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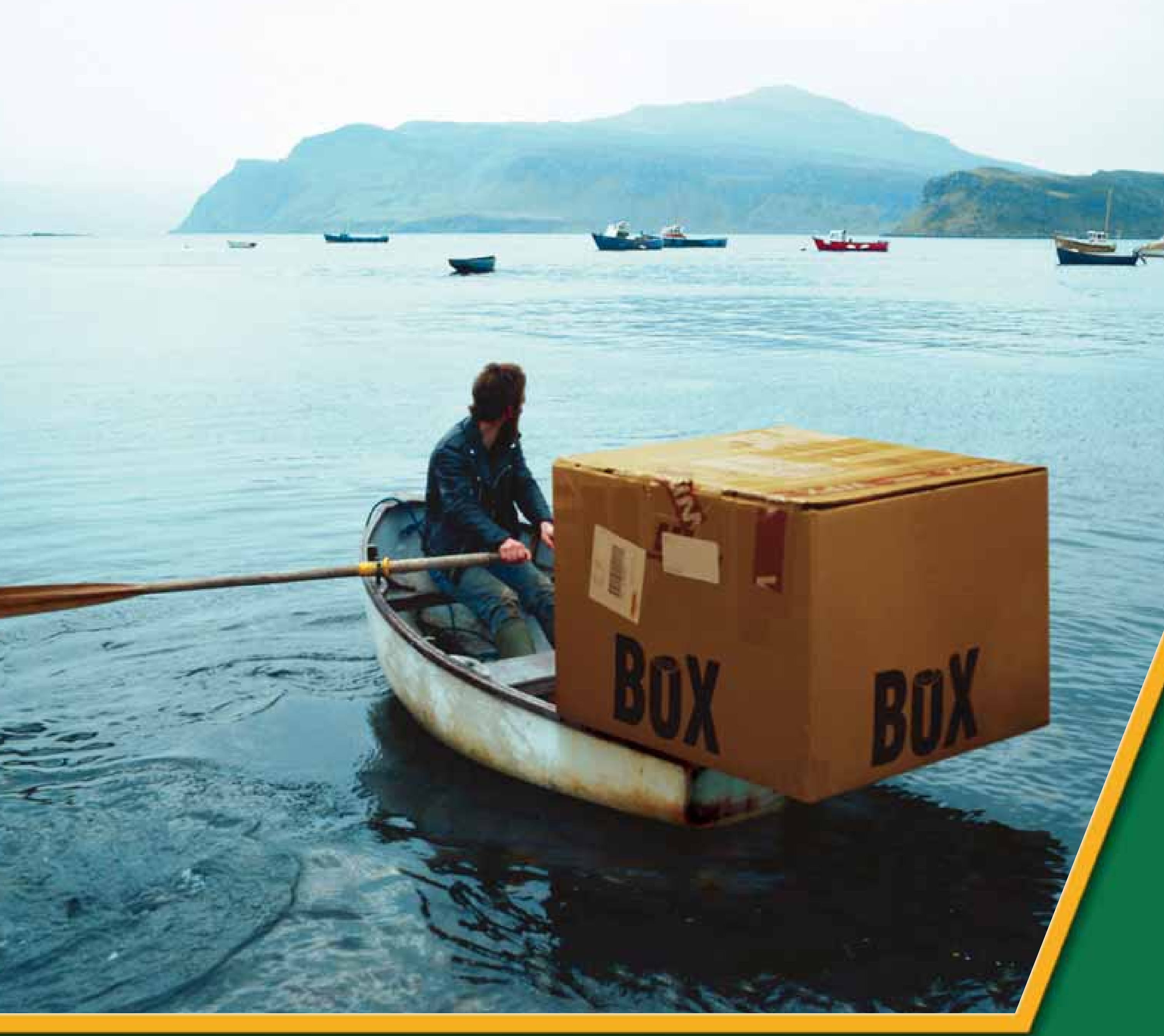
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INSIGHT

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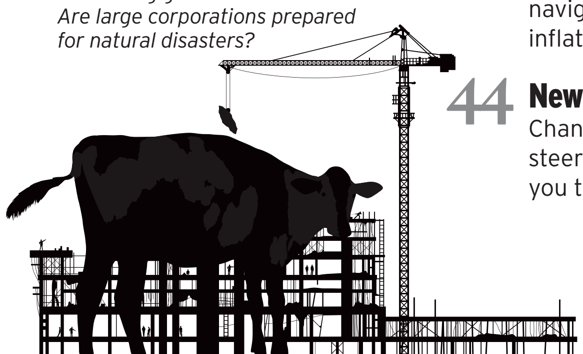

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Andreas F. Voegelin, Antikenmuseum Basel and Sammlung Ludwig

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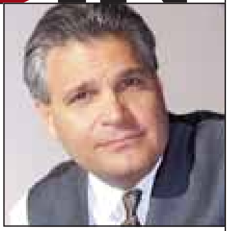
CHECKINGIN

Keith Biondo

by Keith Biondo | **Publisher**



Boeing, Boeing Gone?

When times get tough, supply chain/logistics redeployment grows increasingly important. Part of evaluating site locations for your manufacturing and logistics facilities involves considering fundamentals such as proximity to sources and customers, and transport infrastructure.

But there is a "softer side" of site selection. As I write this, Boeing is in the midst of a strike with the International Association of Machinists that is idling production lines, postponing 787 Dreamliner back orders even further, and costing a reported $90 million in lost profits each month.

Even if the strike is settled by the time you read this, it will have long-term implications for both sides, and for the Seattle region including Everett and Renton, for Washington state, and for the U.S. economy as well, according to reports in the *Seattle Post Intelligencer.*

The softer side of site selection includes the temperament of the local population, press, elected officials, and community leaders toward manufacturing, transportation, and business in general. Despite 27,000-plus workers being idled, there is little leadership or meaningful comment by elected officials, nor little outcry from the area's mainstream press to encourage a quick resolution given the wider importance of what is at stake, according to our contacts there.

Boeing is not feeling the love from Seattle, so much so that after the last labor dustup it moved its corporate headquarters from Seattle to Chicago. There is talk in the business community about relocating some Boeing manufacturing facilities as well, in what is described as part of a supply chain redeployment that is more responsive to the airplane business today.

Is a move like that possible? Look at the automotive example. Plot on a map where the car manufacturers were located 40 years ago, and you'd find perhaps 65 percent in the U.S. Midwest. Today? They're all around the world; and U.S. automotive growth has been in the southern states. Even for huge manufacturing enterprises, momentous shifts in sites are possible in a short time.

Are we looking at a possible aerospace rust belt in Seattle, especially as airlines cancel plane orders and the next administration starts looking for ways to pay for all the new items in the ever-expanding government shopping cart? They will likely cut defense spending, which is the other part of Boeing's business.

This edition of *Inbound Logistics* features articles on communities across the United States, including around Memphis, that get it. These communities, and their local leaders, understand the many choices you have when considering new locations. Beyond offering great transport infrastructure and other hard benefits, they understand the softer side of site selection. You are bringing jobs and they know it. They would love you to locate there and they will show it. ■

inbound logistics

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10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Ruriani

Keeping Expedited Costs Down

While expedited shipping can be expensive, it doesn't have to break the bank. With a little thought and planning, shippers can control the factors driving expedited shipping costs by following these tips from Dave Quinn, president of Belleville, Mich.-based Active On-Demand.

1 **Choose the right mode.** Utilizing the wrong mode costs shippers the most when they make premium transportation decisions. Choosing air charter over exclusive-use trucks, or same-day air rather than next-day air, quickly increases unnecessary costs.

2 **Eliminate padding.** Everyone along the logistics chain–from the person placing the order to the production team to the traffic manager–sometimes adds "safety" time to ensure an on-time delivery. Pretty soon, a shipment that is required by 9 a.m. becomes required by 5 a.m. and needs a more expensive transportation mode. Stick to the original delivery time.

3 **Ask the right questions and provide accurate information.** Inaccurate information relating to shipment weight, dimensions, and timing can cost thousands of dollars. For example, a shipper might request a pickup of a six-piece shipment weighing 2,000 pounds, but when the van arrives the pieces are too long or too heavy to fit on a van and a truck needs to be dispatched. Logistics specialists encounter these scenarios every day.

4 **Utilize a broad carrier base.** Shippers who lock themselves into dealing with one or two service providers ultimately pay more. When it comes to achieving hard-cost savings, increasing visibility, reducing labor, and maximizing service, Web-based bid and quote portals can be more effective than "partnerships." Transportation costs change daily and a single-source provider always charges a tariff-based rate.

5 **Search for transportation capacity and options before you need them.** Working in advance allows shippers to review competitive carrier solutions and make decisions that ultimately reduce transportation costs. Making hasty decisions when up against the clock can be expensive. Avoid dialing for diesel at the 11th hour.

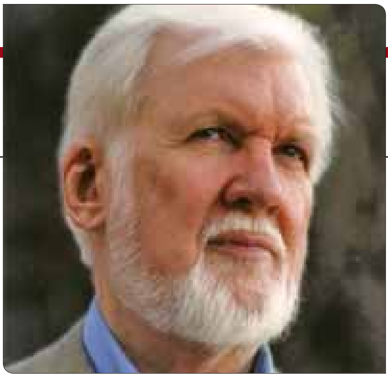
6 **Create a competitive bidding environment.** Whether you send RFQs or use a Web-based bid-and-quote model, creating competition among carriers is a good policy. This practice drives down costs by ensuring the best possible rate on every shipment.

7 **Buy quality expedited services.** Failure to deliver on time is costly and can cause production stoppages, failed customer commitments, and lost business. Using a sub-standard or inconsistent carrier costs more in the long run.

8 **Streamline the audit process, quote/invoice integrity, and financial controls.** Pay only for the service you received and the amount you were quoted. Audit your bills to verify that the proper party pays for shipping.

9 **Max out dedicated equipment.** Dedicated truck costs are based on per-mile charges for each truck type. If you need to ship only one skid, but have enough available space to fill the truck, fill it. The cost per unit will be substantially lower.

10 **Consider flexible and creative sourcing solutions.** Waiting a few hours for delivery can often save a considerable amount of money. Be flexible regarding delivery times. ■



[SCPERSPECTIVES]

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

Diagnosing Complexity

SKU proliferation, supplier diversification, and greater competition are increasing the complexity of global sourcing, manufacturing, and logistics. Knowing when and where to simplify is critical to supply chain innovation and success.

Complexity can be a concern wherever it arises. More often than not, it is perceived as a burden rather than a virtue. Simplicity, on the other hand, has shown great value in science and engineering. Yet even in these areas, complexity still persists. When complexity runs wild it becomes chaos. Some gurus tell us to "embrace chaos," but is it proper to run a business accordingly?

Modern business literature touts innovation as the right hand of a well-managed enterprise. Kill innovation and you kill the business. Complexity and innovation are the razor's edge for an enterprise, and must be approached with care.

SOURCING COMPLEXITY

Complexity in the supply chain manifests itself in a number of different ways:

■ **In the design process.** Adding more than the usual number of parts or sub-assemblies specified in a product design builds complexity within the supply chain. More parts mean more inventories, and therefore an increase in SKUs. SKU diversity often conflicts with lean manufacturing philosophies. It is hard to operate lean with more of anything.

■ **In the product lifecycle.** Managing more parts in design and manufacturing also impacts processes farther along in a product's lifecycle. Returns and recalls add complexities where companies can least tolerate them, creating unwanted transportation and repair costs. When it comes to returns, complexity destroys profitability.

■ **In marketing and distribution.** Design, manufacturing, and product lifecycle issues are not the only sources of complexity. Marketing and distribution also can add complexity through too many hauls, too many destinations, or too little economy of means. Customization within the product line and within distribution operations is always more complex and, as a result, more costly.

■ **In global sourcing.** Complexity arises when businesses partner with global suppliers. Aside from rising transportation costs, global trade regulations and customs clearance processes increase complexity–more sources, more pain, less gain.

■ **In competition.** If a company operates with fewer parts, fewer sources, and a leaner supply chain it may gain a competitive advantage. Judging the complexity of a new product, and the supply chain processes that sustain it, must address the context of the market. A product is not just a thing, however; it is a set of sources, a supply chain, a logistics nightmare, or a logistics opportunity.

STRIKING A BALANCE

The opposite of supply chain complexity may be commonality–using as many of the same parts or processes as possible. But that practice can reduce value within a product or process, or reduce value and service to the ultimate consumer.

An attack on complexity runs the risk of injuring innovation, and that can be more lethal than any degree of complexity.

Supply chain complexity is like a log jam that builds one log at a time. It takes a practiced logger, and logistician, with the right insight and experience to know which logs to move first and which ones to leave alone. ■

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PROFILE

by Merrill Douglas

Supply Chain Management is in His DNA

Is there a gene for supply chain management? If so, James Bradley must have it–his father worked in logistics and supply in the Air Force, and Bradley has been focused on the field since college.

If scientists do discover such a gene, chances are they'll be working with technology from Bradley's employer, Affymetrix, a Santa Clara, Calif.-based developer of technologies crucial to genetics research. As senior director of global order fulfillment, Bradley serves as the customer's voice in operations.

"I'm responsible for the receiving process, inventory control, warehousing, transportation, and order management worldwide," he says.

Affymetrix's flagship product is the GeneChip microarray, an industry-standard tool for analyzing genetic information. Researchers in academia, government, and pharmaceutical companies use the tool, as well as the company's instruments and reagent chemicals, to identify and measure genetic information.

After completing a network consolidation next year, Affymetrix will operate two manufacturing plants in the United States and one in Singapore, plus regional distribution hubs in both countries and another in the Netherlands.

Shipping temperature-sensitive products among those locations and to customers poses a major challenge. Microarrays can travel at

CRACKING THE CODE

NAME: **James Bradley**

TITLE: Senior director, global order fulfillment

COMPANY: Affymetrix, Santa Clara, Calif., since 2006

PREVIOUS EXPERIENCE: Various positions, starting with production planner/scheduler and culminating in corporate logistics manager, Raychem Corp.; director of logistics integration, Steelcase; vice president of supply chain, Integrated Strategies

EDUCATION: BS, business administration, California State University, Sacramento, 1982; MBA, Rotman School, University of Toronto, 1996.

The Big Questions

What do you do when you're not at work?
I've done some volunteer work with local Council of Supply Chain Management Professionals roundtables. Family activities are also a priority. My hobbies involve outdoor activities such as hunting, fishing, sports, and exercise.

Ideal dinner companion?
I'd love to have another meal and personal session with Jack Welch.

If you didn't work in supply chain management, what would be your dream job?
Running a successful fishing resort, doing field tests for an outdoor company such as Cabela's, or traveling around the world.

Your idea of a successful day?
Contributing to a positive customer experience or helping to obtain positive business results for my company. In supply chain management, you're either the hero or the villain; there's very little in-between. You've got to celebrate the wins when you get them, because it will always be a roller coaster ride.

ambient temperatures, but after five days they have to be refrigerated. Reagents travel frozen, wrapped in ice or gel packs, but that packaging is also only good for five days. In either case, a delay in transportation or customs could endanger the product.

To stave off meltdowns, Bradley anticipates delays and works to avoid them. For example, shipping products from the Netherlands hub to non-members of the European Union requires customs clearance, which doesn't always run smoothly.

"Some non-European Union countries have customs and tax practices that pose challenges," Bradley says.

Bradley also works with the sales force to ensure that customers understand their shipping terms. Otherwise, shipments could sit at borders waiting for customers who don't realize they are responsible for picking them up.

WORDS FROM THE WISE

If genetic predilection led Bradley to supply chain management, serendipity steered him into the cold chain field. In 2006, Bradley met Jack Welch, legendary former chairman and CEO of General Electric, after Bradley's wife won a contest promoting Welch's book, *Winning*.

Bradley came to the meeting armed with 25 strategic-level questions. Coming from traditional manufacturing, he wanted to know which up-and-coming industries were likely to keep substantial operations on U.S. soil. Welch noted that three technologies were coming together to make a significant impact: biotechnology, nanotechnology, and information technology.

"I thought, 'That's a big takeaway. I'll find out more,'" Bradley says.

One month later, he received job offers from two biotech firms. "The stars aligned," he says. "And here I am at Affymetrix." ■

TRENDS

TRENDTRACKER

Milking Vendors Spoils Returns

by Joseph O'Reilly

The New York City Department of Education (DOE) is learning the fundamentals of transportation and vendor management the hard way – and it shows. Facing a $300-million budget deficit, this past spring the DOE decided to revamp its decades-old milk purchasing arrangement and consolidate suppliers, according to the June 18, 2008, edition of the *New York Post*.

"Our primary goal is to derive the best price," said Eric Goldstein, who manages the department's milk vendor contracts.

Instead of vendors bidding individually for milk contracts at New York City's 1,000-plus public schools, the DOE's purchasing program now requires dairies to compete for a "borough's worth of schools" – which amounts to six contracts (Brooklyn's schools are split in two).

The justification? Buying in bulk increases competition and economies of scale, reduces paperwork, and saves the schools money.

The milk vendors see it differently. They argue that contracts will become more expensive as suppliers factor in extra truck, labor, and fuel costs. In the past, dairies bid on schools that were along existing milk runs, deliveries they could simply plug into daily routes and schedules.

Under the new system, those still vying for this business will have to add trucks, drivers, and routes to serve more stops


MAKING
BUSINESS
FLOW

CONTINUED FROM PAGE 14

Food Chains Gone Bad

When food and beverage recalls run wild, they do so at a heavy cost to the enterprise, according to a recent study conducted by AMR Research. The report, developed in conjunction with Lawson Software, a Minneapolis/St. Paul IT vendor, found that 40 percent of surveyed companies with a recall in 2007 incurred losses of at least $20 million, while more than half reported losses in excess of $10 million (*see chart below*).

The study, *Traceability in the Food and Beverage Supply Chain*, polled food and beverage manufacturing companies in the United States as well as France, Sweden, and the United Kingdom.

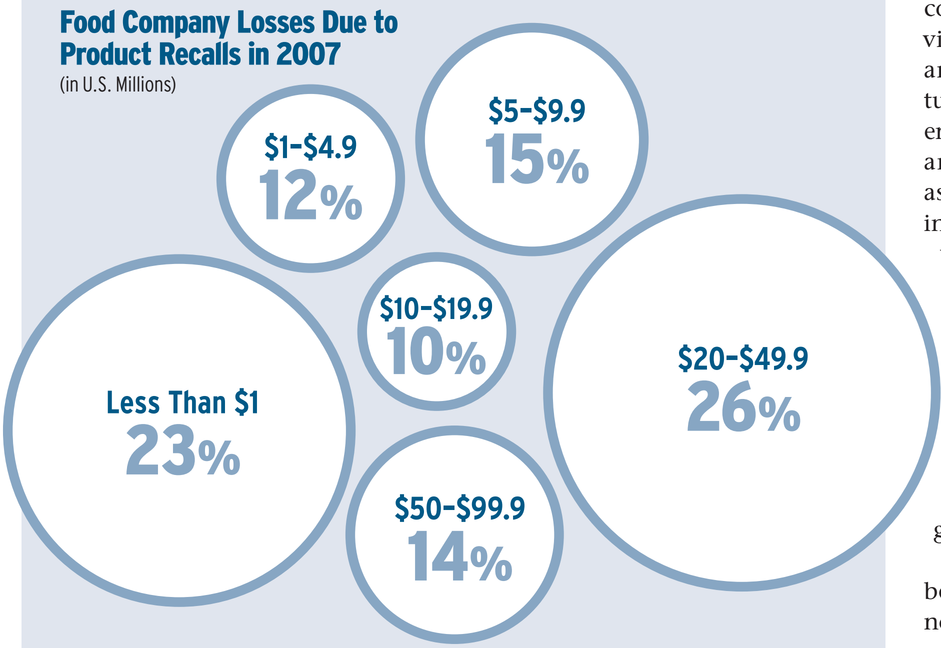
The figures are remarkable given recent consumer sensitivity to food product safety and quality and the fact that traceability processes and systems are widely available to mitigate such exceptions before they spiral out of control.

The disjuncture appears to be in recognizing when there is a problem and being able to respond quickly. Food and beverage companies report it takes an average of 14 days to sense the need for a recall, then 34 days to act on it. By that time, less than 40 percent of affected product can be collected because the rest has already been consumed or thrown out.

"Despite a perception among food companies that they're doing a good job managing product quality, the staggering cost of recalls proves business-as-usual isn't working," says Rob Wiersma, industry strategy director for Lawson. "Food producers can be much more proactive in managing food safety to improve product quality and reduce supply chain risk."

While the food and beverage industry has been slow to adopt modern traceability software, companies appear to recognize a need for change. More than 75 percent of those surveyed plan to spend money this year to improve their sense-and-respond time to quality alerts as well as invest in track-and-trace capabilities.

Food Company Losses Due to Product Recalls in 2007
(in U.S. Millions)



Source: AMR Research study, *Traceability in the Food and Beverage Supply Chain*, which surveyed U.S. and European food and beverage companies.

across a much larger, and arguably more inefficient and congested delivery network. With today's high fuel prices, vendors estimate the DOE's "improved" purchasing program will cost taxpayers $10 million more annually, or $50 million over a locked-in five-year contract.

SHARED KNOWLEDGE EQUALS SHARED GAIN

This lesson aside, businesses have been gradually shifting the way they integrate their supply chains to drive visibility into inventory movement and create better efficiencies across functional divides.

The current economic climate only raises the importance of looking beyond "shelf purchase price" to probe underlying cost structures, digest and disseminate this data throughout the chain, and identify areas for improvement. The natural synergies that exist between logistics disciplines bear recognition, then action.

Tying together transportation and procurement, for example, provides incentive for businesses to place purchase orders in the hands of the people coordinating inbound moves. Deeper visibility into the purchasing function, and therefore greater capacity to capture, track, and forecast demand signals, enables transportation managers to plan and consolidate loads and optimize asset utilization. Breaking down walls inspires innovative strategies – and vice versa. This is a core tenet of inbound logistics.

Conversely, when businesses – and school districts – optimize one function without optimizing another, fail to understand how changes in one area can ripple out to others, or lack control over transportation execution, the consequences can yield far greater problems.

The communication breakdown between the DOE and local dairies is not all that uncommon in the broader scope of supply chain management, and outside the media's prying eye. Nor are the consequences. Businesses that

CONTINUED FROM PAGE 16

apply cosmetic fixes to hemorrhaging cost bleeds, and fail to consider broader symptoms or repercussions, optimize "dis-ease" and dysfunction elsewhere.

In this case, the DOE gains greater internal control over purchasing at the expense of losing control over transportation pricing, which it has little control over anyway. Even if fuel prices drop, extra delivery miles ultimately raise costs.

The department also sets a negative precedent by putting the squeeze on suppliers, rather than working together to explore a suitable compromise.

INTEGRATED LOGISTICS 101

This "public-facing" drama plays out as many private sector enterprises take a completely different approach to reducing costs: deconsolidating distribution networks and creating shorter transportation legs to better rationalize mode selection and fuel economy.

As an example, Procter and Gamble (P&G) recently announced a major shift in distribution within its global supply chain. As one of the world's largest consumer goods manufacturers, P&G operates production facilities across the globe and knows a few things about meeting speed-to-market demands economically and efficiently.

To reduce transportation distances and costs, the manufacturer is locating production and distribution facilities closer to demand and holding more stock in the system.

"Supply chain design is now upside down," said Keith Harrison, P&G's global product supply officer, in a June interview with *Financial Times*. "The environment has changed. Transportation cost will create an even more distributed sourcing network than we would have had otherwise."

Consumer goods manufacturer Procter and Gamble is wiping clean traditional supply chain tenets by moving production closer to demand and holding more inventory.

P&G recognizes the bi-directional consequences shifting sourcing dynamics and transportation pressures place on the global supply chain. Turning convention on its ear, the company is taking a holistic approach to creating what it believes will be a more sustainable distribution network for pulling product to market.

Consider another example on a smaller scale. Ken Westfield, strategic sourcing manager for The Gorman-Rupp Company, an industrial pump manufacturer, collaborates with his transportation department to squeeze out costs.

After discovering vendors controlled most inbound freight movements, he began working with his traffic coordinator to better vet carrier terms and specify transportation instructions in purchase orders. This collaborative effort allows Gorman-Rupp's purchasing and transportation departments to source the right parts at better rates, thereby optimizing the whole.

This level of visibility and collaboration was evidently lacking when the DOE and local milk vendors came to the table – if they even got that far. In the department's defense, consolidating purchasing power is an appropriate action given the economy and New York City's fiscal problems.

But without regard for transportation, especially when fuel prices are exorbitantly high, this disconnect will likely leave vendors with an axe to grind and taxpayers with a sour taste in their mouths. ■

CONTINUED FROM PAGE 18

Forwarding Regression

Perhaps reflecting an impending worldwide recession, growth in the global freight forwarding market slowed to its lowest rate in four years during 2007, according to the latest figures published by UK-based industry analyst, Transport Intelligence. Its research also reveals, however, that despite worldwide economic uncertainty, the market has remained resilient, returning low double-digit growth.

Among other key findings in the company's *Global Freight Forwarding 2008* report:

- Airfreight forwarding growth dropped sharply, by almost five percentage points to 7.5 percent, as the market cooled significantly. This was a result of lower volumes due to the economic slowdown and the migration of some traffic to less expensive sea freight.
- Sea freight forwarding continues to grow at a similar rate as the previous year, registering a 14.3-percent increase in 2007. China's trade is developing at a strong pace and was one of the key drivers of this growth. U.S. exports partly mitigated weakness on the import side, and Asia Pacific-Europe trade volumes grew markedly.
- Of the main forwarding markets, Europe and Asia Pacific performed best, while North America–specifically the United States–dragged down overall growth. The credit crunch and a downturn in consumer confidence particularly affected imports into the region. On the plus side, exports picked up due to the weak dollar. Weakening economic indicators suggest Europe will be the next market to follow the United States' dubious lead.

To Be (Or Not To Be) Prepared

Large corporations might do well to familiarize themselves with The Scouts' Motto: Be prepared. With supply chains increasingly protracted and the challenges of bringing product to market magnified by such length, anything out of the ordinary can have considerable ripple effects throughout an enterprise.

Despite a litany of devastating natural disasters over the past five years, many companies are ill-prepared for such catastrophes and are not overly concerned about the potential business impact, according to the *2008 Natural Disaster Business Risk Study*, commissioned by FM Global, Johnston, R.I., one of the world's largest business property insurers. The findings are based on the responses of 100 financial executives from U.S.- and Canada-based corporations with at least $1 billion in annual revenue.

Many companies are not prepared for the impact a natural disaster could have on their supply chains.

▼ PLAYING WITH FIRE, BY THE NUMBERS: Though 96 percent of financial executives say their companies have operations exposed to natural catastrophes such as hurricanes, floods, and earthquakes, less than 20 percent indicate that their firms are "very concerned" about such disasters negatively affecting their bottom line.

EARTHQUAKES:

84% of companies have exposure to earthquakes

71% of companies report they are not well-prepared for an earthquake

85% of financial executives are not overly concerned that an earthquake could negatively impact their company's bottom line

FLOODS:

90% of companies have exposure to floods

63% of companies report they are not well-prepared for a flood

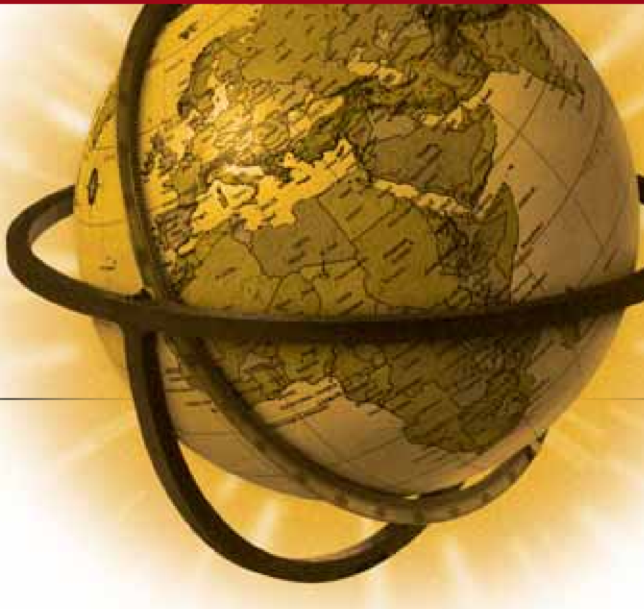
89% of financial executives are not overly concerned that a flood could negatively impact their company's bottom line

HURRICANES/ TYPHOONS/CYCLONES:

80% of companies have exposure to hurricanes

48% of companies report they are not well-prepared for a hurricane

79% of financial executives are not overly concerned that a hurricane could negatively impact their company's bottom line



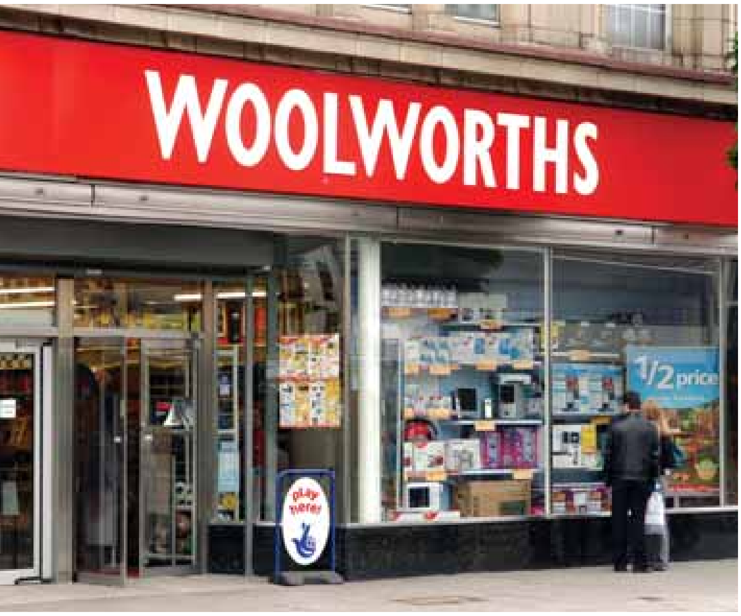
GLOBAL LOGISTICS

by Joseph O'Reilly

What's Leadership Worth?

In tough economic times you can't nickel-and-dime logistics process improvement. That, in itself, is a lesson for struggling retailers. The United Kingdom arm of Woolworths, the original five-and-ten discount chain, knows this reality firsthand, and is making supply chain management and leadership top priorities as it looks to reverse its fortunes.

Beset by rampant stockouts and poor inventory control, two years ago Woolworths' UK stores began tweaking their supply chain approach, improving customer fulfillment capabilities and integrating new SAP supply chain management technology to improve warehouse productivity. The retailer returned to profitability last year, largely as a result of these improvements.



Still, increasing competition from supermarkets and other discount retailers, and a bleak earnings forecast, convinced Woolworths' board to bring in new leadership to steer the company's turnaround.

Steve Johnson joined Woolworths as its new CEO in September. As former head of Focus DIY, a do-it-yourself home furnishings retailer, he successfully realigned the company's price proposition with an overhauled supply chain to grow sales, enhance margins, and reduce costs. He plans to bring a similar nuts-and-bolts approach to restructuring Woolworths' supply chain.

The company recently announced it would greatly streamline the enterprise; sell, sub-let, or bring partners in to manage its 120 largest stores; and otherwise return to the basics of retailing. On-shelf availability at Woolworths has only been 74 percent, meaning that one in four products that should be on the shelves is not, Johnson observes.

To rectify inventory availability and improve branding identity with consumers, Johnson aims to reduce Woolworths' product range by 25 percent and better differentiate and rationalize private-label items.

"The stores and customers are at the end of the line rather than the beginning of the thought process," observes Johnson in outlining the company's core problem. "We need a good dose of basic shop-keeping and attention to retail detail."

Woolworths' UK stores returned to profitability after focusing on supply chain management improvements and tapping new leadership talent.

Around the World in a Box

A paper blowing in the wind, a bottle bobbing in the current, a container pinballing between global ports–all part of the obscure minutiae of everyday life. If the British Broadcasting Corporation (BBC) has any sway, however, its Big Box project will publicize the not-so-subtle ebbs and flows of global trade and the importance of containerization to the masses.

In a landmark experiment and yearlong presentation that will be aired on television, in print, and online, the BBC is tracking a GPS-equipped 40-foot container as it bumps and floats its way around the world. Inspired by economist Marc Levinson's history of containerization, *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger*, the BBC has partnered with the Container Shipping Information Service (CSIS) and its member partner, NYK Line, to handle logistics for the project.

The BBC-branded shipping container embarked on its voyage in September, leaving the port of Southampton, England, for a Scottish bottling plant, where it was loaded with whiskey bound for China. During its journey, the container will criss-cross the United States, Asia, the Middle East, Europe, and Africa, transporting a variety of consumer goods before returning to England.

BBC News is following a container around the world for one year to tell the story of globalization and the world economy.

The BBC's goal is to highlight the importance of the container shipping industry, providing a live demonstration of how "the box" connects countries, markets, businesses, and people.

"As this specific container travels around the world, everyone can follow its adventures and start to understand how pivotal container shipping is to the globalized world and the global economy," says Jeremy Nixon, European managing director of NYK Line.

You can track the box's progress through daily GPS updates on the BBC's Web site: www.bbc.co.uk/thebox

How Well Do You Know Your Container?

Since Malcom McLean's revolutionary idea took float more than a half century ago, containerized trade has redefined global commerce. Here are some facts to get you up to speed on the box that's lifting your business.

- Standard container sizes measure 20 feet or 40 feet long, eight feet wide, and eight or eight and a half feet tall.
- Shipping containers come in a variety of types including: end-opening, side-opening, half heights, open-top, flatrack, reefer (refrigerated), liquid bulk (tank), and modular.
- An empty TEU container weighs approximately two tons.
- A standard container can hold 24,914 tin cans.
- Many containerships can comfortably carry more than 8,000 containers.
- In one year, a large containership will carry more than 200,000 containers.
- The equivalent of approximately 141 million loaded 20-foot containers moved across the world in 2007.

Sources: The Container Shipping Information Service, Drewry Shipping Consultants

CONTINUED FROM PAGE 23

Hitching a Ride on the Eurasian Express

Traditional ocean and air routes between Europe and Asia now have competition from a Eurasian landbridge expected to reduce transport time and cost, coast to coast.

A container train carrying 50 containers of Fujiusu Siemens Computers' (FSC) monitors and chassis recently embarked from Xiangtang, China on a 17-day, 6,000-mile journey to Hamburg, Germany via the Eurasian landbridge.

The train traveled through China and Mongolia, crossing the border to Russia near Irkutsk, and continued along the Trans-Siberian Railway route via Novosibirsk, Omsk, and Ekaterinburg to Moscow, then through Belarus and Poland to Hamburg.

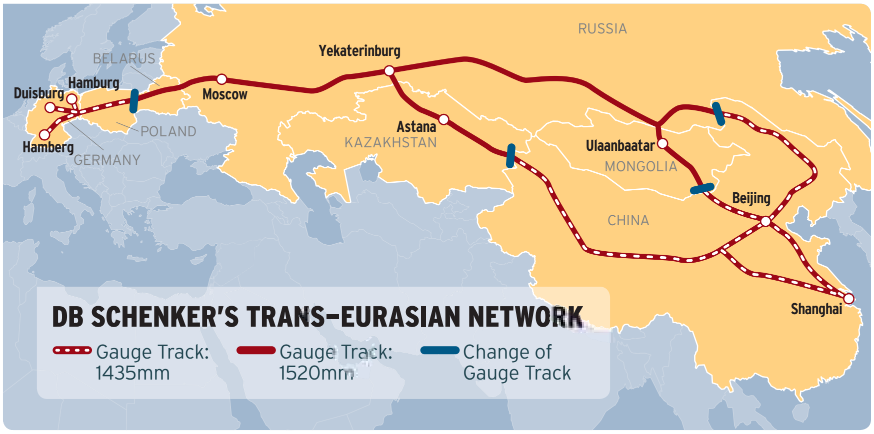
In Hamburg, the 50 containers were forwarded in two directions: the monitors continued by train to FSC's European DC in Worms, Germany; and the chassis were delivered direct to a plant in Augsburg that manufactures PCs and servers.

Most freight moving between Asia and Europe is handled by ship and plane, with only two percent of international freight moving by rail. Comparatively ocean transit takes 30 to 35 days, and while air freight is considerably faster, it also costs more. Shipping IT products by rail is more flexible and 25-percent cheaper than air, says Heribert Göggerle, FSC's senior vice president of supply operations.

Germany-based DB Schenker spearheaded the express rail link by partnering with Russian Railways RZD and the Chinese Railways to manage the move. With the success of FSC's inaugural transit and increasing demand for ocean and air alternatives, DB Schenker plans to launch a Trans-Eurasia Express service, a weekly connection between China and Germany, with departures in both countries. The company anticipates the new service will be particularly suitable for the following trade segments:

- Long-haul freight inside China.
- Freight that has to be transported quickly but less expensively than air freight, such as electronics and mechanical and plant engineering project cargo.
- Freight that is carried on the Eurasian landbridge as an alternative to air and ocean freight to remedy bottlenecks and delivery instability.

For global shippers, the Trans-Eurasia Express is an important step toward linking logistics networks between the European Union, Russia, and China. Already, 18 high-capacity transshipment terminals are under construction in China to link the new inland industrial regions with the rail corridor by 2010. Consequently, emerging manufacturing and consumer markets throughout Asia and Europe will have greater modal connectivity, providing further incentive for global enterprises to locate operations in these areas.




California
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91
LOS

CONTINUED FROM PAGE 24

RIM Looks for Edge in India

Research In Motion (RIM) is on the move overseas. The Ontario, Canada-based company, famous for its BlackBerry smartphone, plans to set up manufacturing and logistics operations in India to tap into the country's growing and outwardly mobile consumer base.

"Along with China and Brazil, India is a strategic growth market for the company," says RIM Co-Chief Executive Officer Jim Balsillie.

"India is the most exciting and fastest-growing mobile market, and RIM is absolutely committed to making India-specific phones," he says.

RIM has thus far hooked up with five Indian carriers to launch its Blackberry solutions. In the Asia-Pacific region alone, the company has connections with 39 carriers in 18 markets.

The news comes after Indian authorities threatened to embargo BlackBerry use earlier this year over security concerns with the device's encrypted system. After a meeting between government officials and representatives from the wireless industry, India decided to let the encrypted BlackBerry system continue operating, thereby paving the way for RIM's penetration into the market.

Though the manufacturer has yet to disclose specific details about the size or scale of its proposed investment plan, Balsillie believes India has a dynamic workforce capable of meeting the demands of the local market by manufacturing less-expensive devices.

RIM introduced its BlackBerry messaging service and software in India in 2004 through a partnership with mobile service provider Airtel. ■

Express Urgency

As testament to the rapid growth of intra-Asia and Asia-Europe trade, the penetration of U.S. interests in the region, and demand for time-sensitive delivery services, global expediters continue to ramp up investments in China.

DHL recently completed a $110-million expansion of its Central Asia Hub (CAH)—five years ahead of schedule. The facility, located at the Hong Kong International Airport, is the first large-scale automated express hub in the Asia Pacific. Expected to process 40 million shipments this year, the CAH can handle 75,000 pieces per hour, a 114-percent increase over its previous throughput.

To capitalize on the influx of express cargo handling capabilities, the Chinese government aims to support further development by improving the airport's links to nearby markets, with plans to add a third runway and increase runway capacity in the near future.

The completion of DHL's CAH facility follows UPS' decision to relocate its intra-Asia air hub from the former Clark Air Force Base in the Philippines to Shenzhen Airport in southern China earlier this year.

The new $180-million Shenzhen hub, expected to be operational by 2010, will initially be able to process up to 18,000 pieces per hour, with capacity to expand to 36,000 pieces per hour.

UPS also plans to establish a UPS International Air Hub at Pudong International Airport in Shanghai. Due to open in November, this facility will connect China to UPS's global air network, including U.S. and European destinations. The new Shenzhen hub will connect all major Asian points.

TOYS"R"US HAS TROY HAMMOND. The next-gen video game revolution of 2006 sent product demand to an all-time high and put trusted retailer, Toys"R"Us, to the ultimate test. The number of new systems Agility's Troy Hammond was handling broke records for Agility's 13-year-old Direct-to-Store program. To secure the necessary courier lift, trucking support, and temporary labor for the fast-moving products, Troy's team managed a multiple-carrier program. By systematically processing allocations on a store-by-store basis, Troy kept Toys"R"Us shelves stocked and gamers stoked. **TOYS"R"US HAS AGILITY.**

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IT MATTERS

by Razat Gaurav

Can You Afford to Ignore Supply Chain Risk?

As companies gravitate toward a "build anywhere, source anywhere, sell anywhere" mind-set, supply chain risks–entering into long-term contracts at unfavorable prices or sub-optimal quality, excessive dependence on one geography or supplier, lead time variability, and supply disruptions caused by natural disasters–assume greater proportions. Any supply chain setback could negatively impact average operating income and return on sales by more than 100 percent within two years after the incident occurs, according to analysts.

SOURCES OF RISK

To successfully manage risk, companies must continuously evaluate factors across the decision continuum–from procurement network design to supply movement.

In many industries, risk is first determined in product design. For example, it is not uncommon to accrue excess and obsolescence charges for specialized components used in only a few products. While most risk discussions center on supply volumes, price volatility is also an important factor.

Demand uncertainty is another source of risk. It often requires supply chain organizations to operate in a narrow safe zone that keeps the triple threat of unmet demand, excess/obsolescence charges, and unnecessary financial commitments at bay. This is particularly true for industries that experience the "long-tail phenomenon," where there are few high-volume products but many medium- and low-volume products. Well-designed supply networks can increase the operational "safe zone" by providing recourse to feasible alternatives.

In addition to design decisions, companies must consider external factors that can potentially disrupt the flow of goods, such as strikes, terrorism, mechanical failures, research and development delays, and unexpected logistics challenges. As the supply chain increasingly stretches across the globe, multiple hand-offs and legs of movement increase uncertainty.

All risks are not equal, and they must be categorized based on the severity of the impact and the likelihood of occurrence. Risks that are most likely to occur and cause the most severe impact earn top priority.

All risk evaluation includes two phases:

1. **Risk identification–**determine the sources of risk, dependencies among them, and the likelihood they will occur.
2. **Response analysis–**examine potential options to hedge against the risk while assessing the financial impact.

The first step in risk identification often involves variants of the Delphi method of predictive analysis. The Delphi method is a facilitated brainstorm process that engages experts to participate anonymously in iterative sessions and provide predictions with supporting logic. The experts reassess the results of each session until they reach a relative consensus.

Once risks are identified, the response analysis phase focuses on estimating the impact of risk factors across the supply chain. Techniques for analyzing risk-decision clusters fall into the following two families:

- **Prescriptive decision models** include many supply chain optimization tools and are designed to prescribe an answer to a given set of inputs. By systematically analyzing different scenarios, the models provide insight into the interaction between risk factors and supply chain control variables.
- **Descriptive simulation models** are designed to replicate supply chain operations and generate statistics by using a series of simulated inputs. Decision-makers use these statistics to inform their choices.

As supply chains grow longer, increasingly complex, and subject to more potential disruptions, supply management executives must decide whether they can afford not to make risk management a top priority. ■

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VIEWPOINT

by David Rubright

Community Service: Supporting Logistics Education

Manufacturing jobs are leaving American shores at an increasing rate. While this presents challenges for manufacturing companies, it also boosts demand for distribution and logistics professionals. Because many products manufactured overseas are ultimately consumed in the United States, the need for warehouses and distribution centers to move those materials from port of entry to point of use continues to grow, creating demand for a new generation of distribution and logistics professionals.

To meet the need for these new employees, enterprises that hire logistics and supply chain professionals are getting more involved in programs that aim to educate students and parents about opportunities in the field.

Too many people think that working in a distribution center means performing a low-level job. Nothing could be further from the truth. Distribution and logistics careers are technically challenging, and well-trained workers will always be in demand.

In fact, the growing importance of technology in our profession means that the warehouse jobs of the 20th century are becoming exactly that–a thing of the past. Contemporary distribution jobs are exciting, fast-paced, and plentiful.

Capable, tech-savvy workers fill positions as facility managers, operations managers, shift supervisors, inventory control managers, purchasing managers, and dispatchers. Most of these positions require at least an associate's degree, and, depending on the level of responsibility within the organization, can pay very well. The increasing reliance on technology makes these jobs appealing to students.

GET THEM WHEN THEY'RE YOUNG

To spread the logistics education message, training and outreach programs increasingly look to younger audiences. Engineering, education, law, medicine, and other professions already have name recognition by the time students reach middle school. Distribution, materials handling, logistics, and other roles in our segment are not as familiar.

An in-school program can reach students when they are still forming ideas about their career paths. But the cost of creating a distribution course–much less a facility equipped with the latest technology–can be prohibitive to high schools and middle schools.

Where can these schools turn for support as they seek to offer logistics training? Industry. At little or no cost to schools, industrial partners can provide the resources and knowledge to develop effective and up-to-date logistics training programs.

These partnerships offer benefits that reach beyond the students and program sponsors and into the community. For example, companies often locate large distribution centers in areas with low real estate values and wage averages. The jobs these centers bring are exactly the kind of work needed in those areas.

In some instances, the distribution centers established for education can have an impact on the entire county. One facility in Lehigh Valley, Pa., for example, handles all the purchasing and inbound freight for the county's nine school districts.

Not only do students get a hands-on education about supply chain and logistics, but the facility is able to leverage its buying power to negotiate excellent prices, thereby saving money for local taxpayers.

When forward-thinking enterprises realize the opportunity presented by sponsoring logistics education programs, the entire community can benefit – and the next generation of supply chain professionals will thank them. ■


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SUPPLY CHAIN SECURITY

TAKING CARE OF | **BUSINESS**

by Bob Jaffin

Hazmat Education Is the Best Response

Today's logisticians need to be well-grounded in many areas of hazardous materials (HM) management and alert to the prevalence of these regulated materials throughout the supply chain – in the workplace, in the work process, and in distribution.

HM falls into two categories and three broad applications. The two categories are materials inherently hazardous and materials that are hazardous for disposal. The three broad categories include materials used to produce finished goods, materials used to maintain facilities, and production machinery employed to produce finished products and materials.

Strictly speaking, any material in sufficient quantity in the wrong place can become hazardous. In fact, many materials we classify as hazardous are essential to the function of the human body. HM rarely is consumed or expended within a facility, so transportation is always necessary.

The Emergency Response Guide (ERG), published by the U.S. Department of Transportation, serves as a quick, easy, and effective tool that can help logisticians identify HM and respond to incidents when they occur. The ERG has been updated every four years since 1996, and the 2008 version is now available.

In 1991, the United States began a complex process to align the 49 CFR (Code of Federal Regulations for HazMat Materials) with the rest of the world. We are at the tail end of this process now, and many 2008 revisions are based on technology and homeland security changes, rather than harmonization and standardization.

Here is a rundown of some HMs featured in the 2008 ERG.

■ **Ethanol.** The quantity of ethanol shipped to produce enhanced automobile and truck fuels continues to grow. This is an issue in terms of emergency response and fixed fire suppression systems located in facilities. As an example, ethanol and gasoline are both flammable liquids, but the foam typically used to fight a gasoline fire is ineffective against ethanol.

■ **Lithium batteries.** No other regulated item has had more impact across a broad range of product applications and processes than lithium ion batteries. But they also have a long and serious safety record. Both international and U.S. transportation regulations were recently updated to reflect the increased risks these ubiquitous cells present to shippers and producers.

■ **Fuel cells.** All forms of fuel cells present unique hazards, whether installed or in shipment. Currently, the focus is on educating and preparing emergency responders so they can take the appropriate action at the scene of an incident. This is a safety, security, and reliability issue when selecting a vehicle, as well as developing related training requirements for operations and emergency response.

■ **Fluorescent lights.** There are inherent dangers in green innovations. Compact fluorescent lights, for example, represent a significant hazardous waste disposal challenge. Despite increased energy savings, fluorescent lights contain mercury. This means they should be, and in some cases must be, recycled.

■ **Consumer goods.** Even seemingly benign products can result in special challenges. Military personnel, emergency responders, and outdoor enthusiasts frequently use Flameless Ration Heaters, known to many as heat tabs for ready-to-eat meals. Older devices, still readily available on the Internet, are water reactive and represent hazards in shipment, storage, use, and as hazardous waste if thrown away unused.

The ERG can help logisticians identify lurking risks and address associated liabilities often overlooked in everyday logistics processes. To download the current 2008 Emergency Response Guide, go to: http://hazmat.dot.gov/pubs/erg/gydebook.htm

In the meantime, stay safe and ask questions. ■

MARITIME LOGISTICS:

STAYING

AFLOAT

Ocean carriers toss out lifelines to help shippers navigate economic riptides.

BY LISA HARRINGTON

The maritime industry, like every other transportation sector, is sending out an SOS. Unprecedented challenges such as slowing economies in Europe and the United States, fuel cost inflation of 60-plus percent, and a steep decline in the value of the U.S. dollar are having far-reaching effects on ocean shipping. The cost of moving a container from China to the United States, for instance, has tripled since 2003.

In the face of these challenges, ocean carriers are throwing out lifelines to shippers, working with them to solve problems, create solutions, and address the difficulties of cost inflation and business slowdowns. These new shipper/carrier partnerships focus on collectively saving money and operating more efficiently, keeping all boats afloat.

LIFELINE #1: KEEP FUEL PRICES IN CHECK

"Our biggest challenge is the cost of fuel," says Michael Wilson, vice president, equipment and logistics, for Morristown, N.J.-based ocean carrier Hamburg Süd North America. At the beginning of 2007, fuel cost less than $300 a ton. In mid-summer 2008, prices hit $750 a ton before dropping to about $600 a ton at press time.

To address the fuel issue, liner companies and their U.S. importer customers agreed in contract negotiations earlier this year to floating bunker fuel surcharges that adjust monthly over the contract term to reflect world fuel price fluctuations.

These contract negotiations were a stressful time for shippers, according to Ali Hosein, vice president, international freight and merchandising for Rooms to Go, a regional furniture retailer headquartered near Tampa, Fla. Last year, Rooms to Go imported 25,000 containers from Asia into distribution centers located in Arlington, Texas; Suwannee, Ga.; Charlotte, N.C.; Mobile, Ala.; and Tampa and Lakeland, Fla.

Rooms to Go uses a mini-landbridge (an intermodal system that transports containers by ocean, then by rail or truck to a port previously served as an all-water move) out of the ports of Los Angeles and Long Beach to serve the Texas distribution center. The retailer relies on all-water/East Coast port routings to Savannah and Tampa to serve its other DCs.

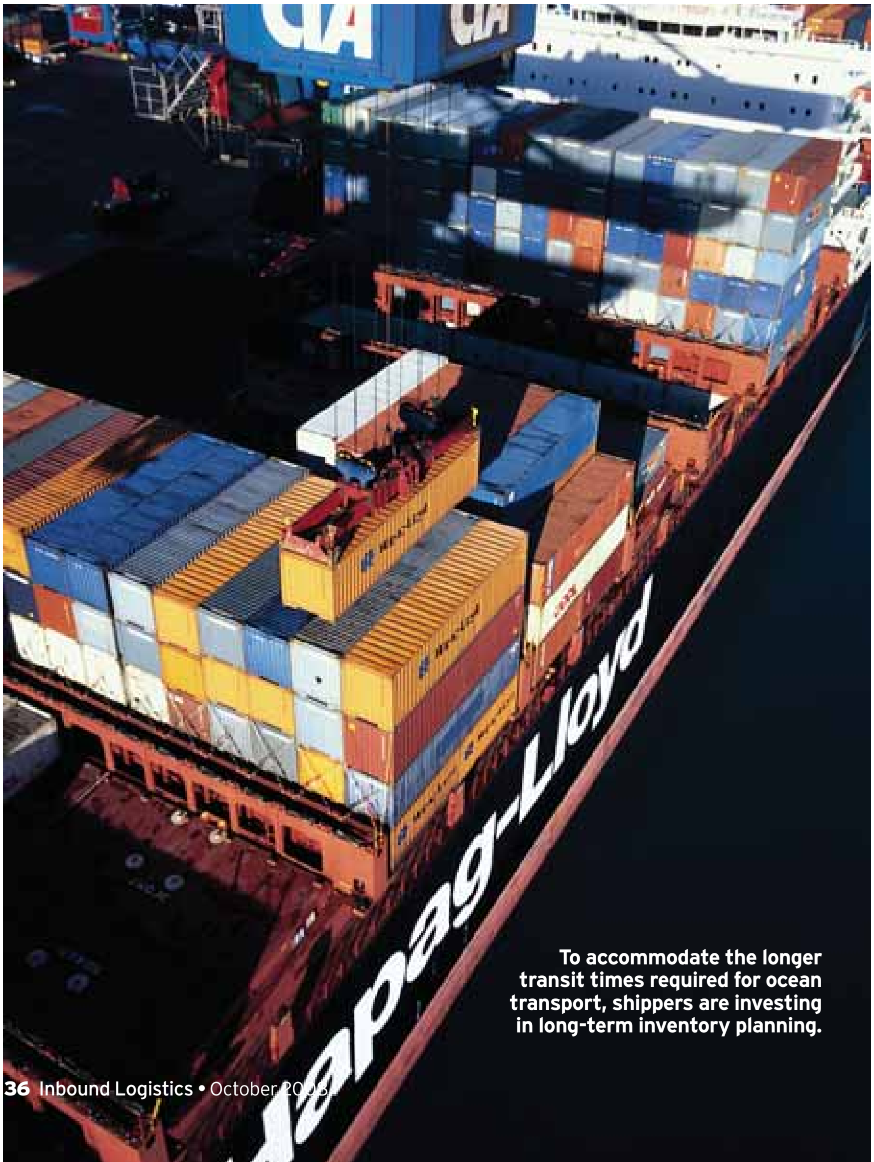
"Until this year, we had consistent ocean carrier contracts with rate stability for the year," Hosein notes. "Now we have to accept fuel cost adjustments. Because we sign contracts directly with the steamship lines, however, we've been able to hold our rates. We negotiate our own destiny, and that works well for us."

Carriers are doing their part to cut fuel consumption by slowing down their ships. "A 10- to 20-percent drop in vessel speed significantly reduces fuel consumption," says Peter Keller, president, NYK Line (North America) Inc.

LIFELINE #2: ADD SHIPS

To maintain service levels for shippers, carriers are adding ships to their route rotations. "That it costs less to add a ship than to operate at higher speed shows how significant the impact of fuel is," says Wilson. Because new sailings offset slower speeds, carriers can continue to give shippers the service they need.

"Today, shippers care about consistency and reliability more than speed," Wilson notes. "Adding two days of



To accommodate the longer transit times required for ocean transport, shippers are investing in long-term inventory planning.

THE LCL OPTION

Not all shippers import or export in full containerloads. Those shippers that require less-than-containerload (LCL) service typically use freight forwarders or other third parties to consolidate their cargo into containerloads and arrange for both inland and ocean transportation.

Several ocean carrier logistics companies – such as OOCL Logistics, Maersk Logistics, and APL Logistics – offer LCL services. For instance, OOCL Logistics' LCL services tap the ocean carrier's dedicated trunk and feeder services to "provide reliable weekly sailings with fixed-day cargo and vessel cut-off times," according to the 3PL. Shippers get direct connections between OOCL's Asian base ports and selected U.S. and Canadian destinations. "Transit times are consistent, enabling shippers to plan their freight flows more effectively," the 3PL says. And shippers can monitor their cargo's progress online via OOCL's information management system.

One obstacle to LCL transport is that transit times still are not as reliable or efficient as containerload transport, according to Chris Corrado, director of global logistics for Tyco International. LCL service is an offering that third parties – primarily freight forwarders – control. "We work closely with freight forwarders to reduce our LCL transit times. But we find it still takes longer to get cargo into the container and out of the origin port," he says.

In many cases, the booking forwarder does not handle the actual physical consolidation and co-loading. "They may give it to another freight forwarder, and those hand-offs add time," Corrado says.

"When we emphasize these issues to our forwarders, however, service improves," he adds.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transit time for a shipment moving from Sydney to Philadelphia doesn't make that much difference. Speed is an issue only when you can reasonably afford to do something about it. But with the cost of fuel today, that's not possible."

LIFELINE #3: ADJUST ROUTES AND SERVICES

In response to fuel cost increases, U.S. shippers have been routing more freight through the Panama and Suez canals to East Coast and Gulf ports to reach Midwest, Gulf, and East Coast markets. The Transpacific Stabilization Agreement (TSA), a group of 14 container shipping lines serving the Asia-U.S. trade, reports that demand for East Coast all-water services grew by 10 percent for the maritime trade as a whole, and more than 15 percent for TSA lines in 2007.

"Importers are re-thinking their supply chain strategies to reduce their inland trucking and rail fuel costs," says Wade Elliott, senior director of marketing at the Port of Tampa. "They are asking carriers to provide more service to Atlantic and Gulf ports, and carriers are responding. Shippers are doing more long-term inventory planning to accommodate longer transit times."

From all indications, the shift to all-water routes in the United States will continue to escalate, particularly as the Panama Canal expansion comes online in 2014 or 2015. "Opening a third set of locks in the Panama Canal will remove an infrastructure constraint and create more transit capacity for Asia-U.S. all-water containerships," notes Drewry Supply Chain Advisors in a report on U.S.-Transpacific intermodal trade.

On a straight ocean-rate basis, Drewry expects container services from Asia to the U.S. West Coast to continue to be more cost-competitive than Asia-U.S. East Coast (USEC) or Asia-Gulf Coast – even if post-Panamax 8,000-TEU vessels (ships that are too large to fit through the current canal system) are employed after the opening of the enlarged Panama Canal. Panama authorities recently indicated that the Canal will be able to handle vessels of more than 13,000 TEUs, however, a development that would change the West Coast routing economic equation.

If you factor in U.S. inland transportation costs and eastern U.S. consumption market demographics, this equation has

Many importers are re-thinking their supply chain strategies and shifting to all-water routes to reduce fuel costs associated with inland transportation. The shift will escalate, particularly after the Panama Canal expansion boosts capacity for Asia-U.S. containerships.

already changed. "For most final destinations in the eastern United States, all-water services via the USEC and Gulf cost less than the West Coast intermodal routing," Drewry reports. "If ship sizes through Panama increase to 6,400 TEUs, most places east of the Mississippi will fall out of the West Coast's sphere of influence. Push canal capacity up to 8,000 TEUs, and the 'border' shifts across the Missouri for 40-foot import cargo."

If the Panama Canal Authority succeeds in getting 13,000-TEU ships through its new locks, then Denver, Albuquerque, and El Paso will be the "border towns" for West Coast hinterlands, the Drewry report says.

Drewry expects shippers to divert 25 to 30 percent of the U.S. West Coast's current cargo to East Coast and Gulf ports over the next decade.

LIFELINE #4: ADD CAPACITY

In response to these dynamics, carriers have added considerable capacity and services to Gulf and East Coast ports. For example, ZIM Integrated Shipping Services, an Israeli ocean carrier with North America operations based in Norfolk, Va., added an Asia-Gulf express service at the Port of Tampa.

"ZIM saw a huge opportunity to expand Asia-Gulf container service

> "Today, shippers care more about **consistency and reliability** than speed. Adding two days of transit time to a shipment moving from Sydney to Philadelphia doesn't make that much difference."
>
> –**Michael Wilson**, vice president, equipment and logistics, Hamburg Süd North America

SHIPPERS EYE **CLEAN TRUCKS** PROGRAM

Ocean freight shippers are closely watching the Clean Trucks Program, launched Oct. 1, 2008, at the Port of Long Beach, Calif.

The Clean Trucks Program is designed to reduce air pollution from harbor trucks by more than 80 percent within five years. The program calls for drayage truck owners to scrap and replace about 16,000 polluting trucks working at the ports, with the assistance of a port-sponsored grant or loan subsidy.

Under Long Beach's "concession" plan, truckers can lease-to-own a new truck for as little as $500 a month, including pre-paid maintenance. They can choose to work as employees or owner/operators, and need a federal Transportation Workers Identification Credential (TWIC).

Originally, the plan called for banning 1988 model and older trucks beginning Oct. 1. There are not enough clean diesel and liquefied natural gas-powered drayage trucks to fill the need, however, so the port has pushed back the ban dates for certain trucks to Jan. 1, 2009 for diesels and April 1 for LNG vehicles.

To finance the $2-billion truck replacement program, the Port of Long Beach will levy a fee on loaded containers. The port was hoping to collect the fee through the PierPass program, but at press time had not yet worked out the details of that arrangement with the non-profit organization that administers the program.

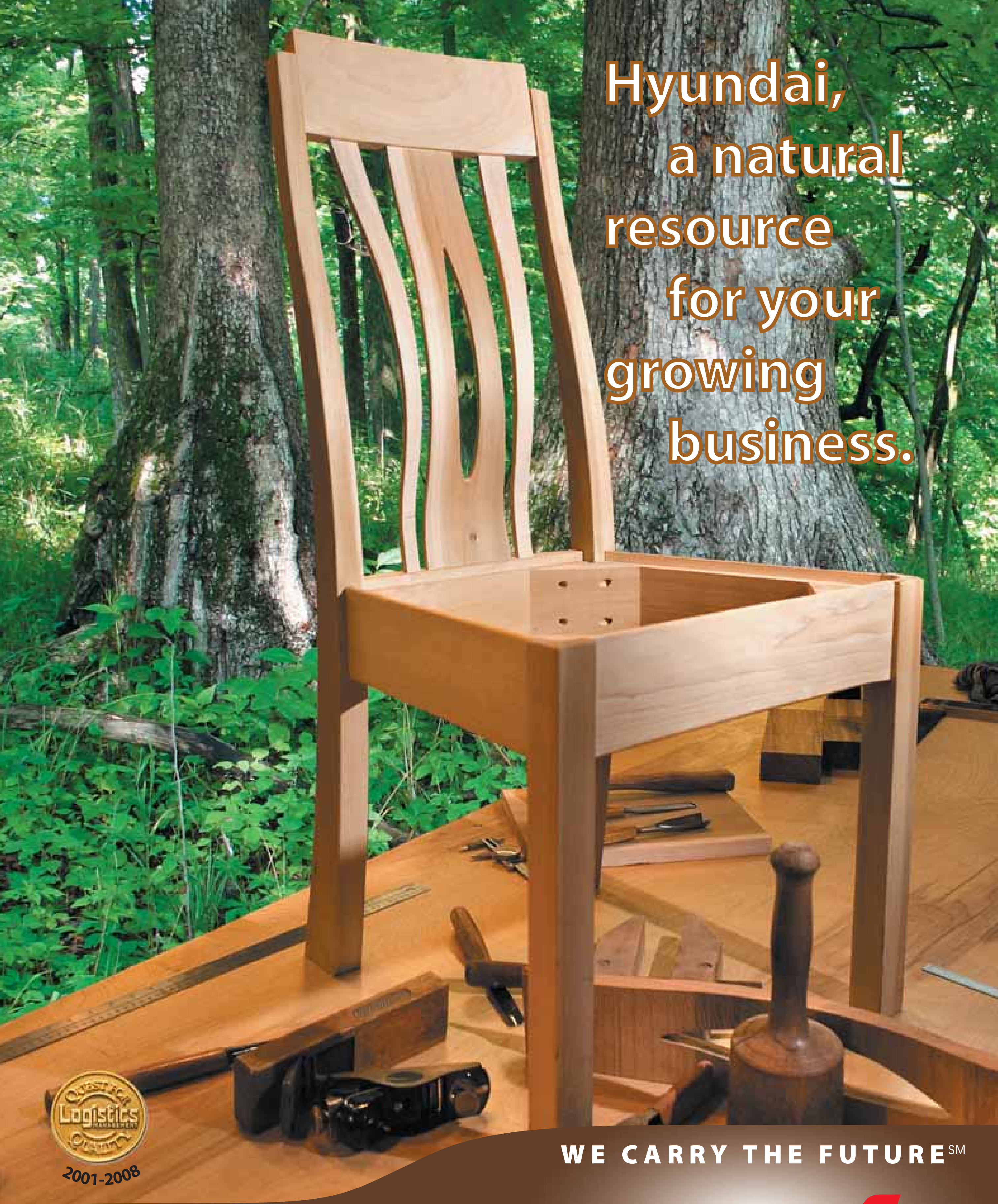
The California state legislature passed a measure that would assess a fee on all containers moving in and out of the ports of Los Angeles, Long Beach, and Oakland – $30 for TEUs, $60 for FEUs – for environmental mitigation and infrastructure development. At press time, the bill was sitting on Governor Schwarzenegger's desk awaiting signature.

Clean diesel and natural gas-powered drayage trucks may replace the polluting trucks currently in use at the Port of Long Beach – but the related fees may cost the port cargo shippers.

The Clean Truck program fees "increase our cost of doing business, but we recognize we have to be part of the solution to clean up the air," says John Isbell, director of corporate delivery logistics for Nike.

Will the Clean Truck fees and other such costs drive freight away from California ports? "Shippers will have to determine what their model is," Isbell says. "There's always discretionary cargo that will move to ports that are the most efficient and least expensive in which to operate."

The California fees will make some beneficial owners of cargo reconsider their routings. "This is not to say that shippers will abandon southern California entirely. It is still a huge consumption and logistics center," says Peter Keller, president of NYK (NA) Lines. "But discretionary cargo definitely will be affected."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EXPORTS FLOAT THE BOAT

The weak dollar has brought some good news to the U.S. maritime trade. "U.S. exports have shot up dramatically, which helps steamship lines better balance their equipment," reports Michael Wilson, vice president, equipment and logistics, for Morristown, N.J.-based ocean carrier Hamburg Süd North America.

"Carriers are not shipping as many empty containers back to Asia, so exports ease the overall pain of the U.S. economic downturn and rising costs," he adds.

Many exported products are bulk commodities from the country's heartland. Bulk shipping rates have risen significantly as a result of high demand, and bulk vessels are scarce. Consequently, a significant volume of freight that used to move on bulk ships has converted to containers.

Bulk shifting to containers does present a problem, however.

Because of high inland rail rates, liner operators have tried to keep their containers on the coasts. "We didn't want to pay high rail rates to move our containers," says Peter Keller, president, NYK Line (North America) Inc., "so we managed our assets away from the interior of the country. But now, that region is producing the surge in agricultural and raw materials exports, creating a scarcity of containers available to move them."

Shippers can work with their carriers to mitigate this issue, Keller suggests, by trucking bulk products to a central accumulating point, where they can be loaded into containers.

Container scarcities don't just affect bulk exporters. For example, Sysco International Food Group, a distributor of food, non-food plastics, and paper products, has to regularly scramble to locate export containers. The Tampa, Fla.-based company, whose business is 100-percent export, serves fast food and commercial restaurant chains all over the world. The company is growing rapidly—from $76 million in revenue four years ago to more than $300 million today. It now ships to 110 different markets, from the Caribbean and Central America to the Middle East and Central Asia.

"We ship about 15,000 TEUs globally a year," reports Henry Jimenez, Sysco's senior vice president. "Half the cargo moves through our Tampa facility; the other half moves out of our office in Brazil and other sourcing locations, such as Argentina, Canada, and Australia.

"U.S. shipping lines weren't prepared for the boost in exports that resulted from the weaker dollar," Jimenez notes. "For a time, we had serious issues getting equipment. Our service promise is that no restaurant can run out of food. So we have to find equipment, whatever it takes. We had to reroute cargo, which added expense."

To address container scarcities, Sysco International works with its liner carriers to locate ports with a surplus of equipment. "We can get equipment out of Miami but not Savannah, Jacksonville but not Dallas," says Jimenez. "Our inbound logistics team routes product into port areas that have equipment, then cross-docks it to its destination."

Because the company arranges a greater volume of its own inland transportation, it is negotiating more port-to-port contracts with its ocean carriers. "We gain more control over inland supply," he says.

Sysco International also relies on niche ports such as Tampa to serve certain regions of the world. "We use ZIM service out of Tampa to serve Asia both inbound and outbound," Jimenez says. "Because of ZIM's service and the port's proximity to our location, Tampa is an easy port for us to use."

Working closely with its carriers to find creative ways of locating export container equipment is an essential strategy for Sysco International. "We are an export company," says Jimenez. "If we don't have the container, we can't make the sale."

at the Port of Tampa—and predicted that shippers would embrace this service—but we needed to buy cranes and build a proper terminal," recalls Elliott. "No sooner had we installed gantries than ZIM began weekly Asia-Gulf service using 2,800-TEU ships."

ZIM's service enables shippers to access the dense Florida population with minimal inland transportation, a fact that companies such as Rooms to Go appreciate.

LIFELINE #5: FORM ALLIANCES

Carriers are also using alliances to beef up service on high-demand routes. For example, the Grand Alliance, formed in 1998, includes members Hapag-Lloyd (Germany), MISC Berhad (Malaysia), NYK (Japan), and OOCL (Hong Kong).

Hapag-Lloyd, NYK, and OOCL have upgraded their Atlantic Express service on the North Europe-North U.S. Atlantic Trade, in cooperation with ZIM. It offers weekly, fixed-day sailings between northern European ports and New York, Norfolk, and Charleston.

The service consists of four 4,000-TEU capacity vessels, one of which will be provided by ZIM and the other three by the Grand Alliance. The larger ships significantly reduce bunker consumption per slot-mile, providing more cost-effective service to shippers.

LIFELINE #6: BULK UP LANDSIDE OPERATIONS

Carriers are working to make landside operations more efficient. In May 2008, for instance, APL Logistics completed a two-year reconstruction at its Oakland, Calif., marine terminal. The $68-million renovation, which was jointly funded by APL and the Port of Oakland, doubles cargo-handling capacity without expanding the terminal's physical footprint. "That's a dramatic productivity gain," notes John Bowe, president of the Americas for APL.

The project improves terminal operating efficiency, permitting future cargo volume growth in Oakland while minimizing environmental consequences. Truckers can get in and out of the facility faster, resulting in quicker turnaround time on cargo processing, which

> “This year, we had to accept fuel cost adjustments. Because we sign contracts directly with the steamship lines, however, we’ve been able to hold our rates. We negotiate our own destiny, and that has worked well for us.”
>
> – **Ali Hosein**, v.p., international freight and merchandising, Rooms to Go

helps get goods to market sooner. The increased productivity attracts shippers to Oakland as a West Coast gateway.

LIFELINE #7: ADOPT COLLABORATIVE PLANNING

Communicating with carriers helps shippers manage ocean freight effectively in these turbulent times.

“We provide our ocean carriers with accurate forecasts, and commit to them,” says Christian Corrado, director of global logistics for Princeton, N.J.-based Tyco International, a provider of electrical and metal construction materials, pipes and valves, and safety products. “If we can commit to a volume forecast, then our carriers can guarantee the capacity we need. That gives us stability.

“For our exports, we used to share forecast information with our freight forwarders and work through them,” Corrado continues. “But we found that dealing directly with select carriers produced better results. The more we collaborate, the better service levels the carriers provide, such as space commitments on vessels and block commitments for loading containers.”

LIFELINE #8: FORGE CLOSER RELATIONSHIPS

Maritime shippers and carriers are nothing if not resilient. They have to be because the maritime industry is cyclical, rising and falling with world economies. The additional dynamics at work in the sector today are putting companies’ resiliency to the test, however. Carriers and shippers are responding by tweaking their networks, re-thinking their operating strategies, and re-negotiating relationships.

Greater transparency has brought shipper-carrier relationships closer within the past several years. “Information technology provides greater visibility into how supply chains work,” Wilson notes. “It offers greater transparency into the dynamics of the global market. Shippers and carriers better understand each other’s business, enabling them to conduct business more intelligently and collaboratively. There’s more empathy between parties today; more discussion on how to solve issues.”

Working together more closely is the only way for shippers and ocean carriers to not only stay afloat, but also to move forward.

INBOUND LOGISTICS' 2008 OCEAN CARRIER GUIDE

NEW HO

Changes in trade latitudes and changes in shipping attitudes are steering ocean carriers in new directions. As global businesses explore new offshore manufacturing and sourcing locations and more efficient routings for pulling product to U.S. markets, carriers are tacking their sailing schedules, following demand into new ports of call, and developing a dashboard of value-added logistics services to keep customers cruising at full speed ahead.

From expanded sailing frequencies to all-water services and integrated intermodal offerings, LCL consolidation, and new fleets of "green ships," carriers are pulling their weight to help ocean shippers find efficient, timely, and cost-effective transportation solutions and better match demand to supply.

Below deck, enterprising liners are developing innovative technology capabilities, empowering shippers and consignees with track-and-trace, Customs compliance, booking, bill of lading, and reporting functionalities. Online and at sea, carriers are giving shippers complete visibility into their supply chains.

With a new coat of paint and a fresh set of sails, *Inbound Logistics* invites you to tour some of the ocean freight industry's top players.

Atlantic Container Line (ACL)

800-ACL-1235
www.aclcargo.com

PARENT COMPANY: Grimaldi Group

Since 1967, ACL has been a specialized carrier of containers, project and oversized cargo, heavy equipment and vehicles, with the world's largest combination RORO/containerships. ACL is headquartered in Iselin, N.J., with offices throughout Europe and North America. ACL's main weekly service calls Baltimore, Norfolk, New York, Halifax, Liverpool, Antwerp, Hamburg, and Gothenburg. The carrier offers four transatlantic sailings each week, container and RORO services between North America and West Africa, and oversized service to the Mediterranean and South America.

WEB TOOLS: Booking and rate requests, express documentation.

FLEET SIZE: 5 G-3 vessels operate in the core North Atlantic service and seven various vessels are time-chartered to the Grimaldi Group.

CUSTOMER AWARDS: Recognized by Lloyd's List for superior schedule reliability.

WHAT'S NEW: A weekly container/RORO service to West Africa and a transhipment service to the Mediterranean and South America.

China Shipping

888-712-7811
www.chinashippingna.com

PARENT COMPANY: China Shipping Group Company

China Shipping offers container transportation and related services including storage, transshipment, customs arrival manifest filing, and intermodal on-carriage. Its 472,244-TEU fleet calls 12 China base ports plus most river ports along the Yangtze River, the Pearl River, and their branches, providing fast, safe, and economical transportation of all containerized freight. A total of more than 40 international routes round out the line's current service profile.

WEB TOOLS: Tracking/tracing, EDI, eBrochure, sailing schedules.

FLEET SIZE: 154 vessels

CUSTOMER AWARDS: Lloyd's Loading List–Shipping Line of the Year; regional customer service awards for Far East and North America routes.

WHAT'S NEW: Trans-Pacific, Trans-Atlantic, Mediterranean, North Europe, China Pearl River Delta, and China Yangtze River Delta services.

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NEW HORIZONS

Crowley

800-CROWLEY
www.crowley.com

PARENT COMPANY: Crowley Maritime Corporation
LOGISTICS DIVISION: Crowley Logistics

Jacksonville, Fla.–based Crowley Maritime Corporation, founded in San Francisco in 1892, is a privately held family and employee-owned company that provides diversified transportation, logistics, and marine services in domestic and international markets through six operating lines of business: Puerto Rico/Caribbean Liner Services, Latin America Liner Services, Logistics Services, Petroleum Services, Marine Services, and Technical Services. Offered within these operating lines of business are the following services: liner container shipping, logistics, contract towing, and transportation; ship assist and escort; energy support; salvage and emergency response; vessel management; vessel construction and naval architecture; government services; and petroleum and chemical transportation, distribution, and sales.

WEB TOOLS: Track-and-trace, tariff retrieval, e-bill of lading registration, 24-hour manifest schedule, downloadable shipping documents, booking, rate requests.

FLEET SIZE: 210 vessels

CUSTOMER AWARDS: Toyota Logistics Service Awards for Outstanding Customer Service and Quality; Sears Partner in Progress; Payless ShoeSource International Partnership Award.

WHAT'S NEW: Crowley's Speed-to-Market program leverages the proximity of Central America and the Caribbean with frequent, direct vessel services for apparel and reefer shippers and others seeking to get products to market faster.

Evergreen Line

201-761-3000
www.evergreen-line.com

PARENT COMPANY: Evergreen Group
LOGISTICS DIVISION: Evergreen Shipping Agency (America) Corp.

Taiwan-based Evergreen was founded in 1968 by Group Chairman Dr. Yung-fa Chang and commenced full container liner services in 1975. It has developed into a global carrier, operating one of the industry's newest fleets and serving all six continents. Now, some 40 years since it began changing the tides of ocean shipping, Evergreen continues to make waves with its ongoing global reach, environmental responsibility, customer-driven services, and innovation.

WEB TOOLS: Integrated e-commerce services via Evergreen's ShipmentLink portal; enhanced e-reports available to all customers, with new functions including event-driven notification, tracking reports, and statistics to help manage and monitor shipments.

FLEET SIZE: 190+ vessels

CUSTOMER AWARDS: Best Shipping Line-Intra Asia, Asian Freight and Supply Chain Awards 2006; Corporate Social Responsibility, Humanitarian, Educational and Environmental Efforts–*International Shipping Magazine* 2006; E-commerce Excellence award, LOG-NET, 2003 and 2004.

WHAT'S NEW: Evergreen's new S-type Greenship vessels incorporate environmental features that surpass the requirements of new and soon-to-be-introduced international regulations. Evergreen Group's Chang Yung-Fa Foundation recently opened a Maritime Museum and assembled the 70-member world-class Evergreen Symphony Orchestra.

Hamburg Süd

973-775-5300
www.hamburgsud.com

PARENT COMPANY: The Oetker Group

Hamburg Süd specializes in marine transport and logistics, with a focus on containerized temperature-sensitive cargo shipping. Company services link North America, South America, Europe, the Mediterranean, Asia, India, Pakistan, and Australia/New Zealand.

WEB TOOLS: Online booking, cargo tracking and tracing.

FLEET SIZE: 139 vessels

CUSTOMER AWARDS: Eastern Canadian Freight Forwarders Top Ocean Carrier; Central Canadian Freight Forwarders Top Ocean Carrier.

WHAT'S NEW: Hamburg Süd upgraded its Trident service to weekly rotation earlier this year. The stand-alone service links Australia/New Zealand, the East Coast of North America, and North Europe.

Hapag-Lloyd

617-984-0300
www.hapag-lloyd.com

PARENT COMPANY: TUI AG

For more than 150 years, Hapag-Lloyd has linked continents, countries, and cultures. A player in the global door-to-door container transport industry, the company handles complex logistics packages along the transportation chain, delivering a comprehensive range of shipping services. Hapag-Lloyd operates 330 sales offices in more than 100 countries.

WEB TOOLS: Track-and-trace, interactive scheduling, freight rates, downloadable sea waybills.

FLEET SIZE: 144 vessels

CUSTOMER AWARDS: Canadian International Freight Forwarder Association–HL Carrier of the Year Nordatlantik; awards from the

INBOUND LOGISTICS' 2008 OCEAN CARRIER GUIDE

NEW HORIZONS

New York/New Jersey Foreign Freight Forwarders and Brokers Association and the Port of Montreal.

WHAT'S NEW: Hapag-Lloyd constantly enhances and optimizes its service offerings to guarantee shippers fast, flexible links. Hapag-Lloyd's service to Australia, for example, was recently expanded and now offers faster transit times.

Horizon Lines

877-678-SHIP
www.horizonlines.com

PARENT COMPANY: Horizon Lines Inc.

Horizon Lines, Inc. is the nation's leading domestic ocean shipping and integrated logistics company comprised of two primary operating subsidiaries. Horizon Lines, LLC operates a fleet of 21 U.S.-flag containerships and five port terminals linking the continental United States with Alaska, Hawaii, Guam, Micronesia, and Puerto Rico. Horizon Logistics, LLC offers customized logistics solutions to shippers from a suite of transportation and distribution management services designed by Aero Logistics, information technology developed by Horizon Services Group, and intermodal trucking and warehousing services provided by Sea-Logix. Horizon Lines, Inc. is based in Charlotte, N.C.

WEB TOOLS: Online booking, track-and-trace, and payment applications that allow customers to create customized reporting; event notification; and e-mail or threshold activity alerts.

FLEET SIZE: 21 vessels

CUSTOMER AWARDS: 2007 Lowe's Platinum Carrier; 2007 Wal-Mart's Jones Act Carrier of the Year

WHAT'S NEW: Horizon Lines, Inc. outlined a road map for developing a U.S. Marine Highway that will ease congestion around gateway trade corridors and improve the overall efficiency of America's transportation system earlier this year. Horizon Lines is working with maritime unions to design a viable labor model for a Coastwise Container Feeder Network. The feeder service will act as a safety valve, moving containers from congested gateways to smaller ports closer to destination, with better intermodal connections. Horizon Lines implemented Horizon Green to better understand and measure its impact on the environment, and to develop programs that incorporate environmental thinking and mitigation into the core operations, focusing on marine environment, emissions, sustainability, and carbon offsets. Horizon Lines' new ReeferPlusGPS container tracking and shipment monitoring solution in the Puerto Rico trade is designed to track high-value perishable cargo through the entire transport chain from packing to delivery.

Intermarine

504-529-2100
www.intermarineusa.com

PARENT COMPANY: Intermarine, LLC

New Orleans-based Intermarine provides worldwide ocean transport and inland heavy haul services for breakbulk, specialized project, and heavy lift cargo. The company also operates offices in Houston, Caracas, Buenos Aires, Shanghai, Seoul, and Mumbai.

WEB TOOLS: Company information, weekly sailing schedules.

FLEET SIZE: 30 vessels

CUSTOMER AWARDS: 21st Asian Freight & Supply Chain Awards, Best Shipping Line–Project Cargo.

WHAT'S NEW: Intermarine's latest service offering comprises a route between China, Japan, and Korea and the Persian Gulf and India. It also now provides on-demand heavy-lift service between the entire Asian north coast to the Arabian Gulf nations in the West and all points in between. Using up to nine vessels capable of 400- to 500-metric-ton self-sustained lifts, this new service is designed to meet the needs of new oil and gas facilities in the Middle East, as well as power generation plants in Southeast Asia, and various other global infrastructure development projects.

Maersk Line

973-514-5187
www.maerskline.com

PARENT COMPANY: A.P. Moller-Maersk Group
LOGISTICS DIVISION: Maersk Logistics USA

The A.P. Moller-Maersk Group, headquartered in Copenhagen, Denmark, operates offices in more than 125 countries. In addition to worldwide container shipping and logistics services, the A.P. Moller-Maersk Group is engaged in exploring and producing oil and gas, shipbuilding, and aviation. It also offers transportation and maritime services to the U.S. government.


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In Your Logistics Puzzle

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NEW HORIZONS

WEB TOOLS: Online booking, shipping instructions, bill of lading printing, tracking and tracing reports, customs clearance, rate search and request, live chat 24 hours a day, Monday-Friday.

FLEET SIZE: 500 vessels

CUSTOMER AWARDS: 2006-07 Origin Cargo Manager of the Year – Wal-Mart.

WHAT'S NEW: Direct U.S. Southwest/West Coast service to Australia and New Zealand with calls in Sydney, Melbourne, and Auckland, New Zealand. The service includes a 14-day transit from Long Beach to Auckland.

MOL

800-OK-GATOR
www.molpower.com

PARENT COMPANY: MOL Ltd. (Mitsui O.S.K. Lines)
CONSOLIDATION DIVISION: MOL Consolidation Services, Ltd. (MCS)
LOGISTICS DIVISION: MOL Logistics (U.S.A.) Inc.

MOL (America) Inc., MOL's wholly-owned liner subsidiary in North America, employs 500 transportation professionals in 26 sales offices throughout the United States, Canada, and Mexico. Founded in 1884, MOL's business diversity makes it one of the world's most financially solvent transportation companies.

WEB TOOLS: Online booking requests and shipping instructions; bill of lading searching, viewing, and printing; global shipment tracking; reports; sailing schedules.

FLEET SIZE: 874 vessels

CUSTOMER AWARDS: 2007 Ocean Service Provider of the Year Award - Limited Brands Logistics Services (transportation arm of specialty retailer Limited Brands)

WHAT'S NEW: In July 2008, MOL expanded its service to the growing South Atlantic region when it began calling on Jacksonville Port Authority's (JAXPORT) Blount Island Terminal. With the January 2009 scheduled completion of its new TraPac Terminal at JAXPORT, MOL will solidify its commitment to enhancing its East Coast global service, while continuing to strengthen its presence in Latin America and the Caribbean.

NYK

888-695-7447
www.nykline.com

PARENT COMPANY: Nippon Yusen Kabushiki Kaisha
LOGISTICS DIVISION: NYK Logistics (Americas) Inc.

Nippon Yusen Kabushiki Kaisha (NYK), founded in 1885, is one of the world's largest marine transportation and logistics companies. The NYK Group operates more than 800 major ocean vessels, as well as fleets of planes, trains, and trucks. NYK employs more than 52,000 people worldwide with offices in 27 countries and 240 locations. NYK is based in Tokyo, and has regional headquarters in New York, London, Singapore, Hong Kong, Shanghai, Sydney, and Sao Paulo. As a group, NYK revenue in fiscal 2008 was $25.8 billion. The company also offers logistics services in a highly integrated transportation network by designing, building, and operating innovative logistics solutions that measurably improve quality, cost, and customer service through the integration of knowledge, network, and information capabilities.

WEB TOOLS: Rate inquiry, customized reports, booking, bill of lading processing, shipment alerts.

FLEET SIZE: 800+ vessels

CUSTOMER AWARDS: 2008–World's Most Ethical Companies; Global 100 Most Sustainable Corporations; Dow Jones Sustainability Index; Ford Supplier Sustainable Forum; Circle of Excellence Award–NYK Logistics

WHAT'S NEW: Direct all-water service from China to U.S. East Coast-SCE (South China East Coast Express)

OOCL

888-388-OOCL
www.oocl.com

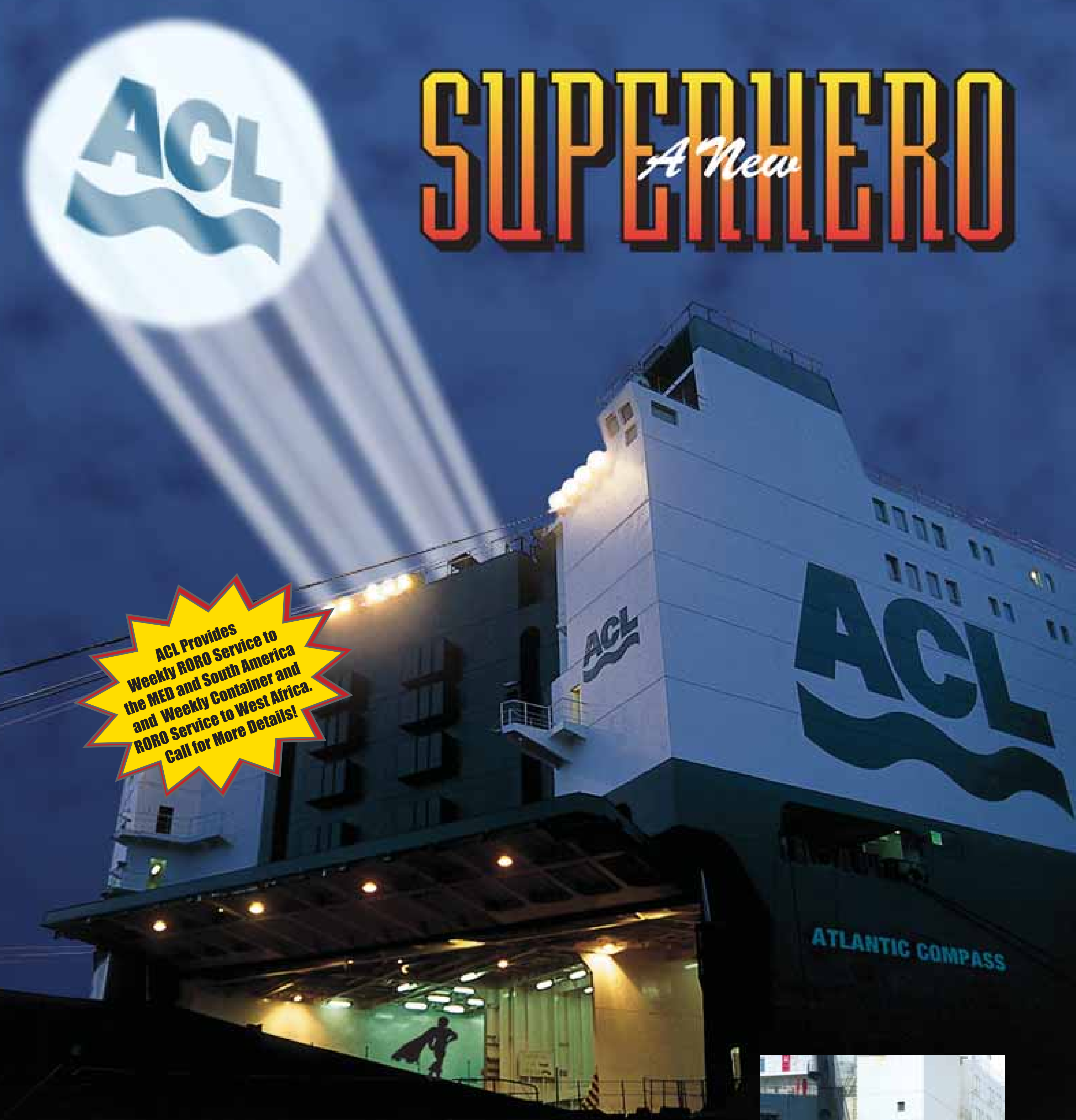
PARENT COMPANY: OOIL (Orient Overseas International Ltd.)
LOGISTICS DIVISION: OOCL Logistics (USA) Inc.

OOCL is among the world's largest integrated international container transportation, logistics, and terminal companies. As one of Hong Kong's most recognized global brands, OOCL provides customers with fully-integrated logistics and containerized transportation services, with a network that encompasses Asia, Europe, North America, and Australasia. OOCL is well-respected in the industry with a reputation for providing customer-focused solutions, a quality-through-excellence approach, and continual innovation. OOCL pioneered transportation coverage of China and is an industry leader in information technology.

WEB TOOLS: OOCL's Web site and CargoSmart portal provide advanced visibility and exception management, enabling shippers, consignees, and logistics providers to keep cargo moving and delivered on time. By applying both online tools and integration services, OOCL enables customers to plan, process, and monitor the critical path of multiple-carrier shipments and communicate in-depth, timely information to key parties in the supply chain.

FLEET SIZE: 71 vessels

CUSTOMER AWARDS: 2008 Agriculture Transportation Coalition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(AgTC) Ocean Carrier Performance Award; Computerworld Smithsonian Institute Award; Green Flag Award from Port of Long Beach.

WHAT'S NEW: The Indian Subcontinent East Coast Express (IEX), connecting India and Pakistan to the U.S. East Coast. Five fast-transit, all-water services from Asia to the U.S. East Coast, with direct India-to-U.S. East Coast service.

Senator Lines

+49-421-3083-0
www.senatorlines.com

PARENT COMPANY: Hanjin Shipping

Headquartered in Bremen, Germany, the independent international container shipping company Senator Lines offers an integrated ocean and intermodal transportation network as well as customized transportation solutions. Represented by 140 customer service offices and agents in 62 countries, the shipping line offers a wide network of partners and personalized local service. With a total of 14 liner services making approximately 1,570 voyages per year, the German ocean carrier provides its customers with excellent connections to the strong growth markets of Northern Europe, Asia, the Far and Middle East, the Mediterranean, Canada, and South America.

WEB TOOLS: Schedules, rates and surcharges, booking, bill of lading, cargo tracking, and access to INTTRA and GT Nexus.

CUSTOMER AWARDS: CIFFA Forwarders Choice Award 2007: Best Ocean Carrier Middle East, Lloyd's Loading List Star Performer Award 2007: Fastest transit time from the United Kingdom to South-East Asia

WHAT'S NEW: Doubled capacity on Mediterranean-Middle East-Asia services NMX and MEX, increased capacity in Mediterranean-Asia service MAP, new China Northern Europe Express service CNX.

United Arab Shipping Company (UASC)

908-272-0050
www.uasc.net

PARENT COMPANY: United Arab Shipping Company (UASC)

UASC is the largest ocean carrier of dry cargo to the Middle East. It has assumed this position on merits as a carrier providing first class service to its customers. Maintaining an unswerving commitment to serve the Arabian Gulf, UASC offers a wide scope of services to the Arabian Gulf/Red Sea and Indian Sub-Continent regions.

WEB TOOLS: Shipment tracking.

FLEET SIZE: 44 vessels

CUSTOMER AWARDS: Recognized by Saudi Arabia Basic Industries for Dedicated Professional Services; Excellence in Service awarded by Qatar Petro Chemical Co. Ltd.

WHAT'S NEW: UASC formally took delivery of its new ship, *M.V. Jazan*, in Korea in July 2008.

Yang Ming

201-222-8899
www.yml.com.tw

PARENT COMPANY: Yang Ming Marine Transport Corporation
LOGISTICS DIVISION: Yes Logistic Corporation

Established in 1972, Yang Ming operates a fleet of 99 vessels, of which containerships are the main service force. Yang Ming transported more than 3.14 million TEUs in 2007, and practices a management philosophy of "Teamwork, Innovation, Honesty, and Pragmatism."

WEB TOOLS: Scheduling, vessel tracking, shipment track-and-trace, bill of lading processing, and booking.

FLEET SIZE: 99 vessels

CUSTOMER AWARDS: Lowe's Ocean Carrier of the Year 2007.

WHAT'S NEW: The new Euromax Terminal in the port of Rotterdam was officially opened in September 2008. The Euromax Terminal, a partnership between ECT and the CKYH Alliance, offers COSCO Container Line, "K" Line, Yang Ming, and Hanjin Shipping state-of-the-art facilities for further expansion in northwestern Europe and provides customers with the best possible service. Phase 1 of the terminal will eventually comprise 1,500 meters of quay wall with 12 deep-sea cranes and four special feeder/inland barge cranes. When everything is up and running by June 2009, the CKYH Alliance will have the capacity to handle 2.3 million TEUs annually.

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TAXES & REGULATIONS
TRUST ISSUES

The road to successful Pacific Rim outsourcing has more than its share of bumps. Here are some turn-by-turn directions to the path of least resistance.

PACIFIC RIM LOGISTICS

PROCEED WITH CAUTION

by Merrill Douglas

WE'VE ALL HEARD THE WORST TALES about manufacturing in Asia–pet food tainted with deadly chemicals, toys coated in lead-based paint. But plenty of other obstacles await U.S. firms that produce goods in the Pacific Rim. They might not spark headlines, but they sure do cause headaches.

Consider what happened to Tassi LLC, a small startup based in Mesa, Ariz. Last February, Tassi hit the market with a line of colorful terrycloth bands a woman can use to keep the hair off her face while she cares for her skin or puts on makeup. The launch went well, but a subsequent order with Tassi's factory in China hit a snag.

"In February, China shuts down for Chinese New Year," says Paul Ellsworth, Tassi's chief executive officer and general counsel. "Many people quit their jobs, take the month off, and go home to their families."

Ellsworth and his wife, company founder Shawna Ellsworth, ordered more hair bands, not realizing that the holiday would stall production. "Now we know to plan around it," he says.

Or take the entrepreneur who contracted with a Chinese factory to make bags for scrapbook hobbyists. The factory's samples looked great, so she placed her first order and paid for it. But when her container load of products arrived, they didn't match the bags she had ordered.

"The bags were not saleable," recalls Jim Norris, Jr., president of One World Sourcing, a strategic sourcing and product development specialist in Brooklyn Heights, Ohio. "Whenever the entrepreneur tried to contact the supplier, she either received no answer, or was told that no one at the factory speaks English. She lost her investment."

For U.S. companies with supply chains stretching into the Pacific Rim, taking charge of relationships with overseas partners is key to business success.

"Having control over supplier relationships provides standardization, process management, visibility, and some assurance that deliveries will be made," says Tony Zasimovich, vice president, international logistics for APL Logistics, a third-party logistics provider based in Oakland, Calif.

Companies get in trouble when executives assume they can place orders and trust overseas suppliers to manage the manufacturing process, says John Tracy, principal at Tracy-Hayden Associates, a logistics and operations consultancy in South Orange, N.J. Tracy points to the example of Baxter Healthcare Corp., which sold a blood thinner called heparin that was made with tainted materials. Baxter's U.S. supplier obtained the materials in China.

"No one paid attention to the fact that the primary subcontractors in China would subcontract, and their subcontractors would subcontract," Tracy says. "As a result, no one knew where the materials came from."

No matter how long the supply chain, a company must maintain control from end to end. "If you can't determine the right process, don't pass the problem along to a third party and hope they'll figure it out for you," Tracy advises.

Years of experience sourcing in the United States might not provide the necessary know-how to deal with the numerous and complex challenges involved in managing relationships with Pacific Rim partners. Here's a roadmap to some of those challenges.

WHAT LANGUAGE ARE WE SPEAKING?

The difficulty of communicating across thousands of miles and one dozen time zones is obvious. Less obvious is the difficulty working together across languages and cultures.

"We faced a great communication barrier," recalls Heidi McCormack, co-owner of Mimimack in Brookfield, Wisc. McCormack and her partner spent about six months looking for a factory in China and India to manufacture their Specktickles – beaded accessories for decorating the stems of children's eyeglasses.

After a fruitless search for a PacRim factory to produce its eyeglass accessories, Mimimack turned to a sourcing firm to manage its orders.

"For example, I was describing a round object to a potential partner, and he said, 'I don't know round,'" McCormack says. She tried "circle" and "like the earth," before the man hit upon "sphere" and they were able to continue the conversation.

English might be the international language of business, but even when you and your overseas partner both speak it, you might not be talking the same language.

As an example, "The Japanese always say 'Yes,' but they mean 'I understand,' not 'I agree,'" says Don Dickey, supply chain senior manager at WiLife, a Draper, Utah-based manufacturer of digital video surveillance systems that was acquired by Logitech last November.

Physical distance, along with differences in culture, mentality, and business practices, pose major challenges for partners trying to build trusting, long-term relationships. "Such relationships could become weak and fragile, unless the partners work hard to bridge the gaps between them," says Steven Kuo, general manager, U.S. eastern district, in the New York office of Dimerco Express, a third-party logistics company specializing in China.

U.S. companies that source from Asia also must learn the ins and outs of taxation and import/export regulations in the countries where they do business. "Regulations can seriously affect the business and lead to misunderstandings or disputes with vendors, suppliers, or partners in the area," Kuo says.

Mastering the nuances of transportation in another country is difficult as well. "In many parts of the world, transportation security is not assured," Tracy notes. "The fact that you load products on a vehicle and they ship does not mean the same material arrives at the destination."

CHOOSE YOUR PARTNERS

Long before they have to start dealing with transportation or tax laws in the Pacific Rim, U.S. companies first must determine which vendors or manufacturers can reliably supply the products they need. "Over time, they build trust with certain factories," says Zasimovich. But it might take a while.

A company needs a partner that can not only do high-quality work, but also meet its particular needs. Tassi, for example, looked for a factory that could support its product launch by producing in small quantities.

"Our hair bands come in 12 colors, and

we wanted to produce a few thousand in each color," Ellsworth says. "It was difficult to find a factory in China that would produce such a small volume."

As a startup, WiLife sought out small to medium-sized contract manufacturers in China. Company officials wanted WiLife to represent a big enough chunk of each factory's business to gain leverage in managing the relationship. "As a small company, we weren't looking for top-tier suppliers; we looked at lower tiers," Dickey says.

While working with a lower-tier factory offers cost advantages, less-established suppliers may pose challenges when it comes to quality, production capacity, and punctual delivery. "In the past year, quality control has become our number-one concern," says Charles Woo, chief executive officer of Megatoys, a Los Angeles toy wholesaler that sources from China.

BECOME AN EXPERT, OR HIRE ONE?

There are two major schools of thought on how to stay in charge of relationships with PacRim partners:

1. Do it yourself. Fly over there, get to know the people and the processes, set up an office, and hire employees in the country where you manufacture. Such employees provide priceless expertise because they understand the culture and the business environment.

2. Let someone else do it. Don't try to learn and do everything necessary to manage partners overseas. Instead, hire a third-party service provider with offices and a network of contacts in the region to represent you.

Dickey belongs to the do-it-yourself camp. For a previous job with Iomega Corp., he lived in Malaysia, helping to kick a new company-owned factory into gear. When developing rapport and trust with overseas partners, communicating via phone and e-mail isn't enough, he says. Some degree of face time is essential.

"Somebody from the home office needs to go over there; it's best to send people who understand and are comfortable in the culture," Dickey says. "They know your company's perspective, and can work seamlessly with their counterparts."

KEEPING AN EYE ON OPERATIONS. Video surveillance company WiLife bases employees in China to work through quality issues and make sure production proceeds as planned.

WiLife uses third parties to handle transportation and clear products through customs, but not to manage relationships with suppliers.

As a startup, WiLife sent employees to China to keep an eye on operations and work through quality issues. Today, as a business unit of Logitech, WiLife benefits from the larger company's quality engineers and supplier management groups based in China. "It helps to have people on the ground in the area, speaking the same language," Dickey says.

The supplier portals included in some enterprise resource planning systems can be helpful for managing day-to-day activities, Dickey says. Compared with e-mail, the portals provide a more structured and efficient way to share forecasts, purchase order commitments, advance shipping notices, and other information across long distances. "These tools keep everybody on the same page," he says.

From an office in Hong Kong, Megatoys employees keep tabs on the company's manufacturers in southern China. "When they promise delivery, our employees monitor daily production," Woo says. "If it's not enough, we have them hire more labor and add extra shifts."

Those local employees also perform quality inspections and take random samples to an independent lab in Hong Kong to test for lead.

"Sometimes testing once is not enough," Woo says. For example, if the factory runs out of paint, the new supply it buys might not match the sample that was tested. And the tests sometimes do reveal problems.

"That's why we test regularly," he adds. "Last year we tested one product eight times. We want to make sure quality is consistent from batch to batch."

Companies trying to identify suitable suppliers in the Pacific Rim might get references from chambers of commerce in the countries they're targeting, or from 3PLs. Legal consultants also can help, Kuo says.

In addition, companies might check Internet-based trading platforms and business directories. Kuo recommends two sites based in China: Alibaba.com and Baidu.com.

And here's another simple strategy: "Pay a visit. Seeing is believing," Kuo says.

SOURCING FIRMS

For some companies, hiring a trusted third party to manage the relationship with Pacific Rim suppliers makes more sense than trying to develop the expertise in-house. That's especially true for small startups such as Mimimack and Tassi, which both used sourcing firms to locate manufacturers, work out the details of producing their goods, and monitor the work.

After failing to find a factory on its own, Mimimack contracted with One World Sourcing, which chose a manufacturer and now manages the company's orders.

One World operates offices in Shanghai, Donggvan, Hong Kong, and

"If you can't determine the right process, don't pass the problem to a third party and hope they'll figure it out for you."

–JOHN TRACY, PRINCIPAL, TRACY-HAYDEN ASSOCIATES

Bangkok. Local employees eliminate headaches for U.S. firms by catching problems at the factory level, Norris says. Companies don't need to waste 30 days or more while bad product crosses the ocean before they discover any flaws.

Also, "if a project gets bogged down, or things don't seem to be going the way the company likes, I jump on a plane and head over there," Norris says.

When a customer needs a new product made, One World solicits quotes, proposed timetables, and samples to determine which factory should do the job. As production begins, One World staffers inspect the raw materials to make sure they're correct.

"Then we do a mid-point inspection to make sure the product is actually being manufactured," Norris says. "When the product is done, before it ships, we make sure it looks like what it's supposed to look like."

One World doesn't handle transportation, but it can connect customers with freight forwarders, Norris adds.

Tassi works with Silk Road Asian Sourcing, an international procurement and project management company headquartered in Shenzen, China, with additional offices in Hong Kong, Thailand, and the United States. The company's chief executive officer, David Dayton, is an American living in Shenzen who is fluent in Thai and Mandarin.

Dayton helped the Ellsworths choose a factory and work out the details of Tassi's product design and packaging. "At first we had to work through some issues with the fabric, sizing, and sewing," Ellsworth says. Now Silk Road helps monitor production.

The company also handles quality control. "When we're in production, Dayton has someone on site most of the time, checking the product as it's being manufactured," Ellsworth says.

At first, for an extra fee, Dayton oversaw shipping for Tassi as well. "But then he hooked us up with a shipping company," Ellsworth says. "When an order is ready to be shipped from Shenzen, we make arrangements with the carrier, which coordinates the shipment with Dayton."

THE ROLE OF 3PLs

Although they usually don't manage entire relationships between U.S. companies and their Asian suppliers, 3PLs do offer many services to help shippers keep an eye on production on the other side of the world.

APL, for example, provides vendor management for many companies. "We act as the eyes and ears of companies that place orders overseas," says Zasimovich.

The process starts when APL receives an electronic copy of the purchase order that the customer sends to the factory. APL makes sure the supplier delivers the order as promised–"that it's shipped in time, and that it's exactly the number of units that are supposed to be shipped," Zasimovich explains.

In some cases, APL tracks the production cycle, making sure the manufacturer hits milestones at the right points in the schedule to make the ship date. In the case of apparel, for instance, it might start by making sure raw materials arrive on time, then follow through on the production process. "Twenty-one days out, we'll check if the manufacturer began the cutting. Sixteen days out, did it begin the sewing? Then seven days out, we'll check the final stitching and packaging," Zasimovich says.

APL doesn't conduct inspections during production, but it might provide quality assurance on a shipment of finished goods. "We may, for instance, be asked to do a random inspection," Zasimovich says.

APL also plays a role when a company first brings an overseas vendor onboard. "We'll go out and meet them, or we'll host vendor seminars in the countries," Zasimovich says.

Along with its many other logistics and supply chain services, Dimerco also provides some quality assurance. For example, the company recently moved the inventory of one customer, a U.S. pen manufacturer, into a Dimerco-owned warehouse in Hong Kong. During the move, Dimerco's employees inspected the product and discovered some manufacturing errors.

"The customer went back to the supplier, and they were able to address the errors before the items were shipped globally," says Greg Spudic, Dimerco's regional vice president, marketing and sales.

Since then, quality inspections have joined the list of standard operating procedures for handling customer products in that warehouse.

Small startup Tassi LLC hit a huge snag when it placed orders for its hairbands in February, just as its Chinese factory shut down for Chinese New Year.

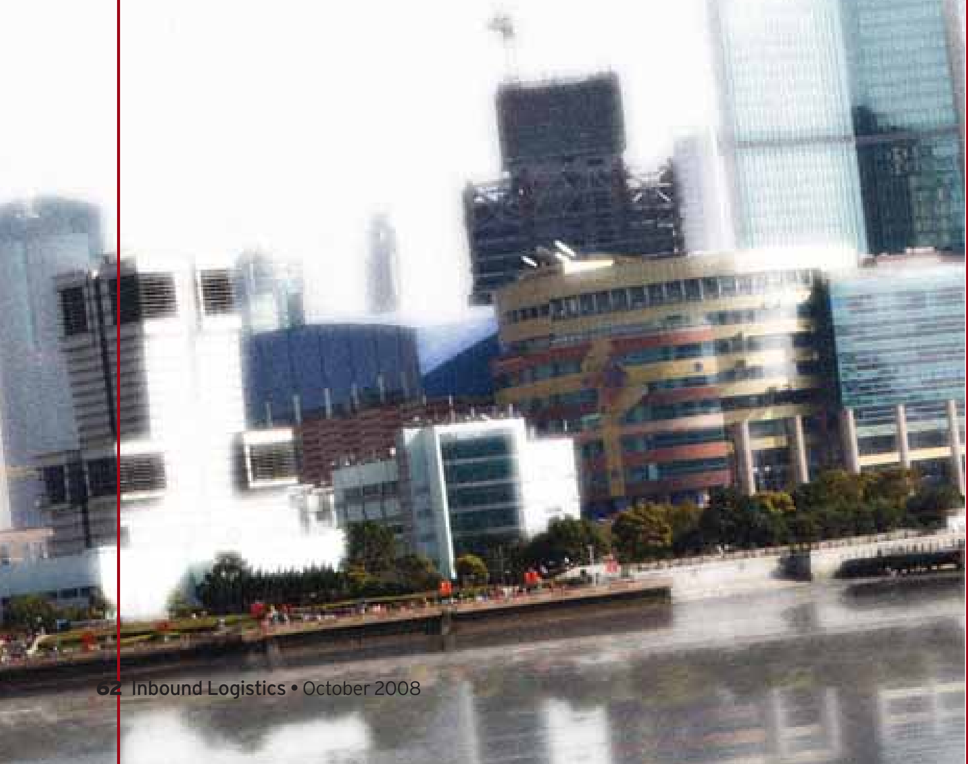
CRACKING THE MARKET

Many U.S. firms that manufacture in Asia have not yet started selling there. But as new markets open, companies will need to learn the ins and outs of distributing in the Pacific Rim.

One major challenge for foreign companies that want to sell into China is the country's 17 percent value-added tax (VAT), says Steven Kuo, general manager, U.S. eastern district, for third-party logistics firm Dimerco Express. Many firms used to ship their products from the mainland to Hong Kong, then back again – sometimes the same day – to avoid paying the VAT.

Foreign companies can achieve the same end more conveniently now that China has set up several free-trade facilities. When a company ships goods from its Chinese factory to one of these bonded logistics parks, that's considered an export. It then can ship from the park to customers in China. "That can be considered an import, and no VAT applies," Kuo says.

Another piece of good news is that a company's Asian contract manufacturers may be able to introduce local distribution and sales channels. That's what happened to video surveillance firm WiLife's parent company, Logitech, and to Iomega, says Don Dickey, WiLife's supply chain senior manager. "Chinese conglomerates–government-owned businesses–sometimes have a family tree of sister companies, so you can network among your suppliers, people they know and work with, to gain introductions."



Besides monitoring production and inspecting finished goods–keeping an eye on what is happening–U.S. companies and their service providers have to prepare for events that might happen. Unexpected challenges may arise due to tight capacity during peak shipping seasons, congestion caused by a port strike, production delays, or quality issues. "Contingency plans become crucial," Kuo says.

APL has worked out contingency plans for some customers that involve quickly switching production to Country B if major problems arise in Country A. APL's teams throughout Asia synchronize their logistics procedures, making it simple to move an operation.

"If purchase orders suddenly shift from Taiwan to the Philippines, for example, companies can pick up and execute orders using the same process, without any special arrangements," says Zasimovich.

Norris points to the Chinese government's move to shut down manufacturing within 75 miles of Beijing to reduce pollution for the summer Olympics. That caused big problems for companies relying on factories in the area.

One way to protect against sudden problems in one region is to contract with two factories in two different parts of the country. That strategy might raise concerns about product inconsistencies, Norris concedes. "But, what's a bigger problem: products on the store shelf in remotely different colors, or not being able to ship products at all?" he asks.

MITIGATING RISK

Using multiple factories, keeping buffer inventories, and toggling between ocean and air freight depending on demand all help mitigate risk, Dickey says. One risk management strategy Logitech employs is to operate its own factory in Suzhou while also using several contract manufacturers.

"Large companies can do that; for smaller companies, it's a much bigger challenge," he says.

But it's the sort of challenge that more and more U.S. firms have to grapple with as they work to keep control over operations on the far side of the world. ■

GREAT LOGISTICS SITES

The Pursuit of Excellence

SPECIAL ADVERTISING SUPPLEMENT

Throughout the United States, local, regional, and state economic development authorities are ramping up investments in transportation and logistics infrastructure to stimulate and sustain business growth.

Excellence is a subjective term. What is ideal for one may be ill-suited for another. But when it comes to logistics site selection, just about everyone can agree on baseline standards for a great site: excellent location, superb facilities, easy access to multiple transportation modes, tax credits and incentives, and a talented, motivated workforce.

To give you a better idea of how various elements combine to make an area a great logistics site – keeping in mind different types of companies and industry-specific demands – here's a close-up look at five locations across the United States that are building a foundation for transportation and logistics greatness.




Workers stay busy in Joplin. The metro area supports a 90,000-person labor pool to serve manufacturing, distribution, and customer support operations.

Logistics is Hoppin' in Joplin

Situated in the southwestern corner of Missouri – near the Kansas, Oklahoma, and Arkansas borders – the Joplin metro area's geographic location serves national markets nearly as efficiently as larger cities such as Chicago or Kansas City, reports the Joplin Chamber of Commerce.

More than five million people live within a 150-mile drive or flight of the Joplin area. In terms of mode access, Interstates 40 and 44 (east-west) and U.S. Highway 71 (north-south) connect the city to every region in the country; and four airports within a 110-mile radius provide cargo services to markets throughout the world. The Joplin area is home to 50 major motor freight carriers, two Class I railroads, and a short-line carrier.

Given such a dense transportation network, the Joplin metro area has become a distribution and value-added logistics hub for many companies including General Mills, La-Z-Boy, and Owens-Corning.

Additionally, Wal-Mart's headquarters is 45 miles away in Bentonville, Ark., so the area serves as a distribution nexus for the retailer's suppliers. In fact, Joplin is located within a two-hour drive of six Wal-Mart distribution centers, giving the region the logistics clout of serving one of the world's foremost supply chain leaders.

As far as ongoing industrial development, the Joplin area has a number of buildings available that are suitable for warehousing and distribution operations, according to the Joplin Business and Industrial Development Corporation (JBIDC), a not-for-profit corporation that serves as the financier and developer of the region's speculative building program. To date, JBIDC has financed and built six buildings.

Bolstering its transportation and distribution footprint is a labor pool of 90,000 workers – more than half of whom have some college education, and 94 percent holding high school diplomas.

The state government is also helping businesses plan for a long-term presence in the Joplin area. Over the years, Missouri has developed a competitive package of incentives for many industries locating or expanding in the state, including tax credits, gross payroll rebates, and property and sales tax exemptions for qualifying businesses based on job creation and investment. ■

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FOR MORE INFORMATION
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Gaining Ground in Greensboro

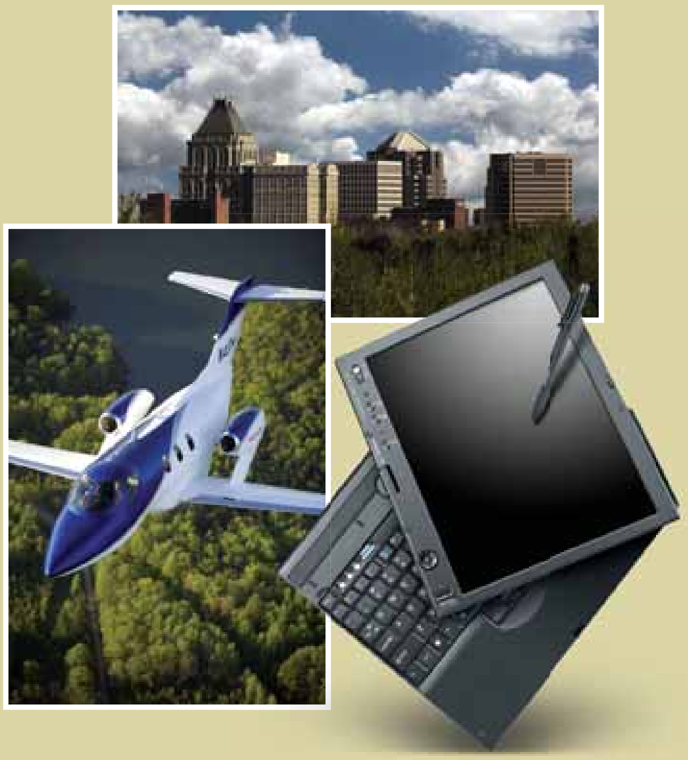
The rapid growth of logistics and transportation infrastructure in and around Virginia's ports is rippling throughout the region. Greensboro, N.C., located in the heart of the Piedmont Triad region, is also strategically positioned as a budding distribution hot spot, with convenient links to ports throughout the Southeast.

"Greensboro is only three hours from the deep-water Port of Wilmington and proximate to the ports of Norfolk and Savannah," says Dan Lynch, president of the Greensboro Economic Development Alliance. "These deep-water ports are within 700 miles of more than 170 million American and Canadian consumers and 70 percent of the U.S. industrial base.

"Because of this close access to a variety of deep-water ports, as well as strategic location at the intersection of I-40, I-85, and I-74/73, Greensboro is a gateway to millions of consumers and an ideal site for manufacturing, distribution, and logistics facilities," he says.

Peripheral to one of the United States' fastest growing regions, Greensboro is attracting interest from logistics service providers and businesses alike. The newest FedEx Express Hub, for example, is nearing completion at Piedmont Triad International Airport in Greensboro. It will provide speed to market and a level of accessibility for area companies unavailable in many U.S. markets.

Located in the heart of North Carolina's Piedmont Triad region, Greensboro provides an ideal site for manufacturing, distribution and logistics facilities.



Greensboro also features one of the largest concentrations of trucking companies on the East Coast, providing an intermodal complement to Norfolk Southern and CSX's extensive footprints in the area.

This saturation of transportation and logistics resources has only raised expectations for businesses locating in the area. Honda Aircraft Company recently sited its global headquarters, certification and testing facility, and manufacturing operation in Greensboro, and O'Reilly Automotive, Mack Trucks, Procter and Gamble, EcoLab, and Tyco Electronics have followed suit.

Lynch expects Greensboro's location will become even more valuable as businesses locate DC facilities closer to ports of entry and in proximity to major consumer pockets.

"The city is a significant manufacturing center in the middle of the East Coast; 66 percent of goods and services sold occur in the eastern U.S. market," he says. "Greensboro is well-positioned geographically and from an infrastructure perspective to provide a competitive advantage to companies rethinking their DC networks.

"O'Reilly Automotive and Lenovo are both excellent examples of companies that have chosen Greensboro as a prime location for distribution operations just since 2007," Lynch reports. ■

The Buckeye Stops in Toledo

When it comes to a dynamic business location, northwest Ohio is a central point for access and opportunity. Nearly 100 million people live within a 10-hour drive of the Toledo region, and with easy access to air, rail, seaport facilities, and two of the country's most traveled interstates, the doors to the global market are wide open.

"Toledo is one of the few metro areas in the United States supporting all modes of transportation, from a world seaport to a heavy air cargo hub operation," says Steve Weathers, president and CEO of the Toledo-based Regional Growth Partnership (RGP).

Toledo is the largest general cargo port on the Great Lakes and is home to one of the top five rail centers in the country in terms of handled tonnage. The city also has a major airport and the benefit of being located at the intersection of three cross-country interstate highways.

Located on the western shore of Lake Erie, and in the heart of northwest Ohio, Toledo has a population of roughly 300,000. The city offers businesses and families the attributes of a large cosmopolitan setting while maintaining small town atmosphere and charm.

Northwest Ohio is at the center of an efficient, intermodal transportation network that connects local businesses to world markets. Toledo Express Airport, which provides daily flights to major midwestern hubs including Chicago, Detroit, Pittsburgh, Cincinnati, and Cleveland, is the 16th busiest cargo airport in the United States – 50th worldwide – and second only to Chicago in the Great Lakes region. The airport also operates as BAX Global's international cargo hub.

Northwest Ohio is a significant trucking hub as well. Three major interstate highways serve the region; I-80 (east/west from New York to California); I-90 (east/west from Massachusetts to Washington); and I-75 (north/south from Canada and Michigan to Florida). Other connecting interstates supply direct links to major cities throughout the United States and Canada.

In addition to its dense road infrastructure, Toledo is the United States' fifth-largest rail hub. Norfolk Southern, CSX, and Canadian National all provide rail service to locations throughout the United States and Canada – which further complements the Port of Toledo's expanding intermodal facilities and capabilities.

The port, located at the mouth of the Maumee River, is the second largest deep-water facility on the Great Lakes/St. Lawrence Seaway System and is one of the closest major U.S. ports to Northern Europe.

"We have abundant acreage for developing airfreight distribution centers at Toledo Express Airport and deep-water sites for heavy industry at the Port of Toledo," Weathers says. There is also space for expanding manufacturing and distribution operations at the intersections of I-80/90 and I-75.

Northwest Ohio provides benefits beyond infrastructure and amenities. "Our region offers a lower cost of doing business, quicker turnaround time due to less traffic congestion, and a highly skilled, trained, and flexible workforce," Weathers says.

The RGP works closely with partners at the local, regional, and state level on business attraction projects. "Incentives include enterprise zone tax abatements on new construction, low-interest financing, employee training grants, new technology funding, and other items," he reports.

By maintaining an 11-county site and building database, the RGP and its partners join with businesses to assist in the

Toledo Express Airport operates as BAX Global's international cargo hub.

site selection process. "The RGP has an extensive partnership with local real estate professionals, developers, local economic development officials, and the Ohio Department of Development," Weathers adds.

Nebraska's Power Play

Omaha's location at the nexus of interstates 80 and 29 provides exceptional access to all major markets.

Nebraska remains one of the bright spots for enterprising U.S. businesses, largely as a result of public and private commitment to incenting and attracting logistics and distribution opportunities to the state.

As the state's largest electric utility, the Nebraska Public Power District (NPPD) is well-grounded in the power Nebraska wields to attract transportation and logistics investment.

The NPPD was formed in 1970, when several of the state's major power utilities merged into a single entity. The state offers the benefits of a vibrant economy and a workforce that's highly educated, mechanically adept, and cost-efficient, according to Dennis G. Hall, the NPPD's economic development manager. He also notes that the state's advanced transportation systems give businesses a means of delivering and receiving shipments conveniently and efficiently.

Nebraska's central location along key transportation routes provides speed to all major markets, regardless of direction. Within one day, goods shipped by truck can reach 26 percent of the U.S. population; add a second day and the percentage jumps to 91 percent.

The state is also positioned strategically within the North American Free Trade Agreement (NAFTA) trade corridor, making it an ideal location for companies that handle shipments between Canada and Mexico.

Nebraska works hard to maintain and improve its 483-mile stretch of Interstate 80, which links state residents and businesses to both the East and West Coasts, Hall reports. Seven national highways run north-south across the state, encompassing 22,156 miles of hard-surfaced roads.

Nebraska is part of the nationwide automatic vehicle identification (AVI) system, which allows participating transponder-equipped commercial vehicles to bypass designated weigh station facilities. This system features technologically advanced plates built into roadways so trucks are weighed and recorded while maintaining their 75-mile-per-hour speed.

Rail also plays an important role in Nebraska's transportation infrastructure. The nation's two largest rail companies – Burlington Northern Santa Fe and Union Pacific – provide rail service to most of the state's communities. In all, 13 freight railroads operate more than 3,600 miles of track throughout Nebraska. "No major city in the United States is more than five days by rail from Nebraska," Hall adds.

In addition to road and rail networks, Nebraska hosts an extensive air transport support system. Commercial airline service is available in nine Nebraska cities and scheduled airfreight service is provided to five additional communities.

Although Nebraska is land-locked, two major river systems provide access to key port cities. The Missouri River, on Nebraska's eastern border, supplies an inland water link to the Gulf of Mexico and the Atlantic Ocean via the Mississippi River. The U.S. Army Corps of Engineers maintains a nine-foot-deep, 300-foot-wide channel that runs 735 navigable miles from Sioux City, Iowa, to the mouth of the Missouri River near St. Louis. With no locks or dams, the free-flowing river is navigable approximately eight months of the year.

Nebraska's unique geographic location and extensive logistics underpinnings place the state in a class by itself. "Because there is no other place like Nebraska, there is no competition," Hall says. ■

All Roads Lead to Hampton Roads

Hampton Roads is strategically located on the mid-Atlantic coast, covering the southeastern corner of Virginia and a small portion of northeast North Carolina. A pivotal trade hub since colonial times, the area's seaports continue to evolve with the ebbs and flows of global commerce and the region's economic development potential is inherently tied to transportation and logistics.

"Hampton Roads provides a strategic location with outstanding port facilities and transshipment networks," says Keith Norden, senior vice president of the Hampton Roads Economic Development Alliance. "Our 50-foot harbors can handle post-Panamax vessels, and bridges do not restrict access."

The Hampton Roads Economic Development Alliance is a non-profit public-private partnership with the mission of marketing the region worldwide as the choice for business investment and expansion. The alliance also serves as Hampton Roads' lead organization for recruiting new businesses to the area and helping existing companies expand and prosper.

Southeastern Virginia's strategic location and advanced transportation infrastructure offer shippers reliable access to two-thirds of the U.S. population. More than 75 international shipping lines serve the region, which has one of the most frequent direct sailing schedules of any port in the country.

In fact, southeastern Virginia is home to one of the best natural deep-water harbors on the U.S. East Coast. "Fifty-foot deep, unobstructed channels provide easy access and maneuvering room for today's largest containerships," says Norden. "Virginia's ports are located just 18 miles from the open sea in a year-round, ice-free harbor."

In terms of modal access, Hampton Road's Port of Virginia transports more intermodal containers to more cities faster and more efficiently than any other port in the United States. As the largest intermodal facility on the U.S. East Coast, Virginia offers six direct-service trains to 28 major cities daily.

On the road, more than 50 motor carriers offer full freight handling and load-consolidation services, and they are supported by a network of interstate and local highways that facilitate fast, inland transport to any point in the United States.

Beyond its current capabilities, Hampton Roads is moving forward with infrastructure investments to pave the way for even more growth. As an example, the Virginia Port Authority plans to develop Craney Island in Portsmouth into the fourth state-owned deep-water marine terminal. The terminal will cover 600 acres and be built in three phases starting in 2013, with completion scheduled for 2032. At build-out, Craney Island is expected to have an annual throughput of 2.5 million TEUs.

Hampton Roads is ready to work with businesses looking to take advantage of the area's logistics resources. "The Hampton Roads Economic Development Alliance has an aggressive marketing outreach program, which takes its staff across the globe," Norden says. "We also work with the local economic development departments of our 15 Hampton Roads localities to identify and assist companies with their expansion and relocation plans."

Additionally, the alliance serves as a facilitator to connect necessary strategic partners with prospective companies during site location searches. "Local and state incentives are offered to qualified projects and are based on corporate investment, employment numbers, and annual payroll," Norden says.

Thanks to its advanced transportation infrastructure, Hampton Roads has been successful in recruiting several large distribution centers, including Wal-Mart (three million square feet), Target (1.8 million square feet), Cost Plus-World Market (one million square feet) and QVC Home Shoppers Network (one million square feet), among others. ■

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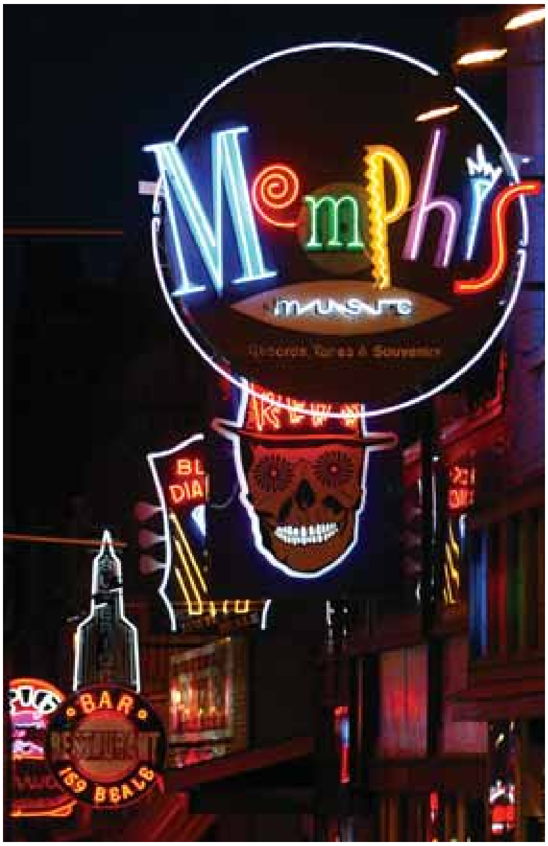

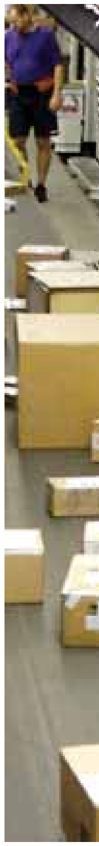

Central location, robust transportation, the busiest cargo airport in the world: no wonder so many companies can't help falling in love with Memphis.

You know it for Beale Street and barbeque; for Elvis, Johnny Cash, and B.B. King. But there's more you should know about Memphis: it's a premiere inland port for trade with the United States and, in fact, the world.

"Our history as a city is all about logistics and transportation," says Dexter Muller, senior vice president, development and logistics, at the Memphis Regional Chamber of Commerce. Blessed with a central location and rich transportation infrastructure, Memphis has attracted a long list of major firms that have put the city at the heart of their supply chain networks. Today, Memphis is building on those strengths to offer even greater appeal to companies that need to move goods efficiently. No wonder so many business professionals call it North America's Logistics Center.

When you talk about logistics in Memphis, you absolutely, positively have to start with FedEx. The logistics and transportation giant launched the express air/ground transportation industry in the United States with a flight out of Memphis on April 17, 1973. In the 35 years since, FedEx has grown into a worldwide power, and its Memphis hub has made the city a magnet for businesses that thrive on time-critical transportation. From Memphis, FedEx can deliver to any North American location within 24 hours and to most major global cities within 48 hours.

WEATHERPROOF OPERATIONS

Location is one big reason why FedEx chose Memphis for its hub. "It's one of the most weatherproof areas in the United States, untroubled by hurricanes, blizzards, or prolonged periods of icy weather," says Tom Schmitt, chairman of the Memphis Regional Chamber and president and chief executive officer of FedEx Global Supply Chain Services. "This is the best place in the United States to put a hub."

Thanks largely to the volume that FedEx moves each day, Airports Council International has named the Memphis International Airport the world's largest cargo airport by volume for 16 consecutive years. In 2006, more than 2.6 million tons of air cargo moved through Memphis.

When it comes to site selection, Memphis has it all: a central location, highly developed infrastructure, growing economy, and depth of logistics and transportation services. No wonder Memphis can rightfully claim the title of North America's Logistics Center.

FedEx is not the only air transportation expert in town. UPS operates a 535,000-square-foot sorting facility at the airport, and Memphis serves as one of three major U.S. passenger hubs for Northwest/KLM.

One feature that helps make Memphis International a global logistics center is its World Runway, a strip measuring more than 11,000 feet that began operation in 2000. Designed to accommodate heavily loaded jets, the runway makes it possible to operate non-stop cargo and passenger service to Europe or the Far East.

With all that capacity, no wonder Memphis has attracted so many firms that rely on speedy transportation. An area specialty is bioscience; one out of seven local employees works in that field. In particular, Memphis is the country's second-largest center for the manufacture of orthopedic devices. Firms such as Smith & Nephew, Medtronic, and Wright Medical have chosen Memphis in part because of its available logistics services.

"For example, wound care company Smith & Nephew can have a doctor in San Francisco meet with a patient at 9 p.m., order the parts, and do surgery by 11 a.m.," Muller says. "Memphis is one of the only cities in the world that offers that."

Because most of FedEx's overnight shipments fly through Memphis, locating near that hub gives shippers one big advantage – later pickup times. That works not only for orthopedic device manufacturers, but also for National Eye Bank Center, the world's largest cornea bank, and for Flextronics, whose Memphis operation is the largest overnight laptop computer repair depot in the world.

In any other city, a company receiving 3,000 computers in the morning for same-day repair would have until 7 p.m. to ship them back out. "In Memphis, they have later cut off times, which extends the work day by a half day," Muller says.

A BOUQUET OF RICHES

The same kind of math attracted leading flower and gift purveyor 1-800-FLOWERS, which distributes from a refrigerated warehouse in Memphis operated by Mallory Alexander International Logistics, a global third-party logistics company with corporate headquarters in Memphis.

Receiving flowers from growers in the United States, Europe, and South America, Mallory Alexander processes customer orders that arrive as late as 8 p.m., picking, packing, and shipping them out in time for next-day delivery. "We ship more than 100,000 orders a year for the company," says B. Lee Mallory, executive vice president at the 3PL.

Other facilities that rely on Memphis International's air express advantage include: the world's largest DVD distribution center, owned by Technicolor Video; the largest overnight drug testing center in the United States, owned by Advanced Toxicology; and major distribution centers belonging to Hewlett Packard, Sharp, Cingular, Jabil Global, Pfizer, Baxter, and GlaxoSmithKline.

WEALTHY AND WISE

Because of its wealth of resources, many third-party logistics providers see the wisdom of operating in Memphis. One major client of High Point, N.C.-based New Breed Logistics thought Atlanta looked like the perfect base for a central critical parts distribution center. A DC located near Atlanta's busy airport could get a service part on the next flight out at any time of day, the company reasoned.

Over time, however, the client realized that getting a part onto the next flight out wasn't nearly as important as having the ability to receive parts orders late in the day for next-morning delivery. "That prompted the decision to move the operation from Atlanta to Memphis," says Joe Hauck, director of corporate development at New Breed Logistics. The FedEx hub made all the difference.

A 3PL that emphasizes value-added services and technology, New Breed operates more than two million square feet of distribution center space in the Memphis metropolitan area. The ability to get next-day delivery for products and parts ordered late in the day makes Memphis a big draw for the company's clients.

For Siemens Medical Solutions, New Breed Logistics ships service parts from a DC in Memphis to 17 stocking locations around the country. This helps Siemens deliver service parts for magnetic resonance imaging machines and computed tomography scanners within two to six hours of a customer's call.

"We're in Memphis because of the requirement to replenish those depots by the next morning," Hauck says.

New Breed Logistics also distributes cell phones for Verizon Wireless, receiving

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“It’s a high-velocity operation, with shipments going out as late as midnight for next-day delivery,” Hauck says. “That service level requirement makes Memphis an obvious choice.”

AMERICA’S AEROTROPOLIS

If you think an airport is a place to pass through as fast as possible, you’re thinking old-school. Instead, envision the airport as the core of a new urban form – the aerotropolis – an “airport city” that mixes industrial, retail, and service businesses – many of which rely on air transportation – with hotels, tourist attractions, and residential neighborhoods in an attractive complex, linked by efficient ground transportation.

Airport cities are growing in Hong Kong, Paris, Amsterdam, Kuala Lumpur, Dubai, and elsewhere around the world, says John Kasarda, Kenan distinguished professor of management, director of the Kenan Institute of Private Enterprise at the University of North Carolina, Chapel Hill, and a major proponent of the aerotropolis theory.

A prime example of the aerotropolis is developing in Memphis.

“Memphis encompasses many attributes of an aerotropolis, and is trying to implement the infrastructure and land use planning that would make it fit the model even better,” Kasarda says. That includes development close to the airport and along several major access corridors.

The three main benefits an aerotropolis offers to companies that locate there are speed, agility, and connectivity. “Memphis has all three,” Kasarda notes.

Business and transportation leaders in Memphis are so devoted to the concept that they’ve claimed a brand name: America’s Aerotropolis. Proponents have formed a steering committee to focus on the aerotropolis development project. They’re working on a master plan and going out for bids from consultants who want to help develop it.

They’ve also already started planning multi-year projects to upgrade specific corridors near the airport – to make them more attractive, improve transportation infrastructure, interest new businesses, and market the area. The first corridor is anchored by the FedEx facility, the area’s largest bioscience companies, and Elvis Presley’s former home, Graceland.

“We’re working on improving the area’s appearance, public safety, blighted properties, economic development, and transportation,” Muller says. The organization also has started planning improvements to a second area that links a cluster of local universities to the airport.

A COMMON GOAL

With officials from city and county government serving on the steering committee along with business leaders, the aerotropolis concept has gained support from leaders who also are working on broader economic development initiatives. As government officials make decisions about zoning, transportation, and other local issues, they’re keeping the future of the aerotropolis in mind.

“All these parties – including those with

> **“When companies evaluate supply chain costs, including warehousing and distribution, they find Memphis not only competitive, but compelling as a site selection choice.”**
> — **ANDY GROVEMAN,** Executive Vice President, Belz

the authority and budget dollars to make recommendations a reality – are sitting at the same table, united around the same goal," says Schmitt.

A QUADRAMODAL CITY

Outstanding air cargo infrastructure accounts for only one-quarter of Memphis's supply chain formula. Memphis is a quadramodal city, boasting fast, efficient connections to the United States and the world via highway, water, and rail as well as air.

Two interstate highways converge in Memphis. I-40 links the state with California and North Carolina; I-55 provides a straight run to New Orleans and Chicago. Four hundred trucking companies operate in the area, providing direct service to all 48 contiguous U.S. states plus Canada and Mexico. It's possible to ship

Transportation solutions provider Cornerstone Systems taps into the myriad options Memphis offers, including truck, intermodal, and rail.

goods from Memphis overnight by truck to 152 U.S. markets, more than you can reach that way from any other U.S. city.

"It's close to the center of population," says Cliff Lynch, executive vice president of CTSI, a supply chain solutions company in Memphis. "It's a good place for companies with distribution patterns that are spread fairly equally, or consistent with the population distribution. Most major markets are within second-morning delivery out of Memphis."

With the variety of service options available in Memphis, shippers can choose the mode that best suits their need.

"Major truck lines operate huge terminals here," says Rick Rodell, chairman and chief executive officer at Cornerstone Systems, a logistics service provider headquartered in Memphis. "Highways run north-south and east-west, so it is a very desirable geographic location."

With offices, facilities, and customers across the United States, Cornerstone doesn't depend specifically on Memphis's logistics infrastructure for its own success. But with his logistics expertise, Rodell understands the Memphis advantage.

"If you're in the warehousing business,

this is a great place to be, given the number of transportation options," Rodell says. "Then there are truck brokers such as Cornerstone that use intermodal and consolidate loads on rail cars. We provide many services out of Memphis and go as far as Mexico and Canada."

As easily as freight reaches Mexico and Canada from Memphis today, that trip will become even simpler in the future, as construction proceeds on two interstate highways linking Memphis to the rest of the North American transportation network.

First, the planned extension of I-69, nicknamed the NAFTA Highway, will complete a major roadway running from Montreal, through Memphis, to the Texas-Mexico border. "About 40 percent of all U.S. manufacturing comes down that corridor," Muller says.

The second project will upgrade U.S. Highway 78 to create I-22, running from Memphis to Birmingham, Ala. Connections to other interstates in Birmingham will link Memphis directly to the heavily populated Atlanta region. I-22 also will connect Memphis with Tupelo, Miss., the future site of a new Toyota assembly plant.

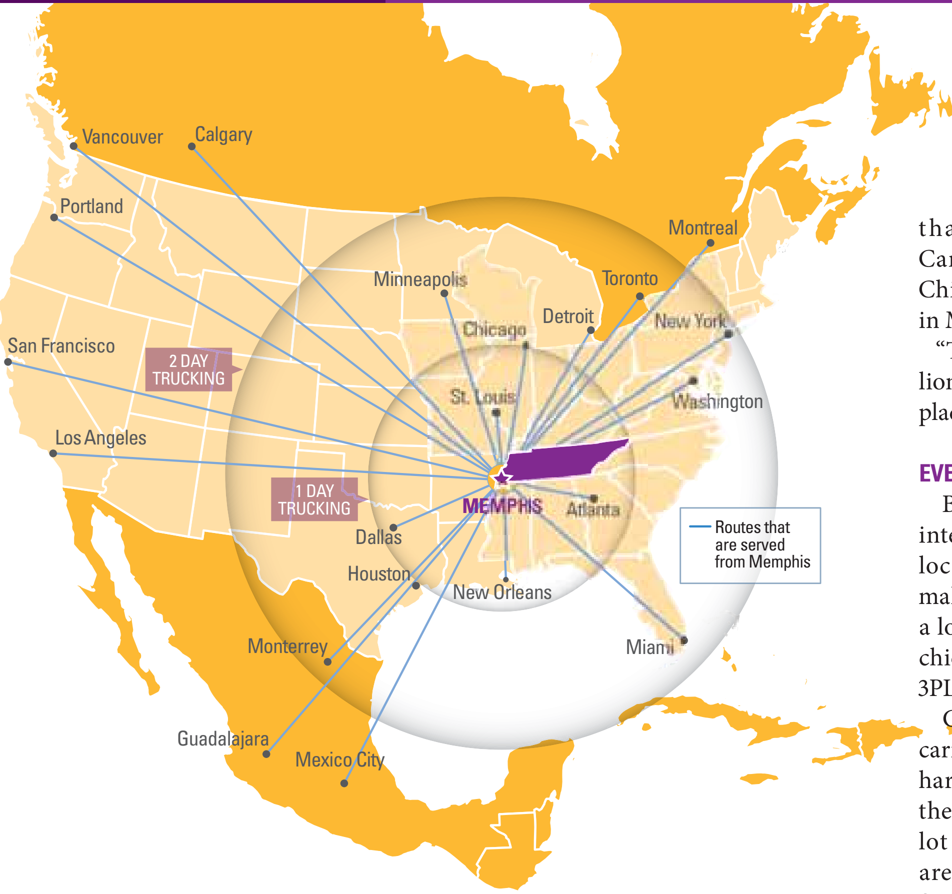
THE PORT BARGES IN

Memphis also boasts another kind of interstate highway. Handling more than 19 million tons of cargo annually, the Port of Memphis is the second-largest inland port on the Mississippi River system and the fourth-largest inland port in the United States. Its central location makes it a strategic choice for barge traffic.

Unlike Vicksburg or Natchez, Miss., it's far enough from the Gulf of Mexico to maximize the time cargo spends traveling inexpensively on the river. But it's also near enough to the Gulf that once a barge unloads at its destination, it doesn't have to travel far before retrieving another load. And, Muller says, "Memphis's intermodal connections are ready to whisk goods off to the rest of the continent."

Those intermodal connections include links to five Class I railroads: Norfolk Southern (NS), Burlington Northern/Santa Fe (BNSF), Union Pacific (UP), CSX, and Illinois Central/Canadian National (CN). They make Memphis the third-largest rail center in the United States.

BNSF is investing more than $200 million to expand its intermodal terminal at Shelby Drive and Lamar Avenue in Memphis. Just across the Mississippi, UP serves the metropolitan area from a 600-acre facility terminal in Marion, Ark.



Located at the nexus of both population and transportation in the United States, Memphis serves more major metro markets overnight by truck than any other U.S. city and can reach 45 states and Canada and Mexico by ground in two days or fewer.

From CN's terminal at the Intermodal Gateway in Memphis, shipments can reach 132 metropolitan markets, representing 60 percent of the U.S. population, overnight.

"The best thing going on in Memphis is the railroad expansions that are currently underway," says Buzz Fly, vice president of Patterson Warehouses, Inc., one of the largest 3PLs in Memphis. Focusing mainly on import-to-retail movements, Patterson maintains about two million square feet of warehouse space in Memphis and handles more than 7,000 containers per year.

These containers come directly from the West Coast to the Memphis rail ramps. "We pull containers all night from the railroads, then hold the inventory," Fly says. Thanks to the BNSF and CN expansions, and perhaps further expansions by other railroads, more companies will choose to locate distribution hubs in Memphis.

While many transportation centers have reached the limit of their rail capacity, causing major traffic backups, "Memphis continues to improve its infrastructure and expand these railroads," Fly says.

Another facility ripe for expansion is the Frank C. Pidgeon Industrial Park, which has 3,000 acres available for development. Already home to a Nucor Steel plant, the park is adjacent to both the Port of Memphis and the Intermodal Gateway. Companies that build in the park can connect via CN to the Port of Halifax on the Atlantic Coast and the Port of Prince Rupert on the Pacific Coast, giving them access to the world.

THE PARTNERSHIP ADVANTAGE

With so many transportation assets converging in one place, a company that works with a logistics partner in Memphis gains a strategic advantage.

"We can provide a full package of warehouse management and operations, transportation management, and supply chain execution to bring products from China or Europe through Memphis to the U.S. market," says Mallory. Companies that import product through the Canadian gateways can move them via Chicago directly to a distribution center in Memphis.

"That puts product close to the 300 million U.S. consumers as well as any other place in the United States," he notes.

EVERYBODY INTO THE TALENT POOL

Besides its large carrier base and intermodal transportation options, the local pool of potential employees also makes Memphis an excellent place to run a logistics operation, says Paul Stewart, chief executive officer of 4-E Logistics, a 3PL located in Memphis.

Given the concentration of both carriers and shippers in the region, it's not hard to find employees who understand the capabilities of 4-E's carrier base. "A lot of talented logistics professionals are concentrated in the Memphis area," Stewart says.

With operating branches in nine U.S. cities, 4-E is expanding its presence in Memphis. Its branches in other markets already work with carriers to transport freight in and out of the city when it makes strategic sense for a customer.

For instance, 4-E chose Memphis for one customer because of its central geographic location. "We were able to provide a plan for the customer to consolidate many of its small shipments in one place in Memphis, and distribute more economically," Stewart says.

4E currently has corporate personnel in Memphis, and later this year will add a sales and operations office in the city. This will provide closer connections to the company's Memphis-area partners and create opportunities to offer additional services to existing customers.

Another factor that makes Memphis a top choice for logistics is the available real estate. "Memphis has an active distribution center real estate market," says Lynch. "Space is less expensive than most areas in the country."

CTSI offers a broad range of transportation management products and services, including a transportation management system, freight bill audit and payment services, and consulting services. Lynch has experience in supply chain consulting, including site selection.

For example, Lynch recently helped a company choose a city for a new distribution center. He researched locations on the West Coast and in Dallas, Atlanta, and Indianapolis as well as in Memphis. "Memphis had the lowest cost per square foot for warehouse space," he says.

In fact, warehouse space in Memphis is some of the least costly among major cities in the nation. Quoted rates for warehouse space in the city were $2.56 per square foot – lower than in Charlotte, Indianapolis, Houston, Raleigh/Durham, Phoenix, or Miami, according to a market report by CoStar Group covering the first quarter of 2007. Out of a total inventory of 149.1 million square feet of warehouse space, Memphis had 23.2 million square feet available.

Consider this affordable warehouse space alongside the city's transportation infrastructure, and Memphis becomes an obvious site selection choice. "Intermodal shipments can come right off the West Coast into Memphis," Lynch says. "We have the facilities to handle them. Add the low-cost real estate, and it creates a formidable combination."

MEMPHIS GETS REAL

Companies looking to take advantage of that combination often find what they need from Belz Enterprises, a family-owned real estate development and investment firm that has been growing with Memphis for more than 70 years. Nike, for example, broke ground in 2007 on a one-million-square-foot distribution center on property it bought in Belz's Northridge tract, adjacent to I-240.

"Nike is proof of what Memphis has to offer – a strong labor market, location, and transportation infrastructure," says Andy Groveman, executive vice president at Belz.

Also in 2007, medical device manufacturer Smith & Nephew started building the largest facility in its global distribution network, a 210,000-square-foot center in Belz's Memphis Logistics and Technology Center (MELTECH).

"More companies recognize the efficiencies of relocating or expanding their facilities in Memphis," Groveman says. "When they evaluate supply chain costs, including warehousing and distribution, they find Memphis not only competitive, but compelling."

Recent developments in global shipping make Memphis an even stronger choice for a logistics facility. In a white paper called *New Age of Trade*, global real estate services firm Cushman & Wakefield points to several recent logistics trends, including: the use of larger vessels served by fewer ports; increasing use of ports other than Los Angeles/Long Beach; the re-emergence of rail; the rise of mega-distribution centers serving larger trade areas; and siting transloading and cross-dock facilities near ports to expedite the movement of goods.

Cities that stand to benefit from these trends and from increased international trade are inland hubs that are close to large markets and have superior connectivity to freeways and rail. The study names four U.S. cities that fit that description: Dallas, Chicago, Atlanta, and Memphis.

Memphis is smaller than the other three, but some very large companies have chosen the city to locate distribution centers of 400,000 square feet or more.

"Large companies do not select Memphis for the size of the metro area," Muller says. "It's because they serve a large part of the United States from those facilities."

THE CHEAPER CHOICE

Rising fuel prices have made Memphis an even stronger choice for a distribution facility; ship by truck from Memphis, you'll save on gas. "You can get to more metropolitan markets from Memphis faster and cheaper than from any other city," Muller says.

The variety of rail services available also gives shippers ample opportunity to choose that less-expensive option. Only Chicago and St. Louis provide access to as many railroads, but rail in Chicago is congested, and St. Louis doesn't offer as many intermodal services. "Memphis is less congested, and offers great services," says Muller.

To take further advantage of recent trends, business leaders in Memphis have been forging alliances with counterparts around the world. For example, as more manufacturing moves south of China's Pearl River, shipping through the Suez Canal to the East Coast of North America starts to make as much sense as shipping across the Pacific to the West Coast.

"We're working on strategic alliances with partners that can make us stronger," Muller says.

Thanks to its central location, infrastructure, workforce, and other assets, Memphis is positioned to retain its title as North America's Logistics Center. ■

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Memphis Regional Chamber • www.memphischamber.com
More and more companies are doing business in Memphis, for good reason. If you or your organization are looking to expand your operations, relocate to a business-friendly community, or take advantage of the economy of scale that Memphis' logistics infrastructure can provide, contact the Memphis Regional Chamber, the economic development agency for the mid-South region. For all the details, visit the Memphis Regional Chamber's Web site.

New Breed Logistics • www.newbreed.com
New Breed Logistics is a third-party logistics company that brings new levels of visibility and control to complex logistics operations. We combine methodical analysis of your material flows with the intelligent application of systems to reduce and automate process steps – across your supply chain or in your distribution center. Some of the world's most respected companies rely on New Breed minds to streamline logistics operations in support of manufacturing, distribution, returns, refurbishment and repair, and service parts logistics.

Patterson Warehouses • www.patwar.com
Patterson Warehouses is one of the largest third-party logistics providers in the Memphis area, operating more than two million square feet of food-grade space. Whether it is import-to-retail, medical supplies, or raw materials for manufacturing, Patterson can meet your ever-changing distribution needs. Patterson Warehouses can ensure your success by becoming your distribution partner in Memphis; visit the Web site for more details.

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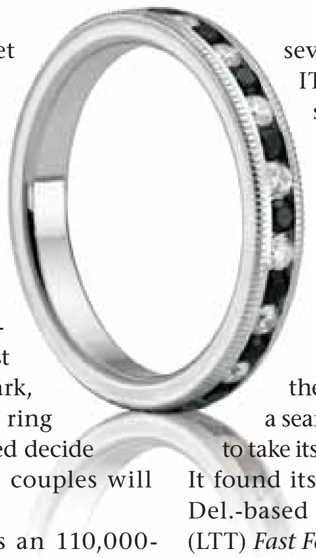
By Amanda Loudin

Making a Commitment To Supply Chain Quality

Wedding jewelry manufacturer Benchmark ties the knot with a software tool that marries forecasting and inventory control.



When couples get engaged, a long, involved process of determining countless details begins. From the wedding date to the bridal gown to the honeymoon, couples have many important decisions to make. For the past 30-plus years, Benchmark, a Tuscaloosa, Ala.-based ring manufacturer, has helped decide which wedding bands couples will exchange at the altar.

Benchmark operates an 110,000-square-foot facility divided evenly between production and distribution. The company, which sells its rings to retailers and major chains throughout the United States, has been situated in the facility for nearly its entire history.

Until recently, Benchmark drove all operations with an in-house enterprise resource planning system developed several years ago by its own IT department. While the system was adequate, Benchmark needed to leverage additional technology to better manage its inventory and planning processes, and get rising inventory and transportation costs under control.

After deciding to improve these areas, Benchmark began a search for the right technology to take its operations to the next level. It found its solution in Wilmington, Del.-based Lead Time Technology's (LTT) *Fast Forward* advanced planning and optimization tools suite.

A FITTING SOLUTION

The unique challenges of the jewelry industry dictated Benchmark's selection. "We use very expensive raw materials with long lead times," says A.J. Tosyali, president. "It's critical that we have accurate, on-spot forecasting. We could

CONTINUED FROM PAGE 93

"Because the costs of our raw materials fluctuate, we have to monitor our inventory and operating expenses closely." – **A.J. Tosyali,** president, Benchmark

achieve that through new technology."

Benchmark sources raw materials from mines based both in the United States and abroad. Lead times for materials such as diamonds, gold, and precious metals may run as long as two weeks.

The raw materials are not only expensive, but they pose the additional challenge of having constantly changing valuations.

"Because the costs of our raw materials fluctuate, we have to monitor our inventory and operating expenses closely," says Tosyali.

The lack of accurate forecasting tools resulted in a costly side effect: poor inventory control.

Another issue that Benchmark faced was that its five product managers lacked insight into the materials and inventory that was related to them. Instead, one person oversaw planning for all 5,000 of Benchmark's SKUs. That one person was overextended.

"He couldn't break out different product categories, which made planning difficult," Tosyali says.

SEARCHING FOR THE PERFECT FIT

Benchmark began the search for a product that could provide supply chain optimization. "We went through many software demos," says Tosyali. "We also supplied data to prospective vendors to see what kind of forecasts they could offer us."

"It helped that Benchmark's representatives approached us with specific company requirements in mind," says Doug MacLean, vice president at LTT. "They're forward thinking and understand the concepts of demand and forecasting. They were looking for ways to improve operations and optimize costs."

Benchmark was equally impressed with LTT. "We liked that they were able to customize the system to our needs," Tosyali says. "And they were able to implement rapidly."

The LTT system also had the level of detail Benchmark needed. "The software can account down to 20 layers of raw materials," Tosyali explains. "Based on lead times, we can set up production and shipping parameters to the item level."

THE SOFTWARE AT WORK

Benchmark included its staff in every step of the implementation process, which helped improve employee buy-in.

"They were part of the process," says Tosyali. "Any time we met with the key people at LTT, our employees were there. It made for an easy transition."

The implementation process took only about 40 days. "It helped that we have our own IT group," says Tosyali. "We were able to push our data to LTT quickly so that they could get started right away."

Now each of Benchmark's production managers receives details on the pricing and schedules of the exact raw

Benchmark's wedding bands require costly raw materials with lead times of up to two weeks.

materials used with their products. With that information in hand, they can set up detailed production and distribution plans for their products.

MOVING FORWARD

Once Benchmark receives its materials, it can begin production immediately. “We can also plan our calendar and accommodate rush items as needed,” says Tosyali. “The system is intelligent and can account for data accordingly.”

Fast Forward is designed to help companies reduce and right-size inventory, improve forecast accuracy and service, optimize production resources, and reduce cycle time across the supply chain.

The product particularly appeals to small and mid-sized manufacturers, which made Benchmark a perfect candidate.

LTT customized Benchmark’s software package to include specific sales data and material levels.

“This data allows us to account for every bit of material associated with our products,” explains Tosyali.

“The forecasting tools also give us the ability to plan production and distribution of new items, something we couldn’t do before,” he adds.

Fast Forward simplified and automated daily decision making for Benchmark. The process improvement best practices are based on lean and Six Sigma principles. Among the benefits and goals are: anticipating orders to improve customer service; reducing inventory; and improving data visibility across the supply chain.

Fast Forward also provides daily make/move recommendations based on available inventory, forecasts, and orders.

Benchmark is enjoying the benefits of the new system, including detailed inventory graphs.

For each SKU, *Fast Forward* displays information such as the dependant demand, booked orders, scheduled production, recommended production, inventory specifics, and bill of materials details.

“We are able to see information in many different ways,” says Tosyali. “That has allowed us to bring supply chain issues to the surface and make improvements.”

Those improvements include reduced inventory and a better turn rate. “Our return on asset has grown as well,” Tosyali notes. “In the jewelry business, the asset is critical.”

With *Fast Forward* in place, Benchmark vows to continue setting the standard for supply chain excellence in the highly competitive jewelry industry. ■

L.I.T. TOOLKIT

by Dan Calabrese

Distribution by the Book

Automated routing helps Scholastic Book Fairs turn the page on inefficiency.

Scholastic Book Fairs, a division of Lake Mary, Fla.-based publisher and distributor Scholastic, logs a lot of miles delivering books to schools around the country.

The world's largest publisher and distributor of children's books, Scholastic distributes nationally to school-based book clubs and fairs, retail stores, schools, libraries, and television networks. The company, founded in 1920, reports projected 2008 revenue of $2.2 billion and employs 10,000 people worldwide.

At Scholastic Book Fairs, schools and other organizations take delivery of books on rolling racks, giving children the opportunity to choose and read various publications. The events both expose children to books and serve as fundraisers for the host organizations.

Delivering books to more than 230,000 stops annually poses unusual challenges for the company's fleet of 298 trucks, which are dispatched from 65 locations. One hurdle arises from the fact that most schools are located in residential neighborhoods, which requires routing schemes to consider more than just highways and main arteries.

Another of Scholastic's challenges is that drivers not only deliver the bookcases, but also pick them up and provide support for the book fair events, requiring multiple visits to the destination.

PINPOINTING EFFICIENCY

As recently as seven years ago, Scholastic planned its complex routing schedule through the efforts of 50 individuals pushing pins into maps.

"As business grew, we developed the need for an automated process," says Tony Smith, Scholastic Book Fairs' director of transportation and facilities. "Our procedure became too cumbersome to organize manually across the country. Our approach wasn't optimized, and it didn't offer the efficiencies we needed."

Scholastic's pursuit of an automated solution led to four prospective vendors. The successful bidder was Oklahoma City-based Appian Logistics, which proposed implementing its *Direct Route* national routing system.

Designed to take advantage of new technology, operating systems, and

CONTINUED FROM PAGE 97

BOOK MOBILE: **Scholastic Book Fairs' 298 trucks traverse the country, delivering books to more than 230,000 destinations annually.**

hardware advancements, *Direct Route* optimizes routes based on customer locations and types, volume and time requirements, road network distances, vehicle costs and capabilities, customer time windows, work-time parameters, and dispatch parameters.

GETTING A READ ON ROUTING

"Our core competency is multi-stop, multi-route optimization," says James Stevenson, vice president of Appian. "For example, the solution can coordinate an order list with time windows, capacity, and different equipment restrictions that apply to certain trucks."

Scholastic looked to Appian to automate its entire routing process.

"Our application is designed to

optimize what Scholastic did manually," Stevenson adds. "It's not designed to replace current processes, but to make them more efficient."

Scholastic's biggest efficiency problem was underutilization of trucks. *Direct Route* automated loads and routing to ensure that each run carried the optimal number of books and cases–which doesn't necessarily mean the highest volume possible. Overutilization can also be a problem because overpacked trucks can lose efficiency by having to make too many stops in a single run.

The automation *Direct Route* introduced allowed Scholastic to reduce the number of people working on routing from 50 to 12, eliminating the inevitable variances of so many people planning routes. It also helped consolidate the process so all field workers can access information from a central source.

"The program supports Scholastic's core initiative of centralizing the route planning function," Stevenson says. "Fifty people working on routing resulted in 50 different routes, which had a direct correlation to the bottom line."

Scholastic saw *Direct Route* as an opportunity to centralize dispatch operations. It gained the ability to more easily review recent routing decisions and learn from their results.

"I can now see how a particular branch ran its routes last week; the old, decentralized system prevented us from pulling all that information together," Smith says.

Training on the system was straightforward, and Scholastic tries to be proactive by keeping tabs on Appian and its various applications.

"We send employees to Appian's annual user conference," Smith says. "And we periodically invite Appian representatives to visit our facilities. When I came on board three years ago, we brought Appian into our routing center within the first six months to work with our routers to pinpoint inefficiencies."

Scholastic drivers have largely embraced the *Direct Route* system because it incorporates their input based on real-life experience.

"For example, some roads don't allow our class 7 trucks," Smith says. "So we have our drivers carry a form to identify those parts of the route."

The driver gives the information to the router, who updates the system. "We can set the system to avoid a specific route," Smith says, "even if it's just a half-mile section of road."

By incorporating such changes, the system combines driver experience with technology–a direct route to improved efficiency. ■

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JDA Software

WHAT'S NEW: Enhancements to the *JDA Transportation & Logistics Management* application.

THE VALUE: The latest version automates transportation and logistics processes to help reduce freight costs, increase productivity, and maximize asset utilization, while maintaining delivery schedules and high customer service levels. Users can manage supplier and carrier relationships to reduce carrier turn-down rates, decrease expediting costs, and improve customer fill rates and service levels; and generate optimized plans to help reduce freight expense and improve inventory turns and sales.

www.jdasoftware.com ✆ 800-438-5301

Rand McNally Commercial Transportation

WHAT'S NEW: A commercial transportation and digital mapping solution.

THE VALUE: *IntelliRoute Dock2Dock* provides carriers and shippers with GPS-accurate, truck-specific routing from origin dock to destination dock for Class 8 and longer combination vehicles.

www.randmcnally.com ✆ 800-275-RAND

ORTEC

WHAT'S NEW: Upgraded versions of *ORTEC Transport and Distribution* (*ORTEC TD*) and *ORTEC Service Planning* (*ORTEC SP*) solutions.

THE VALUE: *ORTEC TD*'s new features include support for intermodal operators, such as sales rate calculation, slot booking, and container trucking planning tools. Dispatcher support tools enhance *ORTEC SP*, providing checks on working time regulations, union rules, and individual contracts.

www.ortec.com ✆ 678-392-3100

Trade Tech

WHAT'S NEW: An on-demand 10+2 software application.

THE VALUE: With *Trade Security*, purchase order information goes directly into the Automated Manifest System (AMS), which provides three core solutions for the 10+2 rule, including: giving origin-based forwarders and NVOCCs online access to Customs;

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

incorporating customs house brokers into the process through online collaboration; and pre-classifying the purchase order in line-item detail.

www.tradetech.net ✆ 425-837-9000

TradeBeam

WHAT'S NEW: An update to its Global Trade Management software.
THE VALUE: Enhancements include new bar-code label management functions designed to strengthen buyer-supplier collaboration across borders; integrated compliance and visibility to speed navigation among orders, documents, and regulatory information; and upgraded data quality management tools.

www.tradebeam.com ✆ 888-311-1415

FKI Logistex

WHAT'S NEW: An update to the *EASYpick* order fulfillment software.
THE VALUE: The latest *EASYpick* software release offers enhanced productivity reporting and workload planning tools for supervisors. The software supports FKI Logistex *EASYpick Pick-to-Light*, *GoKart*, *Voice*, *RF*, and *EASYput* put-to-light technologies.

www.fkilogistex.com ✆ 877-935-4564

Logistics Planning Associates

WHAT'S NEW: An enhanced supply chain planning software system.
THE VALUE: Designed for manufacturers, importers, distributors, and e-retailers, *PSI Planner* features integrated sales forecasting, distribution requirements planning, materials requirements planning, and master production scheduling modules. A new forecasting method is the highlight of the latest version.

www.psiplanner.com ✆ 800-472-0233

Management Dynamics Inc.

WHAT'S NEW: A release of restricted party screening (RPS) software.
THE VALUE: Designed to improve compliance with U.S. Customs regulations, *RPS On-Demand* 5.0 screens individuals and businesses to identify prohibited transactions based on more than 90 restricted party lists.

www.managementdynamics.com ✆ 201-935-8588

INTTRA

WHAT'S NEW: Enhancements to its ocean freight booking solution.
THE VALUE: The updates to INTTRA's booking portal extend support for export and import haulage, and specialized cargo details such as hazmat, out of gauge, and atmospheric control.

www.inttra.com ✆ 973-263-5100

partnerships

Intelligent Global Pooling Systems (iGPS) and Schoeller Arca Systems

WHAT'S NEW: An agreement to produce up to 30 million pallets.
THE VALUE: To meet industry demand, Schoeller Arca Systems will manufacture up to 30 million plastic, RFID-tagged iGPS pallets over the next five years.

www.igps.net ✆ 800-884-0225

PeopleNet and McLeod Software

WHAT'S NEW: The integration of PeopleNet's automated driver log application with McLeod's dispatch and enterprise software.
THE VALUE: Driver hours information is provided wirelessly from PeopleNet's *Fleet Manager* application in the

TECHUPDATE

CONTINUED FROM PAGE 101

Honeywell

WHAT'S NEW: A mobile data collection and communication device.

THE VALUE: Suited for harsh, rugged environments, Honeywell's Dolphin 9900 fits across several vertical segments including transportation, warehousing, and logistics. It features integrated voice and data communication, GPS technology, and bar-code scanning.

www.honeywell.com
973-455-2000

truck cab display on the dispatchers' *LoadMaster* screens alongside other critical load and driver information.

www.peoplenetonline.com
888-346-3486
www.mcleodsoftware.com
877-362-5363

TMW Systems and EBE Technologies

WHAT'S NEW: An agreement in which TMW resells EBE software systems.

THE VALUE: TMW now offers EBE's transportation-specific workflows and process management applications to complement its enterprise transportation software systems with additional business automation. EBE provides support and implementation services to all EBE installations to maintain a high standard of customer care.

www.tmwsystems.com 800-401-6682
www.ebe-inc.com 800-447-0612

Pangaea Software and Catapult International

WHAT'S NEW: An agreement for each company to resell the other's software.

THE VALUE: Users of Australian-based Pangaea's shipment order tracking/visibility system and Kansas City-based Catapult's quote management system with air/ocean contract management can purchase both products from either provider.

www. gocatapult.com 913-871-3626
www.pangaeaworld.com +61 3 9310 4166

hardware

Intermec

WHAT'S NEW: A mobile computer for warehousing applications.

THE VALUE: The CK3 handles a range of data collection and communication functions, including image capture and bar-code scanning capabilities; an optional RFID reader; voice recognition; and support for a line of compatible Intermec mobile printers.

www.intermec.com 800-347-2636

TransCore

WHAT'S NEW: The addition of features to GlobalWave in-cab communications and trailer tracking satellite products.

THE VALUE: Slap & Track mobile tracking terminals now come with replaceable battery packs for efficient power management; a stop-start sensor records whether a trailer is parked or moving, so fleets can gather more accurate trailer information; and the CabLink satellite in-cab communications system now includes integrated Google maps and expanded reporting capabilities for more accurate hours-of-service reporting.

www.transcore.com 717-561-2400

web

Lion Technology

WHAT'S NEW: A Web seminar on the European Union's chemical substance regulations.

THE VALUE: The Web seminar covers how the EU's Registration, Evaluation, Authorization, and Restriction of Chemical Substances (REACH) program affects the supply chain. Participants learn which chemicals, formulations, and articles are subject to REACH regulation; deadlines for pre-registration and registration of products; chemical information that must be shared with other companies; and where to locate the most up-to-date REACH information. The seminar will take place Nov. 4, 11, and 18.

www.lion.com/reach 888-546-6511

Delta Cargo

WHAT'S NEW: Enhanced Web site features.

THE VALUE: Delta Cargo's new Web site allows cargo customers worldwide to conduct global booking, tracking and tracing; obtain rates for most international and domestic products; access dynamic information from any Internet connection in the world; and

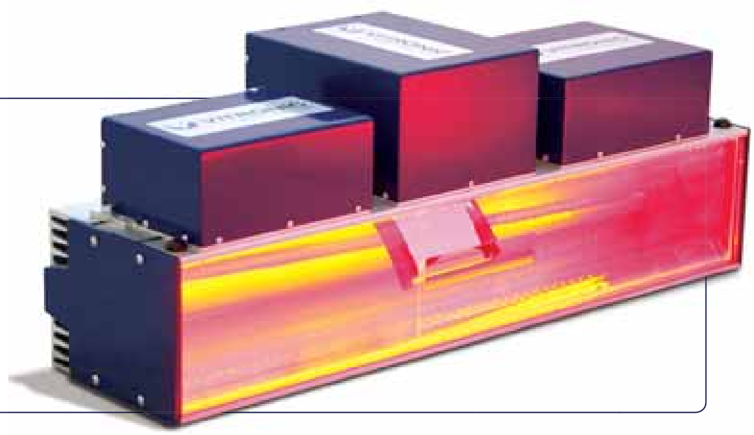
To learn more, contact these companies directly. Remember to mention this issue date and page to get the right information.

VITRONIC Machine Vision

WHAT'S NEW: An optimized conveyor belt scanner.

THE VALUE: A core component of the VIPAC 3-D parcel identification system, the VICAMssi2 scanner includes compact LED illumination; a high-resolution, high-speed line-scan camera; a compact power supply unit; and an optional mini PC for use as a standalone system.

www.vitronic.com ✆ 502-210-9669



access an international network that includes the addition of more than 60 new international routes since 2006.

www.deltacargo.com ✆ 800-352-2746

World Cargo Alliance (WCA) Family of Logistic Networks

WHAT'S NEW: Chinese versions of Web sites for members of the independent freight forwarders network.

THE VALUE: The new, Mandarin-language Web sites make it easier for Chinese exporters, shippers, and buyers to access the WCA Family members' services and find professional forwarders.

www.wcafamily.com ✆ 702-586-7893

XTRA Lease

WHAT'S NEW: An invoice storage and access feature.

THE VALUE: XTRA Lease's Web site now enables fleets to store and retrieve invoices for up to two years after they've been posted.

www.xtralease.com ✆ 800-325-1453

NEWSERVICES

YOUR BUSINESS LOGISTICS RESOURCE

Logwin

WHAT'S NEW: Offices in Campinas, Brazil.

THE VALUE: The international logistics service provider grew its presence in Brazil with the addition of two offices in Campinas, one of the country's rapidly growing commerce centers. Excellent road connections and proximity to the Viracopos airport make Campinas an important transportation hub and an ideal location for offering intermodal solutions, including truck transport of any kind of product. The new offices join Logwin's established Brazil locations in Santos and Sao Paulo.

www.logwin-logistics.com
✆ +352 719690-0

Wheels Group

WHAT'S NEW: A warehouse facility in Mississauga, Ontario.

THE VALUE: Located near Pearson International Airport, the 70,000-square-foot warehouse provides shippers in Canada and the United States with a central facility capable of reaching 64 percent of Canada's population with next-day service. The facility also offers warehousing, kitting, order picking, fulfillment, and distribution services.

www.wheelsgroup.com ✆ 800-663-6331

Lufthansa Cargo

WHAT'S NEW: Expanded security measures in the United States.

THE VALUE: Lufthansa Cargo installed explosive trace detection systems in all its U.S. destinations. The carrier also established "Security Hubs" in its Chicago and Los Angeles bases, installing physical access barriers, comprehensive video surveillance, biometric checks, and security guard patrols.

www.lufthansa-cargo.com
✆ 800-542-2746

Lone Star Overnight (LSO)

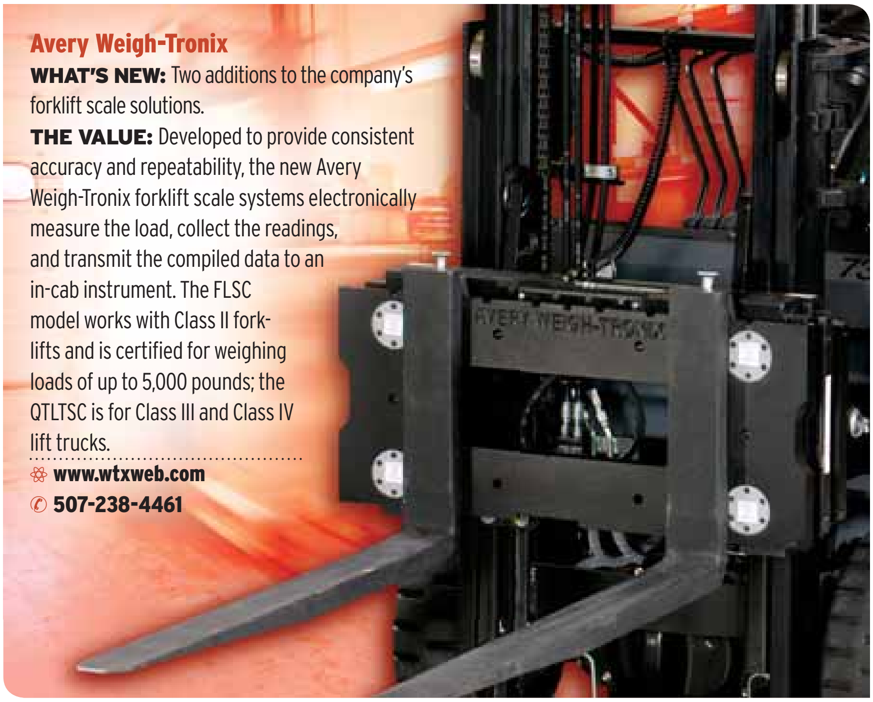
WHAT'S NEW: Expanded overnight package delivery service in Texas.

THE VALUE: With the addition of 100 new ZIP codes throughout Texas, the regional company can now deliver to businesses in Texas, Arkansas, Oklahoma, western Louisiana, eastern New Mexico, and Mexico.

www.lso.com ✆ 800-800-8984

NEWSERVICES

CONTINUED FROM PAGE 105



Avery Weigh-Tronix

WHAT'S NEW: Two additions to the company's forklift scale solutions.

THE VALUE: Developed to provide consistent accuracy and repeatability, the new Avery Weigh-Tronix forklift scale systems electronically measure the load, collect the readings, and transmit the compiled data to an in-cab instrument. The FLSC model works with Class II forklifts and is certified for weighing loads of up to 5,000 pounds; the QTLTSC is for Class III and Class IV lift trucks.

www.wtxweb.com
507-238-4461

Ridg-U-Rak

WHAT'S NEW: A high-density racking solution.

THE VALUE: Ridg-U-Rak's Drive-In Storage Rack Systems store product on continuous rails that allow lift trucks to directly enter the rack structure to place and retrieve pallets.

www.ridgurak.com 866-479-7225

TNT

WHAT'S NEW: The expansion of its international express network in China.

THE VALUE: TNT opened eight new branches, most of which are located in the Pearl River Delta area and the Yangtze River Delta area, China's key manufacturing and export hubs. The new facilities bring the global express company closer to its customers, especially those in high-tech industries.

www.tnt.com 800-558-5555

Successful Quality Systems (SQS)

WHAT'S NEW: A new warehouse in Puerto Rico.

THE VALUE: With 40,000 square feet of warehouse space dedicated to pharmaceuticals, the new SQS facility offers strict inventory control, high-level security, and an advanced temperature and humidity monitoring system that meets all pharmaceutical industry requirements.

www.sqswarehouse.com 787-275-2424

Sellick Equipment

WHAT'S NEW: A 16,000-pound capacity forklift.

THE VALUE: Equipped with four-wheel drive and four equal-sized wheels, the S160-4 steers both axles for a tight turning radius of 150 inches. The model features a diesel engine and automatic power-shift transmission.

www.sellickequipment.com 877-SELLICK

ABF Freight System

WHAT'S NEW: Reduced transit times.

THE VALUE: With faster transit times in more than 24,000 station-to-station lanes, including about 1,300 new next-day lanes and 21,000 new second-day lanes, ABF's Regional Performance Model now reduces transit time by at least one day in more than 445 million ZIP-to-ZIP combinations.

www.abf.com 800-610-5544

Old Dominion Freight Line (ODFL)

WHAT'S NEW: A Southern California warehouse.

THE VALUE: Located in Commerce, Calif., the new facility offers shipment consolidation, container deconsolidation, crossdocking, full-service warehousing, and all modes of transportation including truckload, LTL, and air. ODFL's warehouse division works with the company's supply chain partner in China to provide door-to-door services to, from, and between points in the Far East, the United States, Mexico, and Canada.

www.odfl.com 800-432-6335

IJS Global

WHAT'S NEW: Operations in Poland.

THE VALUE: Located at Warsaw's Okecie International Airport, IJS Global's operations in Poland offer import/export air and ocean freight, road freight, and distribution services in Central and Eastern Europe.

www.ijsglobal.com 203-504-9760

Toyota Material Handling

WHAT'S NEW: A line of large IC pneumatic lift trucks.

THE VALUE: Suitable for use on loading docks, the six new models offer capacities from 22,000 to 35,000 pounds, a two-speed transmission, and 6.7-liter diesel engines.

www.toyotaforklift.com 800-226-0009

Westfalia Technologies

WHAT'S NEW: A line of specialty conveyors.

THE VALUE: The conveyors' standardized designs can be integrated with other materials handling equipment and adapted to the user's requirements. The new line features air chain accumulation conveyors that handle

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

a range of pallet sizes, in-line turner conveyors that knock down and rotate standing 25- to 100-pound bags for loading, and turntable conveyors with flexible, pinch point-free turning up to 180 degrees.

www.westfaliausa.com ✆ 717-764-1115

NYK Line

WHAT'S NEW: Additional service on its Indian Subcontinent East Coast Express (IEX) route.

THE VALUE: Originating and ending in Port Muhammad Bin Qasim (Karachi), the upgraded IEX offers a fixed-day weekly service using seven 4,000-TEU vessels.

www.nykline.com ✆ 888-695-7447

Menlo Worldwide Logistics

WHAT'S NEW: An expanded presence in Guadalajara, Mexico.

THE VALUE: Additional facilities and staff in Guadalajara allow Menlo, a Con-way subsidiary, to better serve the transportation management needs of the city's growing high-tech market.

www.con-way.com ✆ 630-449-1000

FedEx

WHAT'S NEW: Upgraded service from Europe to major cities on the U.S. East Coast.

THE VALUE: FedEx Express International Priority service offers overnight delivery from countries throughout Europe to more than 3,500 U.S. East Coast ZIP codes that previously required two-business-day service. For regions where FedEx already provided overnight delivery, it now offers pickup times later by at least six hours.

www.fedex.com ✆ 888-444-5940

NLM

WHAT'S NEW: Truckload brokerage services.

THE VALUE: NLM Truckload Brokerage includes shipment management from set-up through invoicing and comprises both standard equipment and specialized equipment including flatbeds, drop-decks, and curtain-sides. NLM manages the new service through a network of qualified carriers.

www.nlmi.com ✆ 313-736-8000

The Grand Alliance (GA)

WHAT'S NEW: A Mediterranean hub in Cagliari, Italy.

THE VALUE: The GA's transshipment hub moved from Gioia Tauro to the less-congested Cagliari International Container Terminal in southern Sardinia, Italy, to improve schedule reliability for Europe-Asia Loop 2 and Asia-East Coast Express services.

www.oocl.com ✆ 888-388-OOCL

Estes

WHAT'S NEW: Terminals near Minneapolis and Seattle.

THE VALUE: The terminal in Mankato, Minn., provides shippers with direct service throughout all of south-central Minnesota and is a major component of the company's expanding service coverage in the upper Midwest. The Everett, Wash., location helps eliminate inefficient bridge crossings and traffic logjams on the east-west State Route 520 coming from Seattle, improving service to businesses north of the city.

www.estes-express.com ✆ 804-353-1900

SEKO

WHAT'S NEW: Two facilities in South Africa.

THE VALUE: From its locations in Johannesburg and Durban, SEKO South Africa offers a full range of logistics services including air, ocean, brokerage, warehousing, and distribution.

www.sekoworldwide.com ✆ 800-228-2711

SAS Cargo

WHAT'S NEW: An office in Hamburg, Germany.

THE VALUE: Close proximity to the Copenhagen air cargo hub allows for same- or next-day deliveries in Europe, the United States, and Asia.

www.sascargo.com ✆ 344-849-3300

3PLs

3PLfinder.com • www.3plfinder.com

3PLfinder.com is a free online directory of third-party warehouses that offers the most comprehensive and easy-to-find listings that include every major warehouse in North America as well as facilities worldwide. The site enables you to search by city and state, and includes enhanced listings with advanced search features that allow you to find the closest warehouse that provides the services you need.

CEVA Logistics • www.cevalogistics.com

CEVA Logistics, a leading global logistics company, designs, implements, and operates complex supply chain solutions on a national, regional, or global scale for medium to large enterprises. With 38,000 dedicated professionals, CEVA manages more than seven million square meters of warehouse space and operates an extensive global network with facilities in 30 countries worldwide. The company's Matrix™ product is a centrally hosted, integrated suite of supply chain technologies that enables CEVA to manage complex domestic and global supply chains. For more information on CEVA's products and services, visit them on the Web at www.cevalogistics.com.

InterChez Logistics Systems • www.interchez.com

InterChez Logistics Systems is a full-service contract logistics and consulting company that uses technology-driven solutions to integrate and simplify complex logistics operations. InterChez Logistics Systems provides solutions that deliver measurable value to customers. Its innovative thought, logistics experience, and affordable solutions provide companies with a competitive advantage through logistics excellence. Regardless of the size of your business, your industry, or your business challenges, InterChez can help. To learn more about InterChez and the value it delivers, visit the Web site.

Schenker • www.schenkerusa.com

The integration of Schenker AG 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, and No. 3 in worldwide ocean freight, and No. 3 in integrated heavyweight freight in North America.

IN THIS SECTION:
3PLs–Logistics IT

Wheels Group • www.wheelsgroup.com

In this era of vendor consolidation, Wheels Group concentrates on providing a full spectrum of integrated products and services from a single source. Innovative and non-traditional approaches to supply chain management include: domestic and international transportation services; third-party logistics; supply chain consulting, optimization, and reporting; contract warehousing and distribution; technology systems and process development, and much more. For details, visit the Web site.

ECONOMIC DEVELOPMENT

Regional Growth Partnership • www.rgp.org

The Regional Growth Partnership is a private nonprofit corporation dedicated to fostering local, national, and international economic growth opportunities for Northwest Ohio.

LOGISTICS IT

Appian Logistics • www.appianlogistics.com

Appian Logistics has almost two decades of experience and expertise developing software and is acknowledged as an industry leader in providing solutions that work for transportation companies. Appian Logistics is committed to providing logistics solutions powerful enough for what-if cost analysis and easy enough for day-to-day execution. Contact Appian Logistics today for a solution designed to streamline your transportation operations.

Arcline (2000) Inc. • www.arcline2000.com

Arcline (2000) Inc. develops advanced dispatch management software solutions for the transportation industry. Our objective and commitment is to provide a complete business solution for truck fleets and freight brokers that is reliable, easy to use, and affordable. We pride ourselves as being Partners for the Future with our clients; and employ a customer-driven development approach. Contact us now to schedule a personalized, online demonstration and inquire about our in-house financing and leasing.

OCEAN/INTERMODAL

COSCO Container Lines America • 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, railroad, 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.

Hyundai Merchant Marine (America) Inc. • www.hmm21.com

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

Mediterranean Shipping Company • www.msc.us

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.

Seaboard Marine • www.seaboardmarine.com

Seaboard Marine is an ocean transportation company that provides direct, regular service between the United States, the Caribbean Basin, and Central and South America. Convenient schedules, and an expanding fleet of ships both commanded and managed by a company of dedicated professionals, have become our trademark. For more than 20 years, we have established a strong commitment to be the premier carrier in our trade lanes. We are prepared to meet the ever-changing challenges of our trades in the new millennium.

SITE SELECTION

Hampton Roads Economic Development Alliance • www.hreda.com

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Joplin Area Chamber of Commerce • www.joplincc.com

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

TRUCKING

U.S. Xpress • www.usxpress.com

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

WMS

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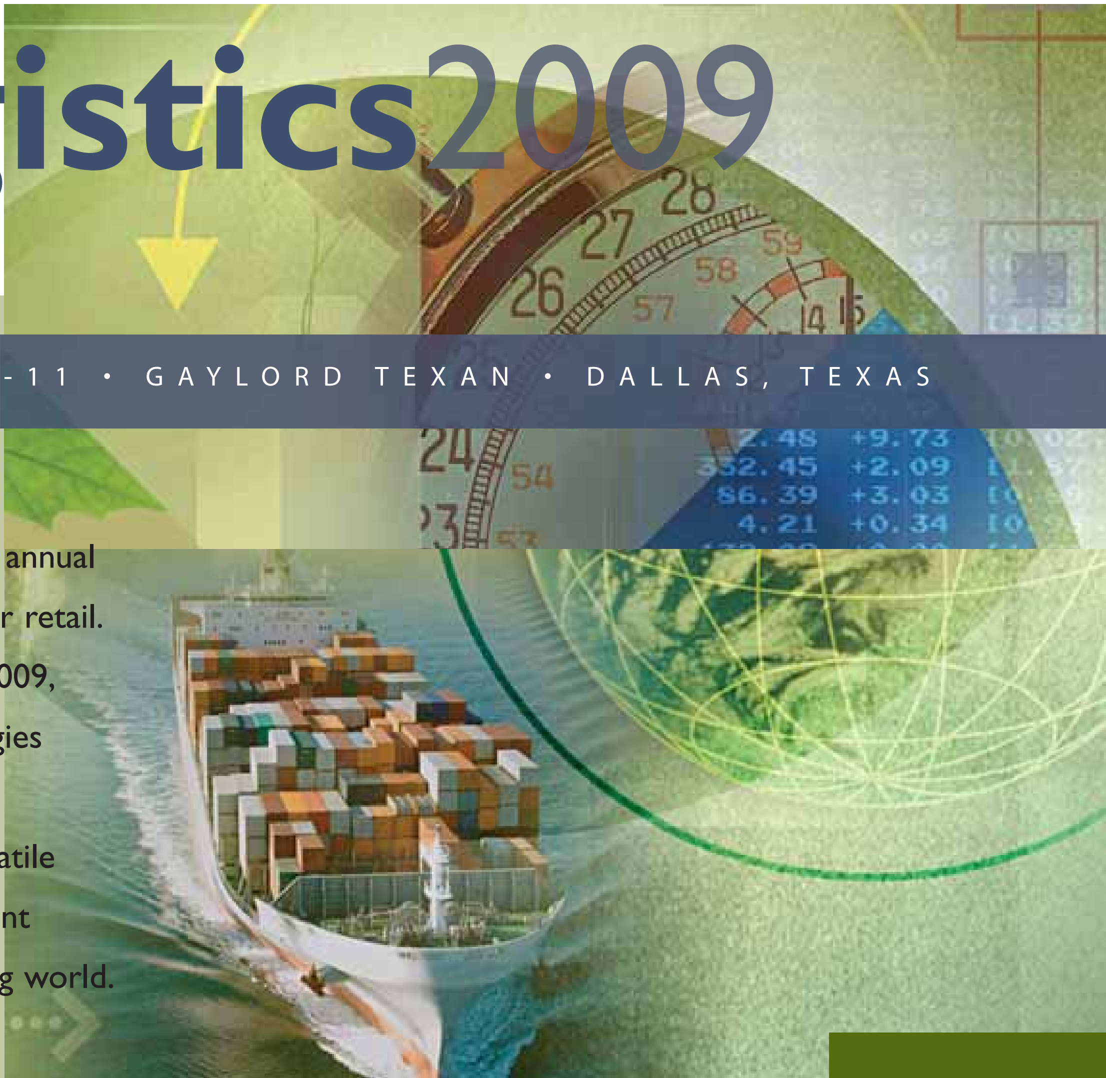

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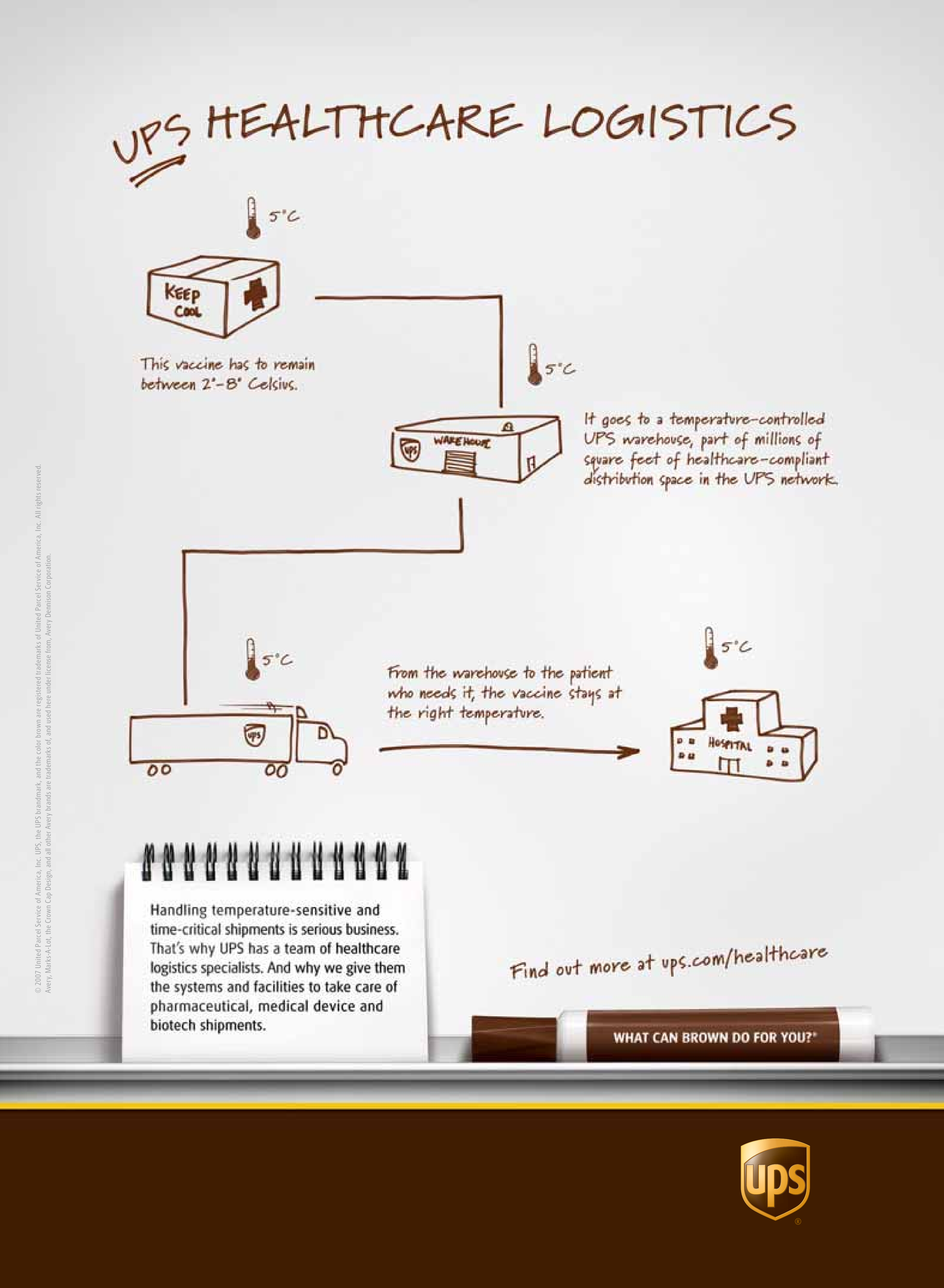
You might call it logistics fit for a king. Last month, the world-renowned collection of artifacts from King Tut's tomb traveled from its latest showing in London to the Dallas Museum of Art.

American Airlines (AA) Cargo handled the move, which involved transporting the more than 130 priceless treasures of antiquity that comprise the "Tutankhamun and the Golden Age of the Pharaohs" exhibit. Unearthed from the tombs of King Tut and other Valley of the Kings ancestors, the collection includes jewelry, statues, funerary masks, and coffins. Some of the items weigh up to 1,750 pounds, and many have never toured the United States before.

Not only was the exhibit the most valuable shipment AA Cargo has ever transported, but it was also the largest, requiring the equivalent of three 777s worth of space. Months of advance transport planning went into arranging the specialty packaging, shipping, and handling the move required. Once it arrived at the Dallas Museum of Art, the exhibit underwent careful unpacking and inspection to ensure that nothing was damaged during transport.

The exhibit will be in Dallas until May 17, 2009; AA Cargo will then transport the items to their next stop, one of two as-yet-unannounced U.S. cities, before conveying them back to Egypt in 2011.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