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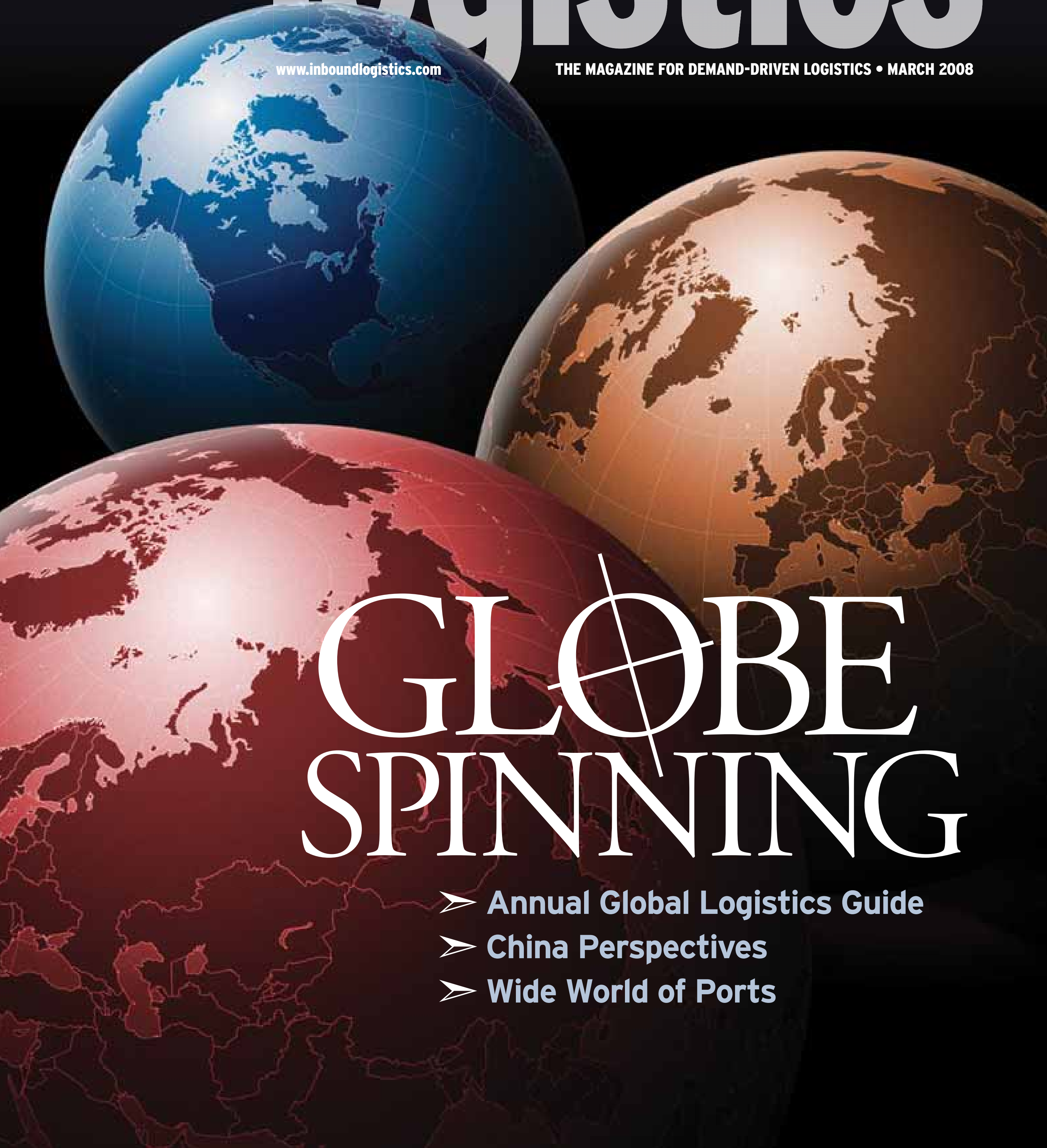

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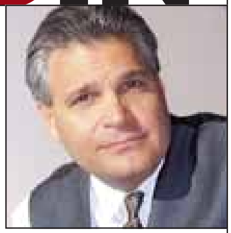

Keith Biondo

by Keith Biondo | **Publisher**

Up and Atom

Some thought leaders, visionaries, and business gurus claim the United States is transforming from an "industrial" to a "post-industrial" economy. More guru-speak: "Wealth in the United States will be created more and more by electrons, and less and less by atoms."

In English, that means our information and service businesses will continue to grow (electrons) and manufacturing capacity (atoms) will continue to diminish.

Some welcome this continuing transition. Most seem resigned to it, including one presidential candidate who, while on the stump in a state that lost thousands of manufacturing jobs last year, said: "Some of these jobs are never coming back."

That may be true for some manufacturing jobs. But can a service and/or information industry *alone* create a healthy economy? Should we acquiesce as manufacturing jobs get swept away in a global tidal wave of unbeatable competition? I say no. We ought to resist the impulse to minimize the importance of domestic manufacturing. Let's not ignore reality. It *is* cheaper to move atoms in some countries because of less expensive labor, but how about a little hardscrabble backbone on the issue?

Here are two examples to illustrate.

In the past decade, China added hundreds of billions to its GDP through industry and manufacturing, not information. Like the United States, China has a growing demographic who won't be working in the information industry any time soon. And there are only so many service jobs in China, or in the United States, for that matter. This phenomenal engine of wealth is being created through manufacturing–China's atomic age, if you will.

A smaller example? India created some excitement recently when a five-year dream was realized and the TATA Nano – a $2,500 car that looks sharp and has an eventual market estimated at one million units in India alone – was introduced. Consider how buyers in the developed world, brought down a few pegs by the price of gas, might find a low-cost, high-mileage car attractive. You can easily add another one million units for the rest of the developing markets. That's a lot of atoms.

Can we build a car like that here? Not at that price point. But like China, which not too long ago had a fraction of its current industrial capability and many infrastructure impediments, it shows what you can do when you put your mind to it. Both India and China are building wealth through manufacturing.

Readers of this magazine, who make their living moving products, know all too well that wealth can be created with both electrons and atoms.

A post-industrial age in the United States? Nah. How about an info-industrial age instead?

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10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Easy Come, Easy Go: Keeping the Yard Running Smoothly

Some companies consider yard management a low priority, but an inefficient strategy can bleed dollars from the bottom line. Wilson Rothschild, industry and product marketing supply chain manager for Infor, an Alpharetta, Ga.-based warehouse management software company, offers these tips for making yard management a strategic imperative.

1 **Lead an initiative to review yard management practices.** Identify a project lead or team and empower employees to find ways to improve yard functionality. Achieving this goal is a priority.

2 **Look beyond the yard.** Your yard is part of a larger operation. A slow yard impacts receiving, putaway, and selection and shipping processes throughout the warehouse. On the other hand, returns management and distributed order management systems could be slowing the yard down. Examine the entire process and improve those systems that affect yard management.

3 **Use automated task management.** Many distribution centers and warehouses still rely on paper tickets and two-way radios to manage the yard. Automated task management systems that notify workers which trailers to move to what position and at what time may be one way to improve trailer visibility and efficiently orchestrate yard processes.

4 **Be business-specific.** Adapt yard management processes to the characteristics of your business, whether you ship bulk, dry goods, or food. You can avoid spoilage, for example, by setting deadlines for processing perishable goods.

5 **Track inventory.** Keep track of the flow of goods to ensure inventory doesn't sit in the yard or on the dock when it should be with your customers. Make sure you have a system in place to do this effectively.

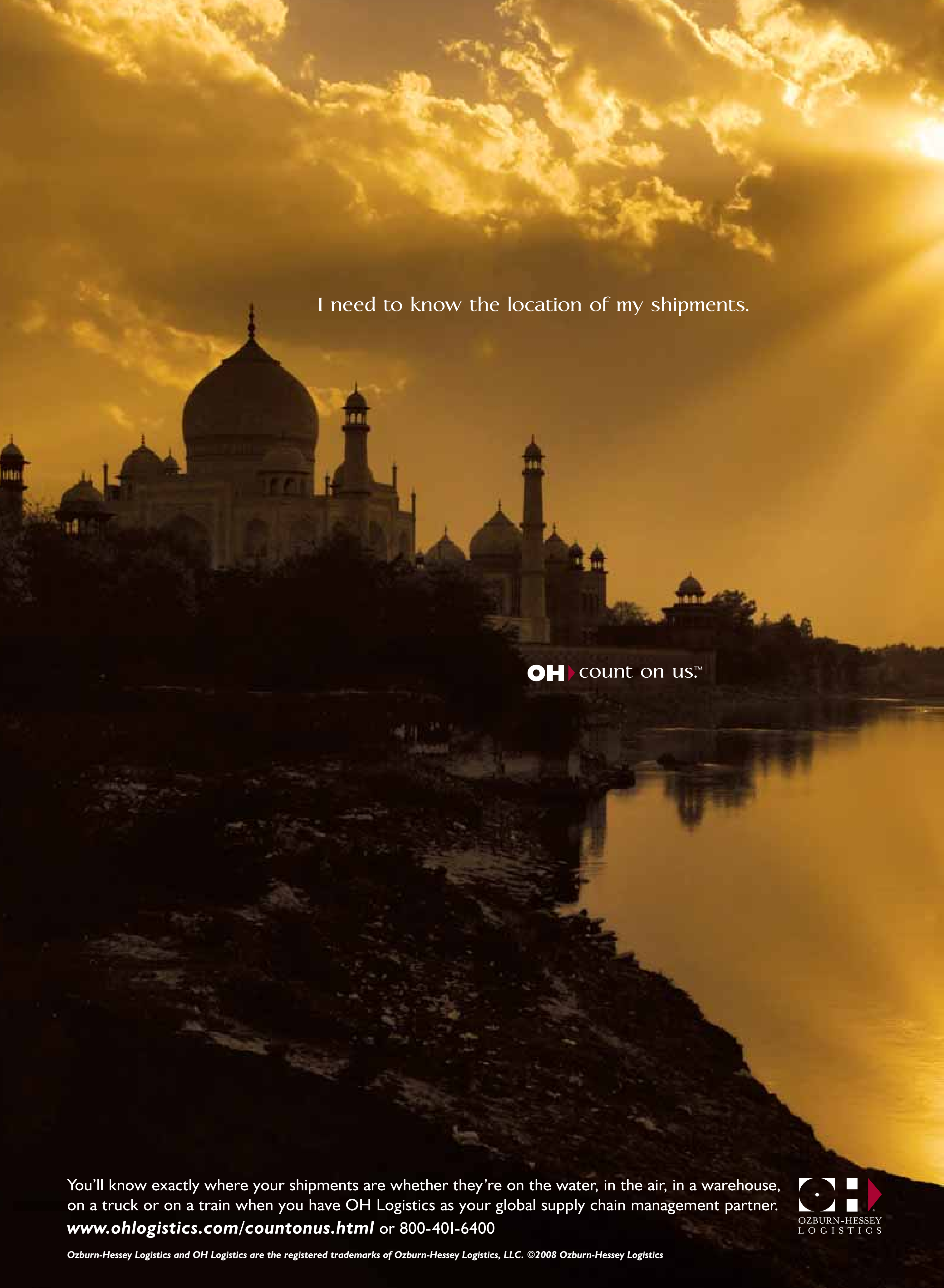
6 **Understand labor.** Do you have the right skill set and labor availability to meet demand as it rises and falls from shift to shift? Don't pay for overtime if it isn't necessary. Make sure your yard personnel are productive and that you pay for only what you need.

7 **Make the yard an extension of your warehouse.** Like you do in the warehouse, limit the moves and distances in the yard to gain efficiencies. This is a basic concept, but developing and implementing a successful plan is difficult. Moves and distance calculations should include both the yard and warehouse.

8 **Move goods quickly.** Leave inventory in the yard too long and it can spoil, take up valuable real estate, or incur unnecessary detention charges. Move goods efficiently to keep your inventory at optimal levels and reduce costs.

9 **Know your yard personnel.** Find out what your workers are up to. Understand when they have downtime and when they are stretched. Empower yard workers to be a part of the overall warehouse team and provide them with the tools they need to make a difference in the operation.

10 **Integrate your WMS.** Extend the value of your warehouse management system or warehouse management module through a yard management system that connects with your ERP. Making the most of technological resources allows you to optimize the flow of goods in and out of your location. ■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DIALOG

LETTERS TO THE EDITO

Saluting Gulf War Veterans

I recently received my February edition of *Inbound Logistics* and came across your full-page ad promoting the hiring of Gulf War veterans. Thank you for your support of the men and women of the Armed Services. It is refreshing to see that people still care and want to help those who have served this great country of ours.

I am a veteran of both Operation Enduring Freedom and Operation Iraqi Freedom. I spent 12 years as a senior logistician with the U.S. Army. Recently discharged, I'm now the director of support services at Kingfisher Regional Hospital in Kingfisher, Okla. My duties include directing materials management, facility management, and the environmental services departments. I also chair the hospital's safety team. I tell you this not to pat myself on the back, but to inform you that I'm just one of many veterans who have the skills American business is looking for.

Again, thank you for your support of not just veterans of the current conflict, but of all the great veterans whenever and wherever they might have served.

– Fred A. Clark, director of support services, Kingfisher Regional Hospital

Rail Support

In the October 2007 Checking In column, *Railroad RXR?*, you raised significant observations and questions about the railroads' complacency over the last three decades since deregulation.

I believe your comments "nailed" an issue that our country has faced for years. I, along with countless others, have been frustrated with the railroads' lack of creativity and progress in failing to exhibit leadership and vision for the 21st century. Your editorial succinctly captured the issue and brought it to light.

Apparently you have gotten the attention of some of the "right people" in the railroad industry. A *Wall Street Journal* front-page article on Feb. 13, 2008, described all the new investments the industry is making. According to the article, "for the first time in nearly a century, railroads are making large investments in their networks."

Thank you for bringing this critical issue to the forefront. I hope this is the real beginning of a new era of development and expansion for the railroad industry, the transportation and logistics industry, and our country. To railroad industry leaders, I truly salute them, and I apologize for any undue criticism that I may have engendered. Obviously this work was well underway for some time and is now bearing results. It's the results that count!

– Frank R. Breslin, Dean, Institute of Logistical Management

Mexico Derailed

Lisa Terry's January 2008 article, *Mexico Paves the Road to Prosperity*, was very interesting, although I was somewhat confused by the section on rail. As someone who has been heavily involved in rail transportation in Mexico since before privatization, I don't understand the reference to the rail systems not being interconnected. To my knowledge, not only are all of Mexico's railroads interchanging traffic smoothly, they are also interchanging traffic with U.S. carriers at the border–using the same rail gauge, cars, and EDI standards for exchanging information. I was wondering if you could clarify what you were referring to in the article.

– Paul Pascutti, vice president, RMI

Lisa Terry responds: Rail conditions differ across Mexico, with those in the north generally superior to southern operations–particularly railroads on the southeastern peninsula. "The duopolized Mexican railway system limits transport competitiveness mainly in south-north and Gulf-Pacific routes, as crossdock operations are needed to complete the delivery," observes Guillaume Corpart Muller, regional director, Mexico, Central America and the Caribbean, for InfoAmericas. As an example, Corpart Muller reports that the rail corridor used by the automobile industry is supported by interconnection facilities. But industries reliant on just-in-time supply chains that don't have the same input/output routes face a completely different situation.

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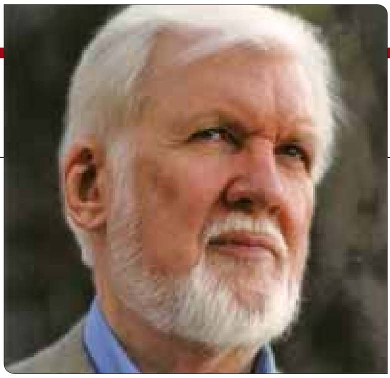


SCPERSPECTIVES

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

Hamilton on Wry

A founding father reminds us that U.S. logistics depends on a strong industrial and agricultural base, balanced with a vital commerce system.

One misty day, I wandered about the graveyard at Trinity Church in lower Manhattan. I spotted a figure sitting on the steps of a square granite box with four urns at its corners and a truncated pyramid in its center. It was the tomb of Alexander Hamilton (1755-1804), who for many Americans is merely the face on the $10 bill.

The man looked up. I was startled to realize it was the former Secretary of the Treasury Hamilton himself. Dressed in cotton stockings, breeches, coat, waistcoat, and powdered wig, he grimaced when he saw me grossly dressed by 18th-century standards in chinos and a North Face jacket.

As we stared at each other I remembered that after the Sept. 11 attacks, the Trinity Church graveyards were covered in ochre ash and refuse after the Towers collapsed. FBI agents found Hamilton's tomb buried in faxes and financial statements. It's ironic that his tomb was so desecrated because Hamilton was best known among the founding fathers for his financial and business acumen. Many agree that he invented our economic system.

I broke the silence. "Mr. Hamilton, I presume?"

"None other, sir," he replied.

"In your *Report on Manufactures* in 1791, you wrote: 'The spirit of enterprise, useful and prolific as it is, must necessarily be contracted or expanded in proportion to the simplicity or variety of the occupations and productions that are to be found in a society. It must be less in a nation of cultivators than in a nation of cultivators and merchants; less in a nation of cultivators and merchants than in a nation of cultivators, artificers, and merchants.' What did you mean?"

"That these United States will only prosper if the three legs of the national stool–commerce, manufacturing, and agriculture–are pursued vigorously. Are they prospering now?"

"I wish I could say yes," I replied. "Manufacturing suffers in the United States, commerce depends on a weakened system of roads, ports, and bridges. We have rail but neglect it, and air traffic is significant but in deep trouble. Agriculture is increasingly shipped in from abroad. We now refer to the handling and movement of goods as logistics. The many levels of government appear to suggest a lot and do little or nothing."

"Those who stand for nothing fall for anything," he noted. "Rail must have developed by some whim of Franklin's. Of air I am totally ignorant. I assume 'logistics' is from the French and refers to military supply?"

"Yes, from the French word 'loger,' meaning lodge or barrack," I replied. "Many at the top, sir, promise everything."

"Promises should begin at the bottom, and must never be broken."

"Sir, they have been broken," I said.

"A nation's prosperity requires that products be distributed, logistically if you will, to meet the needs of the people. The people's demand must govern production and supply."

"On a national basis?" I asked.

"Local governments and states must realize they are all leaves from the same tree, a tree of liberty. We must reach out as a nation and become part of a world economy that is also governed by supply and demand. We should compete with Britain, even if my colleague Thomas Jefferson does not agree."

"So, our country's vision must be international?" I asked.

"While Jefferson and his ilk oppose U.S.-based industry, believing that Britain and other European sovereigns should deliver manufactured goods to our United States, I think we should learn to think continentally.

"And I might add, without rancor, that you would do well to find a new tailor." ■

READER

PROFILE

by Merrill Douglas

Putting Military Training On the Line

MATERIAL MAN

NAME:	Michael Strauss
TITLE:	Chief supply chain officer
COMPANY:	C.H. Briggs Company, Reading, Penn., since 2007
PREVIOUS EXPERIENCE:	Artillery officer, U.S. Army; manager, order fulfillment, American Standard Company; senior project manager, Metropolitan Mechanical Contractors; manager, supply chain, Carpenter Technology Corp.; regional manager, Netfish Technologies; director, supply chain, Elemica
EDUCATION:	BS, systems engineering, United States Military Academy, West Point; MS, management of technology, Wharton School of Business, University of Pennsylvania

In the early 1990s, artillery officer Mike Strauss was leading an Army convoy down a German country road in the middle of the night when he got word of a breakdown three-quarters of the way back in line. The stopped vehicle blocked the road so completely that nothing behind it could squeeze past. One of the obstructed vehicles housed mess hall equipment and the battalion's food. If the troops at the front kept moving, they would not have hot meals–only the notoriously unappealing Meals Ready to Eat.

Strauss got on the radio to find other U.S. troops in the area. "Another unit was traveling in the opposite direction," he says. "We made a deal with them to swap food supplies for 48 hours."

Strauss's troops ate from the other unit's mess truck until the broken vehicle was fixed. Then his unit's mess truck caught up with the other battalion and delivered food and supplies to replace what they had borrowed.

"It was my first cross-docking experience," Strauss laughs.

As chief supply chain officer at C.H. Briggs Company in Reading, Penn., Strauss no longer worries about moving long strings of trucks, troops, and supplies. Instead, he moves materials that cabinet makers and countertop fabricators use in residential and commercial construction.

Reporting to the company's president and chief operating officer, Strauss directs employees who purchase wood, hardware, and decorative surfacing from some 250 suppliers. He manages receiving, warehousing in three facilities, and a shipping operation that uses a private fleet of 25 trucks, plus LTL carriers and UPS, to deliver to customers located mainly in the mid-Atlantic region. He

The Big Questions

What do you do when you're not at work?
Spending time with my family and fishing are my two favorite activities.

Ideal dinner companion?
Jack London or Jesus.

What's in your laptop bag?
Business cards, pens, notebooks, a book on business process management, and a series of inventory reports and metrics that I try to read every day.

Business motto?
I like the Army motto: "Be, know, do."

If you didn't work in supply chain management, what would be your dream job?
Offensive coordinator for the Philadelphia Eagles.

Your idea of a successful day?
Accomplishing what we set out to do as a team. I love those far-too-rare days when everyone involved loses all sense of time, forgets about titles, and simply works together to achieve in one day what was thought to be almost impossible the day before.

also leads an initiative to evaluate the company's business processes for ways to boost efficiency.

Strauss's varied career included time in manufacturing, construction, and the software industry before he joined C.H. Briggs last November.

One of Strauss's challenges arises from the recent addition of granite counter surfacing to the product line. Although C.H. Briggs sources most other products domestically, it buys granite mainly from Brazil, Italy, and India, and is investigating sources in China. Briggs competes for ocean containers during peak shipping months, so Strauss keeps an eye on currency exchange rates.

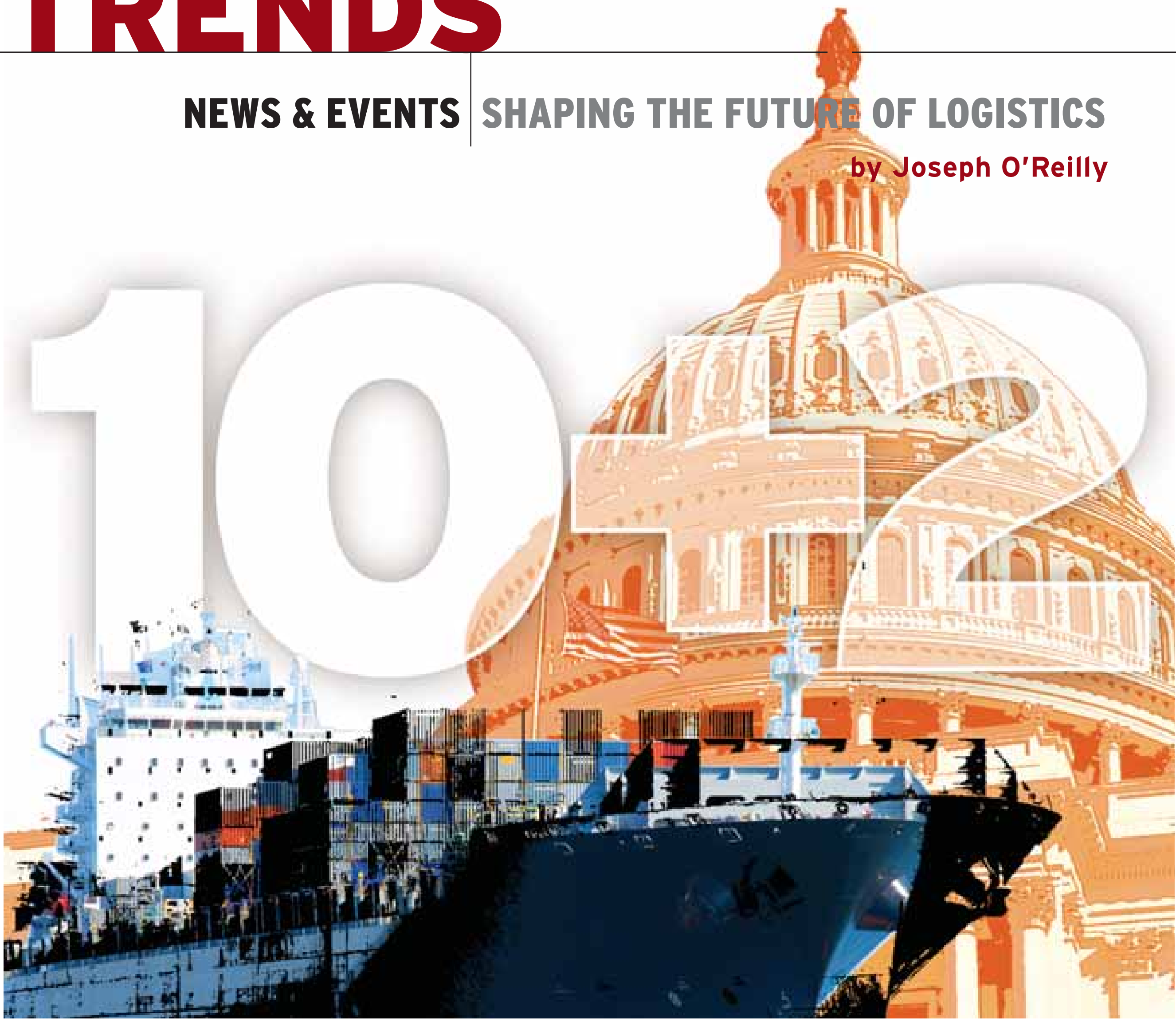
Also, home fashion trends play a bigger role in demand for granite than for other materials, and the product is more susceptible to damage. "It has unique moving and storing requirements," Strauss says.

Strauss, who had never worked for a distributor before he took the job at C.H. Briggs, was surprised by the close strategic relationship Briggs maintains with its suppliers. Supplier brand matters much less to a manufacturer sourcing product than it does to a distributor. A distributor's customers want specific brands, so its sales and marketing team works closely with key suppliers.

For the supply chain team, that close relationship changes the nature of vendor management, including the role of supplier performance measurement. "We do track performance, but it has a different dynamic with a distributor than it does with a traditional manufacturer," Strauss says.

If a supplier doesn't meet performance expectations, the distributor can't simply buy products elsewhere because the brand itself is so important. "You have to collaborate to solve those problems," he says. ■

by Joseph O'Reilly



Anything But Elementary

The Importer Security Filing mandate proposed by Customs and Border Protection (CBP) has been a hot topic of late–as much for speculation about its loose provisions as for its underlying purpose of tightening offshore supply chain links.

When CBP announced its Notice of Proposed Rule Making (NPRM) in early January 2008, its intention was clear: "The Security Filing will improve CBP's ability to target high-risk cargo by identifying actual cargo movements and improving the accuracy of cargo descriptions. It will also improve our ability to facilitate lawful international trade by identifying low-risk shipments much earlier in the supply chain," stated CBP Commissioner W. Ralph Basham.

The mandate would require importers to electronically submit a security filing specifying 10 data elements plus an additional two carrier requirements before cargo is permitted entry into the United States by vessel (*see sidebar, page 16*). Importantly, "10+2" tasks consignees and carriers with gathering and communicating necessary shipment information to CBP 24 hours prior to loading at a foreign port.

CBP is currently in a request-for-comment phase–which was extended through the middle of March–as it collects input and fields questions from importers, carriers, and other supply chain partners. While many transportation and trade interests welcome policy that aims to enhance and secure global trade, the 10+2 equation has, to date, done little more than create confusion and unease among global shippers–for good reason.

"Many shippers have always had to provide 10 data elements prior to shipment. The difference with 10+2 is the timing and methodology," says Lee Connor, president of John S. Connor, a Glen Burnie, Md., freight forwarder.

As a result of the 24-hour stipulation, many importers will have to comprehensively adapt their offshore processes to account for these expected changes.

"The security filing will change the way shippers operate their businesses," says Melissa Irmen, vice president of products and strategy at Integration Point, a global trade management software company headquartered in Charlotte, N.C. "Providing data about a shipment prior to loading will alter how bookings are made, the timing in which information is shared with the importer or agent, and the confidence with which carriers can guarantee placement of goods on ships."

From Irmen's perspective, one challenge in complying with 10+2 is that no single entity currently has custody of all the required information, making 24-hour advanced reporting difficult to fathom, let alone execute.

TAKING SHAPE

As the skeletal provisions of the security filing begin to take shape, largely through the CBP's initial proposal and subsequent discussions and conjecturing among importers, carriers, and service providers, it's apparent that businesses and CBP need to first explore the technology necessary to aggregate and convey this information.

"So far the 10+2 mandate is very much business-oriented, but the technical support necessary to sustain such a directive is still getting up to speed," says Butch Connor, director of ocean operations for John S. Connor.

Some businesses are already flowing this data through the Automated Manifest System (AMS), a mode-specific cargo inventory control and release notification system that interfaces directly with CBP, and indirectly with the Automated Broker Interface (ABI). This allows low-risk shipments to be identified and released faster.

Ensuring that all these extra data points are incorporated into the process, and in a timely manner, demands a concerted and coordinated effort. Service providers and technology partners such as John S. Connor and Integration Point are actively keeping track of ongoing discussions as customer awareness grows. Importers will likely turn to supply chain intermediaries to help navigate terms of the new security filing and facilitate compliance.

Of greater concern to shippers and consignees is the cost and operational disruption as the program is phased in. "Importers and carriers are expected to fund the system and process changes their businesses need to comply with the Importer Security Filing," says Irmen. "It is still unclear how the CBP development effort is being funded."

Another issue importers will have to grapple with is sharing with third-party brokers sensitive information that could threaten competitive advantage, notes Lee Connor–especially in identifying manufacturer and supplier sources. Shippers will have to consider whether it is in their best interest to keep data dissemination in-house, or outsource filing processes to domestic or foreign-based third-party service providers.

SHARING THE LOAD

Carriers will have to share some of the burden as well. In addition to filing their own shipment status reports, they'll have to work more closely with customers to understand how they plan to address the 10+2 requirements.

"According to its notice, CBP is holding the importer responsible for the data filing," says Irmen. "But each shipper may take a different approach

CONTINUED FROM PAGE 15

Tallying 10+2

The 10 data elements required in the Importer Security Filing (ISF) include:

1. Manufacturer or supplier name and address
2. Seller or owner name and address
3. Buyer or owner name and address
4. Ship-to name and address
5. Container stuffing location
6. Consolidator (stuffer) name and address
7. Importer of record number/ foreign trade zone applicant identification number
8. Consignee number(s)
9. Country of origin
10. Commodity Harmonized Tariff Schedule number

In addition, carriers are required to provide two other pieces of information:

1. A vessel stow plan that transmits information about the cargo's physical location on a vessel bound for the United States
2. Container status messages reporting container movements and change in status – container empty or full, for example.

Source: U.S. Customs and Border Protection

and envision a different mechanism to meet the filing–which burdens the carrier to interact with each communication vehicle put in place by various customers."

While some inbound shippers undoubtedly perceive 10+2 as "above and beyond" necessary administrative measures, others might see an opportunity to drive greater visibility and flexibility deeper in the supply chain and build stronger relationships with offshore partners. Most opinions fall somewhere in between.

"All importers want a secure and reliable supply chain," adds Irmen. "It is unclear, however, how the Importer Security Filing will provide that. Many companies undertook the effort of becoming certified in CBP's Customs-Trade Partnership Against Terrorism (C-TPAT) before the actual return on investment was quantified. That voluntary program relied upon the industry's recognition that security is necessary."

Irmen isn't convinced that the 10+2 mandate in its current form is the most well-informed approach to dually enhancing security compliance and cargo flow.

"When it comes to improving supply chain efficiencies, businesses prefer to decide for themselves what detailed data elements are needed, and when they are needed," she says. "They could then base these decisions on their business model and the individual stresses they see on a particular commodity or supply route."

WAIT AND SEE

Importers such as R.G. Barry are taking a wait-and-see approach. Glenn Evans, senior vice president of sourcing and logistics for the Pickerington, Ohio-based accessory footwear developer, is optimistic about its ability to interface with the new system and with partners when the rule is finally introduced.

"The 10+2 security filing regulation is in the commenting stage and could change over the next few months," he says. "We are working with our suppliers and carriers to make sure we are prepared for the implementation. We already use ABI and we expect to implement with few problems."

In theory, supply chain security and efficiency should go hand-in-hand–and 10+2 could facilitate both priorities with proper due diligence. For the time being, the verdict is still out as CBP solicits feedback from industry.

A tentative deadline for the mandate was initially projected for 2008. But given the current impasse, Butch Connor doesn't expect anything to happen until late 2008 or more likely 2009. "CBP will likely want to get it moving, phase in implementation, work out the kinks, then roll it out," he says.

Consumer Goods Companies Still Packing Inventory

Leading retailers and consumer packaged goods manufacturers failed to significantly reduce system-wide inventory levels during 2007. That's despite investments in advanced supply chain planning and tracking tools, and additional spending on sales and operating planning (S&OP), according to a recent Archstone Consulting report. Many companies in the consumer goods industry are shifting their attention to incremental channel-specific and product line improvements to focus on top-line growth.

The study assessed inventory levels and productivity of 25 leading retailers and consumer packaged goods manufacturers–including Wal-Mart, Costco, Kellogg, PepsiCo, Hershey, Colgate, and Unilever–by tracking quarterly inventory turns over a six-year period beginning in 2001.

"A surge in new products across the consumer packaged goods and retail industries during the past two years, and an increase in offshore production, have absorbed any operational improvements achieved in planning and manufacturing over the last few years," says David P. Sievers, consumer products and retail practice leader at the Stamford, Conn., strategy and operations management consultancy. "If retail spending weakens further in 2008 given our uncertain economic environment, expect an increased focus on inventory levels across the supply chain as products sit longer on shelves or in distribution centers."

Among the report's other findings:

- After a period of improvement in retail inventory productivity, gains have moderated from mid-2006 through the third quarter of 2007.
- Wal-Mart's recent inventory productivity gains kept pace with those of the last four years, but did not perform as well as the retailer predicted a few years ago.
- The grocery trade continues to look better, but the drug channel has seen minimal improvement with efforts likely disrupted by acquisition activity.
- Within the food and beverage sector, inventory productivity is declining slightly among large U.S. manufacturers, while mid-size companies have generally maintained performance.
- New product introductions designed to increase top-line growth have made continuous cost and inventory reductions challenging for both consumer packaged goods companies and retailers. ■

by Joseph O'Reilly

Inflation, Food Shortages Burst China's Bubble

China's rapid economic growth and recurring spikes in consumer prices could give U.S. manufacturers and retailers more reason to consider alternate sourcing locations. Inflation rose to its highest level in more than 11 years in January after devastating snowstorms exacerbated food shortages throughout the country. Consumer prices climbed 7.1 percent from the same month last year, driven by an 18.2-percent rise in costs, reports the National Bureau of Statistics. Despite efforts to ease shortages, economists warn that China faces pressure to raise prices across the board due to higher wages and costs for coal, iron ore, and other industrial materials.

February inflation "is likely to be much higher than seven percent, and might even get close to double-digit levels," say Goldman Sachs economists Yu Song and Hong Liang in a recent report.

High inflation could impact government efforts to keep the fast-growing economy from overheating and perhaps let the yuan's exchange rate rise faster. China's economy grew by 11.4 percent in 2007 and is expected to expand by at least nine percent this year.

Surging food costs are a political concern for Chinese leaders as well because they hit the poor majority hard–especially in a society where families spend up to half their income on food. Bouts of high inflation in the 1980s and 1990s sparked protests, which the government hopes to avoid repeating.

Economists expect only modest interest rate hikes this year because the key factor driving inflation is a shortage of pork and other food, rather than too much credit. Beijing has nudged up interest rates over the past two years to cool a lending boom. But raising rates further at a time when U.S. rates are falling could attract money from abroad, adding fuel to the boom.

More importantly for U.S. businesses sourcing in China, if consumer prices continue on this upward bend, it could spark a broader inflationary trend that places even greater premium on finding new low-cost labor markets.

Rising inflation in China could hamper government efforts to keep the economic engine humming and compete for U.S. manufacturing.

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CONTINUED FROM PAGE 18

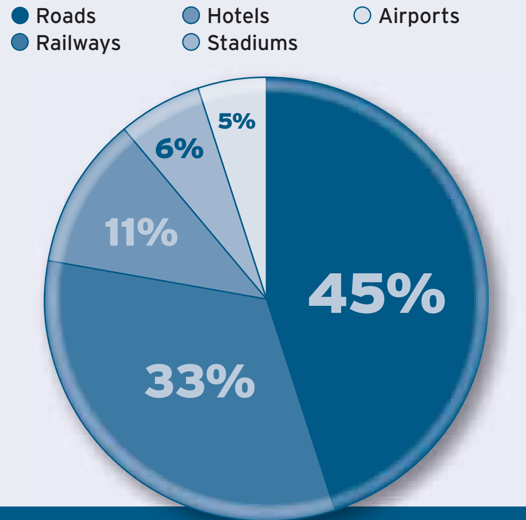
Euro 2012 Infrastructure Kicks Up

Polish and Ukrainian transportation and economic development authorities have plenty to cheer about as preparations for hosting the UEFA (Union of European Football Associations) Euro 2012 "football" championship pick up pace. The value of construction investments in sports, hotel, and particularly transportation infrastructure–including roads, railways, and airports–is expected to reach US $57 billion, according to two recent publications by PMR Research.

Even though it is one of the most prestigious global sports competitions, costs related to stadium construction and modernization will account for less than 10 percent of the total value of planned investments, reports the Cracow, Poland-based market research company. Euro 2012 presents an opportunity for Poland and the Ukraine to take a major step forward and make up for decades of underinvestment in transport development.

Capital invested in road projects is expected to reach $18 billion in Poland and $7.5 billion in the Ukraine as efforts are directed at linking up host cities. Similar outlay for railroad expansion plans will complement $2 billion set aside for airport-related projects.

Investments Related to the Organization of Euro 2012 in Poland and Ukraine, 2008-2012



TOTAL: $57 BILLION

Source: *Euro 2012 in Poland–Construction Investments* and *Euro 2012 in Ukraine–Construction Investments*, PMR Publications, 2008

Pacific Lines Strive To Offset Fuel Costs

Asia-U.S. container shipping lines report progress in negotiations with shippers to more equitably share rising fuel costs. At the same time, the lines are operating at higher utilization levels, reports the Transpacific Stabilization Agreement (TSA), a research and discussion forum of major ocean container shipping lines that carry cargo from Asia to U.S. ports.

Vessel utilization among TSA members averaged 94 percent via the West Coast and 91 percent via East Coast all-water service, according to internal TSA reporting for September through December.

Ocean carriers are redeploying assets and maximizing capacity utilization to offset fuel costs.

Many efficiencies can be attributed to liners redeploying vessels in trade lanes experiencing stronger growth, undertaking maintenance and repairs during slow periods, and mitigating exposure to escalating operating costs such as fuel, observes Ronald D. Widdows, TSA chairman and APL chief executive.

"It can be a costly proposition for lines to shift vessel assets, or to modify routes and schedules," Widdows says. "Asia-U.S. carriers have no option but to fine-tune or even scale back services absent significant economic improvements and fuel prices topping $500 per ton."

Despite petroleum prices softening, the oil market is highly volatile, with prices over the coming months impossible to predict. "With many transpacific lines already operating at a loss and facing rising intermodal, equipment, environmental, and other costs in addition to fuel, it is imperative that carriers achieve full-floating bunker charges in their contracts going forward," notes J.S. Lee, senior executive vice president, Hanjin Shipping Co. and TSA executive committee member.

Profitability concerns in light of rising fuel and other operating costs will likely diminish the importance of the supply-demand balance as a key driver of price this year, according to Widdows. TSA lines have outlined a revenue and cost recovery program for the 2008-2009 contract season that includes:

- Freight rate increases of US $400 per 40-foot container (FEU) for U.S. West Coast port-to-port and port-to-door cargo, and US $600 per FEU for all other traffic.
- Restoration of a floating bunker fuel surcharge in all contracts that have had bunker surcharges mitigated, capped, or folded into base rates.
- A US $400 per FEU peak season surcharge in effect from June 1 through Oct. 31, 2008.

Inbound Specifiers Dig Incoterms Groove

The 1960s were pretty far out by most estimations–but are even farther removed compared with today's $12 trillion global import and export valuation. Despite this disparity, many companies still look at trading contract terms and structures through rose-tinged lenses.

Many importers fail to take advantage of a little-known aspect of Incoterms 2000, the internationally accepted standard definitions of trade terms, says Simon Kaye, founder and CEO of Jaguar Freight Services, a London-based freight forwarder. "Even major global trading companies do not realize how much flexibility they have to determine how and when the title to goods they import will transfer," he observes.

Incoterms (International Commercial Terms) specify the exporting seller's and importing buyer's obligations regarding carriage, risks, and costs, and establish basic terms of transport and delivery. They do not, however, define contractual rights other than for delivery.

Less experienced importers often specify Group C Incoterms, where the seller arranges and pays for the main carriage without assuming risk. The importer then has to deal with a freight company that the vendor chooses and might not represent its best interests, says Kaye.

More sophisticated importers prefer to use Group F terms (such as FOB, or Free on Board) which give them greater control over their shipments, as risk and cost transfer from seller to buyer.

Aggregating control over inbound transportation and terms increases supply chain visibility and oversight of import shipments.

"By taking control as cargo crosses the ship's rail at the port of origin," Kaye says, "importers are better able to obtain accurate and timely shipment information through working with the 3PL of their choice.

"Moreover, Incoterms do not deal with the transfer of ownership, when transfer of title in goods takes place, or other considerations necessary for a complete contract of sale," he adds. "The issue of the title transfer remains subject to what has been separately agreed upon between the parties in the relevant contract of sale and applicable law."

Diligent importers can specify in their contract that a title to goods only transfers when they take possession at the port of entry. By deferring ownership until this later date, importers can delay accounting for costly shipments as inventory on their financials, thus reducing spend and boosting income. ■

GLOBAL SPIN

A New African Star: Global logistics service provider Agility is set to acquire Nairobi, Kenya-based Starfreight Logistics. A customs clearance and freight-forwarding specialist, Starfreight concentrates on procuring and clearing goods and machinery into Africa. ● **Russian Routings Underutilized:** Russia is losing billions of dollars each year due to a lack of convenient cargo transportation routes across the country, Russia's First Deputy Prime Minister Sergey Ivanov said recently during a meeting of the government's commission for industry, technologies, and transportation. The transport of one million containers via the Trans-Siberian Railway could translate to $2.3 billion in additional revenue and the railroad has the potential to accommodate 14 million containers annually, he stated. Also, container transit from South Korea to Finland via the Suez Canal takes 40 to 45 days, compared to 14 to 16 days via the Trans-Siberian Railway. ● **K+N Sells Samsung on CEE:** Samsung has awarded global logistics provider Kuehne + Nagel a three-year contract to manage warehousing and distribution across Lithuania, Latvia, and Estonia. The agreement applies to Samsung's core products, including consumer electronics, telecom devices, and household appliances.

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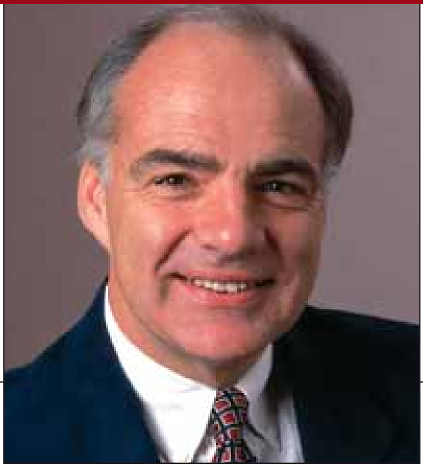

VIEWPOINT

by Thomas L. Finkbiner

Can We Create a Viable National Transportation Policy?

State and federal transportation departments, the White House, and Congress have failed to promote and fund a coherent and dynamic national transportation policy to meet the infrastructure demands of our 21st century global business environment.

Today's overburdened and congested infrastructure cannot meet the economic and energy demands of a population that has doubled since 1950. Our nation's leaders have also failed to recognize our intermodal transportation system and have left us with a largely highway-based system stretched beyond capacity.

While the government remained a silent spectator as intermodalism evolved and global trade increased, the nation's Class 1 freight railroads have stepped forward to help fill the void left by government ineffectiveness. The private sector is helping to achieve some necessary infrastructure efficiencies and is beginning to alleviate some problems.

Between 1980, the year of deregulation, and 2005, Class 1 railroad freight revenue ton-miles grew 84.7 percent. During this period, railroad employment decreased by 18 percent, while the use of intermodal and other freight cars increased by 50 percent–speaking directly to the increased productivity demonstrated by the nation's 97,496-mile rail network. At the same time, thanks in large part to this productivity and increased consumer consumption, GDP more than doubled–from $5.2 trillion to $11.7 trillion annually.

The private sector has developed intermodal properties in areas such as Meridian, Miss., with direct rail connections to Port Rupert in Canada via CN and direct service to Lazaro Cardenas, Mexico, via Kansas City Southern Rail. BNSF has built large terminals in Joliet, Ill., and Alliance, Texas, enabling private developers to build logistics parks around rail connections. CSX is building a major intermodal rail facility and logistics park in Winter Haven, Fla.

But the private sector cannot do it alone. In 2050 our economy will be four times as large as it is today, generating another 50-percent increase in transportation activity over the next 20 years, the DOT estimates.

Class 1 railroads cannot bring about the required policy changes and funding necessary to address all our growing transportation concerns. They have to pay for the construction and maintenance of their own rights-of-way. But to continue contributing to infrastructure enhancements and carry more freight more quickly, the rails must have additional investment capital beyond what they can generate.

The private rail sector has demonstrated it can create economic efficiencies to handle our growing freight burden. For freight railroads to continue to re-engineer, rebuild, and enhance their privately-owned rights-of-way, however, they will need a realistic transportation policy and government funding. Without them, it will be impossible for our current transportation network to handle the continuing capacity surge.

Today's broken transportation infrastructure cries out for common sense dialog between the private and public sectors that will produce a working 21st-century transportation agenda. If Congress and DOT are serious about creating an up-to-date transportation network, they must listen to the industry leaders who understand our interconnected, multimodal system and work closely with the private sector to create a seamless intermodal infrastructure.

This country needs a strong, intelligent, and cooperative partnership between the public and private sectors to make a real difference in developing a viable national transportation policy and infrastructure. ■

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ITMATTERS

by Dr. Moshe BenBassat

Location-Based Services Put Efficiency on the Map

Enhanced productivity. Cost savings. Revenue increases. Improved customer relations. These are among the most important–and most widely acknowledged–benefits of deploying location-based service (LBS) tools such as geographic positioning systems (GPS) and street-level routing (SLR). Add one more benefit of emerging importance that will have significant impact over time: reduced emissions.

Corporations, rental agencies, and the federal government account for about nine million fleet vehicles, each running an average of 25,000 miles per year, according to the U.S. Department of Energy. That's a lot of carbon monoxide and other harmful emissions being dumped into the atmosphere. At a time when global warming's devastating effects are universally feared and understood, many service corporations are struggling with how to reduce their individual impact on the environment and become more "green."

Minimizing travel is an effective strategy for companies with large vehicle fleets to reduce their environmental impact. Companies with 500 trucks on the road can create a dramatic change by eliminating superfluous travel time.

Effectively reducing travel when hundreds of service calls are scheduled daily has been a tedious, time-consuming task. Location-based services incorporating SLR and GPS can help companies track all their field technicians throughout the day using large GPS-enabled maps. SLR can also ensure that technicians take the optimal route based on the shortest distance and travel time from job to job.

SLR gives dispatchers and managers the information to make smart scheduling decisions, removing guesswork so routes can be mapped efficiently–ensuring that technicians spend more time completing jobs and less time driving. This technology eliminates the inherent problems with linear distance or "as the crow flies" route planning.

Congested neighborhoods, slow-moving highways, one-way streets, and natural boundaries such as rivers and mountains all slow travel–despite the fact that two job sites may be close in linear distance. SLR takes into account all these variables and suggests routes that require less driving time, which means less gas consumption and carbon monoxide emissions.

AUTOMATED WORKFORCE MANAGEMENT

Knowing where your technicians are and how to direct them from job to job is an important first step in reducing travel and streamlining service delivery. Modern service organizations recognize that GPS maps, SLR, and real-time communication devices such as mobile phones, handheld computers, laptops, and GPS units are not just about data transmission and map displays.

Rather, they enable organizations to act on data in real time and make smart resource allocation and job scheduling decisions. While GPS and SLR alone enable companies to make sure technicians "drive the route right" based on pre-established directions, optimized scheduling ensures technicians "drive the right route" by deciding in real time what tasks to assign to which service technicians in what order throughout the day.

By connecting decision support and optimization algorithms to the real-time stream of field scheduling data – where engineers are, their current job status, and which schedule changes require immediate attention – organizations have a continually optimized schedule that improves field force productivity, strengthens customer relationships, and reduces fuel costs and emissions. A system that dynamically adapts to changing field data will continue to make sure that drivers travel the shortest routes to jobs, whether scheduled or unscheduled.

Service organizations can also make on-the-fly adjustments to address unplanned delays with real-time traffic updates. Incorporating into the algorithm updates such as traffic jams due to accidents, closed bridges, construction, and other delays enables the system to propose more practical routes or reroutes to minimize the impact on the schedule.

TAKING A DETOUR

When the system is alerted to a delay, it compares that information with existing geographic information systems (GIS) maps to find the best alternative route around the problem. The system can then automatically send that information to dispatchers or technicians in the field so they don't burn fuel while waiting in traffic or take circuitous routes that may add unnecessary mileage.

Corporate responsibility regarding the environment is no longer just a feel-good story. State and federal legislation mandating reduced emissions targets and alternative fuel pilot programs are being introduced and/or passed constantly. Service organizations that must balance improved customer service and increased productivity with reduced fuel consumption and emissions can take a significant step by capitalizing on the inherent optimization capabilities in location-based services.

Doing so means the field force spends more time completing jobs and less time on the road, which is the ultimate goal of any service organization. ■

GLOBESPI

by Joseph O'Reilly

Managing offshore supply chains has become a matter of balancing reason with instinct: comparing actual demand against forecasted demand; total landed cost versus lowest unit cost; leading-edge sourcing with over-the-edge exploration. Supply chain executives often find themselves suspended somewhere in between as they try to narrow the gap between concrete and circumspect knowledge–with the ultimate goal of better matching inventory to customer demand.

Technology can help manage that balancing act by creating an interface for supply chain partners to communicate and share information across cultural and economic divides. As continental gaps converge, countries large and small are manipulating this free flow of information to tap economic development opportunities – linking available material resources, labor, manufacturing expertise, and transportation

NNING

As the world flattens, global sourcing invariably becomes more dynamic. Sophisticated technologies and an emerging crop of offshore suitors are forcing today's intrepid explorers to balance reason with instinct.

capabilities with global demand for products and services.

This "flattening effect" has otherwise created a more dynamic trade environment as companies leverage their supply chains to compete for market share in new places. Global sourcing today is considerably less static than it was five years ago; and five years hence, it will likely be even less predictable. Such caprice has compelled businesses to take a more scientific approach to capturing demand, monitoring demand variability, calculating total logistics costs, and integrating all this information to buttress strategic offshore expansion or contraction.

"Instead of taking a snapshot approach and freezing supply chain information frame by frame, businesses have to continuously monitor this stream of information," says Greg Johnson, executive vice president of sales and marketing at GT Nexus, an Alameda, Calif., supply chain software provider.

Johnson believes that technology has evolved to the point where businesses have a much deeper understanding of supply chain costs, more accurate data, and the capacity to act on this information intuitively and quickly. In turn, they are using strategic outsourcing and offshoring measures to rationalize spend with speed and service – routinely and as needed.

"Shippers not only have visibility into the cost of sourcing in different regions, they also have the ability to compare and analyze these locations. Because they have deeper corporate memory to hold cost data, they can make more informed decisions on where to source from," he explains.

CHINA: THE PERFECT FOOTPRINT

In 2003, R.G. Barry Corp., a Pickerington, Ohio-headquartered accessory footwear developer, made the strategic decision to completely exit Mexico and shift outsourcing production to Asia. Confronted by increasing pressure to turn around its corporate financials, the company, famous for its Dearfoam slippers, opted to jettison company-owned manufacturing facilities in favor of less-expensive Chinese suppliers.

R.G. Barry is by no means an exception. In the footwear industry, nearly 80 percent of product sold in the United States is manufactured in China, says Glenn Evans, vice president of marketing and product development, R.G. Barry. And the writing was on an already cluttered wall. Over the company's 60-year history it has shifted production from the Midwest to the Sun Belt, then to Mexico, and now China.

"In our industry, customers want new products. Forecasting demand is highly volatile and demand is highly seasonal," explains Evans. "We needed a business model that could more accurately match supply with demand–especially seasonal fourth-quarter demand. We wanted a flexible sourcing model that could align both curves."

The China move proved to be an important stimulus in R.G. Barry's rebound. In 2007, it reported $25.1 million in net income and predicts revenue growth of four percent to six percent in 2008. Last year it also became Wal-Mart's exclusive year-round supplier of slippers, a move that should give it more traction in the marketplace.

Currently, R.G. Barry sources from six to eight factories in China. During peak season it expands to 20 facilities. The advantages of using multiple in-country suppliers run the gamut from greater flexibility in scaling production to more rational use of labor.

"Sourcing from multiple vendors gives us the flexibility to increase and decrease capacity and supply to keep in line with demand," says Evans. "We are a highly seasonal business and need multiple vendors to handle peak demand. We also utilize many factories to minimize risk due to natural disasters, local labor issues, and financial difficulties. This approach improves our contingency planning so we can move production quickly without interrupting the supply of goods."

R.G. Barry also produces multiple SKUs of products with different construction methods. So by sourcing from several suppliers, it can align product types with factories that have expertise manufacturing specific footwear.

THE NEXT GENERATION

To help augment visibility within its China supply network, the company recently partnered with New Generation Computing (NGC), a software company that focuses on apparel, footwear, and retail solutions, to use its *e-SPS* software platform to manage suppliers. The Miami, Fla.-based software developer has firsthand experience and knowledge of the challenges companies such as R.G. Barry face when they source abroad.

"Our Web platform transforms the ability to execute – from design through sourcing to manufacturing," says Fred Isenberg, vice president of sales, NGC. "The system keeps a profile of sourcing capabilities, enabling businesses to benchmark factories, find good ones, and improve them. It gives businesses control over information as if they owned the facility."

MANUAL NO MORE

As a Web-based solution, *e-SPS* replaces manual reporting and information gathering, standardizes sourcing processes across all departments and suppliers, offers multiple data views and alerts, and features end-to-end product lifecycle management/product development and global sourcing functions.

"Companies need to manage design, sourcing, and process as one continuum. This includes tracking shipments and performing quality audits," Isenberg adds. "By aggregating visibility, they are more agile in responding to change."

NGC's *e-SPS* platform gives R.G. Barry better visibility into managing in-country suppliers. By streamlining global sourcing and reducing product lead times, the Web platform enables it to respond faster to customer trends and more easily scale growth objectives by adding brands and managing more suppliers.

For R.G. Barry, having a technology partner such as NGC has helped bring China closer to home. "NGC's product provides visibility and transparency across the supply chain so we can more closely manage distance and increased variability as the supply chain becomes more complex," Evans explains. "It will not replace due diligence in the vendor evaluation process and factory visits, but it will increase our ability to manage the process from a distance."

While China may be facing increasing competition from other Southeast Asian markets, especially in more skill-intensive production activities, it's still the overwhelming favorite sourcing location for the footwear industry. "Many countries are three to five years behind China," observes Evans. As long as the costs of outsourcing manufacturing in China remain competitive, Evans doesn't see any reason to change R.G. Barry's sourcing strategy.

"Freight, though a significant cost, is just a small percentage of our overall cost of goods sold," he says. "Our product is very light and uses minimal cube, so our focus is on speed–how fast we can get goods from order date to the retail shelf. For the time being, Asia is where we need to be–and will be–as long as partners deliver in the time frames we forecast."

While labor and production economies drive manufacturing growth in Asia, pulling companies such as R.G. Barry to China's hinterland, Evans still keeps an eye on other locations. He acknowledges that the manufacturing model in China is shifting as production costs increase and companies look further inland to find cheaper labor. "We're looking at India and constantly evaluating other emerging markets. But we don't want to be on the cutting edge. We want to be somewhere in the middle," he adds.

If China's economic engine continues to hum as all indications suggest, R.G. Barry will find itself in the middle of a rapidly exploding consumer market. "We're still three to five years away from selling in China. But we have relationships with partners who can make that happen when the time is right," Evans reports.

BUILDING MUSCLE MEMORY

For R.G. Barry, China was the logical offshore play as it transitioned from a captive market sourcing model to a more open "plug-and-play" approach. Other industries prioritize cost, capacity, speed, and risk management factors differently.

Some businesses consolidate suppliers to aggregate control over transportation and spend; others diversify supply sources to better manage risk and create more options for pulling product to market. Inevitably, the gap between reason and instinct is shrinking. Working with IT developers and third-party logistics providers, smart companies are developing supply chain capabilities that allow them to flex with market economics. Over time, they are developing what Johnson terms "muscle memory."

"Those that invest around an IT platform are likely to perform evaluations more regularly," he explains. "Companies that master sourcing in one location and create a system for handling manufacturing flows are well-positioned to look at other markets and trade lanes."

REASON VERSUS INSTINCT

As the world turns, businesses are increasingly sensitive to shifts in supply and demand. Whether chasing low-cost labor in emerging markets or bringing manufacturing closer to home, strategies are evolving as companies leverage their supply chains to differentiate themselves from competitors.

Control over product quality, visibility into shipments in transit, and incentive to expand are major factors for companies considering countries where regulatory oversight and transportation infrastructure are still maturing. While cost remains a primary driver, businesses are equally attuned to risk management, labor availability, capacity, congestion, and speed.

To some degree, diversifying global source points is both a cause and an effect. As enterprises become more comfortable outsourcing and offshoring, then diversifying activities within the country, the next tendency is to expand into other markets. These hotspots are many and multiplying.

Inbound Logistics' fourth-annual Global Logistics Guide presents a navigational beacon as you calibrate your company's global compass with these existing and emerging coordinates.

Our scorecard provides a macro perspective of the global supply chain to help you quantify and qualify expansion opportunities with countries that best fit your logistics and supply chain needs. This guide is not meant to give instinct reason; rather it provides circumstantial reasons to be instinctive – to look beyond the status quo and consider what lies ahead.

2008 Global Logistics Guide

Intuitive technologies and diligent supply chain strategies are rapidly redefining how businesses approach offshore expansion. Shifts in demand and supply require agile supply chains, and companies are increasingly less gun shy about evaluating global sourcing opportunities more frequently.

Whether seeking new markets to manufacture in or sell to, realigning transportation and distribution channels, balancing sourcing options to avert supply chain risk, or better rationalizing total landed costs, global companies need to map their specific business needs with available resources and expertise. *Inbound Logistics'* fourth-annual Global Logistics Guide presents a good starting point as you evaluate potential sourcing locations.

***IL* identifies global hotspots as excelling in three key areas:**

T: **TRANSPORTATION INFRASTRUCTURE** – The density and breadth of airport, port, and road infrastructure

I: **IT COMPETENCY** – The progressiveness of information and communication technology investment

P: **PEOPLE POWER** – The strength and expertise of homegrown logistics talent and government leadership

We refer to this logistics potential benchmark as the TIP Quotient.

Businesses may also consider a country's logistics potential by the amount of foreign direct investment (FDI) the United States is pumping into its economy. Though FDI alone does not translate to economic development promise, countries with good transportation infrastructure, IT capabilities, logistics talent, government leadership, and favorable business policies invariably capture a bigger piece of the American pie.

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

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 People power (1 to 3 points). Points are totaled for all categories – taking into consideration X-Factor +/- points – to decide final ranking; 10 is highest, 3 is lowest.

* The Global Information Technology Report published by the World Economic Forum ranks 122 countries by their capacity to exploit global information and communications technology (ICT) developments. It uses the Network Readiness Index (NRI) to measure the degree of preparation of a nation or community to participate in and benefit from ICT developments.

SOURCES: U.S. Department of State; World Port Rankings, American Association of Port Authorities; 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

The Americas

Canada

		SCORE		
GDP:	$1.4 trillion	8	T	3
EXPORTS:	$440 billion		I	3
IMPORTS:	$394 billion		P	3
FDI (2006):	$246 billion		X	-1

FACTOR: IT and skilled labor shortage

The United States' largest trading partner and border confidant is among the foremost global economies and is well prepared to capture more Asia-North America trade, especially as U.S. West Coast container volumes balloon. With $1.5 billion worth of goods crossing the U.S./Canada border daily, the two economies are inherently linked. The Port of Vancouver remains an important cargo port for both Canada and the United States, and the emerging promise of Prince Rupert, combined with an extensive and underutilized railroad network, could be a major boon for the country's economic prospects. In 2006, U.S. companies contributed $246 billion in direct investment to Canada, up from $166 billion in 2002. Still, unbalanced economic growth (as a result of Western Canada's Asian-fueled development), dependence on U.S. trade, increasing immigration, and shortage of skilled labor are concerns the government needs to address.

Mexico

		SCORE		
GDP:	$886 billion	6	T	2
EXPORTS:	$268 billion		I	1
IMPORTS:	$279 billion		P	2
FDI (2006):	$85 billion		X	1

FACTOR: Commitment to transportation investment and proximity to U.S. markets

Mexico's economic reckoning continues to grow as U.S. companies face difficulties getting product to market through congested and capacity-constrained chokepoints. President Felipe Calderon has made fighting corruption and creating bureaucratic transparency critical initiatives in bringing more credibility to Mexico's economic blueprint. The country's coastal transport infrastructure, namely the ports of Manzanillo, Lazaro Cardenas, and Veracruz, are fast gaining recognition as major container conduits, but questions still remain about the quality of roads beyond the developed northern region. A five-year, $37-billion public-private funding package, recently announced by Calderon, will help stimulate improvements across all modes.

Chile

		SCORE		
GDP:	$161 billion	4	T	1
EXPORTS:	$66 billion		I	2
IMPORTS:	$42 billion		P	1
FDI (2006):	$10 billion		X	0

Restrictive labor laws and high workforce turnover have created above-average unemployment rates in recent years; resulting in an abundant, if unstable, labor pool. Trade liberalization, including a trade agreement with the United States in 2004, has helped Chile attract foreign direct investment – ranking 28th globally and third in Latin America to Mexico and Brazil. It is also well positioned in terms of IT infrastructure, ranking 31st in the world and tops in Latin America, according to the World Economic Forum's Network Readiness Index. But hurdles remain. Transportation is still largely undeveloped and issues with intellectual property theft and counterfeiting have placed Chile on the U.S. Trade Representative's Priority Watch List.

Brazil

		SCORE		
GDP:	$1.3 trillion	4	T	2
EXPORTS:	$159 billion		I	1
IMPORTS:	$116 billion		P	1
FDI (2006):	$33 billion		X	0

Brazil remains the heart of South American trade thanks in large part to a strong agricultural and export-oriented economy. President Luiz Inácio Lula da Silva has been proactive in growing the country's trade tentacles on the continent as well as facilitating agreements with China, for example, and promoting public-private partnerships to stimulate much-needed funding for transportation infrastructure investment. Some U.S. businesses see Brazil as another offshore manufacturing option that could someday rival the Asia Pacific. Abundant and cheap labor and proximity to U.S. markets weigh in its favor. Manaus, a river port city and transportation hub in Northern Brazil, is attracting prominent manufacturers such as Nokia, Samsung, Sony, and Essilor. Still, historically restrictive trade and labor legislation and poor inland road infrastructure are hurdles to widespread sourcing activity.

T Transportation Infrastructure
I Information Technology
P People Power

Europe & Russia

T Transportation Infrastructure
I Information Technology
P People Power

The Netherlands

GDP:	$755 billion
EXPORTS:	$465 billion
IMPORTS:	$402 billion
FDI (2006):	$216 billion

SCORE		
8	T	4
	I	3
	P	2
	X	-1

FACTOR: Labor shortage and capacity constraints

The Port of Rotterdam's unexpected double-digit spike in container volume in 2007 serves as an appropriate example of the Netherlands' economic expectations. Despite concerns over capacity limitations and congestion at the ports in Rotterdam and Amsterdam, sound transportation infrastructure, a favorable regulatory and customs environment, competitive transport rates, well-developed intermodal capabilities, and a skilled labor force make the country a top logistics location. And U.S. companies have taken notice. In 2006, the Netherlands collected $216 billion in U.S. FDI, making it the third most popular investment destination for U.S. capital after the United Kingdom and Canada. With Asian container volumes surging, and an unemployment rate among the lowest in Europe, labor availability could become an obstacle to further economic growth.

France

GDP:	$2.5 trillion
EXPORTS:	$559 billion
IMPORTS:	$601 billion
FDI (2006):	$66 billion

SCORE		
7	T	3
	I	2
	P	2
	X	0

As the sixth-largest economy in the world, France touts two ports (Le Havre and Marseilles) among the world's top 50 in cargo tonnage and Paris De Gaulle airport ranks 11th in total air cargo tonnage. But France does not command the U.S. FDI clout that Switzerland, Belgium, the Netherlands, Germany, and Luxembourg do. While privatization has been an ongoing goal for the country as it attempts to transition to a freer market-oriented economy, government control over transportation and industry sectors still remains apparent. Despite ranking high in workforce productivity, widespread and well-publicized opposition to labor reform is an obstacle that President Nicolas Sarkozy's government is working to overcome.

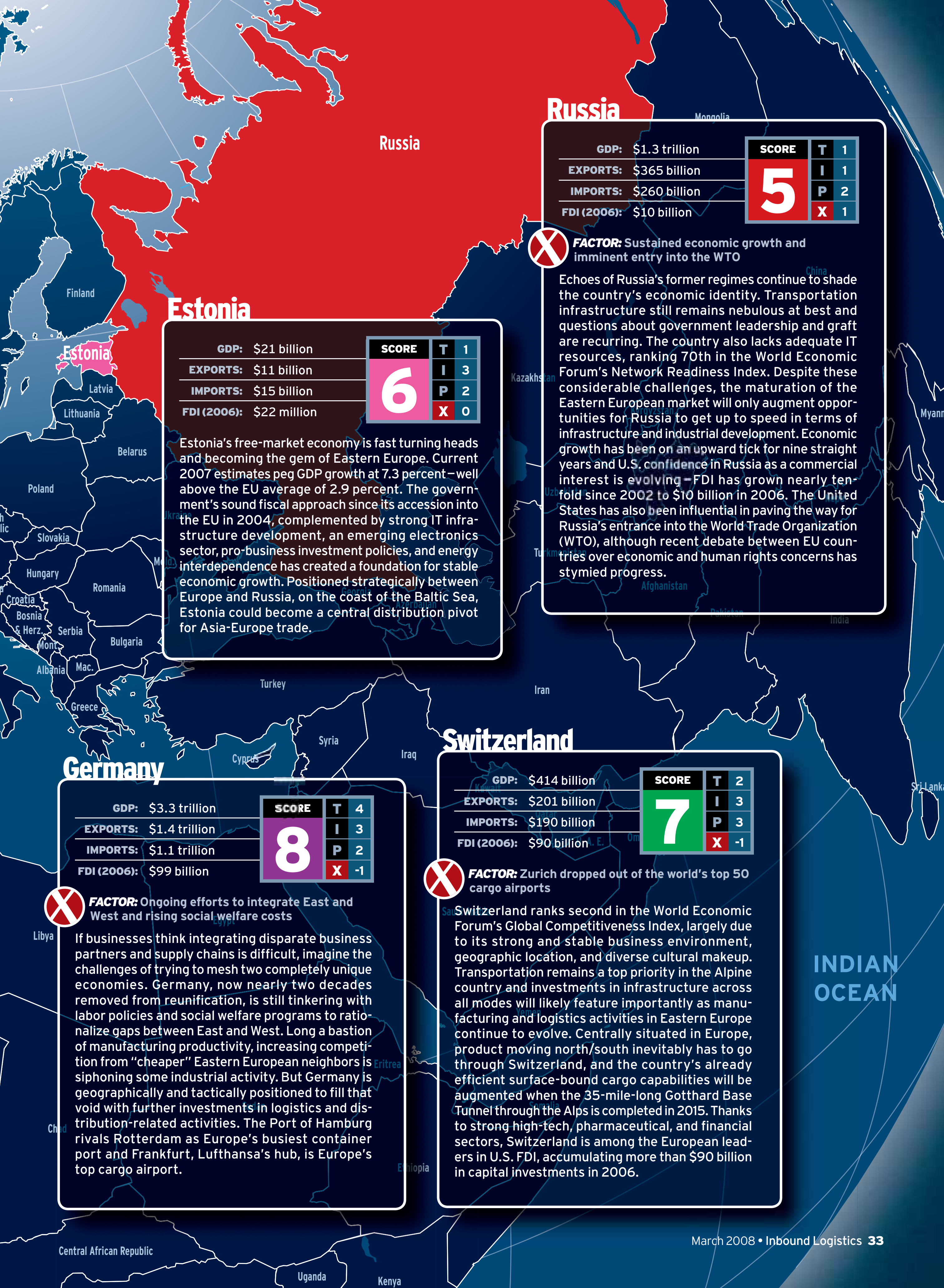
Belgium

GDP:	$443 billion
EXPORTS:	$328 billion
IMPORTS:	$321 billion
FDI (2006):	$52 billion

SCORE		
7	T	4
	I	2
	P	2
	X	-1

FACTOR: Reliance on imports and regional trade

Belgium's location in Central Europe, combined with booming container trade between Europe and Asia and the emerging manufacturing appeal of Central and Eastern Europe (CEE) and Russia, are strong indications of the country's economic development prospects. For a country the size of Maryland, its multimodal transportation resources are beyond compare. The Port of Antwerp, which surpassed eight million TEUs in 2007—a 16-percent increase over 2006—is complemented by the emerging presence of Zeebrugge (two million TEUs, 24 percent increase over 2006). Belgium's Brussels and Liege airports are among the world's top 50 in cargo tonnage and a dense network of roads, railways, and canals facilitate cargo transportation capabilities through the country. On the downside, Belgium's economy is heavily focused on regional trade. With few natural resources, it relies heavily on importing these materials, then finishing them for export. The country is looking to expand its global trade partnerships to account for this shortcoming.



Russia

GDP:	$1.3 trillion
EXPORTS:	$365 billion
IMPORTS:	$260 billion
FDI (2006):	$10 billion

SCORE		
5	T	1
	I	1
	P	2
	X	1

FACTOR: Sustained economic growth and imminent entry into the WTO

Echoes of Russia's former regimes continue to shade the country's economic identity. Transportation infrastructure still remains nebulous at best and questions about government leadership and graft are recurring. The country also lacks adequate IT resources, ranking 70th in the World Economic Forum's Network Readiness Index. Despite these considerable challenges, the maturation of the Eastern European market will only augment opportunities for Russia to get up to speed in terms of infrastructure and industrial development. Economic growth has been on an upward tick for nine straight years and U.S. confidence in Russia as a commercial interest is evolving—FDI has grown nearly tenfold since 2002 to $10 billion in 2006. The United States has also been influential in paving the way for Russia's entrance into the World Trade Organization (WTO), although recent debate between EU countries over economic and human rights concerns has stymied progress.

Estonia

GDP:	$21 billion
EXPORTS:	$11 billion
IMPORTS:	$15 billion
FDI (2006):	$22 million

SCORE		
6	T	1
	I	3
	P	2
	X	0

Estonia's free-market economy is fast turning heads and becoming the gem of Eastern Europe. Current 2007 estimates peg GDP growth at 7.3 percent—well above the EU average of 2.9 percent. The government's sound fiscal approach since its accession into the EU in 2004, complemented by strong IT infrastructure development, an emerging electronics sector, pro-business investment policies, and energy interdependence has created a foundation for stable economic growth. Positioned strategically between Europe and Russia, on the coast of the Baltic Sea, Estonia could become a central distribution pivot for Asia-Europe trade.

Germany

GDP:	$3.3 trillion
EXPORTS:	$1.4 trillion
IMPORTS:	$1.1 trillion
FDI (2006):	$99 billion

SCORE		
8	T	4
	I	3
	P	2
	X	-1

FACTOR: Ongoing efforts to integrate East and West and rising social welfare costs

If businesses think integrating disparate business partners and supply chains is difficult, imagine the challenges of trying to mesh two completely unique economies. Germany, now nearly two decades removed from reunification, is still tinkering with labor policies and social welfare programs to rationalize gaps between East and West. Long a bastion of manufacturing productivity, increasing competition from "cheaper" Eastern European neighbors is siphoning some industrial activity. But Germany is geographically and tactically positioned to fill that void with further investments in logistics and distribution-related activities. The Port of Hamburg rivals Rotterdam as Europe's busiest container port and Frankfurt, Lufthansa's hub, is Europe's top cargo airport.

Switzerland

GDP:	$414 billion
EXPORTS:	$201 billion
IMPORTS:	$190 billion
FDI (2006):	$90 billion

SCORE		
7	T	2
	I	3
	P	3
	X	-1

FACTOR: Zurich dropped out of the world's top 50 cargo airports

Switzerland ranks second in the World Economic Forum's Global Competitiveness Index, largely due to its strong and stable business environment, geographic location, and diverse cultural makeup. Transportation remains a top priority in the Alpine country and investments in infrastructure across all modes will likely feature importantly as manufacturing and logistics activities in Eastern Europe continue to evolve. Centrally situated in Europe, product moving north/south inevitably has to go through Switzerland, and the country's already efficient surface-bound cargo capabilities will be augmented when the 35-mile-long Gotthard Base Tunnel through the Alps is completed in 2015. Thanks to strong high-tech, pharmaceutical, and financial sectors, Switzerland is among the European leaders in U.S. FDI, accumulating more than $90 billion in capital investments in 2006.

China

		SCORE		
GDP:	$3.2 trillion	7	T	3
EXPORTS:	$1.2 trillion		I	1
IMPORTS:	$917 billion		P	2
FDI (2006):	$22 billion		X	1

FACTOR: Government leadership

China remains a primary focus of U.S. offshore interests and the government's control over investing in and building transportation infrastructure is unrivalled. As its coastal manufacturing regions become more developed and relatively more expensive, businesses are looking farther inland and westward to mine even cheaper production capacity. This means U.S. businesses have to hurdle the challenges of transporting product from China's less developed hinterland to its ports, which adds time and cost to the supply chain. Concerns over product quality and intellectual property theft are recurring, but will unlikely stem the flow of trade from China to the United States. The country's growing middle class also presents a ripe opportunity for businesses to begin targeting China as a sell-to market.

Thailand

		SCORE		
GDP:	$226 billion	5	T	2
EXPORTS:	$143 billion		I	2
IMPORTS:	$122 billion		P	1
FDI (2006):	$8 billion		X	0

As a primarily export-oriented country, Thailand's diverse manufacturing sectors – specifically high-tech consumer products, furniture, canned food, toys, and jewelry – are driving the country's economic engine. Its transportation infrastructure, which includes Bangkok Airport and the Port of Laem Chabang, has grown to support these industries. While the government is looking to liberalize trade policies to spur more foreign investment, political instability, as evidenced by a military coup in 2006, has investors wary. Continued expansion of transportation, utility, and communication networks to match export volumes will be critical initiatives as the government looks to solicit more foreign interest.

United Arab Emirates

		SCORE		
GDP:	$190 billion	6	T	3
EXPORTS:	$152 billion		I	2
IMPORTS:	$95 billion		P	2
FDI (2006):	$5 billion		X	-1

FACTOR: Dependency on oil, the "war effect," and high real estate costs

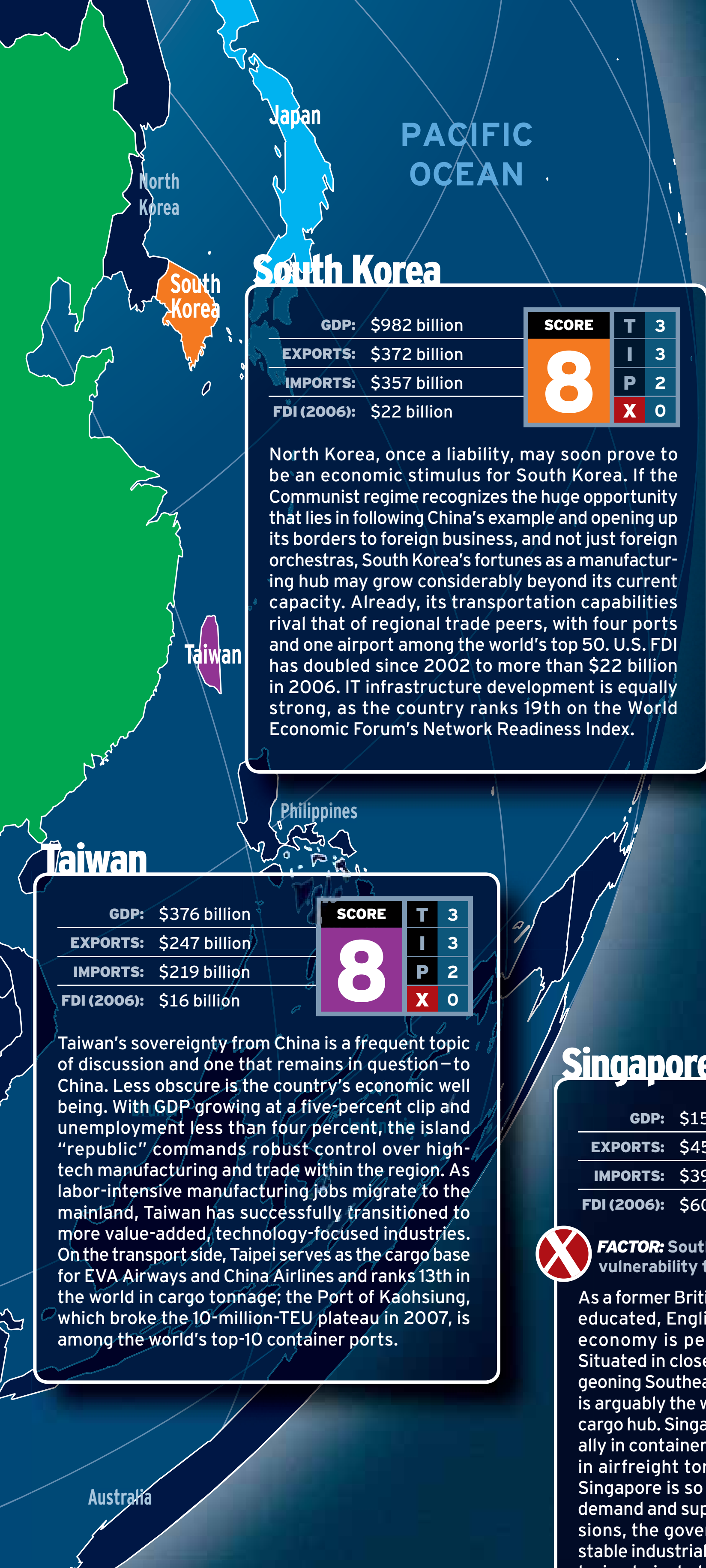
As elsewhere in the Middle East, privatization and diversification have been primary drivers as the United Arab Emirates (UAE) looks toward transportation and logistics development to attract a better balance of industries. Dubai ranks 17th in the world in air cargo tonnage and its port is ninth in container volume. The planned development of Dubai Logistics City and a new cargo airport at Jebel Ali – which will be larger than London's Heathrow and Chicago's O'Hare combined – are drawing interest from global businesses seeking strategic distribution hubs. Much of Dubai's current growth, in terms of cargo volume and infrastructure development, is largely a result of the war in Iraq and ongoing construction activities in the country, which bears questioning whether UAE's fast-paced growth is sustainable.

India

		SCORE		
GDP:	$1 trillion	6	T	2
EXPORTS:	$141 billion		I	1
IMPORTS:	$224 billion		P	3
FDI (2006):	$9 billion		X	0

As U.S. businesses mull sourcing and outsourced manufacturing options in Asia, India is a perennial target in large part due to its mature business process outsourcing (BPO) sector, available and educated labor force, and English language proficiency. Foreign investment to date, however, has been stifled by poor inland infrastructure and prohibitive regulatory bureaucracy. U.S. FDI was a relatively paltry $9 billion in 2006 – merely double what U.S. businesses are investing in Trinidad and Tobago. Ongoing government reform has helped facilitate foreign investment in the country, but transportation issues are still problematic. For the short term, businesses will continue to leverage third-party resources to make inroads into the Indian market as infrastructure development chases demand.

The Middle East & Asia



South Korea

		SCORE		
GDP:	$982 billion	8	T	3
EXPORTS:	$372 billion		I	3
IMPORTS:	$357 billion		P	2
FDI (2006):	$22 billion		X	0

North Korea, once a liability, may soon prove to be an economic stimulus for South Korea. If the Communist regime recognizes the huge opportunity that lies in following China's example and opening up its borders to foreign business, and not just foreign orchestras, South Korea's fortunes as a manufacturing hub may grow considerably beyond its current capacity. Already, its transportation capabilities rival that of regional trade peers, with four ports and one airport among the world's top 50. U.S. FDI has doubled since 2002 to more than $22 billion in 2006. IT infrastructure development is equally strong, as the country ranks 19th on the World Economic Forum's Network Readiness Index.

Japan

		SCORE		
GDP:	$4.4 trillion	8	T	4
EXPORTS:	$666 billion		I	3
IMPORTS:	$571 billion		P	2
FDI (2006):	$92 billion		X	-1

FACTOR: Aging workforce, capacity and congestion issues

A legacy in manufacturing innovation has paved the way for Japan's status among the world's elite economies. Its high-tech and automotive export industries have helped shape a transportation network that boasts seven ports among the world's top 50 in cargo tonnage and three airports that rank in the top 25 in terms of airfreight volume. Japan's government has become more aggressive in investing capital to diversify industry sectors after years of fiscal conservatism following its economic bubble burst. U.S. direct investment is robust at more than $90 billion in 2006, second in Asia to Australia. Capacity limitations, congestion, an aging workforce, and increasing competition from other Southeast Asian countries are unavoidable obstacles to trade expansion.

Taiwan

		SCORE		
GDP:	$376 billion	8	T	3
EXPORTS:	$247 billion		I	3
IMPORTS:	$219 billion		P	2
FDI (2006):	$16 billion		X	0

Taiwan's sovereignty from China is a frequent topic of discussion and one that remains in question—to China. Less obscure is the country's economic well being. With GDP growing at a five-percent clip and unemployment less than four percent, the island "republic" commands robust control over high-tech manufacturing and trade within the region. As labor-intensive manufacturing jobs migrate to the mainland, Taiwan has successfully transitioned to more value-added, technology-focused industries. On the transport side, Taipei serves as the cargo base for EVA Airways and China Airlines and ranks 13th in the world in cargo tonnage; the Port of Kaohsiung, which broke the 10-million-TEU plateau in 2007, is among the world's top-10 container ports.

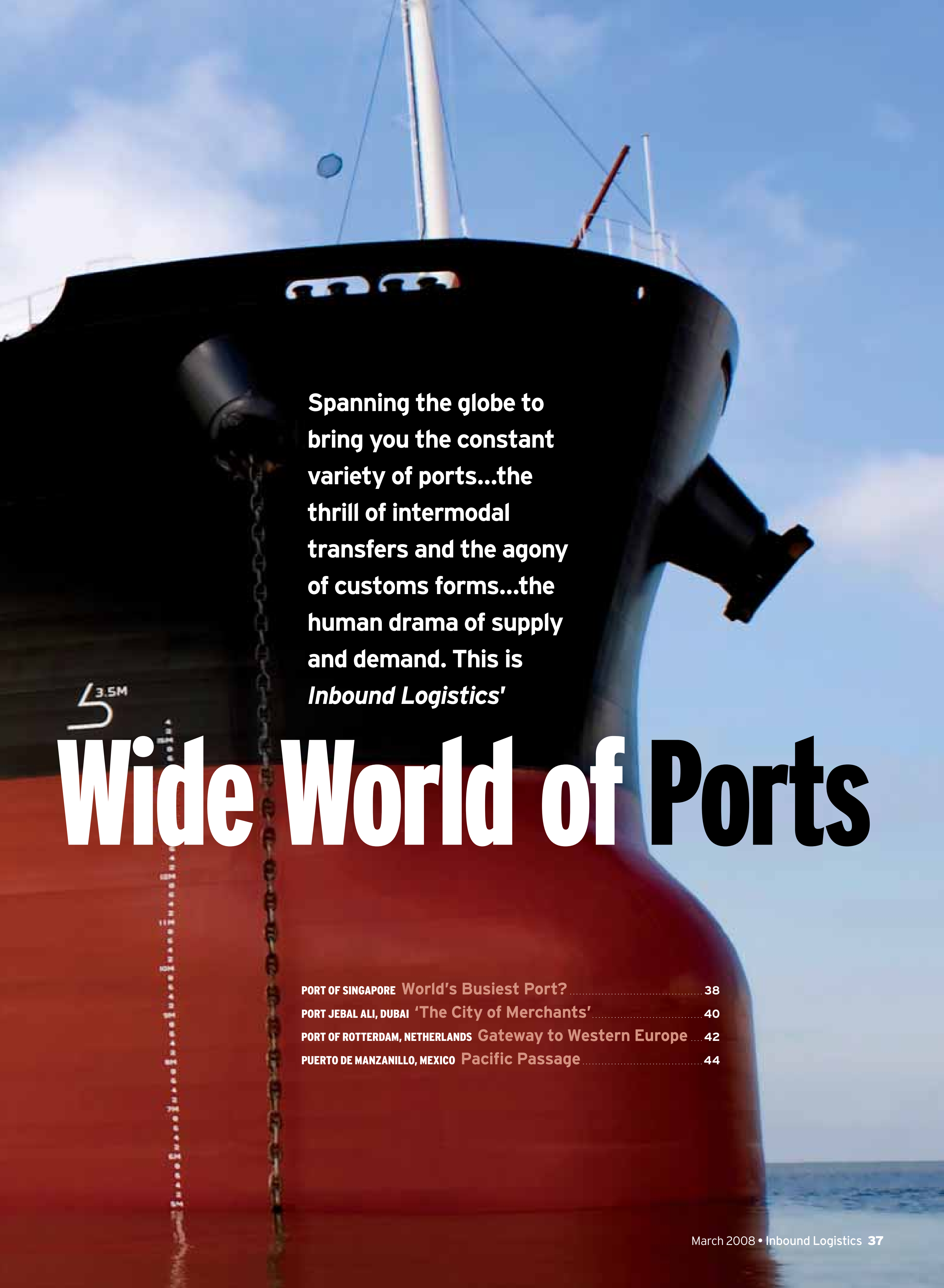
Singapore

		SCORE		
GDP:	$154 billion	9	T	4
EXPORTS:	$451 billion		I	3
IMPORTS:	$396 billion		P	3
FDI (2006):	$60 billion		X	-1

FACTOR: Southeast Asian competition and vulnerability to global economic shifts

As a former British trading colony, Singapore's well-educated, English-speaking, transport-anchored economy is perfectly adapted to global trade. Situated in close proximity to China and other burgeoning Southeast Asian markets and trade lanes, it is arguably the world's busiest and most developed cargo hub. Singapore's port ranks number one globally in container throughput and its airport is ninth in airfreight tonnage. On the downside, because Singapore is so intrinsically tied to global shifts in demand and supply and therefore economic recessions, the government is trying to create a more stable industrial base beyond technology manufacturing to include pharmaceuticals and other niche sectors.

T Transportation Infrastructure
I Information Technology
P People Power



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Wide World of Ports

Port of Singapore

World's Busiest Port?

Since the 5th century A.D., traders moving between China and India have made their way through Singapore's waters. During its history, the city, located in Southeastern Asia, has been a trading outpost for an ancient Buddhist kingdom, a 13th-century Muslim empire, and, beginning in the 16th century, the Portuguese, Dutch, and English governments in succession. Arriving in 1819, British East India Company agent Sir Thomas Stamford Raffles spread word to the West of Singapore's naturally deep harbor.

The expansion of trade throughout Southeast Asia and, in the 20th century, the demand for its tin and rubber products, helped Singapore grow into a shipping powerhouse.

Today, Singapore, noted for its range of marine services, is widely considered to be the world's busiest port, with Shanghai jockeying for position. The government plans a $2-billion port-expansion project in the southwestern area of Singapore known as Pasir Panjang, scheduled for completion in 2013.

VESSEL CALLS:
140,000

MAIN CHANNEL DEPTH:
52 feet

TOTAL TEUs:
27 million

TOTAL CARGO:
533,090 tons

BULK CARGO:
185,956 tons

TOTAL CONTAINERIZED CARGO:
318,672 tons

(all figures reflect 2007 statistics)

? DID YOU KNOW

- According to legend, the city's name comes from the Sanskrit words "singa," meaning lion, and "pura," meaning city. The city's symbol, the merlion—a mythical creature with the head of a lion and the body of a fish–is a reminder of Singapore's longstanding connections with the sea.
- Japanese forces bombed Singapore, the site of a British air base, on Dec. 8, 1941 and occupied the city in February 1942. The island remained under Japanese control until September 1945, when the British recaptured it.
- The maritime industry contributes about **seven percent to Singapore's GDP** and employs about 100,000 workers.
- Singapore's Pasir Panjang Wharves is a ro/ro and car carrier hub, handling **more than 21 million tons of breakbulk and specialized cargo annually**, including 900,000 vehicles.
- Singapore is fast becoming the petrochemicals hub of Asia-Pacific. It has developed a dedicated petrochemical complex on Jurong Island, a group of seven small islands just off the western end of Singapore.

Maritime and Port Authority of Singapore (MPA) • 460 Alexandra Road, #19-00 PSA Building, Singapore 119963 • **www.mpa.gov.sg**

Port Jebal Ali, Dubai

'The City of Merchants'

Once a village of 6,000 residents, Dubai based its economy on fishing and pearl diving until 1966, when oil was discovered nearby. Since then, the wealthy city's population has grown to 1.3 million.

Dubai has two ports–Port Rashid, located within the city, and Port Jebel Ali, about 21 miles southwest of Dubai. In January, all cargo handling operations from Port Rashid shifted to the Jebel Ali terminal; Port Rashid is now used for cruise ships and ferries.

Declared the "Best Middle East Seaport" at the Asian Freight and Supply Chain Awards for the 13th consecutive year, Jebel Ali is the largest container port between Rotterdam and Singapore, with berthing facilities that handle bulk cargo, ro/ro vessels, tankers, and livestock vessels.

The port's owner, Dubai Ports World, projects that Jebel Ali will be able to handle 80 million TEUs by 2030, thanks to the construction of an artificial island and a new terminal.

VESSEL CALLS
128,568

MAIN CHANNEL DEPTH
43 feet

TOTAL TEUs
10.7 million

CONTAINER STORAGE
249 acres

(all figures reflect 2007 statistics)

? DID YOU KNOW

- Completed in 1979, Jebel Ali Port is the **world's largest man-made harbor.** At the time, the port, the Great Wall of China, and the Hoover Dam were said to be the only three man-made objects that could be seen from space.
- The Jebel Ali container terminal has **tandem-lift gantry cranes** that can hoist either two 40-foot shipping containers or four 20-foot containers simultaneously.
- The **Jebel Ali Free Zone**, opened in 1985, sits between Jebel Ali Port, ranked the world's 8th-largest seaport, and Jebel Ali International Airport, the world's largest cargo airport. It offers warehouse, office, and manufacturing space with incentives such as a 50-year exemption from corporate and income taxes.

DP World • PO Box 17000, Dubai, United Arab Emirates • **www.dpa.ae**

Port of Rotterdam, Netherlands

Gateway to Western Europe

Situated directly on the North Sea, Rotterdam has grown from a small 14th-century fishing village to achieve its position today as Europe's largest logistics and industrial hub. The damming of the River Rotte in 1250 created an ideal trading location for the area's fishing industry, and by 1600, the port was able to accommodate as many as 100 herring ships. Warehouses were built on the quays to hold tobacco and spices brought in from South America and the Dutch East Indies.

The construction of the Nieuwe Waterweg (New Waterway) in the mid-19th century created a passage between Rotterdam and the North Sea, a great benefit for ships carrying ore for the German steel industry. The early 20th century established Rotterdam as the primary port for petroleum exports to Western Europe.

After nearly 40 percent of Rotterdam's port was destroyed in World War II, reconstruction efforts greatly expanded its capacity. Today, it handles more total cargo than any port in Europe–approximately 414 million tons per year–and more than 500 scheduled services link Rotterdam with ports worldwide.

VESSEL CALLS
165,000

MAIN CHANNEL DEPTH
75 feet

TOTAL TEUs
10,790,604

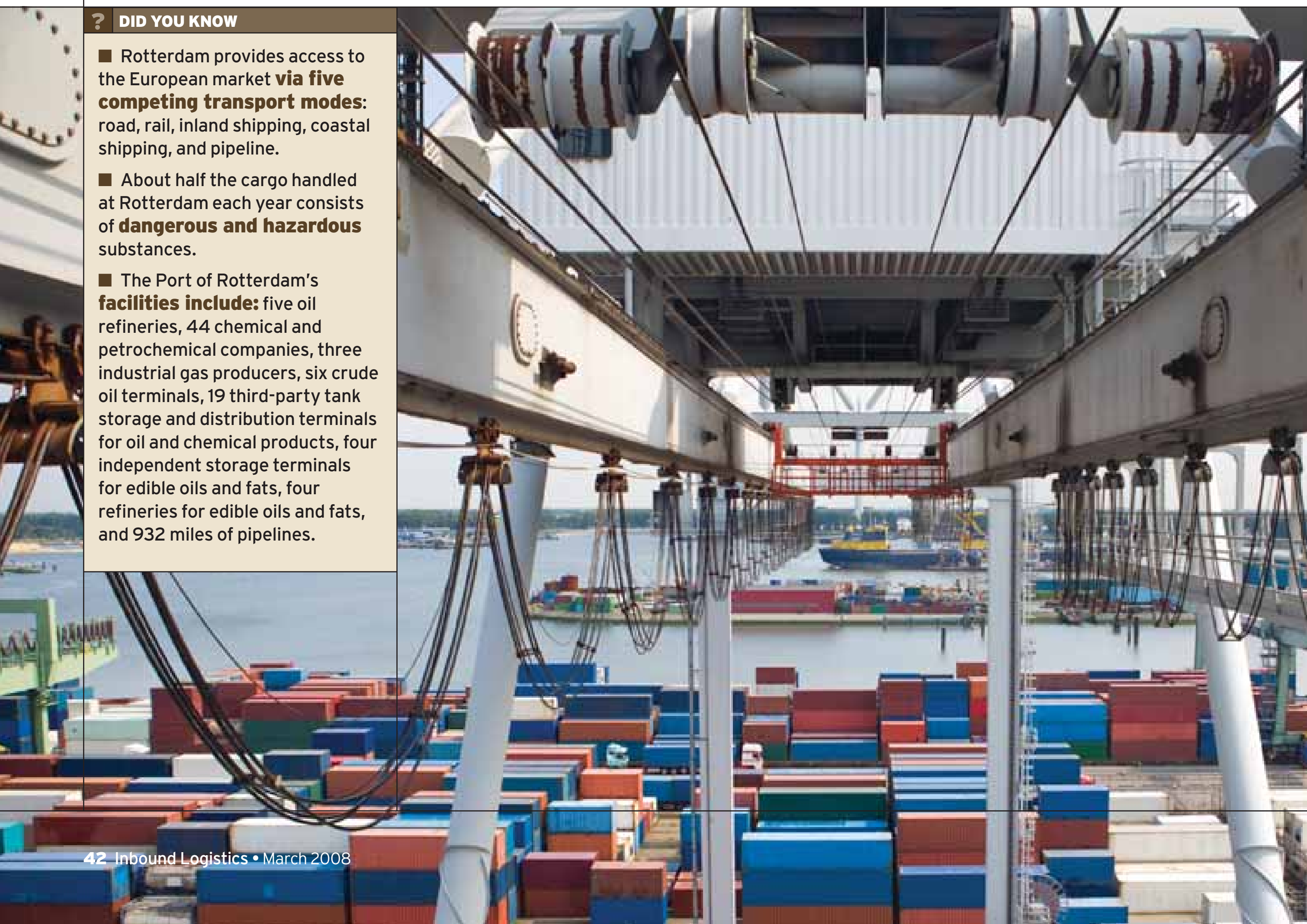
TOTAL INCOMING AND OUTGOING CONTAINERS
6,488,071

TOTAL PORT AREA
25,946 acres

TOTAL COVERED STORAGE
1,235 acres

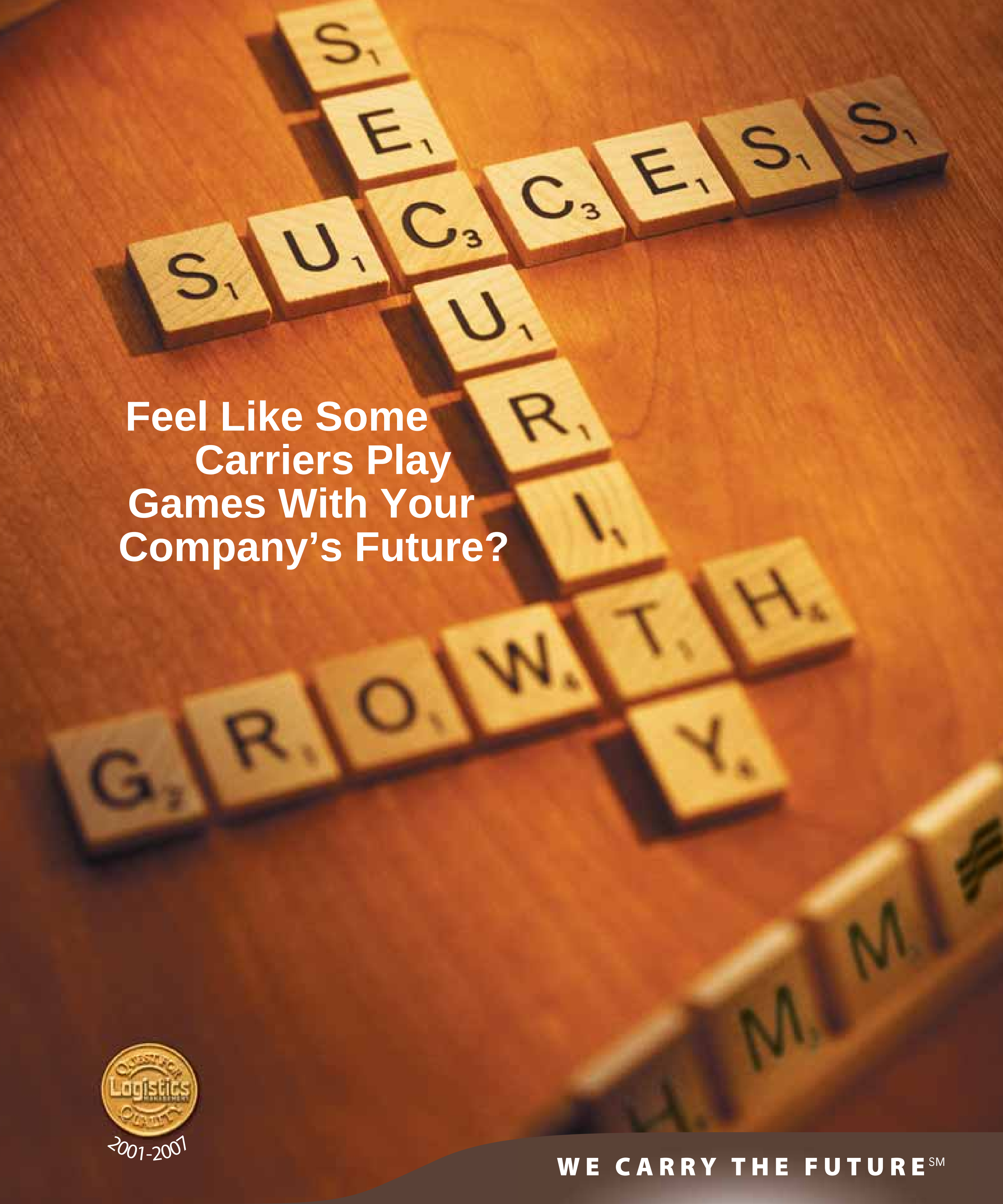
(all figures reflect 2007 statistics)

Rotterdam Municipal Port Management • P.O. Box 6622, Rotterdam 3002 AP, Netherlands • **www.portofrotterdam.com**



DID YOU KNOW

- Rotterdam provides access to the European market **via five competing transport modes**: road, rail, inland shipping, coastal shipping, and pipeline.
- About half the cargo handled at Rotterdam each year consists of **dangerous and hazardous** substances.
- The Port of Rotterdam's **facilities include:** five oil refineries, 44 chemical and petrochemical companies, three industrial gas producers, six crude oil terminals, 19 third-party tank storage and distribution terminals for oil and chemical products, four independent storage terminals for edible oils and fats, four refineries for edible oils and fats, and 932 miles of pipelines.



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Puerto de Manzanillo, Mexico

Pacific Passage

Spanish explorer Hernán Cortés' expedition arrived in the area now known as Manzanillo in the early 1520s. Its abundant manzanillo trees made it a popular location for shipbuilding and the area became an official departure point for future expeditions. Soon, ocean traffic attracted the attention of European pirates, who looted and burned ships for their cargo.

Today, Manzanillo is Mexico's leading Pacific port, with shipping lines serving the Pacific Rim and the eastern seaboard of the Americas via the Panama Canal.

Manzanillo sees twice as much container traffic as Mexico's second-busiest port, Veracruz, located on the Gulf/Caribbean coast. Part of Manzanillo's success stems from its status as the only port in Mexico capable of double stacking containers onto railcars, which provides efficient cargo movement throughout Mexico and into Texas, 1,000 miles away.

MAIN CHANNEL DEPTH
46 feet

TOTAL TEUs
1,279,894

TOTAL PORT AREA
1,100 acres

INSTALLED CARGO CAPACITY
18.5 million tons per year

DOCKING POSITIONS
19

(all figures reflect 2007 statistics)

? DID YOU KNOW

- Manzanillo is considered **the most efficient port** in Mexico for tuna landings.
- Visitors to Manzanillo can witness the optical phenomenon of green flashes or rays that occur on the area's horizon at sunrise and sunset.
- Hernán Cortés twice visited Manzanillo to protect his ships from Portuguese pirates.

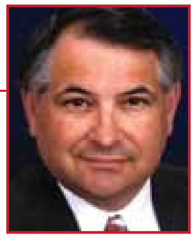
Administracion Portuaria Integral de Manzanillo S.A. de C.V.
Av. Teniente Azueta No. 9, Col. Burocrata, Manzanillo, Colima C.P. 28250, Mexico • **www.apimanzanillo.com.mx**

What makes logistics in China so challenging? Who's really to blame for its much-publicized product quality failures? What's the secret to outsourcing success? A trio of industry experts responds.

MADE IN CHINA

PERSPECTIVES ON THE GLOBAL MANUFACTURING GIANT

ORGANIZED CHAOS



Pain Points and Growing Pains

by Bob Daniell,
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732-861-1487 • Bob_Daniell@sra.com

China's economy has grown nine percent on average each year for the past 20 years. Companies looking to gain competitive advantage by reducing supply chain costs targeted the country as a base of operations, creating an increase in trade volume that has exposed some gaping holes.

One sensitive spot is supplier management. In recent years, some manufacturers have abandoned the low-margin, capital-intensive business of manufacturing goods and focused instead on higher-margin branding and marketing activities. Globalization has increased short-term pressures for speed, forcing supply chain managers to balance resources against requirements.

This strain is particularly evident in China, where many of the resources its global popularity requires are lacking. Companies outsourcing to China face the following obstacles:

1. Regulation. China's logistics sector remains one of the world's most heavily regulated environments, with rules existing at the local, national, and regional levels and differing from city to city. Logistics projects in China still rely heavily on the strength of personal contacts with Chinese bureaucrats. Companies inevitably nurture relationships with members of China's communist party government to work within restrictions.

2. Lack of institutional knowledge and resources. Many Chinese companies don't understand how to leverage best logistics practices, and the government has failed to offer incentives that could improve logistics programs. Inadequate information technology standards, coupled with poor systems integration and equipment, weaken organizations. Unreliable energy supplies further complicate companies' ability to communicate.

3. High transportation costs. The cost of transporting goods in China can be as much as 50 percent higher than in developed regions such as Japan, Europe, and North America. High tolls on the country's roads also contribute to swelling transportation costs. Generally, logistics costs are estimated to be two to three times the norm.

4. Distribution difficulties. Inadequate facilities and management cause high levels of product loss, damage, and pilferage, especially in the perishables sector. An estimated one-third of China's annual harvest is damaged by the inability to store and move produce effectively.

5. Traffic flow imbalance. Wide regional variances in economic activity and development create a major imbalance of goods flowing from China's industrialized eastern region to its less-mature western part, making backhaul opportunities virtually impossible. Although China entered the World Trade Organization, goods can still be subject to unofficial border tolls when moving between provinces.

Supply chain execution in China will continue to be unpredictable until business-process reference models can be taught and implemented locally. Acquiring a universal language for attaining performance metrics, applying leading or best practices, and defining process activity will help companies set–and meet–expectations for doing business in the country.

DON'T BLAME CHINA

Rooting Out Product Quality Issues

by John Tracy, president,
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973-763-6111 • JohnJTracy@aol.com

Don't blame the U.S. government or the Chinese government. Put the shame squarely where it belongs: Last year's infamous toy recall scandal was all about supply chain management failure.

Those of us in the profession don't want to hear it. We want a scapegoat, and it's easy to blame the faceless, "dishonest" foreign supplier.

Oversimplifying such a conclusion benefits no one. The following five factors combine to create product quality problems, and only by examining each facet can we uncover the true root causes.

1. Supplier reliability. By necessity, producers are concerned that suppliers provide goods and services that meet expectations. Global supply networks complicate the situation, and have created the need for quality control, quality assurance, contract law, and ISO certifications.

Businesses try to screen questionable suppliers, but even the most trusted partners can make errors. With luck, the mistakes are discovered and corrected before any serious damage is done. This is why some firms doggedly pursue quality management, while others choose to "economize." Contract law provides a remedy when our judgments, or circumstances, go wrong.

When a problem inevitably occurs, questions fly: Who didn't do their homework? Why were problems discovered after product was distributed to the market?

In the case of the toy scandal, Chinese suppliers took the blame. It was, however, a result of management oversight.

2. Cultural expectations. Even with self-policing ISO standards and tough economic and legal recourse in place, corruption seeps into the supply chain. The most cursory examination of cultural values can explain why a "one size fits all" approach to supplier management is impractical.

In some cultures, personal integrity trumps a legal document. But, as elsewhere, this value might not extend beyond those who have received personal commitments. Other cultures are notorious for producing nothing more than the

minimum needed to meet their own interpretation of an "agreement." The century-old attitude, "they pretend to care about us, we pretend to care about them," is slow to change.

When sourcing from other cultures, it's critical to understand that all parties to an agreement might have different expectations. Remedies that work in one culture may be ineffective in another. Centuries of international trade prove that cultural diversity can be managed. A learning curve may precede success, and those choosing not to recognize it often pay a steep price. Expecting another culture to assume your value structure is a strategy for failure.

3. Cost and risk management. There is nothing inherently wrong with management's desire to drive costs down. But there is implicit folly when companies don't seriously consider relatively small costs – such as on-site inspection and testing – that carry possible high-cost risks, including product recalls and damage to corporate images. Deciding not to inspect suppliers, or relying on third-party government inspectors without a successful track record, reduces one cost while inviting higher direct cost risks.

With such high risks attached to these kinds of transactions, one has to ask: Was anyone paying attention? Were we so busy, so frugal, and so confident that we knowingly or unknowingly took these risks?

The responsibility for cost and the responsibility for risk are often separate domains within organizations. One is relegated to supply chain operations, the other to strategists or the finance department. Whether or not costs and risks are properly balanced is sometimes a mystery.

4. Reliance on software. Separating from hands-on management of products, processes, and people, coupled with confidence that software can manage the supply chain, provides a false reliance on management by remote control.

Today's powerful supply chain software was developed on the backs of practitioners whose experience and knowledge of current practices gave them confidence to anticipate and plan for future management issues. But the future is here, and every issue was not anticipated.

Software planners have long said that finished "program releases" are 95-percent complete, and remain that way forever–as long as they are continually updated. So what happens to the five percent of a program that remains unfinished?

That is what management is about: making the necessary adjustments. Don't assume that solutions built into existing software fully meet current needs or anticipate future ones.

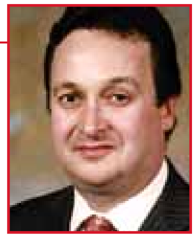
5. Getting the whole picture. Supplier reliability, cultural differences, cost and risk management, and software reliance don't function independently. Failing to consider how all the pieces of this puzzle connect creates a jumbled manufacturing process. For example, deciding to cut costs by eliminating periodic and/or continual inspections might not be connected to recall risks–nor would delaying annual software update expenditures. These cost-cutting measures, however, affect product quality. Who is responsible for these decisions? Suppliers? Chinese culture? The government?

Our desire to drive costs down without fully recognizing the implications? Our reliance on software rather than common sense?

We have known the principles of good supply chain management for decades–perhaps even centuries. They require that each piece of information the supplier provides is useful for timely and accurate representation of the product and adherence to marketing schedules. To do less is a gamble–and the cost of losing can be steep.

QUANTUM LEAP

Overcoming China's Sourcing Challenges



by Simon Kaye,
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The total logistics flow through China topped $10 trillion during 2007, estimates the China Federation of Logistics and Purchasing, and Shanghai's throughput reached 560 million tons in 2007, reports the Shanghai Port and Shipping Bureau.

As a still-developing market economy, China – now the eighth-largest economy in the world and the second-largest in Asia–poses enormous and complex logistics challenges for manufacturers that source there. Its rapid growth continues to strain logistics channels even as it adds capacity.

Recognizing China's Challenges

China's logistics challenges are illustrated in a recent report by the Wharton School. Although China and the United States are physically the same size, China has only one-third the highway network. And its six million trucks are owned by nearly two million trucking companies, making for highly fragmented logistics control.

Overall, delays, red tape, and administrative costs as a result of fragmented shipping mean Western multinationals can expect about 20 percent of their Chinese sourcing costs to be logistics-related, compared with an average of about 10 percent in the West. And shipping goods from China to the West typically takes six weeks–much longer than sourcing from Latin America or Europe, according to the Wharton report.

Architecting a global logistics system in this environment requires a quantum leap from past shipping practices. Global supply chains can be notoriously delicate and subject to catastrophe from constantly shifting economic pressures, government policy, and increasingly erratic weather.

An inefficient supply chain with outdated knowledge and procedures can create unnecessary storage and demurrage charges at ship terminals and airports, caused by information snags, missing or ill-prepared shipping documents, and inappropriate cargo routing. Given these realities, electronic tracking techniques may become more important to global manufacturers sourcing in China.

Creating a Comprehensive System

An electronic tracking and documentation system is a comprehensive way to monitor transportation, stocking, and compliance quality, so that suppliers and shippers understand what is expected of them. This also includes installing processes to calculate cross-border tariffs and excise taxes, as well as regulatory and licensing compliance.

A manufacturer must always know the status of mission-critical factors in its supply chain, even when outsourcing freight management to a third party. That means knowing what products have shipped, what is in transit, what is due to be shipped, where freight is in the cycle, and how the shipment is meeting delivery schedules. Electronic tracking adds transparency to a process that can quickly become opaque and convoluted as materials and packaging shuttle back and forth between multi-tiered markets.

Electronic systems for ensuring that supplies are delivered on time and with the proper quality require logistics companies to implement an electronic tracking protocol. The ability to track freight as it moves across the world reduces pressure on the manufacturer's transportation department, and improves both efficiency and cost effectiveness.

Integrating with Trading Terms

Before the wide use of online technology, trading terms were generally limited to Cost, Insurance, and Freight (CIF) charges. Using CIF terms when negotiating the purchase of merchandise requires that all insurance and freight charges be included in the price, making it hard to verify those costs. In contrast, shipping Free On Board (FOB) offers more competitive freight rates and enhanced shipment control. FOB integrates well with electronic tracking because increased supply chain visibility and control is a critical FOB benefit. By taking control of goods at overseas shipment ports, an importer is better able to obtain accurate and timely shipment information by working with a third-party logistics provider. In this way, the manufacturer is assured the freight partner is working for its best interests–not the local supplier's.

The Avenue of the Saints highway connecting St. Paul with St. Louis **is becoming one of the most important logistics corridors in the country.** Find out what makes the Avenue unique and why companies that locate there find it heavenly.

SPECIAL ADVERTISING SUPPLEMENT

Avenue of the Saints

Out in the Middle of Everywhere!™

"Avenue of the Saints is the emerging transportation corridor in the Midwest, and is becoming one of the most important corridors in the country. The Iowa Avenue of the Saints Logistics Corridor touches 13 counties, a population of 320,000, and a labor force of 180,000. It also connects with transcontinental corridors I-80 and I-35."

That's how Bob Henningsen, president of Smart Solutions Group, a Des Moines economic development consulting firm, and former director of business development for the Iowa Department of Economic Development, characterizes the Avenue of the Saints, the recently completed north-south transportation corridor linking St. Paul, Minn., with St. Louis, Mo.

Henningsen, along with others in the business and transportation sectors, believes that the Avenue of the Saints "puts Iowa squarely on the map" as an ideal location for manufacturing and distribution facilities.

Companies the likes of Target and Martin-Brower agree. They and others – in growing numbers – are choosing the Iowa Avenue of the Saints Logistics Corridor as the site for major Midwest distribution centers. These companies are investing hundreds of millions of dollars in logistics facilities, and reaping the benefits of fast, economical access to major Midwest cities such as Chicago, Kansas City, St. Paul/Minneapolis, St. Louis, and beyond.

The Avenue of the Saints, the highway that spans 600 miles from St. Paul to St. Louis, was only a dream when Iowa community leaders proposed it to Congress 20 years ago. But after more than a decade of construction, the Iowa section of the Avenue – covering 268 miles past such towns as Mason City, Charles City, Nashua, Plainfield, Waverly, Cedar Falls, Waterloo, and the counties of Butler, Chickasaw, Buchanan, and Grundy – is now a reality. It is one of the most ambitious road construction projects in Iowa's history, with a price tag of approximately $541 million. More than 80 percent of the funds come from federal sources.

Today, the Avenue of the Saints corridor is home to nearly seven million people and 250,000 businesses.

HISTORY OF THE SAINTS

The push for the Avenue of the Saints began in 1985 with a lobbying effort by southeast Iowa community leaders, who ultimately developed a broader coalition of supporters. One motivation behind their campaign was the desire to provide a more efficient transportation network for Mount Pleasant's huge Wal-Mart distribution center, which employs 1,200 people and handles an estimated 3,500 trucks weekly that deliver to the company's retail stores in several states.

The late Ernie Hayes, a Mount Pleasant businessman, coined the phrase "Avenue of the Saints," along with New Hampton banker Robert Rigler and Warren Dunham, former director of the Iowa Department of Transportation. They thought a catchy name would draw attention to the project in Washington, D.C.

SAINTS BE PRAISED. The 600-mile Avenue of the Saints corridor, which links St. Louis with St. Paul, is home to seven million people and 250,000 businesses.

The 1989 federal Transportation Appropriations Act gave the Avenue of the Saints project its initial financial footing with a $400,000 appropriation to study the feasibility and necessity of constructing a four-lane highway from St. Louis to St. Paul.

The feasibility study was completed in March 1990. It evaluated four possible routes for the Avenue of the Saints. Two rejected routes would have followed U.S. Highway 52 and U.S. Highway 63 from St. Paul through Rochester, Minn., to Waterloo, Iowa. Another rejected route traveled U.S. 61 from St. Paul through La Crosse, Wisc., and Dubuque to Davenport, Iowa, and U.S. 67 from Davenport to St. Louis.

On May 15, 1990, the Federal Highway Administration endorsed the steering committee's recommendation for the route that followed:

- Interstate 35 from St. Paul to a point south of Clear Lake, Iowa
- U.S. Highway 18 to Charles City, Iowa
- U.S. Highway 218 to Cedar Falls, Iowa
- Iowa Highway 58
- U.S. 20 around Cedar Falls and Waterloo, Iowa
- Interstate 380 from Waterloo through Cedar Rapids to Interstate 80 near Coralville, Iowa
- U.S. 218 to Donnellson, Iowa
- Iowa 394 and Missouri Highway B to Wayland, Mo.
- U.S. 61 and Interstate 64 from Wayland to St. Louis.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) dubbed the Avenue of the Saints an official "high-priority corridor" and provided $188 million in federal funding through fiscal year 1997 for corridor projects in Iowa, Missouri, and Minnesota. In addition, ISTEA provided $14.8 million for the construction of the Mason City bypass, a key segment of the designated route.

About 140 miles of the Saints highway follows previously built four-lane corridors in Iowa, including Interstate 380 and a 27-mile stretch of Interstate 35 in northern Iowa. Another 128 miles of the Iowa route includes sections where a two-lane highway has been widened to four lanes, or where four new lanes have been constructed on a new alignment.

Construction on the Saints highway in Iowa began in the early 1990s; sections opened intermittently over the ensuing years.

In August 2001, the Iowa Department of Transportation assigned the Avenue of the Saints its own highway number: Iowa 27. This was an additional number to existing routes; however, in 2004, Iowa 394 was decommissioned, and Iowa 27 is now a standalone highway south of the split with U.S. 218.

A new four-lane bridge across the Des Moines River opened on Dec. 8, 2004, replacing a toll bridge. A new four-lane road between the bridge and U.S. 61 south of Wayland opened the same day. This road was numbered Missouri State Highway 27 to match Iowa's Avenue of the Saints number.

Iowa completed work on the last stretch

Growth Along the Iowa Avenue of the Saints Logistics Corridor 2001–2007

$322.5	million in new capital investments made by distribution facilities
2.42	million square feet of new distribution space constructed
342,450	previously vacant square feet of distribution space filled
19	new and expanding distribution companies added to the corridor

SOURCE: Iowa Avenue of the Saints Logistics Corridor

of the Avenue of the Saints in the spring of 2006. It extended 7.5 miles and followed U.S. 218 and Iowa 27 from Iowa 16 to Iowa 2 east of Donnellson in Lee County, southeast Iowa.

The only four-lane construction remaining on the Saints highway outside Iowa is 15 miles in northern Missouri on U.S. Highway 61 between Wayland and Canton, which is scheduled for completion this year. Minnesota's section, on existing Interstate 35, is already in place.

The Avenue of the Saints in Iowa represents a dramatic improvement over the old north-south road system linking St. Paul and St. Louis, according to Dena Gray-Fisher, spokesperson for the Iowa Department of Transportation.

"The route used to wind through several small towns, with 25 mile-per-hour speed limits and lots of stop-and-go traffic," she recalls. "Now, the completed four-lane thoroughfare increases safety, reduces congestion and bottlenecks, and eliminates dangerous crossings and intersections."

The Avenue reduces time as well. "Time savings vary by destination and speed, but in general, the Avenue saves about one hour in transit time across Iowa," Gray-Fisher notes.

A MAGNET FOR DISTRIBUTION

The Avenue of the Saints in Iowa is performing exactly as its proponents hoped it would: It has made the corridor an extremely attractive site location for manufacturing and distribution operations.

"Since 2001, 19 logistics and distribution companies either established new locations or expanded existing ones," reports Lisa Skubal, vice chair of the Cedar Valley Regional Partnership, based in Waterloo-Cedar Falls. "These companies opened approximately 2.4 million square feet of new distribution space."

Mass retailer Target Corp., for example, chose to build a distribution center in Cedar Falls, largely because of the accessibility the Avenue of the Saints provided to its stores in the Midwest.

"The key for Target was attaining

proximity and an efficient way to reach its stores," Skubal explains. "The retailer wanted to be near Highway 20. It looked at many sites within that radius, then chose Cedar Falls. We were able to move fast to lock in an option on a site in a matter of days."

Another major company calling the Avenue of the Saints home is Ferguson Enterprises Inc., the largest wholesale distributor of plumbing supplies and pipes, valves, and fittings in the United States, and the third-largest heating and cooling equipment distributor. Ferguson established a 608,000-square-foot DC in Waterloo, Iowa, in 2004 because it provided proximity to contractors in the Chicago, Minneapolis, and St. Paul markets.

SETTING UP SHOP

Many other companies have established transportation/distribution operations along the Avenue in the past few years. Some examples:

- Overnite Transportation established a 3PL operation for Ferguson Enterprises.
- FedEx Ground expanded its facility in Waterloo.
- New Hampton Transfer and Storage added 60,000 square feet and spent more than $1 million in New Hampton.
- Denso Corporation, a Japanese company providing parts for the automotive and agriculture industries, expanded its distribution center and built a new facility in Waterloo.
- Ice cream maker Schwann's built a 10,000-square-foot distribution center in Cedar Falls.
- Olderog Wholesale Tire Inc. purchased a 25,250-square-foot speculative building in Grundy County.

"These examples illustrate the critical mass that is beginning to form," Skubal observes. "Developing more than two million square feet in the last six years is impressive. Our connection to the Avenue puts us on the map."

"Being connected to two four-lane highways/interstates makes us more marketable," agrees Angela Determan, director, North Central Iowa Alliance. "It has done wonders for us.

"Because of the markets we can reach using the Avenue, we are perfectly positioned to be a hub for the Midwest, with spokes to destinations east and west," she says. "The Avenue provides transportation alternatives to companies that locate here. For example, they can use intermodal transportation by taking advantage of the Class 1 railroads in the area.

"In addition, many of our utilities providers have built reputations for being very cost-competitive," Determan adds. "They assist financially and technically with new development."

The Avenue has also made 3PLs such as Crescent Park Corp., a logistics/warehousing firm in Mason City, more accessible, according to Jon Prieskorn, logistics manager.

"In the past, to deliver east from our plant, trucks had to drive south to Des Moines to connect with Interstate 80," he notes. "Now, they drive four miles to the Avenue.

"Deliveries to Iowa City used to take 3.5 hours. Today, drivers can make it in slightly more than two hours," Prieskorn adds.

The efficient highway access offered via the Avenue reduces freight costs, making it easier for companies to grow in northern Iowa.

"Although this area is within a 500-mile radius of 20 to 25 percent of the nation's population, it used to be perceived as remote, with poor transportation access," Henningsen observes. "The Avenue of the Saints corridor changes that perception."

> **"Although this area is within a 500-mile radius of 25 percent of the U.S. population, it used to be perceived as having poor access. The Avenue of the Saints changes that perception."**
>
> — **BOB HENNINGSEN,** President, Smart Solutions Group

WHO WENT MARCHING IN

Here's a closer look at some companies that have located on or near the Avenue of the Saints highway corridor.

Winnebago Industries. One household name company located on the Avenue of the Saints is Winnebago Industries, the country's leading recreational vehicles manufacturer.

In the largest expansion project in its 44-year corporate history, Winnebago in 2002 built a 300-employee, 204,000-square-foot assembly plant in Charles City, Iowa. At full capacity, the new $12.5-million facility increases Winnebago's annual production of motor homes by some 30 percent.

"Charles City has been an excellent partner to Winnebago Industries," notes Winnebago Chairman, CEO, and President Bruce Hertzke. "We couldn't be more pleased with the success of our facilities, our excellent workforce, and the great relationship we have with the Charles City community." Winnebago also likes the area's labor availability, company officials note.

Winnebago's Forest City, Iowa, campus, located just 10 miles from the Avenue of the Saints, is the largest motor home manufacturing facility in the country. About 3,000 people work at the 2.5-million-square-foot campus.

"The Avenue of the Saints connects

Motor home manufacturer Winnebago operates three facilities in Iowa. Its 2.5-million-square-foot Forest City assembly plant, located 10 miles from the Avenue of the Saints, employs 3,000 people.

the Charles City plant to Winnebago's other facilities in Iowa," reports Randy Potts, vice president of manufacturing. Winnebago's third Iowa facility is located in Hampton.

"We move about 15 truckloads of product among our three campuses every day," says Ron Berry, Winnebago's warehouse and distribution manager. "The most efficient way to get these products where they need to go is through the Avenue."

Winnebago handles 50 million pounds of freight annually. These shipments include raw materials, purchased components, and manufactured products. It uses about 60 LTL and truckload carriers, and a small private fleet for intra-plant moves.

"The Avenue provides fast access to and from our production plants," Berry says. "It has increased the availability of transportation, and has improved service, delivery times, and access to suppliers."

Overall, "the Avenue has cut transit times and made our operations more efficient," he concludes.

Target Corp. Another prominent business resident along the Avenue of the Saints is Target Corp. In 2001, the mass retailer announced plans to build a 1.4-million-square-foot distribution center in Cedar Falls, Iowa. Opened in 2002, the center distributes general merchandise to Target stores in Iowa and surrounding states.

During its site selection process, Target considered several Iowa communities, as well as locations in nearby states. The retailer chose Cedar Falls because of its excellent highway access, skilled workforce, and quality of life throughout the Waterloo/Cedar Falls area.

Target likes the Cedar Falls area so much it recently decided to build a 400,000-square-foot cold-storage perishable grocery warehouse adjacent to the existing DC.

The new warehouse will cost approximately $35 million to construct. Total investment in the project, including refrigeration and other equipment, will reach between $80 million and $90 million. When completed, the refrigerated DC, together with the general merchandise DC, will represent an investment in buildings, machinery, and equipment of close to $200 million.

"Target is happy to be part of the Cedar Valley community," the company says. "Our experience with the community and the workforce contributed to our decision to build a new distribution center here."

Ferguson Enterprises Inc. Founded in 1953, Ferguson Enterprises was acquired by UK-based Wolseley plc in 1982. Headquartered in Newport News, Va., Ferguson posted sales of $9.7 billion last year, and employs 22,000 associates in 1,400 service centers located in all 50 states, the District of Columbia, Puerto Rico, Mexico, and the Caribbean.

Ferguson distribution centers stock more than 45,000 different products from a diverse group of suppliers. Approximately 1,200 associates in Ferguson's distribution center network process between 500 and 600 vendor shipments weekly and 2,500 to 3,500 orders daily at each DC. Some 1,400 Ferguson branches nationwide receive shipments from the company's DCs.

Ferguson's DCs are the heart of its supply chain network and a key competitive advantage. By the end of 2008, the company will have a total of 11 DCs serving the United States and Canada. "Through the distribution network, we are able to maintain excellent relationships not only with our customers, but with our suppliers as well," the company says.

Ferguson's Waterloo facility, which opened in the fall of 2005, "has enhanced our distribution center network by providing improved accessibility to a large portion of the United States," according to the company.

"When considering locations for any of our distribution centers, we take into account the number of locations that we will be able to service, as well as the ease of transportation into and out of the particular location," the company states. "The Waterloo community and the state of Iowa were extremely cooperative and worked in conjunction with Ferguson to commence operation in the area."

Ferguson currently employs 175 associates at the Waterloo distribution center. "We have found the local labor pool to be plentiful and have been very pleased with the positive attitude and strong work ethic that seem to be common characteristics of those in this general area," the company concludes.

Stellar Industries. Founded in 1990, Stellar Industries Inc., Garner, Iowa, manufactures high-quality truck-mounted equipment cranes, hooklift loaders, air compressors, and other equipment used to service tires and truck equipment in the field. Customers include tire service shops that serve commercial farms, over-the-road and off-the-road tires, vending machine and motorcycle dealers, and waste management, construction, and landscaping companies.

Stellar operates a 150,000-square-foot production facility in Garner, 20 miles off the Avenue of the Saints, midway between Minneapolis and Des Moines. Products and materials move inbound via small parcel and LTL carriers; some truckload shipments are delivered by the company's private fleet. A third-party logistics provider manages Stellar's inbound transportation.

"Transportation service to our location is plentiful," notes Steve Schnieders, operations manager for Stellar Industries. "The Avenue of the Saints corridor offers unlimited shipping opportunity. It also provides access to good traffic lanes, which helps us cut freight costs."

The quality of the workforce and breadth of the labor pool also provide benefits to Stellar, which employs 250 people.

"Even though Garner's population is only 3,000, we draw employees from Mason City, which is 30 miles away with a population of 40,000," Schnieders says. "People make the commute because this is a great place to work."

Crystal Distribution Services. Crystal Distribution, a third-party logistics service firm located in Waterloo, Iowa, handles everything "from farm to fork," says Tom Poe, president. The company provides temperature-sensitive processing, warehousing, and distribution services for meat, dairy, and other perishable food items.

"We're located in the center of northeast Iowa's food production belt," Poe notes. "The food products we handle come from surrounding areas as well as from the north – Minnesota and Wisconsin. These goods flow down the Avenue of the Saints, through us, then farther on to markets south.

"Our location provides excellent access to all Midwestern cities, as well as the East and West Coasts," he continues. "We also handle food exports, a growing business in this part of Iowa."

Crystal operates more than five million cubic feet of freezer and cooler space in three Cedar Valley locations. Its facilities are served by both truck and rail/intermodal.

Ferguson sited a distribution center in Waterloo, Iowa, because of its fast, efficient transportation access to a large part of the country.

Education Along the Avenue

"The Saints corridor provides access to tremendous education resources," says Bob Henningsen, president of Smart Solutions Group, a Des Moines economic development consulting firm. "Three universities–the University of Northern Iowa, University of Iowa, and Iowa State–and four community colleges provide customized, flexible industrial training that can be applied to the logistics industry."

The University of Northern Iowa in Cedar Valley is developing an undergraduate supply chain management program, according to President Ben Allen. "We can't keep up with demand for supply chain students," he notes. "Our marketing department also offers courses that concentrate on logistics management."

In addition, the University of Northern Iowa boasts "one of the best performing arts centers in the state," Allen says. "This attracts tremendous talent to the area. In fact, the arts center is one of the reasons Target located here."

The universities and colleges also host lectures, guest speakers, sporting events, and other cultural and educational activities.

Iowa is taking steps to ensure that it can supply the work force to meet tomorrow's business needs. For example, it has created the Institute for Tomorrow's Work Force, a state entity co-chaired by President Allen. The group is charged with working to maintain and develop Iowa's K-12 and college/vocational education system to meet the future needs of companies locating in the state.

The company uses its own private fleet for local moves, and a network of large refrigerated trucking companies for nationwide coverage.

"We are located one-quarter mile from the Avenue of the Saints, and its good highway access has been a boon to our business," Poe reports. "We've been in the Waterloo area since our founding 100 years ago. When it came time to expand, we considered four other potential communities. We decided to stay because of the improved highway access."

In the 1980s, Waterloo was the largest metropolitan area in the country without an interstate connection. "The Highway 380 connection gave us access to I-80. The completion of the Avenue of the Saints north to St. Paul helped economic growth in our area tremendously," Poe notes.

"In the perishable foods business, every minute counts when you run a reefer truck," he adds. "Now that the Avenue is completed, we cut one hour from our transit time. That's huge."

The cost of living in the region also attracts people and companies. "Over the last decade, many people who were raised in Iowa but moved to large cities such as Chicago and Los Angeles returned because our economy is growing and they miss the quality of life," he says.

Progress Casting Group. Progress Casting Group provides total aluminum casting solutions for domestic and international customers including automotive and motorcycle OEMs.

Three years ago, the company, headquartered in Minneapolis, opted to build a new 90,000-square-foot casting plant in New Hampton, Iowa.

"We chose Iowa because we can logistically satisfy growing customer demand to the east and west," says Chris Brock, production manager at the New Hampton facility. "In particular, we can easily and cost-effectively serve our biggest customer, located 200 miles away in Milwaukee. Good interstates and highways run in every direction."

From a labor standpoint, Iowa has a strong work ethic and small town values, both important factors in Progress Casting's decision.

L&M Radiator Inc. L&M Radiator celebrated Independence Day two years ago when it opened a plant in Independence, Iowa, located between Waterloo and Dubuque. L&M manufactures radiators and heat exchangers at locations in the United States and overseas.

L&M brings in raw materials such as copper and brass, and ships finished products all over the world. Seven or eight flatbed truckloads move shipments weekly from the Independence plant.

When the company began looking for a Midwest plant site, it considered Wisconsin, South Dakota, and Iowa.

"Independence seemed to have a good labor pool and offered attractive incentives on an existing building," recalls Jamie Bonazza, L&M's production manager. "We also found a steel fabricator supplier that was opening a plant next door. All that made Independence a good fit for us."

From a transportation viewpoint, "we're in a very good location," says Rin Kurtz, shipping manager for L&M. "No one has a hard time getting here. We're 15 miles from I-30 and sit right on U.S. Highway 20."

MAKING THE CONNECTION

The Iowa Avenue of the Saints Logistics Corridor is an ideal site for distribution facilities of any size. "The corridor connects us to major business centers in the Midwest and beyond," notes Henningsen. "Our job now is to get the word out about the Iowa Avenue of the Saints Logistics Corridor."

With its easy transportation access, low cost of living, strong work ethic and labor pool, and high quality of life, the Iowa Avenue of the Saints Logistics Corridor is a viable candidate for any company's short list of potential manufacturing and/or distribution center sites. ■


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Trading Spaces

Will the shift to global sourcing–combined with an economic downturn, housing slump, high fuel costs, and lack of visibility–unseat the furniture industry? BY LISA TERRY

Transitional isn't just a style of furniture. It also describes the furniture supply chain, which is beginning to move beyond first-phase, low-cost country sourcing strategies just as the housing market hits a slump, taking furniture sales with it.

Furniture companies face a confluence of difficult conditions, particularly from demanding consumers whose buying decisions are increasingly based not just on low price, but on how fast a retailer can deliver. They also expect their deliveries to be in perfect condition, gently carried into the home by polite drivers who leave no tracks in their wake. An economic slowdown, increased competition with furniture e-tailers, little use of technology apart from some top players, and a high percentage of the sales dollar dedicated to logistics costs make it a tough time to be in the furniture business.

But the news isn't all bad. Increasing use of consolidation centers near the source of supply or strategically placed near customers, innovative and fast cross-country furniture carrier services, the growing availability of real-time visibility tools, and an increasingly collaborative attitude among trading partners are some strategies helping the furniture industry feel its way toward effectively managing supply chain costs.

"It's more important than ever to control costs and maintain service," says Carl Abernathy, vice president sales and marketing for specialized furniture carrier Four Truckers Inc. "It's critical for furniture companies to scrutinize every aspect of their supply chain."

While the furniture industry has been more willing to share ideas than most, trading partners are still working to transform adversarial supply chain relationships into collaborative ones. "We have to recognize that we all play for the same team, and the object is to move the product from the point of manufacture to the customer," says Pat Rooney, a consultant for Cambium-Group, a third-party logistics provider based in Greensboro, N.C. That level of cooperation becomes particularly critical in tough economic times, when it takes creative strategies to keep dressers and dining room sets moving on time, damage-free, and cost efficiently.

[CASE STUDY] Fius Massages Its Supply Chain

Fius Distributors has been in business for only 18 months, but the North American distributor has already tweaked its logistics strategy several times. Now it's about to change again, as the company adds a large retailer—Inada—to its roster of specialty store customers.

Fius buys Inada massage chairs by the container from China and Japan, and brings them into U.S. ports using a freight forwarder. It stores the containers in two of its 3PL's DCs in Indiana and Santa Fe Springs, Calif. LTL carrier Old Dominion transports items to Fius dealers either one at a time or collectively. When dealers request it, Fius uses specialized furniture carrier MFS to move goods individually for white-glove delivery to customers.

Managing that complexity as a start-up can be tough.

"We'd like to find a carrier that can move the goods from China to the customer's home, but we have not yet been successful," says Clifford Levin, president of Fius. "The strategy we currently employ provides the fastest delivery for the time being."

Fius is also challenged by keeping a lid on rising freight costs; even customers who spend $6,000 on Inada's massage chairs are cost-sensitive, and SMB retailers need to maintain margin.

"Vendors are trying to hold freight costs down for their customers, and we're trying to keep retail costs down to the end customer. We're absorbing freight costs to maintain market share," Levin says.

Fius also needs real-time visibility to avoid manual processes in ensuring chairs are reaching their destination; with a price tag ranging from $3,000 to $7,000, it can't afford to lose sight of even one massage chair.

The distributor is looking forward to building the market muscle of a large retailer. "Inada can assist us with supply chain challenges," says Levin. "Because it has buying power, it can probably pull containers right from ports. Acquiring this customer creates a logistics and sourcing challenge, but I know it will make us a better company."

One area that has taken Levin by surprise is the lack of scrutiny over last-mile deliveries. "Because quality is such a driving factor, especially in the last mile to the home, I'm not convinced that carriers are aggressively following up with customers to determine their satisfaction with the service, or using penalties or rewards based on customer feedback," he says.

THERE'S THE RUB. When distributor Fius took on a new massage chair customer, it had to shake up its logistics strategy.

[HOT TOPICS] Top-of-Mind Issues In Furniture Logistics

Fuel Costs The fuel surcharges ocean carriers imposed last January are particularly bad news for the furniture industry, with its low SKU counts per container. Fuel surcharges reached $950 per 40-foot container in January 2007 – a difficult hit to absorb, particularly in today's economy.

Not surprisingly, some furniture retailers take issue with the rate increase. "Carriers are trying to make a profit off fuel," claims Gill Mitchell, corporate traffic manager for Salt Lake City, Utah-based furniture retailer R.C. Willey. A vessel carrying 4,500 containers could net $3.6 million in fuel costs, he calculates.

"No way is that vessel burning $3.6 million worth of fuel," Mitchell notes. Yet, because there is no standard for fuel cost reporting in the ocean industry, shippers do not always know what they are paying. That makes it difficult for furniture companies to forecast costs, and is particularly frustrating with carrier contract renegotiations set for April.

The Need for Speed Furniture retailers may turn inventory just four to five times a year, but when furniture does sell, customers want it fast. Furniture companies have tested various strategies for maintaining ready inventory while controlling costs.

Furniture manufacturers continue to offer discounts to retailers willing to buy full containers. In addition, they are opening consolidation centers in Asia to combine SKUs–bedroom and dining sets, for example–and even mix several customers' orders. Retailers are also increasingly asking manufacturers to amass stock in strategically located U.S. distribution centers to facilitate quick deliveries.

"Furniture retailers initially jumped on the bandwagon to buy direct containers Free-on-Board (FOB), but now are moving toward buying more domestically and requiring manufacturers to hold additional inventory in the United States," says Bill Smith, director supply chain management, Globe Express Services, a global logistics solutions provider.

Many furniture companies prefer to use specialized carriers, particularly for LTL deliveries. Specialized carriers can help avoid damages that occur when mixing furniture with other goods and surcharges for difficult delivery locations. But they base scheduling on volume, while common carriers offer the benefit of regularly scheduled shipments.

Some companies take a different approach to furniture deliveries. Freight forwarder Manna Freight Systems (MFS), for example, relies on specialized pallets to speed deliveries – cross-country within five days. "It's high-speed, white-glove home delivery," explains Robert Masters, MFS senior vice president.

That speed provides a business benefit particularly for Internet furniture purchases: keeping a lid on returns.

"The sweet spot for furniture delivery is 72 hours. Until then, there is little buyer's remorse," Masters says. "But, after waiting six days for delivery, customers tend to change their minds."

It's better to deliver one or two days late than damaged, he adds.

SNAPSHOT
FURNITURE LOGISTICS

Total Landed Costs When furniture was largely sourced domestically, shipping was standardized – freight moved either pre-paid or collect. Costs were predictable and businesses maintained an advantage by keeping product close to demand. But the growth of offshore sourcing has shifted distribution locations and complicated the equation.

"Furniture retailers are moving away from collect freight toward landed freight charges," Abernathy says. "They want to sell to customers with freight included so costs don't vary dramatically."

Visibility Furniture companies need more supply chain visibility than most have today. Large manufacturers and retailers are investing in visibility technology, and operators at all levels are demanding data from their 3PLs and freight forwarders.

"Customers want to talk about four things: cost, quality, service, and information," says Abernathy. "For furniture carriers, information can mean the difference between getting or losing the business."

Some third parties deploy processes and technology specifically to help small furniture retailers and wholesalers better manage their suppliers.

"Small companies are used to domestic practices, receiving delivery within two weeks," notes Tom Craig, general manager for LTD Supply Chain, a logistics solutions provider based in Glenmoore, Pa. "But when sourcing internationally, the furniture is not even loaded on the boat within two weeks. Small companies have to adopt best practices used by larger companies, such as being demand-driven and addressing supplier performance issues."

Damages Take a large, delicate product such as furniture, and add inadequate packaging, long shipping distances, increased touches, and the need for fast delivery. The result? An increase in damages, which can drive up costs and impact customer satisfaction.

"The slightest scratch can cause the customer to refuse delivery," says MFS' Masters. "Worse, a consignee may refuse a 10-item shipment because one piece is damaged."

To tackle the issue, furniture companies are placing a renewed emphasis on packaging standards that had been relaxed as production moved to low-cost countries.

"By investing $3 or $4 more in packaging, a company can save hundreds of dollars," says Cambium's Rooney. "Once furniture is damaged, it's costly to repair and can't re-enter the new product stream."

If companies don't demand a high level of quality packaging and inspection, they likely need more "deluxing"–the process of preparing furniture for final delivery. The use of low-quality materials and inadequate construction techniques means some furniture cannot be repaired.

Companies also reduce damage by inspecting goods as soon as a container is opened, and using flat-packing for ocean transport.

PLUMPING UP: ADDITIONAL RESOURCES

Specialized Furniture Carriers Association www.furniture-carriers.org

American Home Furnishings Alliance www.ahfa.us

National Home Furnishings Association (retailers) www.nhfa.org

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SNAPSHOT
FURNITURE LOGISTICS

[CASE STUDY]

Rearranging the Furniture Helps Control Costs

R.C. Willey rode the housing boom into new markets in Las Vegas, Reno, and Boise. But that larger trade area is now putting pressure on the southwestern furniture retailer to cap rising supply chain costs. Willey operates 13 130,000-square-foot mega-stores supported by a 750,000-square-foot distribution center in Salt Lake City and smaller DCs in Las Vegas and Roseville, Calif.

"I feel the pressure because sales are down compared to several years ago," says Gill Mitchell, corporate traffic manager for R.C. Willey, which sells appliances, electronics, flooring, and furniture. "We have to try to be more competitive and take action to drive sales."

Within the supply chain, Mitchell is seeking ways to "negotiate freight costs as low as we can," he says. "We're specifically looking for more cost-effective ways to move shipments domestically."

Key to achieving that goal is gaining visibility and control over freight movements. While total landed cost is growing increasingly popular among furniture manufacturers and importers, "we fight it from the transportation side," says Mitchell. "It's attractive to buyers or vendors to establish a retail price based on total landed cost.

"But that costs us more than if we control the freight, and we lose total visibility into our supply chain," he adds. "We prefer to handle most of our own transportation, and buy FOB origin so we can keep control."

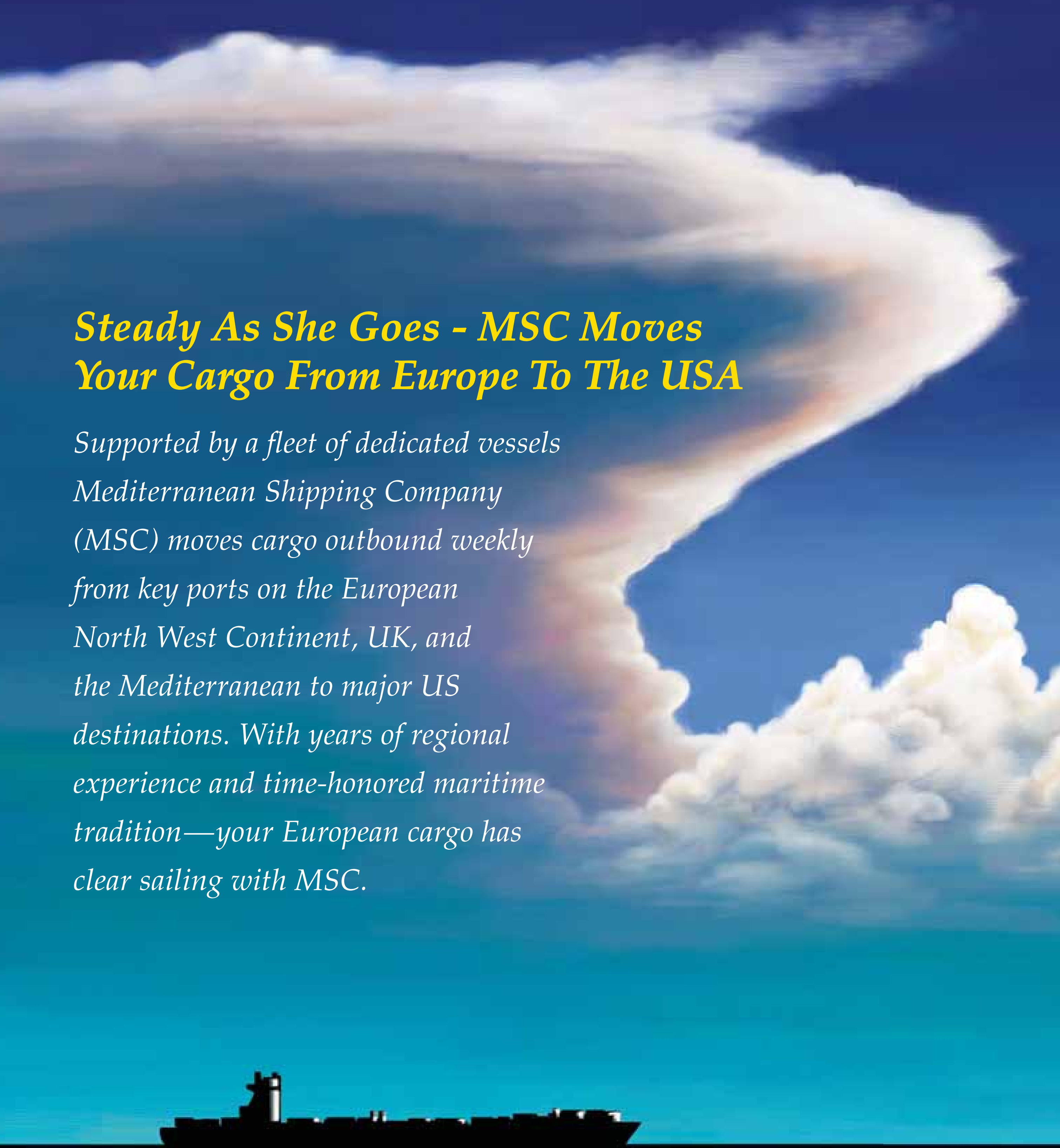
R.C. Willey has boosted its control of inbound containers from 68 percent in 2006 to 90 percent in 2007. The company uses a freight forwarder to bring in about 300 containers a month, mostly from China and Vietnam through Long Beach, Calif.

Willey's vendors continue to establish consolidation warehouses in Asia. If the company runs through an initial order of a hot item, it can place smaller re-orders of mixed containers and receive them within 30 days rather than the 60 to 90 days it would take to wait for production. "We pay slightly more compared to buying direct," Mitchell explains, "but the time savings make it an efficient system."

To help manage growing complexity, the firm is considering investing in a transportation management system.

SHOP TALK: A Furniture Lexicon

Case Goods: Non-upholstery furniture pieces such as dressers, chests, and tables that are used for storage or function. **Deluxing:** The process of making furniture customer-ready. Includes minor assembly, repairs, and polishing. **Flat-Pack:** Refers to furniture that is designed to pack flat, thereby reducing shipping costs and fuel used in transportation. Flat-pack designs are ready to assemble by the customer, right out of the box. **Lift Gate:** A large moveable platform that is attached at the end of a trailer or bobtail and is used to move items to and from a van or truck. A lift gate is especially useful for handling large sensitive pieces of equipment, such as furniture. **Remanufacturing:** A recycling concept where secondary manufacturing or refurbishing processes, such as remanufactured systems furniture, extend the useful life of an existing product. **White-Glove Service:** High-quality delivery service into the home, including set-up, padding, and shoe covers. **Worm Holes:** Small holes found in wood furniture, considered a defect in some instances and an aesthetic element in others.


Steady As She Goes - MSC Moves Your Cargo From Europe To The USA
Supported by a fleet of dedicated vessels Mediterranean Shipping Company (MSC) moves cargo outbound weekly from key ports on the European North West Continent, UK, and the Mediterranean to major US destinations. With years of regional experience and time-honored maritime tradition—your European cargo has clear sailing with MSC.

SNAPSHOT

FURNITURE LOGISTICS

[CASE STUDY] Badcock Uses Technology To Polish Furniture Logistics

Adopting and integrating new technology is challenging. Doing so within an automation-lagging industry in the midst of an economic slowdown is even tougher. But W.S. Badcock is succeeding, and early results are helping to keep sales healthy.

Badcock is a 104-year-old vertically integrated importer and retailer of furniture, appliances, and electronics. The company works with more than 300 stores throughout the Southeast, about 75 percent of them dealer-owned.

Badcock's business model is shaped around serving customers who want to know their order is in the warehouse and take delivery within days of the sale.

To maintain high customer service levels while containing costs, Badcock is rolling out a seven-year technology plan designed to provide visibility, communication, control, and streamlined business processes. The plan replaces and augments legacy applications with packaged software.

But adopting supply chain best practices through technology is tough when some suppliers can't even accept simple EDI transactions. So the company implemented Berwyn, Pa.-based software developer Boomi's enterprise integration tool. Boomi enables Badcock to trade data regardless of its partners' capabilities while encouraging their conversion to EDI.

"By consolidating to one system, we gained process improvement and security," says Ronald Mallory, director of technology infrastructure for Badcock. The company now uses EDI for 57 percent of its purchase orders, and that number is climbing.

Badcock is also gaining control of inbound and outbound freight costs. Minimum order quantities from factories in China, Vietnam, Indonesia, Malaysia, and other Asian sources, together with long make-to-order sales cycles, drive up delivery time and costs. "We have to wring every possible point of time waste from our transactions," says Bill Trimble, Badcock's CIO.

"We have to wring *every possible point of time waste* from our transactions."

In addition, Badcock is transitioning from 100 percent Cost, Insurance and Freight (CIF) terms for its 5,000 loads a year to 100 percent FOB, working closely with its 3PL to attain lower landed costs.

"As part of that transition, we needed a software tool to automate forecasting and purchasing," says Trimble. Badcock deployed a solution that creates forecasts based on inventory levels in its four DCs. The company is also seeking to increase its order frequency rate and is reviewing possible order consolidation before containers leave Asia. Currently, they are broken down and reallocated in U.S. DCs.

The company also has a TMS and WMS on its radar screen to handle freight movement from ports to DCs and out to stores. "We want to be able to commit to a delivery schedule and serve customers at a high level," says Greg Brinkman, Badcock's vice president of purchasing

and international logistics.

The transition to this new approach involved significant change management. Badcock is working closely with suppliers to share risk on all its purchases and is nine months into a supplier performance benchmarking effort. "That's easier to do with partners who also work with big-box retailers than fine furnishings companies not in the mass market," notes Brinkman.

Badcock's supply chain revitalization effort has yielded a high in-stock percentage, fewer lost sales, and the ability to contain the cost of goods sold.

"Moving forward, we want to reduce inventory levels as well as improve on-time shipping performance and inventory management," Brinkman says.

With the savings gained so far, Badcock remains in the enviable position of posting solid sales numbers while forging ahead on a technology plan that promises even more savings down the road.

Some Top Drawer Furniture Logistics Providers:

3PD Inc.
www.3pd.com

Cardinal Logistics Management
www.cardlog.com

Chesapeake Logistics
www.cheslogistics.com

EDC Moving Systems
www.edc-mover.com

Four Truckers, Inc.
www.fourtruckers.com

Globe Express Services
www.globeexpress.com

Manna Distribution Services
www.manna.com

MGM Transport
www.mgmtransport.com

Old Captain WW Logistics
www.oldcaptaininc.com

Sun Delivery Inc
www.sundeliveryinc.com

W&A Distribution Services, Inc
www.wnad.com

Zenith Freight Lines
www.zenithfreight.com

by Amanda Loudin

The ABCs of WMS

Early childhood education company Kaplan chooses a WMS that makes the grade.

If you have children, you likely have spent time searching for books, toys, and educational products that lay a foundation for long-term success. Choices can seem limitless–if you can think of an early childhood educational tool, it's probably available.

Some companies behind these tools stand apart from the rest due to the quality of products they offer and the commitment they make to helping parents concerned with early childhood development.

One such enterprise is Kaplan Early Learning Company, based in Lewisville, N.C. Kaplan is one of the original developers of early learning tools and has a long track record on which to hang its hat. It also has a long history of supporting various childhood education-related organizations.

Kaplan began its journey in 1951, when Leon Kaplan opened a toy store in Greensboro, N.C. A second store soon followed, and by early 1960 several toy stores operated under the Kaplan banner. During this time, Kaplan sought to provide toys that promoted learning as well as play.

From those early toy stores, Kaplan evolved into Kaplan School Supply in 1968. Today, through publishing and developing curriculum and assessment products, the company has become a leader in the field of early child care and education. Customers include day care facilities, public and private schools, head start programs, preschools, teachers, and parents. Its products are geared toward children from infancy to fifth grade.

PREPARING FOR THE FUTURE

With so many hats to wear, Kaplan is a busy, growing company. A recent partnership with Amazon.com has opened up new markets, and added to the already heavy volume that the company's distribution centers must manage.

With a main DC measuring 250,000 square feet, and a second 100,000-square-foot facility set aside for overflow, the company plans to add another 150,000 to 200,000 square feet in 2008.

The DCs handle more than 10,000

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SKUs between a regular first shift and a small third shift. Some 60 employees are spread out between the two shifts.

As it adapted to its rapid growth, Kaplan knew that it was time to invest in a sophisticated warehouse management system (WMS) to take it into the future.

"In the late 1990s, we determined that a WMS was required to fully meet customer needs and maintain a well-run DC," says Matthew Marceron, Kaplan's executive vice president.

"While many of our customers are large schools with sophisticated DCs, we also serve small schools and day care centers," he adds. "A single, well-organized shipment lets teachers focus on the important part of their business–educating children."

The system Kaplan previously had in place did not allow it to deliver at the desired customer service level.

"The system functioned, but it was not open," recalls David Bumgarner, Kaplan's vice president of operations. "Visibility, cartonization, and putaway logic were limited, as was sophisticated integration with our ERP system."

"In a world where implementations rarely go as planned, this one was an exception. It launched on time, on budget, with no business disruptions."

After an extensive search for the right WMS, Kaplan turned to Waukesha, Wisc.-based RedPrairie.

"We were looking for a business partner who would support us over the long haul during a time of industry consolidation," says Bumgarner. "RedPrairie offered integration between our ERP and its WMS. The interface between the systems allowed us to automate many business processes. We gained efficiencies and improved accuracy."

Implementation of the new WMS was "a major success story," according to Marceron. "We had excellent support from RedPrairie's consultants and trainers, who led us through the system setup and decisions we needed to make. In addition, the implementation was customized to integrate with our existing pick-to-light order fulfillment system and sortation systems."

To ensure success, Kaplan assembled a team dedicated to the implementation process. Made up of representatives from information technology, purchasing, finance, order entry, receiving, shipping, and inventory control, the team tested warehousing functions as well as ERP integration.

CHILD'S PLAY. Kaplan Early Learning Company improved the efficiency of its putaway, pick, and replenishment processes by implementing a WMS.

"We completely tested the system several times before we went live to ensure the results were accurate," notes Marceron. "RedPrairie consultants were on-site during those key test phases."

When working with Kaplan, RedPrairie kept its methodology flexible.

"We understood Kaplan's business, built its requirements into the system's process flows, and configured the software to it," explains Matt Butler, RedPrairie's director of implementation services. "We considered Kaplan's business trends and geared our plan toward the next five to 10 years."

The partners implemented the WMS, performed the ERP integration, produced the necessary documentation, and trained the staff on the new system.

"When we moved into the ownership phase with Kaplan, we helped facilitate the testing and validate the results," says Butler. "Kaplan did a great job of taking ownership."

SMOOTH SAILING

Several factors helped ensure smooth implementation, according to Bumgarner:

- Senior management buy-in. "Management was committed to and supported the change," he says.
- Selecting the right vendor/partner. "We spent far more time on the RFP and requirements process than on implementation," Bumgarner notes.
- A dedicated staff.
- Being open-minded and limiting customization.
- Testing, testing, testing.

"In a world where implementations rarely go as planned, this one was an exception," says Marceron. "It launched on time and on budget, with virtually no disruption to Kaplan's business."

By all accounts, the new system has led to a change for the better at Kaplan. "We improved our ability to ship more products in the same time frame while balancing work loads," says Bumgarner.

"We improved inventory accuracy and we have a happy warehouse manager who goes home on time every night."

Overall efficiency has improved as well, particularly for putaways, replenishments, and picks. "This system provides visibility, and its flexibility makes it easier to deal with exceptions or special customer requests," Bumgarner says.

The integration between Kaplan's ERP and its new WMS has been an asset as well. "We have more control over how often we can send orders to the warehouse, while keeping our ERP up to date with our progress," says Connie Ellis, Kaplan's project lead for the implementation.

WORDS TO LIVE BY

Having had a positive experience with a WMS implementation, Ellis offers this advice to others looking to do the same: "Assemble a strong, functional IT team who cares about and understands the business, or is willing to learn. Take your time to clearly define what you expect from a system and its vendor. Be rigorous in developing RFPs, analyzing demos, and conducting reference checks.

"It's advice that you hear in every project management course," she adds. "That's because it's true." ■

L.I.T. TOOLKIT

by Merrill Douglas

Holiday Creations Sees the Light

A holiday lights manufacturer takes a shine to its new export management system.

With strings of colored lights, LED Christmas trees, and animated decorations, Holiday Creations brightens the world in the dark winter months. For a long time, though, the company was stuck in the shadows as it tried to keep an eye on its Asian manufacturing.

That changed in 2007 when Holiday Creations flipped the switch on a Web-based export management system. The solution, from QuestaWeb, Westfield, N.J., shined new light on supply chain transactions on both sides of the globe.

Holiday Creations makes seasonal decorations based on light-emitting diodes (LEDs), and sells them in more than 15,000 retail outlets in the United States and Canada. Headquartered in the Denver area, the company maintains a Hong Kong office to manage its relationships with the Chinese factories that manufacture its products.

In the past, the U.S. and Hong Kong offices each used a different computer system, with no direct communication between the two. To relay a change to an order, ask a question, or provide a status report, each office relied mainly on e-mail. But sending messages across 14 time zones is not conducive to a quick response.

"The communications gap spanned a full business day," says Greg Scala, vice president of operations for Holiday Creations.

The disconnect between the two systems also created redundant data entry. The Denver office would take orders from retail chains, enter them locally, then e-mail the information to Hong Kong. Staff there would re-enter those orders in their system to create purchase orders for the factories. When an order was ready to ship, the Hong Kong system generated the export documentation.

"One person entered data in the United States, another entered it in Hong Kong, and mistakes were

CONTINUED FROM PAGE 75

The QuestaWeb software makes order information completely visible to all supply chain parties, and enables changes to be made in real time.

made," Scala says. One error in recording a price or quantity can cost thousands of dollars, so every inaccuracy exposed the company to risk.

Officials at Holiday Creations started looking for a technology solution that would enable staff to enter data just once, making the status of all orders visible to both offices in real time. "We evaluated a few systems," Scala says. "But we decided on QuestaWeb because its people were willing to help us tailor the software to our specific business needs."

IMPORT OR EXPORT?

TradeMasterQW, QuestaWeb's integrated global trade suite, includes modules for importers, exporters, freight forwarders, customs brokers, and warehouse operators. Holiday Creations chose the export module, ExportManagerQW, instead of the import module, because of its business model: rather than import products from China to a U.S. warehouse, then distribute them to retailers, Holiday Creations delivers containerloads of product to customers' consolidators in China for shipment directly to the customer. That makes Holiday Creations an exporter.

The heart of TradeMasterQW is a database that contains all the information related to a company's products, including the necessary data for preparing import and export documents. This information might include, for example, Harmonized Tariff Schedule (HTS) numbers and Export Control Classification Numbers (ECCN).

Many companies also attach specification sheets to products in the database. That way, they can show all the factors that went into specific product classifications if customs officers ask for an explanation. "If a company has the bill of materials in the system, and customs asks to see every product that was made with a particular part, for example, a query of the system will bring up the entries that contain it," explains Wayne Slossberg, vice president at QuestaWeb.

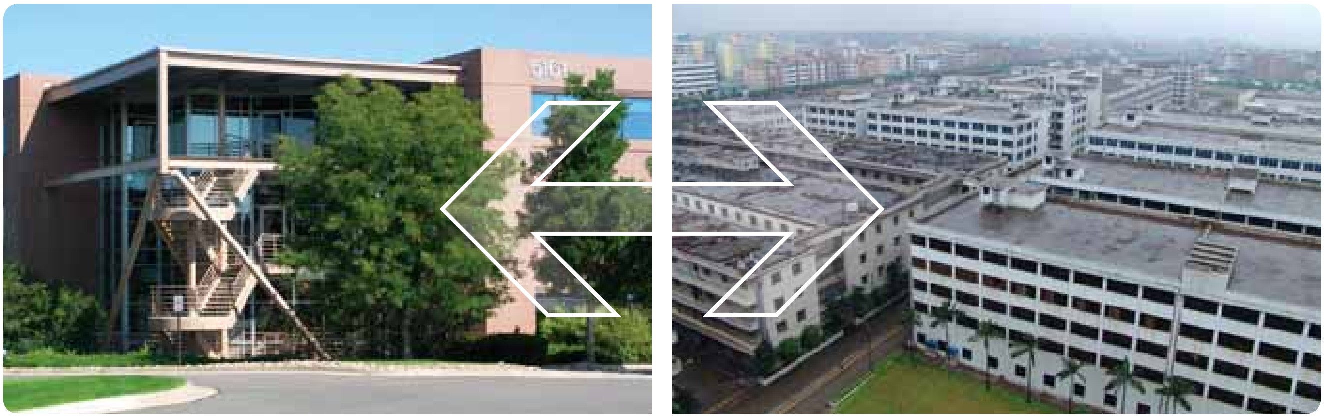
Holiday Creations started implementing the ExportManagerQW system in January 2006 and went live in February 2007. The project took more than one year because company officials decided to build their product database–with its thousands of SKUs–from scratch, rather than import it from their legacy system.

"We had a lot of old information in that database," Scala says. Editing it would have taken even longer than recreating it.

Some companies, however, get the system up and running in as little as six weeks. Once a company decides to implement TradeMasterQW, QuestaWeb performs a gap analysis to determine which business processes the system can accommodate out of the box and what QuestaWeb needs to customize. QuestaWeb also determines how to integrate TradeMasterQW with the company's enterprise resource planning (ERP) system or other legacy software.

QuestaWeb had to modify some functions to fit Holiday Creations' export process. The software had to take several customers' orders from the accounting system and combine them into one purchase order for the factory in China. Then, when the products were complete, it had to break that factory order back into separate customer orders so it could prepare export documents for each shipment.

"That step presented the biggest challenge," Slossberg says. Because the necessary information was available in the database, though, it wasn't difficult to modify the process. Now that QuestaWeb has added this capability,



E-MAIL OF TWO CITIES. An export management system connects Holiday Creations' U.S. headquarters with its office in Hong Kong. When the offices relied on e-mail to communicate, it took a full business day for information to be received and acted on. Today, the new system makes information visible to both offices in real time, and eliminates redundant data entry.

other companies have started using it.

Integration with Holiday Creations' accounting system is still in the planning stage. In the first year of using ExportManagerQW, staff moved data manually between the two systems. "This year we'll make that bridge automatic," Scala says.

One big change the new system has brought so far has been eliminating redundant effort. When the staff in Denver enters new orders, that information becomes available immediately to the staff in Hong Kong, with no need for them to enter the information again or transmit it via e-mail.

Along with initial orders, the staff also can enter changes to orders and make them visible to everyone immediately. That's especially important when customers send not firm orders, but forecasts. "Customers send forecasts when they're not sure exactly what they will order, but they have an idea," Scala says.

From a customer's forecast, the Denver staff creates an official purchasing document that the factory uses to order materials. "We can still move ahead with the forecast and get the ball rolling," Scala says. "When the customer sends the actual purchase order, we then fine-tune that order and create retail transactions with specific PO numbers."

A TAILORED SOLUTION

Although Holiday Creations could do something of the sort in the past, its manual process was cumbersome. "The QuestaWeb software provides flexibility to not only create a data pool of items, but also to tailor those purchase documents to meet a customer's specific needs," Scala says. "Users can change or enter any information they want."

Because the staff in Denver and Hong Kong both access the same system through their Web browsers, it no longer takes one full business day for the offices to catch up with changes in the system. "Now the information is completely visible and changes can be made in real time," Scala says.

In the future, officials at Holiday Creations hope to make data in the system visible to factory operators and customers. When that time comes, it should be easy to get partners to participate. "All they need is a user name and password," Slossberg says.

Trading partners use the browser interface to enter whatever information the owner of the system wants them to provide, and they view only the information the owner wants them to see. "Almost any partner will participate, because there is no cost involved," he says.

For now, ExportManagerQW lights up users' eyes at Holiday Creations because of the time it saves and the increased accuracy it brings to the operation.

"The fewer layers to the process, the better and more accurate the process," Scala says. "Our business is much more streamlined now." ■

NEWSERVICES

YOUR | BUSINESS LOGISTICS RESOURCE

Steel King

WHAT'S NEW: The introduction of a storage rack for extra-heavy loads.

THE VALUE: The SK4000 Structural Tubular Pallet Rack offers a load capacity of more than 70,000 pounds. Bolted beam connections and thick structural tube steel increase the frames' load-carrying capacity and resistance to seismic forces while enabling greater resistance to fork truck impact damage.

www.steelking.com
800-826-0203

Worthington Steelpac

WHAT'S NEW: A lightweight, flame-resistant steel pallet.

THE VALUE: Designed to meet Grocery Manufacturers Association capacity and compatibility standards, the durable steel pallet, which at 63 pounds weighs 10 pounds less than comparable wood pallets, helps materials handling managers cut shipping costs per trip compared to wood or plastic pallets. It measures 48 inches x 40 inches x 5.5 inches, has four-way fork lift and pallet jack access, and provides more than 3,500 pounds of unsupported racking and 40,000 pounds of static load.

www.steelpacpallets.com
717-851-0333

Associated Global Systems (AGS)

WHAT'S NEW: The expansion of residential delivery service.

THE VALUE: To better serve companies that sell direct to consumers, Associated Global Systems now delivers products of any weight and size to any residential address in the United States. AGS Home Delivery offers on-site services such as unpacking, debris removal, and assembly either in the customer's home or in an AGS warehouse prior to delivery.

www.agsystems.com 516-627-8910

Amerijet International

WHAT'S NEW: The construction of a cooler facility.

THE VALUE: Designed to maintain the cool chain integrity of perishables during the transportation process, the 10,300-square-foot facility at the Miami International Airport is subdivided into four climate-controlled chambers offering refrigerated, frozen, and chilled storage.

www.amerijet.com 954-320-5300

USF Holland

WHAT'S NEW: The launch of guaranteed services to and from Canada.

THE VALUE: Regional LTL carrier USF Holland now offers time-specific (before 3:30 p.m.) guaranteed delivery between the United States and Canada.

www.usfnet.com 866-389-3641

Mediterranean Shipping Company (MSC)

WHAT'S NEW: The addition of a weekly direct service from Port Everglades, Fla., to Puerto Santo Tomas De Castilla, Puerto Cortes, and Puerto Limon, Central America.

THE VALUE: The fixed-day service provides MSC shippers with more capacity and service frequency to and from key Central American ports via Port Everglades. The carrier will continue to provide connections from the other U.S. ports it currently serves through its hub in Freeport, Bahamas,

CONTINUED FROM PAGE 79

Lantech
WHAT'S NEW: The introduction of a conveyorized overhead stretch wrapper.
THE VALUE: Designed for fork truck loading or automated integration, the S-2500 features an 80-pallet-per-hour load capacity, multiple wrap patterns, and automatic load indexing, film attachment, cutting, and wiping.
www.lantech.com
800-866-0322

as well as on-carriages to destinations in Guatemala, El Salvador, Honduras, Nicaragua, and Costa Rica.
www.mscgva.ch   +41 22 703 8888

APL Logistics
WHAT'S NEW: Guaranteed delivery of full container loads from Asia to the United States.
THE VALUE: APL Guaranteed Continental service connects the ports of Shanghai, Hong Kong, Chiwan, and Yantian with virtually any ZIP code in the continental United States. The service guarantees delivery on a specified date, or shippers receive a partial refund.
www.apllogistics.com   510-272-8000

NYK and Hyundai Merchant Marine
WHAT'S NEW: A joint container service to Asia, South Africa, and the east coast of South America.
THE VALUE: The New Horizon Express is a weekly fixed-day service operating 10 vessels with a capacity of 2,500 TEUs. The port rotation begins in Shanghai and stops in Hong Kong, Singapore, Santos Buenos Aires, and Paranagua, among others, allowing shippers improved access to these areas.
www.nykline.com   www.hmm21.com

UPS
WHAT'S NEW: The improvement of ground transit services between 12 million ZIP code pairings.
THE VALUE: Deliveries originating in Colorado, Connecticut, Minnesota, the Pittsburgh area, Montana, North Dakota, western Nebraska, and Wyoming now reach their destinations at least one day sooner, without changing their pickup and delivery times.
www.ups.com   800-742-5877

American Airlines Cargo
WHAT'S NEW: The expansion of its express freight product guarantee.
THE VALUE: AA Cargo's truck feeder service is now included in the guarantee for its EXPEDITEfs express freight product, which provides priority boarding and fast flight connections. The service is supported by online tracking technology.
www.aacargo.com   800-227-4622

Storopack
WHAT'S NEW: The release of moldable and foldable tubular air pillows.
THE VALUE: Available in 1.5-inch and 2.5-inch sizes, Airplus Tube Air Pillows conform to products to protect them during shipment. A roll of 13-inch film produces 2,000 feet of tube, which is perforated every six inches (for small tubes) or every five inches (for large tubes). Airplus Tube can be used for cushioning and void fill, and is particularly suited to protecting cylindrical products such as glass containers, bottles and jars, and hard-to-pack industrial products.
www.storopack.com   800-827-7225

Transplace
WHAT'S NEW: The launch of a subsidiary in Mexico.
THE VALUE: Transplace Mexico's service offerings include transportation management systems, freight brokerage, U.S.

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

and Mexico customs brokerage, border processing, warehousing and distribution, ocean forwarding, NVOCC, and airfreight services.

www.transplace.com ✆ 888-445-9425

Jungheinrich

WHAT'S NEW: The availability of a power lift stacker.

THE VALUE: Jungheinrich's new manually propelled HC 110b electric lift stacker handles light-duty stacking operations as well as loading and unloading trailers from ground height. The addition of an optional steel platform allows the lift to function as a work table.

www.jungheinrich-us.com
✆ 804-737-7400

Hanson Logistics

WHAT'S NEW: The addition of four line-haul tractors to its fleet.

THE VALUE: The four new 2008 Kenworth 800 linehaul tractors, featuring Aerocab sleepers, enable Hanson Logistics to use company equipment when responding to customer requests for regional moves, which speeds transit time. The new transportation assets also give Hanson the ability to quickly handle emergency or unusual load requirements.

www.hansonlogisticsgroup.com
✆ 269-982-1390

Crown

WHAT'S NEW: The introduction of the PR 4500 Series Pallet Rider line of trucks.

THE VALUE: Designed to perform in a variety of materials handling applications, the PR 4500 boasts shock-reducing features and improved forward/reverse visibility.

www.crown.com ✆ 419-629-2311

Emirates Shipping Line

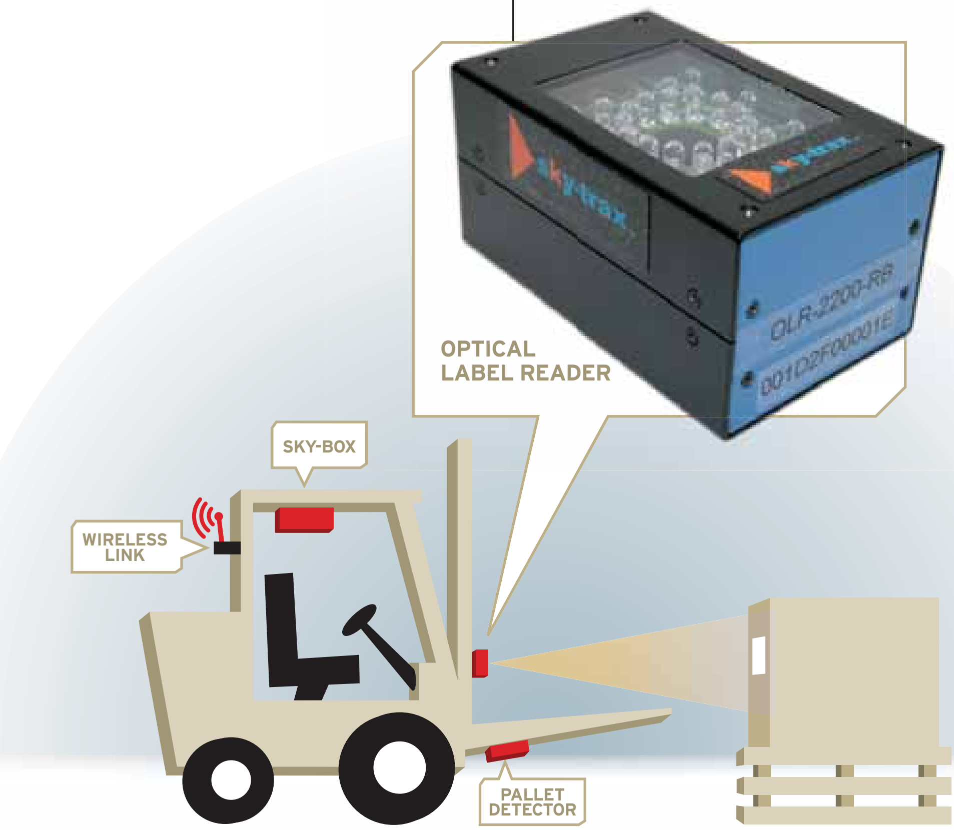
WHAT'S NEW: The acquisition of slots on the North China India Express (NIX) service.

THE VALUE: Emirates Shipping Line's participation in the NIX service, which links major ports in China, Korea, Southeast Asia, and India, gives ocean freight shippers access to one of the few services in the region serving Northern China and Nhava Sheva.

www.emiratesline.com

TECHUPDATE

THE LATEST | IN LOGISTICS TECHNOLOGY



Sky-Trax

WHAT'S NEW: The release of an automatic data collection system.
THE VALUE: Mounted to the front of a forklift, the Skan-Free system's Optical Label Reader (OLR) can read a bar code placed anywhere on the face of a pallet. Pairing this information with the pallet or rack location, the system sends the data to an on-board computer or wireless radio for collection and processing.

www.sky-trax.com
866-927-4927

software

PathGuide Technologies

WHAT'S NEW: The availability of a new module for the *Latitude 8.0* warehouse management application.
THE VALUE: The Manifesting Module integrates with scales and scanners to weigh items and calculate freight based on shipping location, priority, and package size. The module also integrates with in-line sortation and print-and-apply systems to automate printing of all carrier-required shipping labels and documentation.

www.pathguide.com 888-627-9797

Melton Technologies

WHAT'S NEW: An update to its truck fleet management software.
THE VALUE: The Vehicle Maintenance and Tire Tracking addition to Melton's *Horizon* application provides tire management capabilities, 36 methods for managing tractor and trailer maintenance, and a purchase order tool to account for parts and repair items.

www.mtihorizon.com 800-888-1246

Management Dynamics

WHAT'S NEW: The launch of freight bill management software.
THE VALUE: The freight audit solution helps generate significant savings by eliminating freight bill overcharges. The solution automates all contract terms and uses a rating engine to audit bills of lading for both air and ocean transportation, including domestic routes. It also identifies rating discrepancies and provides tools to quickly resolve bill issues with carriers.

www.managementdynamics.com
201-935-8588

Descartes Systems Group

WHAT'S NEW: The development of a basic electronic booking service for air freight.
THE VALUE: Designed for small and medium-sized airfreight forwarders, Descartes' *CargoBooker* provides around-the-clock access to air cargo carrier information such as product, flight, and truck details; routing; capacity availability; and rates.

www.descartes.com 800-419-8495

FedEx

WHAT'S NEW: An application that links Microsoft Office Outlook with FedEx shipping services.

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

THE VALUE: FedEx's free, downloadable *QuickShip* utility allows Outlook users to generate labels, track packages, check rates, schedule pickups, and find FedEx drop-off locations while inside the Outlook 2003 or 2007 application.

www.fedex.com ✆ 800-463-3339

SYSPRO

WHAT'S NEW: A module for the inventory optimization suite.

THE VALUE: The Families and Groupings module collects and aggregates common inventory stock codes into categories designed to accurately predict and forecast business inventory.

www.syspro.com ✆ 800-369-8649

hardware

Datalogic Scanning

WHAT'S NEW: A line of handheld bar-code readers.

THE VALUE: The PowerScan 8000 series offers both corded and cordless models; omni-directional reading of 1D, stacked, and 2D bar codes; and the ability to withstand extreme conditions.

www.scanning.datalogic.com

✆ 800-695-5700

web

Wesley International

WHAT'S NEW: An online design tool for customizing pallet trucks.

THE VALUE: Shippers design their own pallet trucks by entering product specifications such as load capacity and fork size. The Web site provides instant price quotes and estimated delivery dates for various configurations.

www.wesleyinternational.com

✆ 404-292-7441

Psion Teklogix

WHAT'S NEW: The availability of a new series of mobile printers.

THE VALUE: The lightweight, rugged PTX Print Mobile printers measure three to four inches, can be mounted on equipment or worn on the body, and communicate with handheld or other devices by cable or wireless connection. They print items such as warehouse labels, service documents, and receipts.

www.psionteklogix.com ✆ 800-322-3437

rfid/wireless

Lowry Computer Products

WHAT'S NEW: Quick Comply kits.

THE VALUE: The kits provide users with the necessary hardware, software, RFID labels, and support to adhere to retail compliance mandates with minimal disruption to current processes.

www.rfidovernight.com ✆ 800-733-0210

William Frick & Co.

WHAT'S NEW: SmartMark harsh environment tags.

THE VALUE: The SmartMark series of rugged RFID tags and labels are designed to function outdoors, on factory floors, and in metal/liquid-rich environments.

www.fricknet.com/smartmark

✆ 847-918-3700

WEB_CITE CITY

www.inboundlogistics.com/web_cite

IN THIS SECTION:
3PLs – Global Logistics

3PLs

Ryder • www.ryder.com

Ryder provides a variety of leading-edge supply chain, warehousing, and transportation services including: 3PL, 4PL, fleet management, RFID operations, reverse logistics, supply chain management, third-party logistics, transportation management/freight management, truck rental, truck leasing, warehousing, lead logistics provider, lead logistics manager, service parts operations, and distribution center management.

Schenker/BAX • www.baxglobal.com

The integration of DB Schenker and BAX Global has created a new global logistics and transportation solutions powerhouse. Enviable rankings in strategic industry mobility and logistics service sectors include: No. 1 in European land transport, No. 2 in worldwide air freight, No. 3 in worldwide ocean freight, and No. 3 in integrated heavyweight freight in North America.

AIR/EXPEDITED

Schenker/BAX • www.baxglobal.com

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GLOBAL LOGISTICS

COSCO • www.coscon.com

China Ocean Shipping (Group) Company (COSCO), the national flag carrier of the People's Republic of China, is one of the world's premier full-service intermodal carriers. The company utilizes a vast network of ocean vessels, barges, railroads, and motor carriers to link the international shipper with the consignee. COSCON's 20 main line services connect over 100 ports worldwide to reach more direct ports of call than any other carrier in the world, with weekly, fixed-day service to many destinations. The AUM-Pendulum Service's direct ports of call include Tokyo, Qingdao, Shanghai, Yantian, Hong Kong, Charleston, Norfolk, New York, Boston, Valencia, Naples, Genoa, and Barcelona.

WEB_CITE CITY

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IN THIS SECTION:

Logistics IT – Ports

LOGISTICS IT

QuestaWeb • www.questaweb.com

QuestaWeb is a premier provider of integrated web-native global trade management software solutions. The business model unifies import, export, logistics, compliance, and financial processes including customs clearance, reconciliation, drawback, licensing, parties screening, product catalog, P/O performance, tracking, and event management. The centralized global database maintains up-to-date trade content, and supports multiple languages and currencies. Our solutions proactively manage export and import processes for importers, exporters, forwarders, and brokers, and ensure compliance with ever-changing cross-border regulations.

OCEAN FREIGHT

Mediterranean Shipping Company • www.mscgva.ch

Mediterranean Shipping Company (MSC) offers a global transportation solution, operating more than 240 container vessels with an intake capacity of 622,759 TEUs. MSC provides an unparalleled service network via dedicated offices throughout the world. It remains a truly independent and private company, able to respond quickly to market changes and implement long-term plans without unnecessary interference or delay. With its streamlined management, MSC has become a leading customer-focused and cost-effective global transportation solution for shippers worldwide.

OceanSchedules.com • www.oceanschedules.com

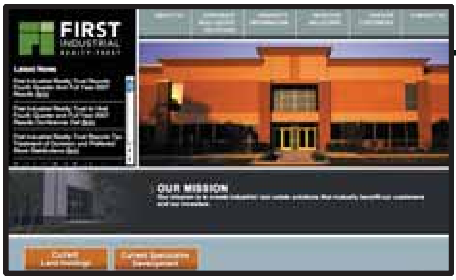
OceanSchedules.com is a free of charge, fast and easy-to-use solution for global shippers and forwarders researching sailing schedule options for containerized freight. Using advanced Web-based technology, OceanSchedules.com delivers global, comprehensive carrier schedules with an interactive interface that allows users to search schedules, request more information from a carrier, as well as make an electronic booking with multiple carriers. The site also provides advertisers with the opportunity to target transportation planners and freight buyers of ocean shipping based on their search interests.

PORTS

Port of Houston Authority • www.portofhouston.com

Visit the Port of Houston's Web site and choose from a menu of items. Check out facilities, shipping and service directories, frequently asked questions, and transportation and shipping links. The site also features the latest economic impact information, container and booking information, and trade statistics. The Port of Houston, the world's eighth-largest port, is a 25-mile-long complex of public and private facilities, just a few hours of sailing time from the Gulf of Mexico.

REAL ESTATE LOGISTICS



First Industrial Realty Trust Inc. • www.firstindustrial.com

First Industrial Realty Trust Inc.–the nation's largest provider of diversified industrial real estate–leases, develops, redevelops, buys, sells, and manages industrial facilities in the nation's top 25 industrial markets. By offering the types of industrial facilities most often found in a company's supply chain, such as R&D, manufacturing, light industrial, regional warehouses and bulk warehouses, First Industrial is uniquely capable of providing complete supply chain solutions to corporate customers nationwide.

RECRUITING

The Everest Group • www.mrglendora.com

The Everest Group, an affiliate of Management Recruiters of Glendora, operates as a full-service executive recruiting firm working with both domestic and international clients. The Everest Group recruits executives for all positions within the supply chain and places an emphasis on: all transportation modes; asset- and non-asset-based 3PLs; supply chain software solutions; pharmaceutical and medical device–regulatory affairs and quality assurance; retail; consumer products; and the food industry. Visit www.mrglendora.com, call 626-963-4503, or e-mail Matt Albanese at malbanese@mrglendora.com.

REVERSE LOGISTICS

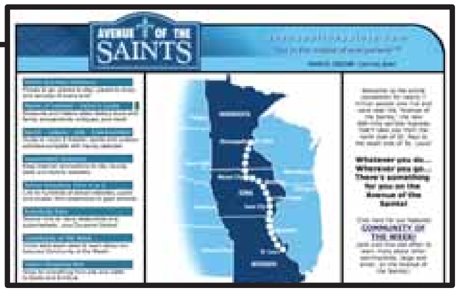
CLS • www.cls.inmar.com

CLS is an industry leader in providing technology-driven reverse logistics and supply chain solutions to the consumer goods and health care markets. By combining excellent execution with information intelligence, our solutions provide the foundation for fostering collaboration between our clients and their trading partners to improve the overall supply chain. Our solutions include: returns management, asset recovery and financial transaction management, regulatory compliant disposition, recall management, supply chain analysis, and Web-based analytics.

SITE SELECTION

Avenue of the Saints • www.avenueofthesaints.com

Avenue of the Saints, the recently completed north-south transportation corridor that links St. Paul, Minn., with St. Louis, Mo., is the emerging transportation corridor in the Midwest, and is becoming one of the most important corridors in the country. In growing numbers, companies are choosing the Iowa portion of the Avenue to site their Midwest distribution centers, reaping the benefits of fast, economical access to major cities such as Chicago, Kansas City, St. Paul/Minneapolis, St. Louis, and beyond. Interested? Visit www.avenueofthesaints.com for more information.



IN THIS SECTION:

Site Selection – Trucking

Greater Waco Chamber • www.wacochamber.com

With its central location in Texas, the United States, and North America, Waco is an ideal site for growing businesses to reach new markets. Waco offers excellent highway access without congestion and Interstate 35 provides north-south travel from Mexico to Canada. In addition, its low cost of living and low cost of doing business; skilled, cost-competitive workforce; excellent sites and facilities; assistance with analysis and incentives; and an attractive, exciting environment make Waco an excellent location for logistics-related industries. Get Waco on your site selection map; visit the Web site today.

Louisiana Economic Development • www.louisianaforward.com

If you're thinking about starting a new business or expanding an existing one, now is the time and Louisiana is the place. And this site is the resource for Louisiana businesses, featuring a portfolio of groundbreaking business incentives offered in the state, as well as comprehensive services to help small businesses grow and empower entrepreneurs. LouisianaForward.com keeps you updated on work being done in the legislature to make Louisiana a state of opportunity.

North Carolina Global TransPark • www.ncgtp.com

The North Carolina Global TransPark (GTP) in eastern North Carolina offers prime commercial real estate and excellent shipping capabilities to almost any size company. With its centerpiece 11,500-foot runway, outstanding available warehousing space, fully permitted environment, and 33,000-square-foot training/conferencing center, the GTP is ready to do business. For more information, see www.ncgtp.com or call Bruce Parson at 252-523-1351.

TRUCKING

Werner Enterprises • www.werner.com

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

CALENDAR

YOUR LOGISTICS **DATEBOOK**

April 20-23, 2008, Navis World 2008, San Francisco, Calif. Leading marine terminal operators, inland logistics managers, shipping line executives, and industry analysts will gather to exchange ideas and learn about emerging supply chain technologies. The event focuses on pressing issues in supply chain operations, including visibility and integration, key industry trends such as globalization, process automation and handling technologies, and ports and terminals of the future.

510-427-4572
www.navis.com

April 21-24, 2008, NA 2008, Cleveland, Ohio. At this event sponsored by the Material Handling Industry of America, attendees will see and operate the best and newest manufacturing, distribution, and IT solutions; learn how to successfully integrate sustainable solutions into manufacturing and distribution operations; and attend specialized education sessions led by industry experts.

704-676-1190
www.nashow.com

April 22-24, 2008, Transplace Sixth Annual Shipper Symposium, Rogers, Ark. The event's agenda features presentations on different aspects of the symposium theme, *Sustainability in the Transportation Industry*. Panels showcasing timely topics include how to cope with rising oil prices and how to handle enterprise-wide supply chain changes. On April 23, the Supply Chain Management Research Center, of the University of Arkansas will sponsor a conference segment, *Sourcing and New Market Development in the Global Supply Chain*.

479-575-7334
symposium.transplace.com

April 22-23, 2008, The Age of Technology, Las Vegas, Nev. This program, sponsored by the Transload Distribution Association, includes panel programs on railroad technology, IT suppliers to the distribution industry, and security for ports, railroads, and transloads. It also features an interactive program on Internet technology and special breakout sessions.

503-656-4282
www.transload.org

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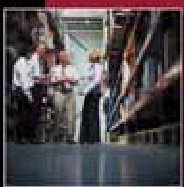

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3PLs

Agility pg. 19
For Agility employees in more than 100 countries around the world, success isn't measured in products delivered or processes streamlined. Success occurs when partners achieve their goals. It's an intimate approach to logistics that demands individual attention and personal ownership.
www.agilitylogistics.com 714-513-3000

Averitt pg. 23
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www.averittexpress.com 800-AVERITT

BAX/Schenker pg. 9
Schenker and BAX's integration created a global logistics and transportation solutions powerhouse with enviable rankings: No. 1 in European land transport, No. 2 in worldwide airfreight, and No. 3 in worldwide ocean freight.
www.baxglobal.com 800-CALL-BAX

ClearPointt pg. 25
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Landstar Global Logistics pg. 65
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Maersk Logistics pg. 63
If you need to create new opportunities in global commerce, turn to Maersk Logistics. Maersk's tailor-made solutions and dedicated customer service team give you a competitive advantage.
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Ozburn-Hessey Logistics pg. 7
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Ryder Cover 2
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Salem Logistics pg. 17
When it comes to meeting your supply chain needs, nobody manages transportation better than Salem Logistics.
www.salemlogistics.com 336-725-5268

Unyson Logistics pg. 70
When your supply chain works in unison you reap strategic benefits. Unyson Logistics helps you drive out supply chain costs by creating solutions that offer unity, visibility, and stability.
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Werner Enterprises Cover 3
Werner Enterprises, a logistics provider backed by global connectivity, assets, experience, and financial stability, offers local logistics knowledge applied worldwide.
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Air Cargo

Lufthansa Cargo pg. 15
Network the world with Lufthansa Cargo. Lufthansa offers cargo services tailored to meet your needs.
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National Air Cargo pg. 21
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Career Development/Education

Bellevue University pg. 77
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www.bellevue.edu 800-756-7920

Institute of Logistical Management pg. 88
Become a part of the oldest logistics distance learning school in the world that has helped more than 84,000 alumni navigate their careers in supply chain and logistics since 1923. The Institute of Logistical Management offers distance learning in many areas of logistics and supply chain management.
www.logisticseducation.edu 609-747-1515

Lion Technology pg. 83
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www.lion.com/hazmat 888-546-6511

Pennsylvania State University, Smeal MBA pg. 74
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www.worldcampus.psu.edu/scm2 814-865-0585

Events

Supply Chain Optimization Symposium pg. 81
Attend the Center for Value Chain Research's Spring 2008 Symposium, May 13-14 at Lehigh University's Rauch Business Center. The event's theme is *Supply Chain Optimization for Speed, Agility, and Efficiency*.
www.lehigh.edu 610-758-5280

Mattech 2008 pg. 78
Held August 20-21 in Miami Beach, Fla., the International Material Handling, Manufacturing and Packaging Technology, Logistics and Supply Chain Expo offers manufacturers a one-stop shopping marketplace for every step in the supply chain.
www.mattech.us 941-320-3216

Progressive Manufacturing Summit pg. 89
Find out how to orchestrate business so it plays as one on the global stage. Register now for the 2008 Managing Automation Progressive Manufacturing Summit, June 10-12 at the Four Seasons Hotel in Las Vegas.
www.managingautomation.com 212-629-1114

Logistics IT

QuestaWeb pg. 16
QuestaWeb's fully automated, modular multinational trade compliance solutions take you from here to there – flawlessly. From content to execution to global visibility, manage all import, export, and financial transactions - automatically, in real time – with QuestaWeb's Web-based solutions.
www.questaweb.com 908-233-2300

SMC³ pg. 39
SMC³'s CzarLite software products help you make smarter transportation purchases by offering a pricing standard that both shippers and carriers can agree on.
www.smc3.com 800-845-8090

Mobile Communications

Motorola pg. 5
Motorola's Enterprise Mobility Solutions synchronize your entire supply chain and allow anytime visibility of your shipments around the world so you can capture, move, and manage data with real-time accuracy.
www.motorola.com/supplychainmobility 800-722-6234

Ocean

COSCO Container Lines Americas pg. 31
With the congestion-free port of Prince Rupert and the dedicated CN rail service to many North American points, COSCO will help your ROI by expediting the transportation of goods in your supply chain.
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- **Hyundai Merchant Marine** pg. 43
  Hyundai Merchant Marine understands how transportation fits into the supply chain puzzle. In a recent customer survey, more than 97 percent of respondents gave HMM high scores in service, reliability and professionalism. HMM...providing dependable ocean transport service to Asia, Europe, and Brazil. On time. Online.
  www.hmm21.com 972-501-1100

- **Mediterranean Shipping Co.** pg. 67
  Supported by a fleet of dedicated vessels, Mediterranean Shipping Company moves cargo outbound weekly from key ports on the European North West Continent, UK, and the Mediterranean to major U.S. destinations.
  www.mscgva.ch 212-764-8592

- **National Shipping Company of Saudi Arabia** pg. 49
  You name it - Ro-Ro, container, project, heavy machinery, timber, even boats - NSCSA ships it. NSCSA can handle all your cargo needs to the Middle East year-round.
  www.nscsaamerica.com 800-732-0204

- **Seaboard Marine** pg. 36
  Seaboard Marine's commitment to building strong partnerships ensures your cargo gets the best service available.
  www.seaboardmarine.com 305-863-4444

Ports

- **Port of Houston** pg. 45
  The Port of Houston delivers the goods, including general cargo and containers, grain and other dry bulk materials, and project and heavy lift cargo. The Port also has expansion plans and ship channel upgrades in the works.
  www.portofhouston.com 800-688-3625

- **Port of Seattle** pg. 41
  The Port of Seattle's expanded, modernized terminals and transportation improvements have prepared it to meet its goal of being the greenest port in the nation. Partner with the port that's working proactively for a brighter future.
  www.portseattle.org 206-728-3873

Real Estate Logistics/Site Selection

- **The Allen Group** pg. 50
  The Allen Group's master-planned logistics parks are located where you need to be to reach America's population centers - near ports, major transportation and trade corridors, and rail and intermodal infrastructure points.
  www.allengroup.com 858-764-6800

- **The Avenue of the Saints** pg. 51
  The Avenue of the Saints, the recently completed north-south transportation corridor that links St. Paul, Minn., with St. Louis, Mo., is the emerging transportation corridor in the Midwest, and is becoming one of the most important corridors in the country.
  www.avenueofthesaints.com 636-230-8808

- **CenterPoint Properties** pg. 59
  CenterPoint has the teams, expertise, and capital for virtually any industrial real estate or transportation-related development or redevelopment. From single build-to-suits to large-scale land and infrastructure projects, CenterPoint provides creative solutions to support its customers' growing needs.
  www.centerpoint-prop.com 630-586-8000

- **First Industrial Realty Trust** pg. 13
  First Industrial Realty Trust is a leader in industrial real estate supply chain solutions. To see how strategically located facilities and land can benefit you, visit www.firstindustrial.com/casestudies.
  www.firstindustrial.com 312-344-4300

- **Nebraska Public Power District** pg. 69
  Looking for comprehensive business development information on Nebraska? Your search ends at sites.nppd.com, a site to see.
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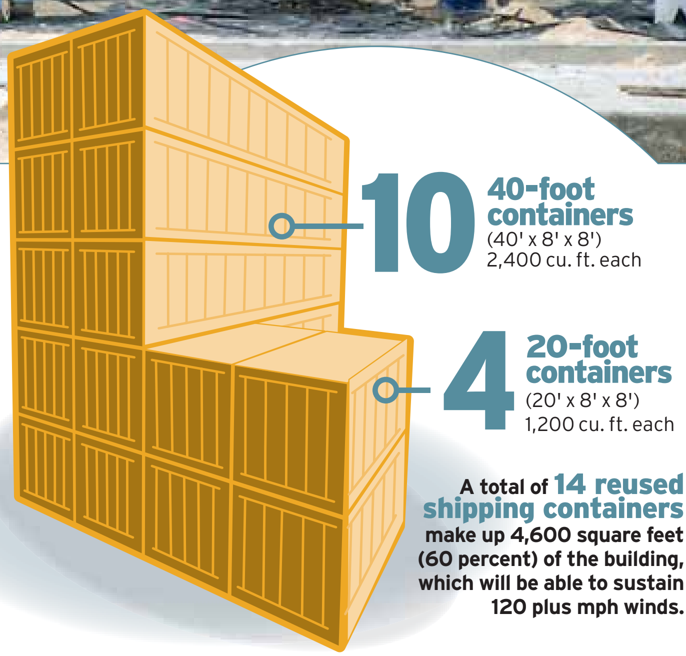
THE LAST MILE

Box Office Hit

Stacking containers is an emerging strength for the Jacksonville Port Authority–in more ways than one. As elsewhere along the U.S. East Coast, the port is expanding its container capacity to meet expected demand. JAXPORT currently handles 800,000 TEUs a year and estimates volume will double when its new TraPac Container Terminal opens in January 2009.

The port is also giving container security a new twist. To keep cargo security operations in line with anticipated growth, JAXPORT is in the process of building a new $2.5-million security operations center *using containers* to reinforce the structure's perimeter.

The use of recycled, POS (put out of service) equipment is kind to the environment, and carries a lower price tag than using new materials. For example, it requires 8,000 kilowatt hours to melt down 8,000 pounds of cargo container steel, versus 400 kilowatt hours to modify a steel container into building material, according to SG BLOCKS, a green building partnership that modified the containers for use in the new facility. The net result? A 95-percent reduction in carbon footprint and cost savings of $114,000. Now that's thinking outside the box.



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