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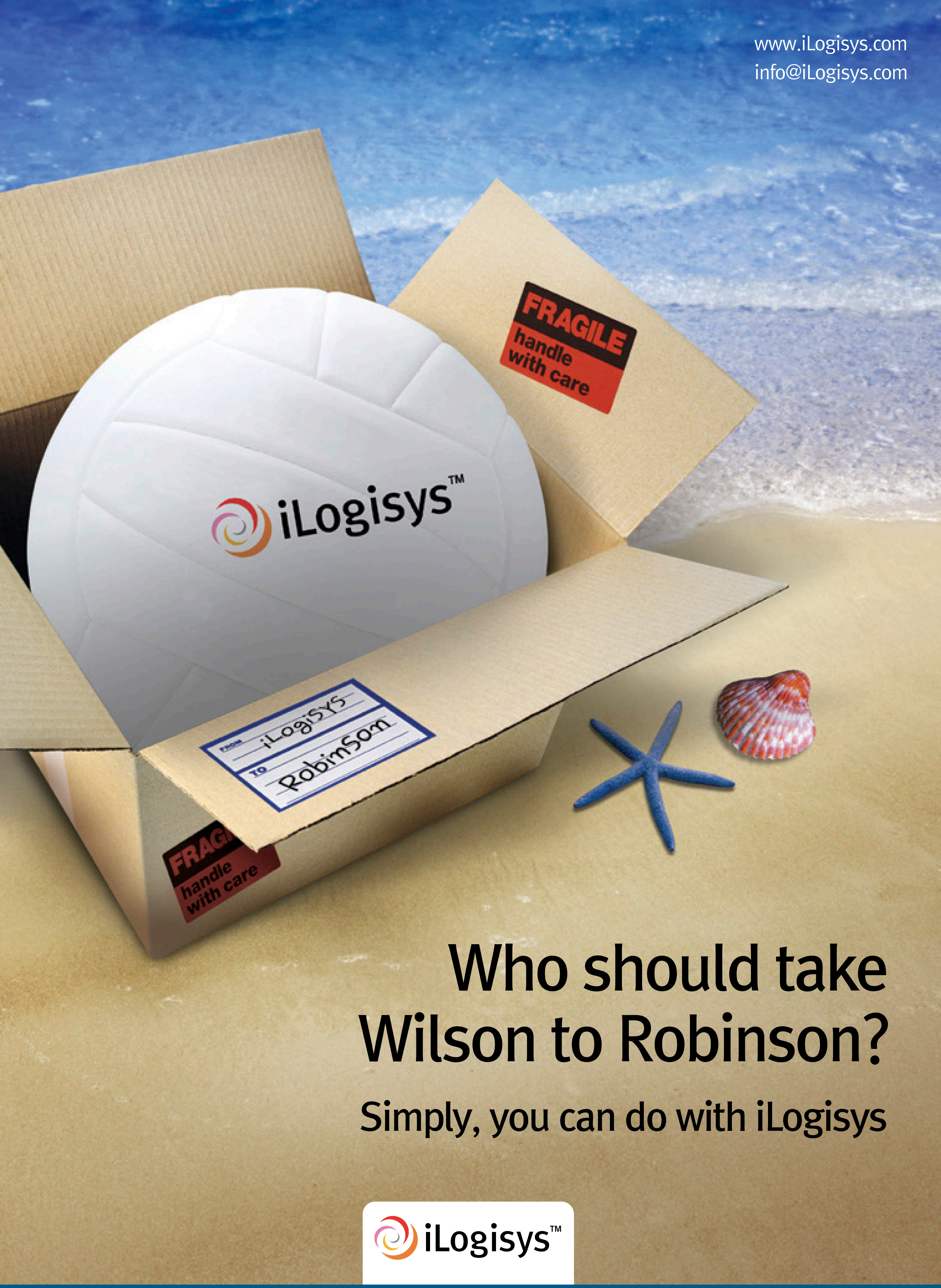
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CHECKINGIN

Felecia Stratton

by Felecia Stratton | **Editor**

Learning on the Job

Today's supply chain is vastly different than 10 years ago—and positively futuristic compared to 1981, when this magazine first espoused a novel approach to managing transportation and logistics. The pace of change has been swift and sweeping. Technology innovation and proliferation have broken down functional silos and torn asunder geographic boundaries and constraints. Shrinking computers and expanding clouds have given way to "big data" marshaled by supply chain control towers. What do we make of it all?

It's a question that many logisticians consider as they evaluate their own skillsets in a fast-changing world. Many of you likely came of age in this industry before supply chain and logistics curriculum became vogue. Today, an established network of undergraduate, post-graduate, and professional development programs are educating and preparing tomorrow's leaders. But it doesn't stop there.

Technology provides supply chain practitioners of all ages the opportunity to hone their expertise and remotely pursue myriad degrees and certifications. The idea of online education has given new meaning to learning on the job.

Justine Brown's feature article *Distance Learning: Making the World Your Classroom (page* 32) documents how universities are extending their reach to students and professionals alike through distance learning programs. Online courses provide convenience and flexibility, whether through independent study or more traditional offerings that stream live classes. Some combine in-person and online components to deliver the best of both.

As a mission-based magazine, *Inbound Logistics* facilitates this new approach to learning as well. Our content is educative. We deliver cases studies that demonstrate real-world examples of transportation and logistics best practices, as well as market research, news and trends, resource guides, and how-to tutorials that provide you with the requisites to enrich your job knowledge and take the next career step.

We also support education at the grassroots level. Recently *Inbound Logistics* partnered with the American Society of Transportation & Logistics to offer a $2,500 scholarship to undergraduates who are pursuing a career in transportation and logistics. To apply, students submit a 2,000-word essay on why they chose logistics and supply chain as a career path, and how they envision that career impacting the company they will work for, as well as the U.S. and global economy. For more information, email scholarship@inboundlogistics.com.

In the supply chain sector, career education and professional development is a continuing process—and one that doesn't end in the classroom. As you flip through this issue, or click through our vast library of online content, we hope that *Inbound Logistics* contributes to your own on-the-job learning experience. ■

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

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10TIPS
STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Crafting Logistics Provider Contracts That Cover All the Bases

Before committing to a logistics service provider partnership, logistics managers must ensure they understand all the contract's parameters. One way to accomplish this is by outlining the terms of the agreement before signing the contract. George Muha, regional director of third-party logistics service and solutions provider Transportation Insight, offers this advice on key factors to cover in service provider contracts.

1 **Establish start and end dates.** Setting a start date establishes initial expectations, and an end date keeps service organizations on their toes when renewal time arrives.

2 **Ensure payment terms are clear.** Businesses need to be paid on time, so it is important that the contract clearly outlines payment expectations. Ensuring that both parties understand the payment terms helps avoid problems in the future.

3 **Request lower price points for faster payment.** Nothing is more powerful in negotiations than short payment cycles. If you are able to pay faster than the suggested payment terms, ask for a price concession in exchange for quicker payment.

4 **Avoid discussing late-payment penalties.** Many service agreements include penalties for late payment. Don't waste time arguing the specific penalties—if a provider senses you have a payment issue, the entire deal could fall apart. You'll call less attention to the issue if you simply request extra payment time.

5 **Include an out clause for non-performance.** Service providers require contracts because of all the upfront costs they invest in the relationship – but that doesn't mean they will always hold up their end of the bargain. Make sure the contract allows you to terminate the agreement if the provider does not meet expected service levels.

6 **Protect against acts of God.** Whenever possible, include contract terms that protect against acts of God, war, and other disruptive events. Most of your customers understand that service delays will occur if a tornado wipes out a warehouse, but others will make unreasonable requests. Including provisions in the contract is good protection.

7 **Make sure all pricing is outlined.** Understanding the pricing model is important. Nobody wants any surprises once the relationship goes live.

8 **Designate a contact person.** The agreement should name a contact person on both sides to receive all formal correspondence. If the agreement requires changes, or issues need to be addressed, both parties must know who to contact.

9 **Address extras separately.** Make sure any extra consulting, customization, or integration outside the scope of the agreement is addressed in writing.

10 **Ask for ongoing process improvement meetings.** Some providers promise more account management than they perform. Making quarterly reviews part of the agreement ensures the provider will deliver customer service. ■


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PROFILE

as told to Merrill Douglas

Sander Eth is senior vice president, supply chain at Bambeco, a Baltimore-based direct merchant specializing in ecologically friendly products for the home. He joined the company in 2012.

RESPONSIBILITIES

Inventory management, fulfillment center operations, and vendor compliance.

EXPERIENCE

Several in-store management positions, followed by corporate positions in inventory management, merchandising, and logistics and supply chain, Staples.

EDUCATION

Tufts University, BA in economics, 1986.

Sander Eth: Putting Green Principles Into Action

ORIGINALLY, I WANTED TO WORK AS AN ADVERTising copywriter. I joined Staples' management training program, thinking sales experience would improve my copywriting skills. I planned to stay for six months, but I worked there for 24 years.

Staples was my second family, and leaving took a great deal of soul-searching. But I'm thrilled with the decision I made in 2012 to get out of my comfort zone by joining Bambeco and moving to Baltimore. It's fun working for an early growth company, and I'm happy Bambeco is aligned with my environmental beliefs.

One of my main roles is applying Bambeco's environmental principles to the supply chain. This involves working with vendors to make sure they use green packaging and follow sustainable practices; ensuring shipments move as carbon-neutral as possible; and implementing green practices in our fulfillment center.

Bambeco sources about 55 percent of products from North America and 45 percent from overseas—mainly from Western Europe and Asia. We receive products in our new fulfillment center in Baltimore, and inspect them to ensure they were

The Big Questions

What's your alter-ego dream job?
Managing a baseball team—specifically the Mets, because I grew up in New York.

Do you have a hidden talent?
I make a spinach and feta cheese omelet that is as good as—or better than—those served in Baltimore's famous diners.

Of whom are you most proud?
My daughter. After two anterior cruciate ligament (ACL) surgeries on the same knee near the end of high school, she worked so hard at her physical therapy that she was able to make her college varsity soccer team as a freshman.

What do you do to recharge your batteries?
Cycling. I used to participate in the Pan-Massachusetts Challenge, a 192-mile charity ride for the Dana Farber Cancer Institute. That ride required a lot of preparation. Now that I'm in Baltimore, I like walking through the Canton and Fell's Point neighborhoods.

What's on your Bucket List?
Owning a boat. I've been living on a boat temporarily, while I look for a permanent home in Baltimore. I love every second of it, and now I want one of my own.

delivered in perfect condition. We warehouse the products, and, with the help of a parcel carrier, distribute them to customers.

Our products include glassware, dinnerware, and other delicate items. When customers open our boxes, we want them to feel as though they're opening a gift. In the future, we might work with carriers to evaluate the packaging for outbound shipments. There may be packaging that's greener, but still allows carriers to deliver products in pristine condition.

One of my most satisfying career achievements occurred when I was still with Staples—organizing a volunteer project in conjunction with Cradles to Crayons, a nonprofit in Boston that provides clothing and school supplies to underprivileged children. Staples donated product and labor to fill 20,000 backpacks with school supplies, and helped with the logistics of delivering the backpacks to schools.

To help develop efficient, economical, and environmentally friendly processes at Bambeco, we need the right supply chain professionals.That means investing time and money in hiring, and developing training programs. It also means sitting down with representatives from colleges and universities that have supply chain and environmental studies programs. My ideal candidate would have a background in both.

Some important lessons I've learned in my career involved hiring decisions that didn't work out. When that happens, I try to use the experience to hone my ability to read people and hire those who can help build an optimal supply chain team. ■

NOTED

THE SUPPLY CHAIN IN BRIEF

GREEN SEEDS

Estes Express Lines is now using solar power at its Elkton and Baltimore, Md., terminals. Estes projects the Elkton terminal will reduce annual CO_2 emissions by 254 metric tons, while the Baltimore terminal will reduce emissions by 227 metric tons.

◀ **GAC,** a provider of integrated services to the shipping, logistics, and marine industries, broke ground on a custom-built Houston, Texas, office and warehouse. GAC plans to consolidate its existing warehouses with this new Leader in Energy and Environment Design (LEED)-registered cross-dock facility.

By redesigning its distribution network, and shifting 80 percent of its cargo from truck to rail, beverage distributor and manufacturer Ocean Spray cut CO_2 emissions by 20 percent.

m&a

Port Logistics Group, a provider of gateway logistics services, purchased **Pacific Distribution Services,** a warehousing and transportation provider serving the Ports of Seattle and Tacoma. Through the transaction, Port Logistics gained 600,000 square feet of warehouse space, and boosted its customer base.

Triple Point Technology, a commodity management software company, acquired supply chain planning and optimization solutions provider **WAM Systems**. The acquisition allows Triple Point to provide commodity risk, materials procurement, demand planning, finished goods forecasting, and sales and operations planning solutions.

UP THE CHAIN

Dietary supplement manufacturer **Doctor's Best** appointed **Tom Lomax** vice president, supply chain. Lomax manages the company's supply chain and identifies and implements new opportunities for system efficiencies.

Stephen Szilagyi was promoted to supply chain executive at **Lowe's.** Szilagyi oversees the logistics and distribution network that replenishes merchandise and supplies to the home improvement retailer's stores.

Catering services company **WSH** appointed **Andy Milner** procurement and supply chain director. Milner brings 11 years of purchasing experience in retail, e-commerce, and business services to the WSH team and manages the company's multi-million-dollar supplier portfolio.

SEALED DEALS

▶ **Ainsworth Pet Nutrition** selected **Transplace,** a transportation and logistics technology provider, to implement transportation management services for all outbound shipments. Its goal is to cut transportation costs and improve operational efficiency.

Menlo Worldwide Logistics, the logistics subsidiary of Con-way Inc., signed a multi-year contract with **Klone Lab,** a sportswear designer and distributor. Menlo now manages warehousing and distribution services for Klone at a new 90,000-square-foot multi-client facility.

Denver, Colo., trucking firm **Carrier West** chose **Epicor Software's** *Prophet 21* enterprise resource planning (ERP) solution to streamline overall performance. The new ERP handles Carrier West's warehouse, order, and inventory management; purchasing automation; financial management; and reporting and business intelligence analysis.

Middle Tennessee Dr. Pepper Bottling Company selected **HighJump Software's** *OASIS 5.0* route accounting system (RAS) to serve its operational hub. The new RAS allows Middle Tennessee Dr. Pepper to manage routes more effectively, employ handheld communication devices, and track schedules.

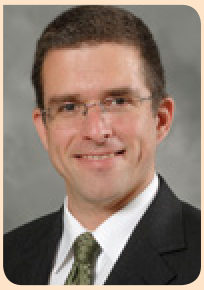
GOOD WORKS

Cascade Sierra Solutions (CSS), an Oregon-based non-profit dedicated to helping small trucking businesses afford fuel and emissions-reducing technologies, received a $20,000 matching donation from third-party logistics firm C.H. Robinson Worldwide. C.H. Robinson has been a donor to CSS's green trucking efforts since 2008.

recognition

▼ Mastio & Company gave its **Great Lakes/Midwest Carrier of the Year Award** to **Standard Forwarding,** a less-than-truckload (LTL) carrier and subsidiary of DHL Freight. The award was granted based on in-depth surveys of 2,000 shippers. Standard Forwarding garnered top scores in 24 categories determined to be most important to LTL shippers.

▶ Michigan State University (MSU) faculty member **Tobias Schoenherr** received the **MSU Teacher-Scholar Award,** recognizing his teaching quality and skill in the university's supply chain management program. In addition to his on-campus work, Schoenherr teaches MSU's new 100-percent-online supply chain management certificate programs.



At its 2013 Inaugural Awards Ceremony, The Transportation Club of Jacksonville named **Bill Schultz Transportation Person of the Year.** Schultz served 33 years with Yellow Freight in various executive positions, and is currently a national account manager for JZ Expedited Logistics.

UTi Worldwide chose **Rock Transfer and Storage** as its **LTL Carrier of the Year,** after evaluating the company's overall performance, and surveying customers who work with more than one UTi client-carrier.

Con-way Freight was honored as the **LTL Carrier of the Year** by Ryder Supply Chain Services. Con-way Freight was recognized for providing superior service in support of Ryder's freight transportation needs.

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TRENDS

SHAPING THE FUTURE OF LOGISTICS

Green: The United Color of Benetton

by Joseph O'Reilly

Sustainability has gained fashion appeal over the past few years. But apparel companies are growing even more sensitive to social responsibility, especially as it relates to materials procurement and use in the supply chain.

Benetton Group is the latest apparel brand to join Greenpeace's Detox Program, launched in 2011 to expose the use of hazardous chemicals in garment production. The Italy-based retailer joins a growing roster of companies—Nike, Puma, Marks & Spencer, and Zara—participating in the program.

Similar to other fashion businesses that have signed Greenpeace's pledge, Benetton promises to end the release of hazardous chemicals throughout its global supply chain by 2020. This latest move mirrors other measures the company has introduced over the past few years, including a switch to biodegradable and recyclable clothes hangers, more eco-friendly white kraft paper bags printed with water-based ink, less packaging, and improved monitoring of emissions throughout its operations.

Greenpeace's advocacy and consumer proclivities for responsibly made products are forcing companies to consider the entire lifecycle of their products—from the materials they use, to the way they recycle and dispose of items after they leave the marketplace.

This growing consciousness is partly a consequence of technology catching up to reality, according to Bob Jaffin, supply chain consultant and author. Many synthetic chemicals introduced in the late 20th century, and now common in various manufacturing processes and products, were engineered without adequate knowledge or recognition that additional testing protocols and instrumentation were necessary to explore their impacts and measure their long-term effects.

"Manufacturers and consumers need to understand that products and processes recognized for years as being new and innovative are now proven to be dangerous," Jaffin says.

These products include a laundry list of toxic chemicals—from dry-cleaning fluids and lead-based paints, to petroleum-based printing inks and DDT insecticide. But, as in other examples across industry, innovation is often a matter of trial and error.

"Even though it is now banned, without DDT we never would have gotten to the point where we found its replacement," Jaffin adds. "We wouldn't have reached the global crop required to support growing populations."

Apparel manufacturers and suppliers find themselves in a similar learning curve as they look more closely at the types of materials they consume, and explore alternate solutions. Benetton is in the process of publicly disclosing chemicals applied throughout its supply chain as they are phased out. For example, the retailer will instruct suppliers that alkylphenol ethoxylates, commonly found in detergents and other chemicals that textile and leather processing companies use, must be replaced with safer alternatives. It also plans to eliminate toxins such as perfluorocarbon, as well as update its chemical-use policy.

These changes are happening at breakneck speed in the apparel industry, and share many commonalities with what other industries—notably electronics and food—have already done to bring greater accountability and transparency into the supply chain. Few can argue against the ethos that is driving supply chain sustainability and safety improvements; there is even less doubt about its future impact.

"Considerably more changes in product, production, packaging, storage, and transportation will occur," says Jaffin.

Benetton promises to **end the release of hazardous chemicals** throughout its global supply chain by 2020.

Texas vs. Amazon: This Time It's All Business

There isn't always a second chance to make a first impression, but Texas and Amazon have learned an important lesson—don't mess with each other. Nine months after Amazon struck a deal with Texas to settle a lingering sales tax debt by pledging to bring thousands of jobs and invest millions of dollars in the state, it is beginning to deliver on that promise.

Amazon will build three fulfillment centers in Texas: a 1.2-million-square-foot site east of San Antonio, and two locations in the Dallas-Fort Worth area covering 2.1 million square feet, collectively.

"We look forward to putting more than 1,000 Texans to work at our new fulfillment centers in Schertz, Coppell, and Haslet," says Mike Roth, Amazon's vice president of North American fulfillment. "We appreciate the state and local elected officials who helped us make this exciting investment in Texas."

Amazon's tone is a far cry from a letter written by Dave Clark, vice president, North American operations, which was circulated among employees two years ago.

"Because of the unfavorable regulatory climate created by the Texas Comptroller's office, we are making the difficult decision to close our Dallas/Ft. Worth fulfillment center on April 12, 2011," Clark wrote. "Despite much hard work, and the support of other Texas officials, we've been unable to come to a resolution with the Texas Comptroller's office."

The crux of the dispute focused on what defined a physical distribution presence—and whether Amazon was therefore liable for collecting sales taxes on in-state orders.

But one year later, Amazon and Texas worked out their differences and a $269-million assessment the state comptroller's office had levied against Amazon for its outstanding tax debt. Now, the Internet retailer is following through on its end of a four-year deal to create 2,500 new jobs and contribute $200 million in capital investment to Texas.

Amazon and Texas ultimately compromised on the settlement. Initially, the company offered to bring 6,000 jobs and invest $300 million in return for a four-and-a-half-year sales tax exemption. The Texas Legislature rejected that offer and in-state customers began paying sales tax on Amazon purchases in April 2012.

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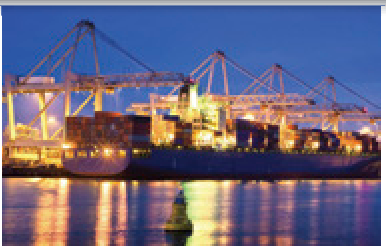

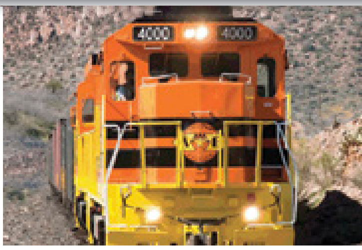

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$180,000,000 Arkansas Best Corporation Has Acquired Panther Ground • Air • Ocean • Logistics Advisor to Buyer *June 2012*	$144,900,000 XPO Logistics Follow-on Offering Co-Manager *March 2012*	C$83,912,500 STI Student Transportation Inc. Follow-on Offering Co-Manager *March 2012*	Western Petroleum Has Been Acquired by Pilot Travel Centers Advisor to Seller *March 2012*	$49,575,000 Old Dominion Freight Line At-the-Market Offering Sole Agent *Completed February 2012*	RT Holdings, Inc. Has Been Acquired by Tailwind Capital Advisor to Seller *January 2012*

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** *Source: Dealogic; ranked by number of transactions.*

New Energy Trend Brewing?

While much current transportation and trade news centers on the emerging potential of natural gas and shale oil, the Alaskan Brewing Company has divined its own source of renewable energy. The Juneau-based craft brewery is using beer—specifically the spent grain left over from the brewing process—as the sole fuel source for its new steam boiler.

The brewery installed a $1.8-million boiler in 2012 that uses the mashed-up, waterlogged grain to create steam in order to keep kettles cooking. Alaskan is the first craft brewery in the world to use by-product in such a way, reducing the company's fuel oil consumption in brewhouse operations by as much as 70 percent.

While other breweries have found useful secondary markets for spent grain, often sending dregs to local farms as feed, the Alaskan supply chain is uniquely constrained. Absent a large agriculture industry, and further hampered by land-locked and costly transportation options, the beer company began exploring different options in 1995 with the installation of a grain dryer. The equipment dried wet, protein-rich spent grain in preparation for shipment to the lower 48 states for use as cattle feed.

Alaskan designed the dryer to use up to 50 percent of the grain as a supplemental fuel source, providing expertise that would prove useful in designing the steam boiler.

In 2008, Alaskan became the first craft brewery in the nation to install a mash filter press, which provides greater energy, water, and materials efficiencies, and produces a lower-moisture-content spent grain that lends itself for use as fuel.

Alaskan expects the new boiler to eliminate fuel oil in the grain drying process, and displace more than half the fuel needed to create process steam in the brewhouse. With moderate growth assumptions, the beer company expects to save nearly 1.5 million gallons of oil over the next 10 years.

Wisconsin Invests in Rail

While some states are busy peddling cycling and pedestrian enrichment projects as roads and bridges continue to crumble, Wisconsin is steering public-private investment toward freight transportation needs. Governor Scott Walker recently announced that Fond du Lac was awarded a $600,000 Transportation Economic Assistance (TEA) grant from the Wisconsin Department of Transportation (WisDOT) to help fund improvements to a rail line serving a McNeilus Steel facility.

The project will feature a 2,360-foot track and 1,570-foot rail spur to offload materials at the steel company's new and existing facilities. The TEA grant covers about half of the project's $1.2-million cost, with the difference shared by the city and McNeilus Steel.

Elsewhere in Wisconsin, the town of Hubbard was awarded a $272,439 TEA grant from WisDOT that will cover half the construction costs of a 1,100-foot rail spur to serve a Menard's manufacturing facility. The home improvement retailer will subsidize the remaining expense.

Under Governor Walker's helm, Wisconsin has progressively enacted freight transportation reform, including measures to increase truck weight restrictions, streamline permitting, and ease seasonal and regulatory restrictions for agriculture and dairy farmers. In 2011, the state hosted the first Freight Summit for manufacturers, shippers, growers, and carriers to come together and talk about important transportation issues within Wisconsin.

Demand Forecasting: Apple & Oranges

Apple sometimes makes it look easy, but operating a complex and convoluted global supply chain is no small task. The iconic brand redefined go-to-market with a product pipeline that routinely spits out new iterations of phones, tablets, and computers. As testament to its operational pedigree, the company has become a regular leader in Gartner's annual Top 25 Supply Chain rankings.

But challenges remain, some of which—such as current media speculation that iPad Mini sales are cannibalizing MacBook revenue—are uniquely born by the company's own success.

So Apple CEO Tim Cook's response to rumors that the company is scaling back iPhone 5 production amid waning sales cut straight to the core.

Such rumors are founded on a "single data point," Cook explained during Apple's quarterly earnings conference call, and recommended not to base assumptions on limited data. "The supply chain is very complex, and we use multiple sources for our products. Yields and supplier performance might vary.

"Even if one data point were factual, it would be impossible to interpret what it meant for our business," he added. ■


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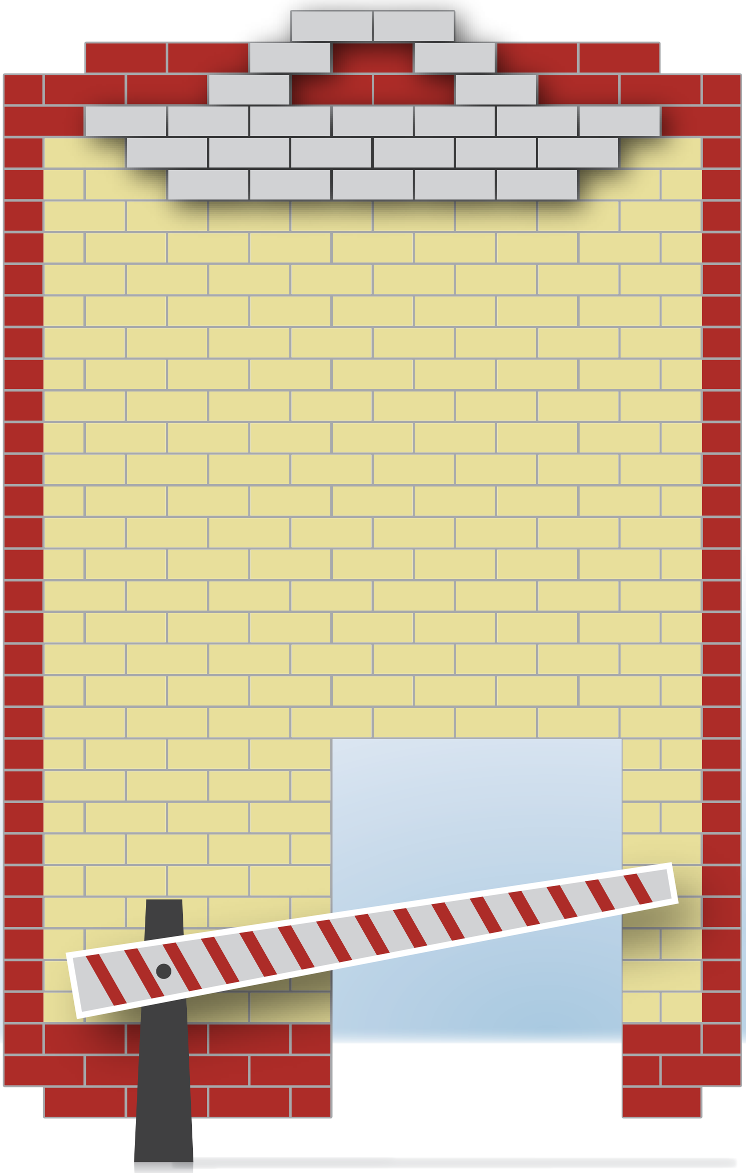
GLOBAL

THE WORLD AT A GLANCE

by Joseph O'Reilly



Lifting Supply Chain Barriers at the Border

Improving border administration and transport, and telecommunications infrastructure and services, could boost global Gross Domestic Product (GDP) by almost five percent, and world trade by 15 percent, according to a new report by the World Economic Forum in collaboration with Bain & Company and the World Bank. Completely eliminating tariffs, by contrast, would increase global GDP by less than one percent, and world trade by 10 percent.

Reducing supply chain barriers delivers economic improvements that are more evenly distributed across countries versus those achieved by eliminating tariffs, says the report, *Enabling Trade: Valuing Growth Opportunities*. Streamlining inefficient customs and administrative procedures, complex regulations, and cross-border infrastructure weaknesses is effective because it eliminates resource waste and reduces costs between trading partners as well as end consumers. Countries in sub-Saharan Africa and Southeast Asia stand to gain the most as large increases in GDP directly impact job growth.

The World Economic Forum recommends that:

- Governments create a focal point to coordinate and oversee all regulation that directly impacts supply chains.
- Public-private partnerships be established to undertake regular data collection, monitoring, and analysis of factors affecting supply chain performance.

■ Governments pursue a more holistic, supply chain-centric approach toward international trade negotiations to ensure trade agreements are more relevant to international business and more beneficial to consumers.

All Over the Map

The report cites examples of trade barriers in the following locations:

■ **Brazil.** Managing customs paperwork for agricultural commodities exports can take 12 times longer (a full day versus a few hours) than in the European Union.

■ **The Middle East and North Africa.** Local content requirements, rule-of-origin restrictions, and pilferage at the border can increase the costs of consumer technology products by as much as nine percent.

■ **Southeast Asia.** Eliminating supply chain barriers in the rubber market could reduce carried inventories by 90 days, representing a 10-percent reduction in product cost.

■ **Russia.** Product testing and licensing in the computer sector can lead to high administrative costs and delay time-to-market from 10 days to eight weeks.

■ **India.** Preferential Market Access regulation, which provides preference for locally produced high-tech products in government procurement, could increase costs by 10 percent over the cost of imports.

Sourcing Insights Now on the Menu at McDonald's

Safety tops the menu for food service companies such as McDonald's, which recently embraced supply chain transparency in its mainstream advertising campaigns. So when Ireland's Food Safety Authority raised the alarm over suspicions that horse meat was passing as hamburger in British and Irish supermarkets, it was a timely coincidence that McDonald's Australian business (Macca's) had just unveiled an iOS app to help consumers learn more about what they are eating.

A food sourcing app helps Australian McDonald's diners prevent a Big Mac anxiety attack.

The TrackMyMacca's app, developed in collaboration with global marketing company DDB Group, uses an iOS camera to scan the image of a food item bought from Macca's. Then, using GPS data secured with free Wi-Fi service at Macca's restaurants, and combining it with date and time, consumers can tap into the company's supply chain data to pinpoint the exact source

U.S., Mexico Strengthen Trade Partnership

Building on the cross-border goodwill that followed a long-overdue resolution to the U.S.-Mexico trucking impasse, U.S. Customs and Border Protection (CBP) and Mexico's Tax Administration Service (SAT) recently signed a joint work plan that lays out a road map for mutual recognition of the two countries' authorized economic operator programs: CBP's Customs-Trade Partnership Against Terrorism (C-TPAT) and SAT's New Certified Companies Scheme (NEEC).

C-TPAT is a voluntary government-business initiative to build cooperative relationships that strengthen and improve overall security for global supply chains and the U.S. border.

Mutual recognition allows companies enrolled in one program to receive reciprocal benefits from the other, securing the international supply chain and facilitating trade between the United States and Mexico. The agreement, which will be implemented in two years, doesn't address other outstanding issues between the two countries, such as a dispute over Mexican tomato import prices.

But the move could greatly benefit Mexican shippers looking to tap the U.S. market. If traders are deemed trustworthy and secure by their own government, they will be afforded similar status in the United States, paving the way for more streamlined border crossings.

Aligning security initiatives allows the United States and Mexico to streamline cross-border moves.

of the meat, and other ingredients. The app currently works on select menu items.

Integrating the solution required redesigning more than 150 million packaging units to add scanning codes.

"We're proud that we meet more than 90 percent of our food and packaging needs in Australia," says Mark Lollback, chief marketing officer, McDonald's Australia. "This app is another way for us to share this with our customers, and allow them to see where our food comes from and what happens on its way to their plate."

China's Internet Inequality Poses Concerns

As China's prosperity moves from the coast to the hinterland, an information technology divide is emerging. The country's Internet boom is on an accelerated path, reports China Internet Network Information Center (CNNIC). In 2012, usage grew 10 percent to 564 million users—more than double the United States, and by far the largest Internet-using population in the world. But CNNIC also reveals that Internet adoption is highly fractured across China, which raises some institutional concerns that threaten continued economic growth.

The disparity in technological progress is a risk for companies following suppliers and manufacturers farther inland; they have to weigh the costs and benefits of sourcing in less-developed rural areas that lack the necessary IT infrastructure to support world-class supply chains.

It's also a challenge for China's rapidly growing e-commerce industry, as companies look to expand their presence over a wider geographic area. What the country currently lacks—a sophisticated domestic express network—is contingent on having a broader online user base, and the requisite connectivity and resources to deliver to those consumers.

Aussie Wool Growers Favor Vietnam

Australian sheep farmers are looking to Vietnam as a new export market and an opportunity to develop a sustainable supply chain for their wool industry. As part of its market expansion plans, the Australian Wool Innovation (AWI)—a research, development, and marketing organization for wool growers—has implemented the "Out of Vietnam" project. Australia exports 80 percent of its wool to China, but an emerging need to establish a new processing and manufacturing market targets Vietnam as a prime area for expansion.

Processing for wool from Australian sheep may shift from China to Vietnam.

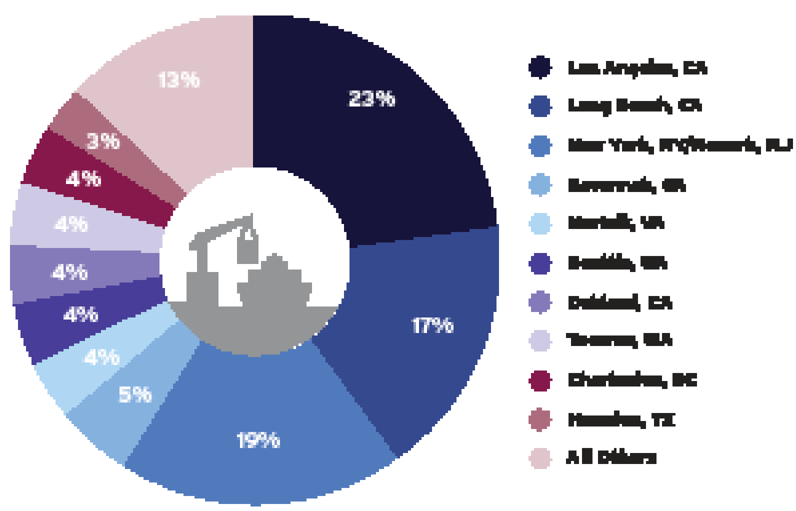
Image Courtesy of The Woolmark Company

"Vietnam meets a host of essential criteria, including low sovereign risk; well-established textile manufacturing industry and infrastructure; a large, skilled workforce; growing exports of textile products; trade access, including a Free Trade Agreement with the United States; and an abundant water supply," explains Jimmy Jackson, manager for product development and commercialization, AWI, in a recent *Vietnam News* article.

The increasing cost of labor-intensive industries, such as spinning and garment making, is partly predicating AWI's move away from China. Vietnam has a pedigree in cotton processing from raw materials to final product, which translates to wool and presents a more affordable option. [ ]

2012 U.S. Ocean Imports, by Port

About 40 percent of all U.S. ocean imports passed through the gates of either Los Angeles or Long Beach in 2012. The top 10 ports brought in 87 percent of U.S. imports.



Source: Zepol Corporation, www.zepol.com

[IT MATTERS]

BY TOM KOZENSKI
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You're Faced With a Recall. Can You Find That Product?

Product recalls cost the U.S. economy $7 billion annually, according to the *Washington Post*. Yet most U.S. companies still struggle with real-time inventory visibility, and managing inventory across their network of suppliers, distributors, and manufacturers.

With the average product recall costing $10 million, the inability to quickly and effectively recall product presents a huge risk to business viability. Whether they involve a food item, drug, medical device, or consumer goods, product recalls require swift action. Days or weeks of recall delays can result in lost revenue and consumer confidence – even lives. Isolating an item—wherever it is in your supply chain—mitigates risk, minimizes liability, protects consumers, reduces costs, and preserves brand reputation.

Many companies rely on spreadsheets and homegrown solutions for tracking products and processes in their supply chain. This approach, however, creates problems related to data inconsistency, response delays, lack of inventory visibility, and limited communication with supply chain partners.

Coordinating with suppliers and distributors, locating recalled items, and responding quickly are among supply chain executives' top concerns when faced with a recall. Automated traceability technology addresses these challenges by identifying any product's exact location in the supply chain.

Armed with Knowledge

Automation combats visibility issues and ensures a complete chain of custody for any item manufactured, stored, or shipped within the supply chain. When a recall occurs, manufacturers can determine inventory location by item, batch, and lot – anywhere and at any time.

For example, in the case of a food or drug recall, companies need to locate, lock down, and remove recalled items from the market as quickly as possible to prevent illness, lawsuits, and bad publicity. Handwritten spreadsheets and homegrown systems mean plowing through paperwork and data to identify that product's location in the supply chain.

And, that data typically only accounts for goods while they are in a small window of the supply chain. Suppliers and distributors have their own unique method for tracking inventory. For many companies, this means completely pulling an item or product—rather than just isolating a contaminated or faulty batch. The extra time and cost of this effort can have a huge impact on a company's reputation and bottom line.

Automating the inventory process with bar-code technology enables companies to track when an item enters the warehouse, where it is stored, and when and how it leaves. More importantly, this technology allows companies to synchronize information with suppliers and distributors across the extended supply chain. The result is a single source of complete electronic traceability.

For a food recall, traceability tools allow companies to identify the farm where contaminated items originated. For a faulty product, businesses can track the specific truck that is carrying the item for delivery. The tools can also identify which stores and shelves contain the recalled goods.

With the right technology, companies can have complete, accurate traceability—from the moment a product enters its supply chain to the time consumers receive it. For businesses and consumers alike, these tools promise a safer, more secure supply chain. ■


inbound
logistics
2013
THE GREAT
EQUALIZER

SMART MOVES

BY PAUL DITTMAN
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Five Core Competencies Every Supply Chain Manager Should Master

The maze of challenges that makes up the global supply chain demands that logistics professionals never stop developing new skills and enhancing existing ones. Here are five core competencies that supply chain professionals need to master—and continually improve.

1. Global business leadership. If your supply chain isn't global now, it probably will be soon. Supply chain professionals must be able to effectively operate in the fast-moving international business environment. This includes adapting to disparate cultures; fully comprehending how global risk plays out for their business; and being adept at managing the long lead times inherent in the international marketplace.

They must also know the basic supply chain fundamentals associated with global logistics, such as how to optimize import and export flows, source globally, and deal with global labor issues.

2. Transformational capabilities. Supply chain professionals operate in a dynamic environment, where they are constantly driving transformational initiatives. They must deliver on time and on budget, while generating superior results.

As the bar is constantly raised, they must excel at managing change, complex projects, and diverse talent, and possess exceptional communication and negotiation skills.

3. Integrated business planning. Dealing with cross-functional and cross-enterprise issues represents a large part of supply chain management. This involves integrating a company's operations side with its demand side, and embracing demand and supply integration concepts, such as sales and operations planning.

In addition, supply chain professionals lead the way in designing collaboration initiatives with suppliers and customers, and they must master the challenge of planning the end-to-end supply chain.

4. Integrated value chain implementation. To be seen as central to the enterprise's success, supply chain professionals must exceed customer expectations and become integral to delivering outstanding value. Some customers don't know what they want until your firm exceeds their expectations. Supply chain professionals achieve this result by implementing an end-to-end value chain design, including customer segmentation, product and supply chain design, and optimization.

5. Linking supply chain performance to organizational success. World-class supply chain professionals combine expertise in material flow management with outstanding knowledge of information and financial flow. Mastering these flows is crucial to generating supply chain performance and financial results that resonate in the executive suite and boardroom.

To sustain that performance, supply chain professionals must design a metrics framework that drives the right behavior, and processes that deliver product availability at the lowest possible cost and working capital levels.

New Skills for a New Age

A decade ago, supply chain leaders at most companies relied on technical proficiency in discrete areas: shipping route knowledge, familiarity with warehousing equipment and distribution center locations and footprints, and a solid grasp of freight rates and fuel costs.

Today's supply chain executives, however, rely on the new core competencies and advanced industry knowledge to rise to the top. ■

BY PAUL A. MYERSON
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Plan Ahead to Avoid Overproduction

Sometimes too much of even a good thing can be bad. Such is the case with excess inventory. Companies need sufficient inventory to meet customer demand, but too much stored product can result in negative consequences, such as high carrying costs.

When companies produce or purchase too much inventory, it is often the result of variability and inefficiency in their processes. In Lean terms, this waste is referred to as overproduction.

A few business practices can lead to overproduction. For example, procurement specialists sometimes buy larger quantities than needed because they must meet vendor minimum order quantities, or they want to take advantage of quantity discounts. But if companies carefully calculate their true carrying or holding costs, they will often see the greater benefit lies in avoiding this surplus.

And manufacturers—whether they are make-to-order or make-to-stock—often schedule more production than is requested or needed to account for factors such as scrap and quality problems. This can result in excess inventory, however, as well as reduced capacity through equipment downtime, and higher costs related to overproduction and quality issues.

A similar situation can occur in office environments where, instead of creating one contract or invoice at a time, paperwork flows in batches, resulting in bottlenecks and overflowing in-boxes.

Takt-ical Maneuvers

Lean practitioners focus on the concept of Takt time—the beat of customer demand that can help companies avoid overproduction. If businesses consistently calculate (and re-calculate) Takt time for a product or family of products, they can schedule products and resources more accurately and efficiently, reducing overproduction.

Drilling into the root causes of why a variability occurred can reduce or eliminate the need for overproduction. Applying Lean methodology can help accomplish this goal, because it combines team members who are preforming the work and others who may contribute to it.

For example, one Lean tool for reducing overproduction is Total Productive Maintenance (TPM), which focuses on equipment-related waste. Equipment breakdowns or poorly performed maintenance result in downtime. When machine uptime can't be predicted, and the process capability isn't sustained, businesses must keep extra inventory against this uncertainty, and the flow through the process can be interrupted.

Correct maintenance, however, improves uptime and increases production through an area, allowing machines to run at their designed capacity.

Typically, operators are not viewed as members of the maintenance team, but in TPM, machine operators train with engineers to perform many daily equipment maintenance and fault-finding tasks. Operators who understand the machinery, and can identify potential problems, can correct issues before they impact production—thus reducing downtime and production costs.

Instead of just living with overproduction, we should learn to question it every time we see it occur—and when we find it, do something about it. ■

Parts of this column are adapted from *Lean Supply Chain & Logistics Management* (McGraw-Hill; 2012) by Paul A. Myerson with permission from McGraw-Hill.

Supporting the Next Generation of Logistics Leaders

Announcing the Inbound Logistics/AST&L Scholarship Program

When *Inbound Logistics* began its commitment to advancing logistics and supply chain education, traffic and transportation were taught as subsets of business courses. Today, global supply chain courses are available in countless schools, and through distance learning programs worldwide. To celebrate that achievement, *Inbound Logistics*—in association with our partners at the American Society of Transportation & Logistics (AST&L)—proudly announces a new $2,500 undergraduate scholarship.

To apply, students will be asked to submit a 2,000-word essay on why they chose a logistics and supply chain career, and how they envision that career impacting the company they will work for, as well as the U.S. and global economy.

Submissions must be received by March 15, 2013. One winner will be awarded the scholarship in June 2013, and featured in our June 2013 careers and education issue. For more information, email scholarship@inboundlogistics.com

AST&L ®

inbound logistics

See IL's logistics education resources here: http://bit.ly/IL_EDU

DISTANCE LEARNING:

MAKING THE WORLD YOUR CLASSROOM

by Justine Brown

Earn a degree without quitting your job? Online supply chain management and logistics programs make it possible, no matter where in the world you are.

Twenty-five million post-secondary students in the United States will be taking classes online by 2015, according to market research firm Ambient Insight. In an increasingly mobile society—and relentlessly tight job market—degree and certificate programs that allow working professionals to keep their jobs and attend class from anywhere are more popular than ever.

In fact, the number of students who take classes exclusively on physical campuses is expected to plummet, from 14.4 million in 2010 to just 4.1 million by 2015, states Ambient Insight's report, *The U.S. Market for Self-paced eLearning Products and Services: 2010-2015 Forecast and Analysis*.

Distance learning is now an essential component of 21st-century education, particularly for busy logistics and supply chain professionals. These programs are so appealing because they allow flexible class scheduling and variety. Offerings range from live, streaming classes for those who prefer a traditional learning approach, to completely independent modules students can peruse at any convenient time. Some programs consist of both in-person and online components, and many use chat rooms, online forums, or social media to help students feel connected and involved.

ONLINE AND IN-PERSON

Generally, a physical presence is not compulsory for distance learning programs, although some schools, such as Michigan State University (MSU), use a hybrid model. Two-thirds of MSU's Master of Science in Supply Chain Management program is conducted on campus, while the other third is completed online.

"On-campus and online learning each present unique challenges," says Nancy M. Taylor, director of the Master of Science in Supply Chain Management program at MSU. "When students are on campus, the challenge is the workload. Classes run from 8 a.m. to 5 p.m. for 11 days. It's tiring and all-encompassing. The tradeoff is that students obtain a lot of credits in that short time.

"The online portion is also challenging because it demands students stay committed to the work despite outside pressures such as career and family," she adds.

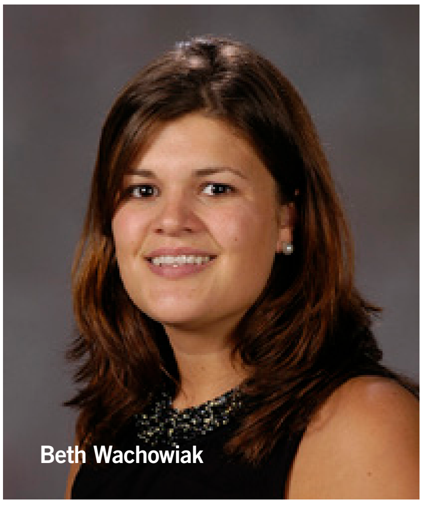
Most MSU master's program students are in their early 30s, and many of them are married with children. To help keep students on course and motivated, MSU parses out its online coursework in 30-day segments, with due dates at the end of each month. "Setting monthly schedules helps students manage the workload without getting overwhelmed," says Taylor.

Beth Wachowiak received an undergrad degree in supply chain management at MSU in 2006. She then joined Kimberly-Clark Corporation, where she has since held several supply chain roles. Her current position as a supply chain development manager involves working directly with customers to maximize supply chain initiatives.

Three years ago, Wachowiak decided to return to school to pursue a master's degree. "My decision was based on a desire for both professional and personal growth," she says. "I want to hold a leadership role eventually, and I feel a master's degree will give me part of what I need to get there—as well as help separate me from the crowd."

Wachowiak didn't want to give up her career, but her on-campus opportunities were limited based on location.

"Kimberly-Clark is in Wisconsin, so I had few school options," she says. "To attend a traditional university would require a five-hour drive each weekend for four to five years."


Beth Wachowiak

"To attend a traditional university would have required a five-hour drive each weekend for four to five years. Through distance learning, I completed my degree in 19 months, while working full time."

—**Beth Wachowiak,** Michigan State University graduate

She chose instead to enroll in MSU's Master of Science in Supply Chain Management program. "I was able to complete my degree in 19 months, while working full time," she says.

Like Wachowiak, many MSU students live far from the campus. In fact, only 20 to 30 percent of the school's distance learning students reside in Michigan or surrounding areas. The rest come from farther away, with two or three international students also attending each year.

For Wachowiak, the only drawback to the distance learning program was the lack of daily, in-person interaction with fellow students. But because MSU's program begins with an on-campus component, Wachowiak got to know students and professors in-person first, which made her feel connected despite the distance.

"If you don't make an effort to keep in touch with your cohorts, you lose some of the interactive education advantage, which I've benefitted from enormously," she says.

Another advantage of Wachowiak's distance learning experience was the ability to share real-world scenarios with fellow students, most of whom were working professionals. "Talking about issues we were dealing with on the job enriched our class discussions," she says.

Wachowiak advises other distance learning students to actively participate in online discussions. "Take the time to read the posts and join the exchange," she says. "Otherwise it's easy to put your education on the back burner and focus instead on work and more urgent needs."

BE PREPARED

Stephanie Maybore, a supply chain manager at PriceWaterhouseCoopers in Chicago, also enrolled in MSU's Master of Science in Supply Chain Management program. At the time, Maybore spent half her workweek traveling, so weekends were the only time she had to continue her education. She took vacation time to attend the residencies.

"The program required a significant amount of prep-work," she says. "That was difficult, because I was attempting to juggle it with working and traveling. Once I was on campus, the pace was tough, but it was manageable for students who came prepared."

For Maybore, the program's biggest benefit was interacting with a variety of people from other states, companies, and even countries. "I learned about a cross-section of industries, and met people with a broad array of experiences," she says.

"MSU's hybrid model gives students the best of both worlds," she notes. "We have the flexibility of accessing class materials on our own schedules, but we also get to know everyone in person and build relationships. I still tap the network of people I met at MSU for advice or expertise on the job."

ARMED FOR ACADEMICS

For other students, such as active military personnel, hybrid programs are not an option.

American Military University (AMU)—a branch of Charles Town, W.Va.-based American Public University System (APUS)—offers an online master's degree in transportation and logistics management.

"Distance learning allows AMU's large military student body to continue their education even when they are serving their country from all over the world," says Dr. Jennifer Batchelor, program director and associate professor of transportation and logistics management at APUS.

Lloyd Knight is one such military student. Now the director of global government operations at UPS, Knight oversees multiple worldwide forwarding programs supporting a wide range of government customers including the Department of Defense, defense contractors, and many government agencies. But before joining UPS, Knight served in the Air Force for 20 years, logging more than 3,000 flight hours on several operational and flight test aircraft including the C-141 Starlifter, C-5 Galaxy, and C-23 Sherpa.

After earning associate's degrees in aircrew operations and human resources management from the Community College of the Air Force, Knight set out in pursuit of a bachelor's degree.

"I was looking for a program that would allow me to take classes wherever I was, and at my own pace," says Knight.

He chose AMU's Transformational Logistics Management program. After earning the degree online, he retired from the Air Force in 2007, then went to work for UPS. "I didn't think I'd ever go back to school after that," he says. "But UPS believes strongly in education, and the more you get, the better.

"So I started working my way up the ladder, but I needed to develop more industry acumen and learn about areas other than aviation," Knight says. "At the same time, the government changed the GI bill, and I became eligible for benefits I hadn't been able to get before. It was too good an opportunity to pass up."

Knight returned to AMU in pursuit of a master's degree in logistics and transportation management. "The program was very flexible, which was invaluable," he says. "During one semester, I was traveling a lot, and ended up doing classwork from Afghanistan, Dubai, Germany, and the United States."

One element of the program Knight enjoyed was working with a well-rounded group of professors and students. "The students were from all over the world, with all kinds of backgrounds. I learned a lot from them," he says. "I may not have received the same exposure and experience at a traditional university."

Like many distance learning programs, AMU's classes feature online bulletins and chat rooms where students are required to post questions or discussion points once a week, as well as respond to other students' posts. "These requirements ensure everyone works with each other and interacts regularly," says Knight. "With traditional classes, that interaction is often limited to the most vocal students only—but this way, everyone is involved."

STAY DISCIPLINED

It takes discipline to be successful at distance learning, Knight says. "You have to make time each week to get the work done, and make sure you monitor yourself," he suggests. "Otherwise you can fall too far behind, and catching up while working full time and traveling can be nearly impossible."

Knight advises students trying to decide on an online university to research their options. "Myriad educational choices are available," he says. "It is a big investment, just like buying a house or a car. Be sure you conduct a proper investigation so you can make the best choice for you."

IT'S ALL IN THE DELIVERY

The availability of faster, more user-friendly consumer technology has contributed to some growth in distance learning over the past several years. But it's also vital that universities understand how to develop quality online programs, and invest in technology to make courses more interactive and interesting.

"With advances in technology and mobile devices, universities must be able to deliver courses however students want to receive them—whether that's on a desktop or laptop computer, tablet device, or smartphone," says Batchelor.

Some of AMU's technology, for example, allows students to have synchronous discussions online, an important component in keeping them connected and engaged.

"It's vital that students connect with each other and their professors. For distance learning, technology is key to making that happen," says Karen Kukta, senior program coordinator at the University of San Diego (USD), which offers a distance learning master's in supply chain management. USD's program is a hybrid model that requires students to visit the campus five times over two years.

Professors who understand the difference between online and traditional teaching know how to use technology to make the most of online courses. Joel Sutherland, managing director of the Supply Chain Management Institute at USD, helped develop an online MBA course at Lehigh University that trains professors to use technology to make online courses interesting and unique.

"At Lehigh, I prepared online classes using different types of media," says Sutherland. "For some courses, I stood in front of a camera as if I were conducting a regular lecture. Others involved voice-over PowerPoint, or using WebEx to conduct an interactive session.

"Professors should be comfortable with and prepared to use different types of technology to keep online instruction interesting and engaging," he adds. "Studies show you can hold the attention of a student online for only 20 to 25 minutes using a traditional lecture approach. Professors should mix in other methods and technologies to produce the best offering."

Gary LaPoint, assistant professor of supply chain management at Syracuse University, agrees. "Faculty members often think they can simply turn a regular class into an online class, but it doesn't work the same way," he says. "They have to design online courses differently; post lectures in smaller chunks, for example, so someone waiting at the airport or taking a lunch break can fit it in."

Syracuse is currently working with instructional designers to ensure they adapt their supply chain curriculum to students' needs. Like MSU and SDU, Syracuse uses a hybrid model, requiring one week of residency at the beginning of each semester.

"On the first day of residency, students take their final exam from the previous semester," says LaPoint. "The next day, they start the new semester."

Syracuse students attend three residencies per year, in January, May, and August. During the residency, students attend four straight days of classes. The rest of the semester is conducted online.

"Most students find the residency valuable," says LaPoint. "It allows them to build camaraderie, and the faculty can get to know them. The residency also provides for discussion and interaction about how the course will play out through the rest of the semester."

Isabel Diaz is a logistics program manager at Lockheed Martin. Based on the East Coast, she works with the Navy, supporting a currently deployed fleet of submarines. She joined Lockheed seven years ago, after receiving her bachelor's degree at the University of Maryland. As part of the company's Operations Leadership Development program, Diaz had access to many opportunities, but because she believed earning her master's degree was important to her career development, she began looking into graduate school programs.

"I wanted a program flexible enough to complete on my own time, and that allowed me to advance my career without being tied to a specific location," says Diaz. "But I also wanted some face-to-face interaction. Distance learning can be difficult without it."

Diaz chose the supply chain management program at Syracuse. "The hybrid program offers the best of both worlds," she says. "Students have to be on campus for one week each semester. This allowed me the flexibility to complete most of my work remotely, but also enabled me to meet my professors and classmates in person, which is important because you network and learn through them."

Diaz still reaches out to the students she met at Syracuse. "In the logistics and supply chain field, so much learning comes from real-world examples and experience," she says. "You don't just talk the talk, you walk the walk. It's a huge benefit to be able to apply what you are learning while you are learning it."

While many good logistics and supply chain distance learning programs are available today, growing demand and an increasingly busy and technology-dependent society indicate there is also room for significant growth. In January 2013, *U.S. News and World Report* released its ranking of the best online graduate business programs. Only five of the top 25 programs currently offer a graduate program in supply chain/logistics management: University of San Diego, Indiana University, Central Michigan University, Penn State, and University of Michigan.

"Distance learning is the way of the future," says Sutherland. "Couple that with the growth expected in the logistics sector over the next few years, and supply chain graduate programs are set to experience significant growth as well."

Universities that can successfully customize online logistics and supply chain graduate programs to meet the needs of busy, tech-savvy professionals will go straight to the head of the class. ■

Michigan State University

"When students are on campus, the challenge is the workload. It's tiring and all-encompassing. The online portion is also challenging. It demands students stay committed despite outside pressures such as career and family."

—**Nancy M. Taylor,** director, Master of Science in Supply Chain Management program, MSU

DISTANCE LEARNING PROGRAMS

A sample of supply chain, logistics, and transportation degrees and certifications programs offered partially or entirely online.

American Public University System

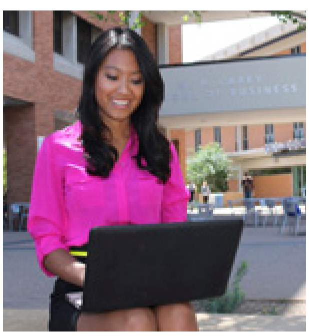
www.apus.edu

American Military University: Online MA in Transportation and Logistics Management. **American Public University**: Graduate Certificate in Leadership and Logistics

American Society of Transportation & Logistics

www.astl.org

Certificate in Transportation and Logistics; Distinguished Logistics Professional and Global Logistics Associate designations; Professional Designation in Logistics and Supply Chain Management

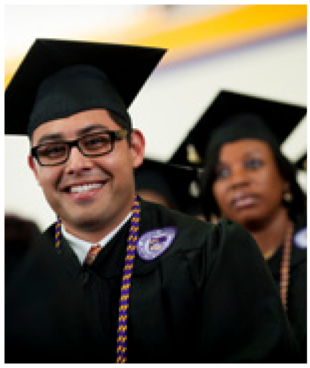


▲ Arizona State University

W. P. Carey School of Business

www.wpcarey.asu.edu

Online MBA with Supply Chain Management emphasis; Online MS in Supply Chain Management and Engineering; Professional Certificate in Supply Chain Management



▲ Ashford University

College of Business and Professional Studies

www.ashford.edu

BA in Supply Chain Management; BA in Operations Management and Analysis; BA in Business with Logistics Management Specialization

Athabasca University

www.athabascau.ca

Online Executive MBA; Online Leadership and Management Development Courses: Green Supply Chain, Outsourcing and Logistics, Strategic Supply Chain

Bellevue University

College of Business

www.bellevue.edu

BS in Supply Chain and Logistics Management; MBA–Supply Chain Management Concentration

California Maritime Academy

www.csum.edu/grad

MS in Transportation and Engineering Management

California State University, Long Beach

College of Continuing and Professional Education

www.csulb.edu

Global Logistics Specialist Professional Designation; HazMat Training

Central Michigan University

Global Campus

global.cmich.edu

MBA with Logistics Management emphasis; Graduate Certificate in Logistics Management

Columbus State Community College

Supply Chain Management Program

bit.ly/IL-CSCC

Associate Degrees: Supply Chain Management, Strategic Procurement, and International Commerce. **Certificates**: Supply Chain Management, Strategic Procurement, International Commerce, International Business

Embry-Riddle Aeronautical University

worldwide.erau.edu

MS in Logistics and Supply Chain Management; BS in Transportation. **Certificates**: Logistics Management, Supply Chain Management, Air Transportation Management, Integrated Logistics Management

Gaston College

www.gaston.edu

AAS in Business Administration with Logistics Management concentration. **Certificates**: Export Operations, Logistics Management

Golden Gate University

Edward S. Ageno School of Business

www.ggu.edu

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Governors State University

College of Business and Public Administration

www.govst.edu/cbpa

MBA in Supply Chain

Institute for Defense and Business

IU-UNC LogMBA

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MBA with Strategic Management or Global Logistics focus

Indiana University

Kelley School of Business

kelley.iu.edu/mba

MS in Global Supply Chain Management

Institute of Logistical Management

www.logisticseducation.edu

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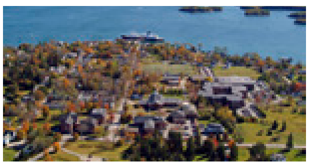
College of Business and Economics

www.lehigh.edu

MBA with Supply Chain Management concentration; Certificate in Supply Chain Management



▲ Maine Maritime Academy
Loeb-Sullivan School of International Business and Logistics

www.mma.edu

MS in Global Logistics and Maritime Management

▲ Michigan State University
The Eli Broad College of Business

broad.msu.edu

Master Certificates: Supply Chain Management and Logistics, Supply Chain Management and Operations, Supply Chain Management and Procurement, Integrated Supply Chain Management, Integrated Supply Chain Management–Advanced

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www.mtroyal.ca

Supply Chain Management Certificate

Nashville State Community College

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North Carolina State University
Poole College of Management

www.ncsu.edu

MBA with Supply Chain Management concentration

North Dakota State University

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Master of Transportation and Urban Systems; MS in Transportation and Urban Systems; Transportation and Urban Systems Graduate Certificate

Northeastern State University
College of Business and Technology

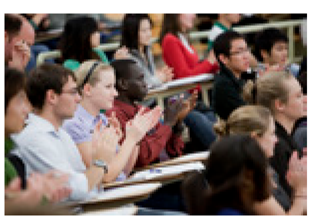
www.nsuok.edu

Bachelor of Business Administration in Supply Chain Management

Penn State University
Smeal College of Business

www.smeal.psu.edu

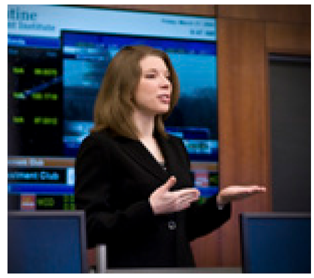
Master of Professional Studies in Supply Chain Management; Graduate Certificate in Supply Chain and Information Systems



▲ Portland State University
School of Business Administration

bit.ly/IL-PDX

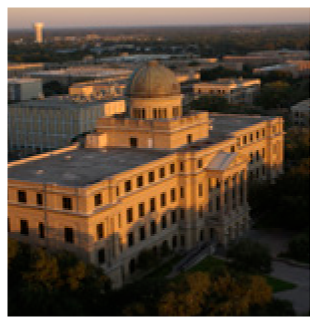
MS Global Supply Chain Management, Bachelor of Business Administration in Supply and Logistics Management



▲ Syracuse University
Whitman School of Management

www.syr.edu

MS in Supply Chain Management



▲ Texas A&M University
Dwight Look College of Engineering

mid.tamu.edu

Master of Industrial Distribution

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Intermodal Transportation Institute

www.du.edu/transportation

MS in Intermodal Transportation Management

University of Michigan-Dearborn

www.umd.umich.edu

MS in Supply Chain Management

University of San Diego

www.sandiego.edu

MS in Supply Chain Management

University of San Francisco
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Certificates: Advanced Professional Supply Chain Management, Advanced Professional Sustainable Supply Chain Management

University of Southern Mississippi
Center for Logistics, Trade and Transportation

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University of Wisconsin-Platteville

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University of Wisconsin-Superior
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www.uwsuper.edu/ctl

Certified in Transportation and Logistics (CTL) Online Program

Vincennes University
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www.VULogistics.com

AS in Supply Chain Logistics Management; Supply Chain Logistics Management Certificate

Wright State University
Raj Soin College of Business

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MS in Logistics and Supply Chain Management

LESS THAN CONTAINERLOAD, MORE THAN WORTH IT

Improved service plus new technology and customized solutions equal new incentive to take advantage of LCL's benefits.

by Lisa Terry

Few shippers get excited about using less-than-containerload (LCL) shipping. Historically, they considered LCL a slow, costly, risky way to move freight across the ocean, but necessary when orders were too small to make a full containerload (FCL), or generated more cargo than could fit in a container.

But consolidators and freight forwarders have a message for shippers: Get excited. Today's LCL is much improved, with end-to-end pricing; direct routes and frequent sailings; increased visibility and control; streamlined processes; and packaged solutions that provide security, clarity, speed, and certainty. Freight forwarders continue to introduce new LCL services in previously under-served markets, and to customize solutions to meet ocean shippers' specific needs.

These enhancements are driving some shippers to reconsider LCL as a viable option among the modes they incorporate in daily and long-term transportation planning.

LCL can help shippers better balance orders with market demand, with less concern about stockpiling until they achieve full containerload quantities.

"Shippers are selecting the mode to move products from Point A to Point B based on actual need, not historical practice," says Clas Thorell, senior vice president and global head of Ocean Freight LCL for Panalpina, a global third-party logistics (3PL) provider. "Rather than holding inventory to fill containers, companies are ordering what they need to feed production lines, and stock stores or warehouses."

BETTER SERVICE, INCREASING USAGE

A trend toward shifting air cargo shipments to LCL — as well as an uptick in smaller, more frequent orders during the recession — drove increases in LCL activity during the past few years. Opinions are mixed whether those patterns are continuing as the economy recovers.

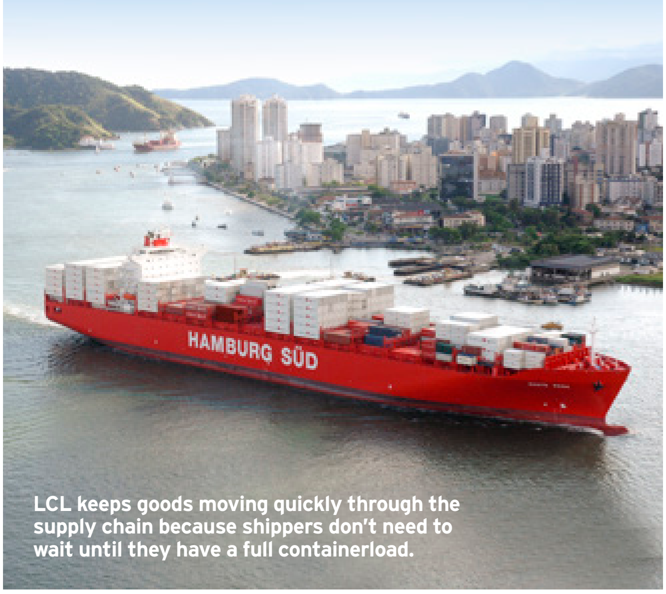
But another supply chain development is contributing to the growing use of LCL: recent ocean carrier rate increases, which are changing the breakpoints at which shippers decide between moving goods via LCL or waiting for a full containerload.

"As full load prices increase, the break-even volume changes," notes Greg Scott, global LCL director at CEVA Logistics, a Jacksonville, Fla.-based 3PL. "While no direct ratio is available to calculate cost increases between LCL and FCL, LCL tends to be less expensive because of the larger volumes."

Also driving the increased use of LCL are service improvements that fill a critical market need. "In addition to keeping a close eye on costs, shippers have a tighter focus on their required transit times," says Jens Rehder, vice president of ocean freight and head of LCL management Americas, DHL Global Forwarding, Plantation, Fla.

"LCL has become a time-defined and schedule-driven product, with guaranteed departures and transit times," he adds.

The continued growth in LCL usage enables many of these service enhancements. "Our LCL volume has increased over the past few years, allowing us to more consistently deliver," says Jason Totah, executive vice president of sales and operations at Jacobson Companies, a Des Moines, Iowa-based 3PL.



LCL keeps goods moving quickly through the supply chain because shippers don't need to wait until they have a full containerload.

To sidestep the bottlenecks and obstacles that used to drive up LCL transit time and cost, freight forwarders and consolidators have been applying multiple strategies—from investing in infrastructure, to tapping lower-demand ports, to bypassing distribution centers.

"The new providers offering LCL service have greatly improved their services," notes Charlie McGee, vice president of international solutions for Cookeville, Tenn.-based transportation and logistics service provider Averitt Express.

Here are six ways forwarders and consolidators are working to improve LCL shipping:

1. **INVESTING IN INFRASTRUCTURE.** Some forwarders are establishing their own consolidation facilities near Asian sourcing locations to bring more of the LCL process in-house. Jacobson, for example, recently opened a terminal in Hong Kong to manage consolidations on behalf of its customers, as well as handle vendor pick-ups and deliveries.

2. **INCREASING SERVICE FREQUENCY.** LCL providers are adding more frequent sailings on established routes, and getting cargo on the water faster.

3. **GOING DIRECT.** Freight forwarders are steadily introducing new services that bypass major ports in favor of smaller ports and Container Freight Station (CFS) facilities closer to the shipment destination. In some cases, these services bypass the shipper or end customer distribution center.

For example, New York City-based 3PL Laufer Group International runs LCL consolidations through West Coast ports, then by rail into its CFS facility in Kansas City. There, shipments are broken down and moved out to customer DCs, avoiding the delays and risks associated with public CFS facilities in the busiest ports. By using this approach, one New York-based shipper began receiving its Asian goods in 21 days, versus 38 to 48 days via traditional LCL.

This approach can be less expensive than delivering a full container to a DC, then moving shipments to their destinations. "The ocean leg costs more, but handling at the DC, and transportation to final destination, are eliminated," says McGee.

For example, an LCL container might move cargo into Averitt's Memphis CFS. Then, individual shipments are mingled with other domestic cargo for delivery, omitting any use of congested Los Angeles ports.

Shipco Transport, a neutral non-vessel-operating common carrier (NVOCC) headquartered in Hoboken, N.J., has been aggressively adding new direct LCL services into smaller ports, and has plans for many more.

"Free trade agreement growth is among the drivers," says Niels Nielsen, Shipco's vice president of LCL export. "And, with more direct services, we are able to cut operational costs and transit times, so LCL becomes more attractive than FCL."

Direct services make delivery faster and more predictable. "Because service providers have improved LCL consistency and transit time, it is not as risky as it used to be," says McGee.

4. SPEEDING IT UP. Several forwarders have added expedited LCL services to their portfolios. In addition to strategies such as bypassing busy ports, these services typically shift LCL cargo to expedited ground networks for delivery. Guaranteed delivery dates are a key benefit.

Shippers often use expedited LCL as an alternative to air freight. CEVA, for example, is developing an expedited service that costs half the price of air freight, but delivers 10 days faster than standard LCL.

UPS is also seeing growth in expedited LCL as an alternative to air. "A shipper might move 30 percent of its cargo via air to get the pump primed, and the rest via a preferred LCL service because of the time-definite delivery," says Thomas Bacon, global director of UPS' LCL product.

5. MOVING OUTBOUND. As Chinese sourcing migrates north and west, as well as to other emerging markets, moving any freight, including LCL, is growing more complex. Adding to the difficulty, particularly in China, is growing demand for goods from other countries.

"The industry's dynamics are changing rapidly," says Michael Van Hagen, Laufer's vice president of sales. "Opportunities are increasing to receive LCL freight from all over the world, break it down, and distribute it through China."

Some providers are also seeing increased LCL traffic out of the United States and Europe, in part due to the globalization of businesses seeking new customers outside their traditional markets.

McGee, however, cautions against using LCL in less-developed new sourcing or delivery locations. Relatively low volumes usually mean transportation infrastructure is not mature enough to safely and securely move loose cargo, he warns.

6. UPGRADING TO FCL. Despite all the new LCL options, simple math still drives many shippers toward FCL. Some forwarders, such as DHL and Laufer, offer services that help shippers amass FCL shipments through multi-vendor consolidation, and multi-port consolidation services in Asia.

At DHL, for example, shipments from multiple origin countries can be bundled via DHL's feeder network and multinational gateways (consolidation hubs). DHL can load dedicated buyers' consolidation containers, which travel as FCL directly to consignee distribution centers.

Communication is an essential ingredient to this type of service. At Laufer, for example, a proprietary booking tool allows the 3PL and its partners to provide shippers with visibility into upcoming shipments, and options for how they can move.

"Laufer Group proactively works with a shipper's vendors to see which shipments

LCL Comes Back in Style

Like many shippers, Christopher & Banks had long regarded less-than-containerload (LCL) transportation as a mode to avoid when possible. But the 617-store Minneapolis, Minn.-based women's apparel retailer has softened its attitude considerably after trying some new LCL services. In July 2012, Christopher & Banks began working with third-party logistics provider Jacobson Companies to manage all inbound freight from its Asian sourcing locations.

Jacobson shifted all of Christopher & Banks' inbound ocean cargo–including the 10 percent of its volume moving LCL–from the Port of Los Angeles to Seattle. As a result, LCL shipments move more quickly through the less-congested port. They undergo deconsolidation in Jacobson facilities, and move via rail directly to the retailer's distribution center in Minnesota. LCL shipments now arrive one full week sooner than they did when moving through Los Angeles.

"LCL freight is consolidated with our other shipments in Seattle, so we have visibility that's just as good as other modes," says Michael Tripp, vice president of supply chain and logistics for Christopher & Banks.

The retailer is also increasing its use of LCL shipping as it begins contracting with suppliers in new sourcing locations, and orders don't always amount to full containerloads. But that's okay.

"We have an appetite for LCL shipping now because of the visibility and consolidation benefits," Tripp says. That means the retailer can offer its suppliers more transportation options to meet demand, using any combination of air, full containerload (FCL), and LCL that makes sense.

"For example, if we have 15 cubic meters coming in from Indonesia this week, and another 15 cubic meters due in next week, we could wait one week and build an FCL shipment," says Tripp. "But if our merchants decide we can't wait for the inventory, we would approve the LCL shipment.

"We continuously look at the cost/benefit analysis, and the in-store dates, to make the best transportation decision to drive our business," he notes.

will be ready in the next several days," says Van Hagen. This provides the shipper with full visibility, and affords opportunities to build full containers. For instance, Laufer worked with the vendors to one large auto parts customer to convert five to seven weekly LCL shipments from several hubs in Asia to full containerloads, saving time and money in paperwork, drayage, handling, and customs clearance.

Despite these service upgrades and improvements, some shippers still harbor intrinsic misunderstandings about LCL and how it has changed.

LCL's legacy lies in multi-party services, where each segment bills separately. That meant it was often difficult to predict total cost—new, unexpected bills would appear long after the shipment. Even today, with more steps packaged by a single freight forwarder, shippers must ensure that they are quoted end-to-end rates.

"Most misunderstanding centers on pricing and total landed cost," says Carlos Martinez-Tomatis, division vice president at ABF Global Supply Chain Services, Fort Smith, Ark. "NVOCCs usually offer

Making LCL Work

Selecting a less-than-containerload (LCL) provider means choosing not just a partner, but a network, because no single entity owns and operates every node and mode of a shipment. Ideally, the same partner manages your full containerload (FCL) and airfreight traffic in addition to LCL, maximizing the opportunity to optimize shipments across modes.

The following actions can help you make the most effective use of LCL, choose a strong partner, and remain engaged in the process.

- CONTROL YOUR FREIGHT. Don't leave LCL transport decisions to your vendors. "Vendors may use dated processes," cautions Charlie McGee, vice president of international solutions, Averitt Express. "Shippers must choose the right transportation partner."

- UNDERSTAND THE NETWORK. Ensure your freight forwarder's network matches your supply chain footprint, through its own infrastructure or its partners'—many forwarders work with consolidators for LCL cargo. "LCL margins are slim, and you need high-volume container freight stations to cover loads," says Niels Nielsen, vice president of LCL export, Shipco Transport. "Many multinational freight forwarders are moving away from handling LCL in their facilities, choosing instead to outsource it to consolidators."

UPS, for example, uses Shipco and other consolidators to supplement its network. "We've benefitted from the volume," Nielsen adds.

- KNOW WHO IS HANDLING YOUR FREIGHT. "Many NVOs buy co-loads, so they are not in charge of the freight," says Michael Van Hagen, vice president of sales, Laufer Group International. "It's a big risk. You don't know who the automated manifest system filer is, so the documentation could be late." He advocates finding vendors who control their own fleet and do their own consolidations.

- ASK QUESTIONS. Some shippers vet not just a potential freight forwarder, but its consolidator partner as well, to ensure handling processes are suitable for their goods. Find out what value-adds that consolidator is bringing to the table, such as the online tools they might offer to create your own load plan, manage documentation, or track a shipment.

- MAKE SURE YOU COMMUNICATE YOUR SUPPLY CHAIN NEEDS. Is your LCL demand uneven? Does your freight require special handling? "Ask for what you want," says Nielsen. Many freight forwarders can customize LCL programs to meet a company's unique shipping needs.

- SCRUTINIZE PROCESSES. Look for processes and technologies that ensure smooth and secure transport of your goods, such as combining C-TPAT shippers, and isolating commodities that pose a security risk. Run some test shipments to see whether they move as promised.

The most important way to judge a provider's performance isn't its regular processes, however—it's how it handles corrective actions for the inevitable problems that will occur.

- UNDERSTAND WHAT'S BEHIND THE PRICE. Is the provider really capable of delivering at the quoted rate? "Ask the right questions to ensure the provider can meet its cost and transit time commitments without continual service issues and ongoing rate increases," says Jens Rehder, vice president of ocean freight, DHL Global Forwarding. "Also, in many cases, shippers are selecting LCL providers based on pricing, and don't pay much attention to global infrastructure and in-house services. This oversight often results in lower rates at origin, while the consignees at destination are being overcharged. It can also lead to cargo damages resulting from multiple cargo stopovers and excess handling."

- DON'T SET IT AND FORGET IT. Business rules and breakpoints for when cargo should move via LCL, FCL, or air tend to be set at the start of a relationship with a freight forwarder. But shippers should revisit those thresholds periodically as rates change, new services launch, or customs processes evolve.

a rate from a foreign container freight station to a CFS in the United States. These rates, however, usually do not include delivery charges and destination CFS fees. Importers and/or exporters often think they are getting a good deal, but later realize that the quoted rate is not the final door-to-door delivery cost."

UPS is striving to simplify pricing by challenging traditional LCL metrics. Instead of pricing by cubic meter plus surcharges, UPS' Bacon would like to see pricing by the kilo, with just two or three additional line items, such as fuel and delivery charges. "We're considering whether that model can drive value and help shippers move their freight, because the pricing is simple and predictable," he notes.

Shippers can make a similar error with total transit time. They may mistake the elapsed time for travel between container freight stations for the total transit time—failing to include the time required to prepare the cargo for pickup, and the transit time to its ultimate destination.

Freight forwarders are also working to dispel another long-held belief about LCL: that it is time- and labor-intensive for shippers. In the past, "it was a real challenge to determine the total and final cost of each shipment, because each of the many parties would invoice for their segments of the service," says Martinez-Tomatis. "Freight forwarders would invoice for the ocean freight; the CFS location would invoice for stripping and loading fees; the customs broker would invoice for duties and customs entry fees; and the trucking company would invoice for the LTL portion of the service."

Today, however, many freight forwarders manage fees and transactions in-house, helping to make LCL as smooth as FCL for shippers.

Customs risks have also been a weak point for LCL. Not only is each container only as customs-ready as its least-well-documented shipment, but flat customs fees per shipment drive up the incremental cost per product. McGee contends that these additional costs are negated by the savings reaped through bypassing large ports and delivering to CFS facilities closer to shipment destination. Freight forwarders also tout their strong relationships with customs, as well as their ability to consolidate in compliance with customs regulations.

Ensuring a smooth trip through customs requires strong subcontractor management. "If shippers are compliant, with documentation and filings in order, the risk of delays is minimal," says Panalpina's Thorell.

Freight forwarders and consolidators have improved LCL service by investing in infrastructure, tapping lower-demand ports, and consolidating shipments at origin.

TECHNOLOGY A KEY ENABLER

Today's providers are replacing LCL's former reputation as a black hole for shipments with visibility and control tools—from EDI and Web services to software solutions that make it easier to request quotes and track shipment status. Particularly when an LCL move occurs entirely within a provider's network, shippers are often able to track shipments through every node of the supply chain.

Improved data exchange between consolidator and freight forwarder means shipment information is more accurate, timely, and complete. Increased visibility tools also enable shippers to manage LCL shipments as never before.

"Purchase order management and vendor consolidation have improved significantly," says Totah.

In fact, data exchange has become a competitive differentiator among LCL providers. "Moving goods from Shanghai to Los Angeles is easy," says Laufer's Van Hagen. "What distinguishes an LCL provider is how it manages data in a way that's useful and actionable for the importer."

Another advancement is the ability to provide shipment data in the shipper's preferred formats. In retail, for example, shippers are not interested in bills of lading and containers; they want to track cargo by purchase order and SKU, and be able to allocate loads by carton.

The need to trim costs across the supply chain, as well as the granular data available to facilitate tracking LCL shipments, mean more shippers are taking an active role in managing this portion of their transportation spend. Large shippers who used to focus primarily on the 90 percent of shipments they move via FCL "are now paying more attention to the 10 percent," says Scott. "If shippers put more time and energy into that 10 percent of spend, they'll be able to buy transportation more efficiently and see cost savings in the long run."

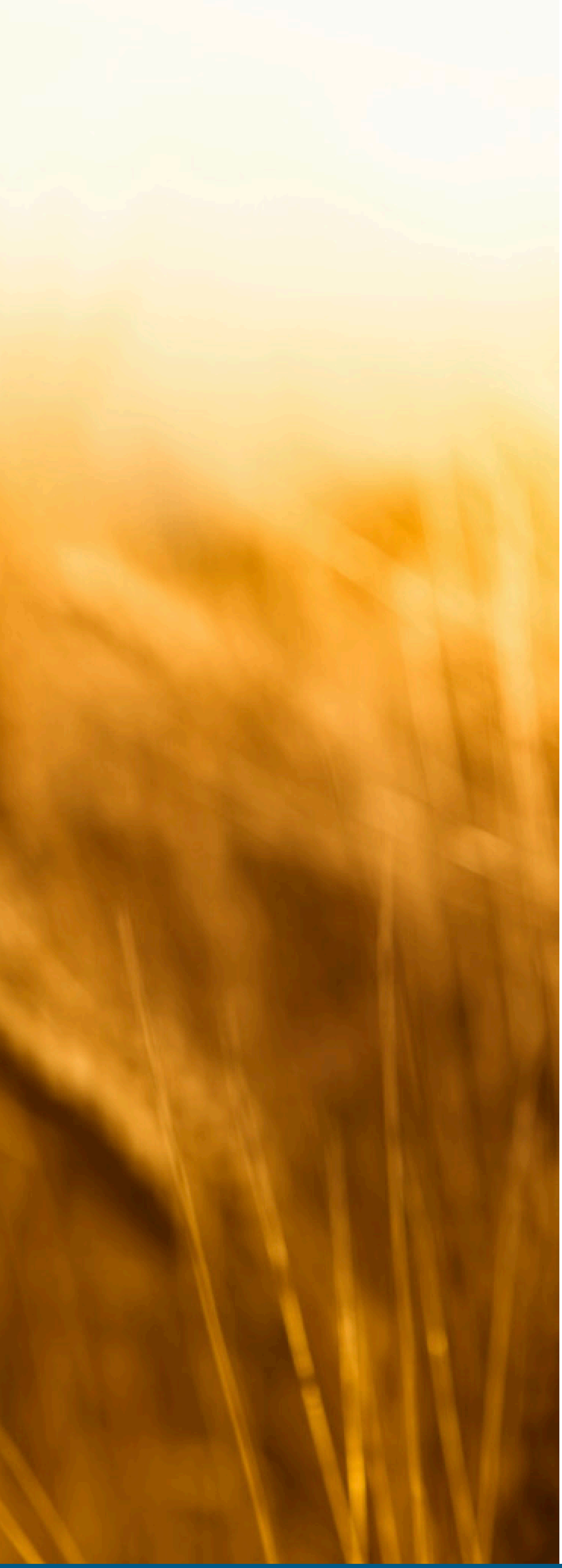
The new wave of LCL services combines well-established networks, improved reporting, more certain delivery times, and end-to-end pricing. If you haven't recently explored the benefits of LCL shipping, now may be the time. ■

AG LOGISTICS:

GROWING PAINS

The success of U.S. agriculture depends on a functional transportation and logistics network that combines efficiencies and economies across all modes.

by Joseph O'Reilly



"DO WE WANT TO PRODUCE for the rest of the world, or do we want to consume from the rest of the world?"

That's the question and argument that Mike Steenhoek presents when discussing the U.S. soybean industry, and agriculture in general. As executive director of the Soy Transportation Coalition (STC), Steenhoek is charged with protecting the interests of his grain-growing constituents across 11 midwestern states—an area that represents more than three-quarters of total U.S. soybean production. The Ankeny, Iowa-based coalition's mission is to stump for cost-effective and reliable transportation investment and planning, especially when it comes to U.S. regulatory policy and decision-making.

Agriculture is a diverse industry comprising a number of different product categories ranging from grains to livestock. It's energy. It's food. It feeds the food consumers buy. While U.S. manufacturing has laid dormant over the past two decades following an exodus of jobs to cheaper offshore locations, an agrarian sensibility remains firmly planted across the United States. In an age where consumption defines U.S. livelihood and commerce, farmers represent a manufacturing ethic that afforded consumers that luxury to begin with.

But agriculture isn't dwelling in the past; instead it has become an export strength in an inbound-centric economy. Agriculture also serves as an important prism for understanding U.S. infrastructure needs. Transportation and logistics excellence makes American-grown product competitive on the global market. Investing in and maintaining a multi-modal network that can deliver quickly and efficiently is critical to sustained growth. Currently, that poses both a challenge and an opportunity.

Drought Brings Problems to the Surface

The drought that swallowed much of the Midwest during the summer of 2012 had a marked impact on U.S. agriculture production. Most crops experienced well-below-average yields that reverberated across global markets.

"U.S. corn production was approximately 25 percent below trend, although in some major producing states such as Illinois it was closer to 40 percent," explains Paul Bertels, vice president of production and utilization for the St. Louis-based National Corn Growers Association (NCGA). "With a short crop, the market has to ration corn."

Grain exports are bearing the brunt of this dearth. The U.S. Department of Agriculture (USDA) predicts corn exports of 950 million bushels in 2013, compared to 2012's crop yield of 1.5 billion bushels. Of the top four crops—corn, soybeans, wheat, and cotton—the latter three rely heavily on export. But each has its nuances. Soybean exports are similar to corn. Wheat is much more reliant on rail. Most ginned cotton is exported via container.

From a domestic consumption perspective, corn's impact is significant because it is used largely as a source for livestock feed. Any change in supply has a direct impact on food prices.

"Assuming the United States returns to normal production in 2013, we will face a significant challenge regaining market share," Bertels says. "While we experienced severe crop problems, our competitors in Brazil, Argentina, and the Ukraine stepped in to fill the void."

The drought had a striking effect on the Mississippi River, according to Paul Wellhausen, president of Granite City, Ill.-based Lewis & Clark Marine. The tugboat line is primarily responsible for switching and fleeting barges on the Mississippi River in the St. Louis area.

"Volumes are off significantly, most noticeably on corn, resulting in a weak pricing environment in the freight market," he says. "Approximately 25 percent of the covered hopper fleet is idled today, and this number will increase as we wrap up soybean export shipments in early 2013."

Low water levels have caused significant damage to underwater barge equipment, increasing repair and maintenance costs. They also reduced the number of fleeting spaces by up to 60 percent.

"Steel shippers quickly moved to rail and truck as alternatives to barge, while grain and fertilizer shippers reduced drafts and moved ahead," adds Wellhausen. He expects that by March 2013, South America will be putting beans on the water for China at a heavily discounted price compared to U.S. product.

The 2012 dry spell demonstrates just how vulnerable global crop cycles are. In 2010, drought and wildfires in Russia, and flooding in Pakistan shook up grain production. U.S. exports spiked as they filled the global deficit. Parts of South America faced their own recent challenges. Now U.S. agriculture finds itself in a similar predicament.

While rising food prices have captured the attention of consumers, receding waters along U.S. navigable rivers raise a more troubling concern—one that is unlikely to reverse course without intervention.

"One big challenge is the inland waterway system, especially the upper Mississippi and Illinois Rivers," Bertels says. "NCGA has long advocated for lock upgrades on these rivers. For more than 20 years, the Army Corps of Engineers has been studying replacing locks that are nearly 30 years beyond their design life."

But current budget shortfalls and delays are pushing these projects farther back in the queue. And without a definitive national plan for fixing and upgrading archaic waterway infrastructure, U.S. agriculture competitiveness is jeopardized.

"Low water levels on navigable river systems are a concern," says Steenhoek. "But what is more concerning is that the United States is not maintaining navigation assets such as locks and dams. We are a spending nation, not an investing nation."

USDA photo by Bob Nichols.

At the Port of New Orleans, a grain storage facility fills a barge for transportation on the Mississippi River.

The Fixed Costs of Failing Infrastructure

Compared to other growing regions around the world, U.S. dominance does not lie in a lower cost to production. South America, as one example, can produce grain less expensively. What makes U.S. agriculture stand apart is its ability to deliver more quickly and efficiently. In that regard there is no parity.

"Brazil's main soybean growing regions are about 950 miles away from the country's major ports," explains Steenhoek. "In the United States, soybeans loaded in Davenport, Iowa; Peoria, Ill.; or Owensboro, Ky., travel anywhere from 850 to 1,000 miles south to Louisiana. The distances are similar. But the United States takes advantage of its navigable waterways more than Brazil does. We are able to deliver volume much more efficiently."

In fact, 59 percent of total 2011 soybean exports passed through Mississippi River ports in southern Louisiana. Of that total, 89 percent passed through locks on U.S. inland waterways on the way to the Gulf, according to a recent study funded by the United Soybean Board's Global Opportunities program, in coordination with the STC.

While the United States has always held a competitive advantage over other agriculture regions around the world in terms of infrastructure, it has failed to make the necessary investments to maintain this advantage. And cracks are beginning to show.

In September 2012, Lock 27 on the Mississippi River north of St. Louis closed for five days due to emergency repairs, delaying river movements and incurring millions of dollars in extra costs. More than half of the locks in existence today are at least 50 years old, and the cost of replacement is estimated at about $125 billion, according to Washington, D.C.-based lobby Waterways Council.

"The greatest shortfall is in inland waterway funding," Bertels explains. "The NCGA has advocated for increasing the user fee (fuel tax), which we ultimately pay in the form of lower grain elevator bid prices to try and speed up funding and construction. We are also investigating alternative approaches such as privatization, or changing the cost share of projects."

To this point, the Soy Transportation Coalition recently published a report, *New Approaches for U.S. Lock and Dam Maintenance and Funding*, in partnership with the Texas Transportation Institute and Center for Ports and Waterways. It outlines possible solutions for fixing and upgrading inland waterway infrastructure and assisting the U.S. Army Corps of Engineers in funding these efforts.

One topic the report raises is the possibility of shifting from a "build and expand" to a "fix and sustain" approach. Given current budget constraints and funding hurdles, industry may have to consider more flexible and lower-cost solutions; and the Army Corps of Engineers will have to work more closely with public-private partnerships.

Aligning Policy and Performance

While U.S. waterway interests need to grow collaboration, transportation and logistics partnership within the agriculture industry at large has always been a key factor to its success. The agriculture supply chain is unique in that it touches all modes of territorial transport, spanning continents as well as import and export markets.

"No perfect proxy says this industry represents the whole U.S. economy," says Steenhoek. "But it's about as close as you can get because it touches on every mode. We are forced to look at the system as a logistics chain. It's only as strong as the weakest link."

Rail transport is another critical piece that dovetails with inland water barge to create an economical and sustainable intermodal transportation chain. Growers in rural areas depend on rail service and economy of scale to keep costs in check.

SPILLING THE BEANS

The Soy Transportation Council is working on a number of key initiatives in 2013, according to Mike Steenhoek, executive director. These include:

- Better stewardship of U.S. locks and dams.
- Aligning rural infrastructure with the needs of 21st century agriculture.
- Encouraging greater rail investment in rural America.
- Making sure southern Louisiana ports are in a position to take advantage of greater efficiencies resulting from the Panama Canal expansion.

"Since the Staggers Act passed, the rail industry has undergone major transformation," says Bertels. "Because of rate structure changes, a significant percentage of grain elevators have made capital improvements to handle unit car trains. This has led to a consolidation in the elevator industry. Some areas, such as South Dakota, are still concerned, however, about a lack of rail competition."

That may change as railroads focus more attention and capital on hinterland networks to support the emerging growth of natural gas, and shale oil exploration and mining. Any investment in rural railroad connectivity and infrastructure is a win for captive grain shippers. Much of the rail network established in areas such as North Dakota over the years has been late to serve agriculture.

"Investment certainly will provide more options and more railroad competition, which could have a downward pressure on rates," adds Steenhoek. "Some regions will benefit from that. It's a favorable development."

On the trucking side, agriculture growers and service providers are paying close attention to regulatory policies—both good and bad—that impact infrastructure spending and investment, and transportation performance. The sobering reality is that many state and local budgets are tapped out.

Following the 2012 election cycle, various public sector authorities introduced a flood of new funding proposals—from raising fuel taxes, to pay-per-mileage schemes, to selling transportation naming rights. Some states have responded to budget shortfalls by lowering weight limits on rural bridges, thereby postponing necessary upgrades.

"Reducing weight limits is a de facto road closure for heavy equipment and grain trucks," says Bertels.

Regulations are a moving target, and are the main concern for agriculture shippers, especially as they try to manage costs in a commodity-priced business that is highly vulnerable to begin with, notes Lance Cheney, vice president for Des Moines-based dedicated transportation service provider Ruan Transportation.

"Agriculture and transportation are two of the most highly regulated industries,"

A DEDICATED COMMODITY

While inland water transport and rail provide fixed coverage in rural areas, trucking still remains the go-to mode for shorter hauls in harder-to-reach growing locations. Carriers, for their part, are helping to bring greater uniformity and visibility to the agriculture industry through technology and business process improvements.

Des Moines, Iowa-based trucker Ruan Transportation has its roots in agriculture and has been helping growers deliver product to market since 1932. It has established a pedigree hauling grains, as well as liquid milk, from farms to processors, coast to coast.

One advantage of a dedicated transportation provider such as Ruan is its capacity to allow agriculture shippers to focus on their core competency–growing product.

Lance Cheney, regional vice president of Ruan, cites the example of one agriculture customer that wasn't maximizing utility in the way it was running its private fleet, incentivizing drivers, and loading product. "The company might call a supplier on Friday afternoon and order feed to be delivered tomorrow morning," he says. "When many shippers were doing that, our fleet was twice the size it needed to be."

So Ruan worked with individual plants to help them level load product distribution during the week.

"We were able to help the shipper understand that by improving communication with end producers, and helping them use 'keep full' programs, we could better manage the process upstream, reduce overall costs, and make it more competitive in the marketplace," Cheney says.

Ruan not only hauls agriculture shipments, it also helps shippers implement business process and technology improvements to boost efficiencies.

he says. "Put them together and it's a constant battle."

As such, it forces growers and their supply chain partners to take a more holistic look at how policy and planning in both the transportation and agriculture sectors impact one another. This is certainly the case with regulatory measures aimed at greening the supply chain.

"Farmers are growing more concerned about making sure the climate exists to operate profitably," explains Steenhoek. "We want to strike a balance between being good stewards of the environment and making sure regulations don't move beyond common sense and stifle the ability to produce."

Another example is the Food Safety Modernization Act. The bill passed two years ago, but is still seeking comments from various industries and likely won't be finalized any time soon. One of the legislation's key objectives is to increase traceability and transparency of product and sources in the food supply chain and introduce preventive controls. Compliance will likely incur extra costs.

To date, growers haven't been impacted as much as they had feared, says Bertels. But it still represents a recurring theme in the ag business—markets want product differentiation, but they only want commodity pricing.

Making Infrastructure a Priority

The challenges facing the agriculture industry demonstrate just how important transportation and logistics infrastructure is to U.S. competitiveness. As the United States looks to encourage and grow more manufacturing activity at home, the means to move product to market will be an important consideration as companies evaluate total landed costs.

Steenhoek represents the agriculture industry on a freight advisory committee commissioned by the U.S. Department of Commerce in 2011. The Advisory Council on Supply Chain Competitiveness provides a platform for stakeholders to share ideas and concerns.

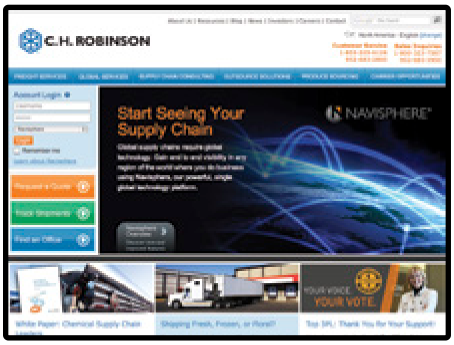
"You'd be hard-pressed to find an industry that has a more diverse and elongated supply chain—everything from primitive gravel roads and rural bridges to ports, locks and dams, and freight railroads," he says. "And we export more than half of what U.S. soybean farmers produce, so we are very global."

Groups such as the STC and NCGA are staunch in their advocacy for making transportation infrastructure, and the service providers that empower it, a competitive differentiator for U.S. agriculture—a resource and commodity that stands alone on the global market.

Whether it's developing U.S. ports and harbors and deepening the draught on the lower Mississippi to accommodate larger vessels when the Panama Canal opens, fixing antiquated locks and dams, or ensuring equitable weight limit restrictions on highways, infrastructure investment remains a priority.

"The success of the U.S. economy is not just a function of out-innovating the rest of the world, but a matter of out-delivering the rest of the world," says Steenhoek. ■

3PLs

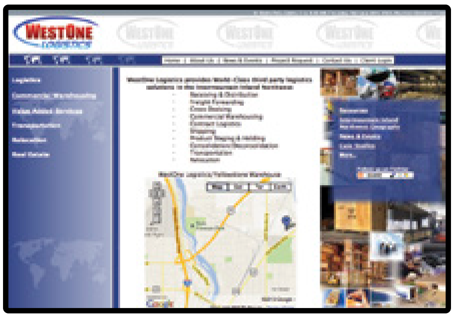


C.H. Robinson Worldwide • www.chrobinson.com

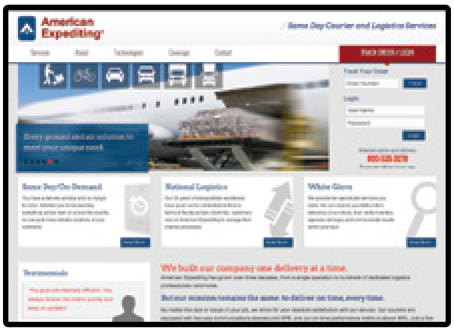
Founded in 1905, C.H. Robinson Worldwide, Inc. is one of the largest third-party logistics companies in the world, providing multimodal transportation, fresh produce sourcing, and information services to more than 32,000 customers globally, ranging from Fortune 500 companies to small businesses in a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

WestOne Logistics, LLC • www.westonelogistics.com

WestOne Logistics offers third-party logistics services to companies looking to outsource all or just part of their supply chain management function. WestOne Logistics provides integrated warehousing and transportation services that can be scaled and customized to customers' needs based on market conditions, and the receiving and delivery requirements of their products and materials.



AIR/EXPEDITED



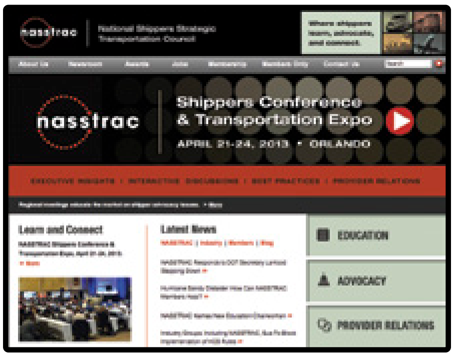
American Expediting Company • www.amexpediting.com

American Expediting has grown over three decades – from a single operation to hundreds of dedicated logistics professionals nationwide. But its mission remains the same: to deliver on time, every time. Couriers are equipped with two-way communications devices and GPS, and the on-time performance metric is more than 99 percent. From messengers, couriers with cars, vans and trucks, to next-flight-out and direct drive shipments, to warehousing, distribution, fulfillment, and more, American Expediting's solutions are custom-tailored to your exact requirements, schedule, and budget.

ASSOCIATIONS

NASSTRAC • http://nasstrac.org

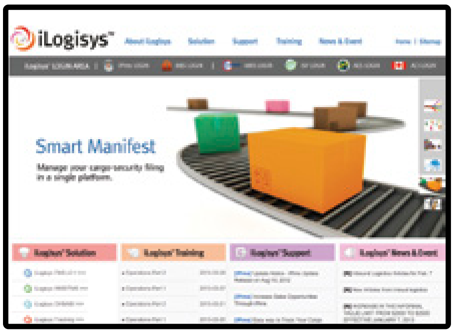
If you're seeking solutions, best practices, information, or industry connections, NASSTRAC is your premiere resource. This industry association promotes transportation advocacy and offers members education on the hottest topics, fosters provider relationships through tools such as an online member directory, job finder, career advice, and a freight resource directory. To learn more about the benefits of becoming a NASSTRAC member, visit the Web site.



IN THIS SECTION:

Customs Brokers – Education

CUSTOMS BROKERS



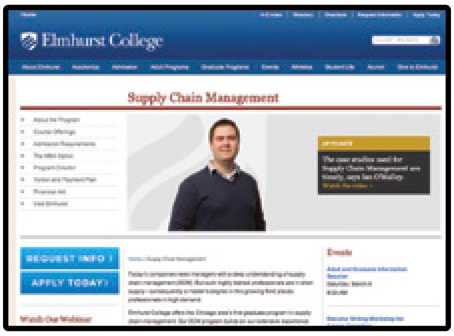
Suntek Systems, Inc. • www.ilogisys.com

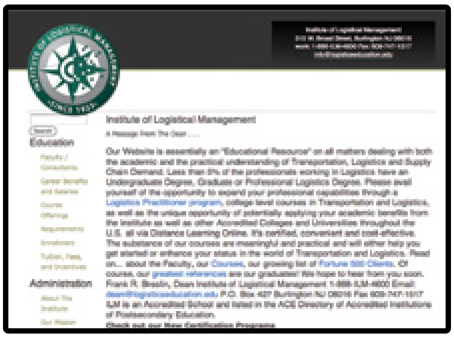
Suntek provides its logistics management software, *iLogisys*, for freight forwarders, NVOCCs, 3PLs, and customs brokers. As the company's flagship solution, *iLogisys* offers simple and efficient methods of logistics operation, collaboration tools between related parties, extensive supply chain visibility, B2B EDI connectivity, and more control over business management. The cost-effective and feature-rich *iLogisys* products boost your customer satisfaction, and increase sales opportunities for business growth.

EDUCATION

Elmhurst College • http://public.elmhurst.edu/scm

Elmhurst's MS-SCM program is designed for professionals with at least three years of work experience in any area of business, and provides them with a broad perspective on supply chain management. Combining coursework in logistics, manufacturing, inventory, transportation, technology, and procurement management, the 21-month, part-time program culminates with a team presentation of a "real-world" consulting project, requiring one year of work and development.



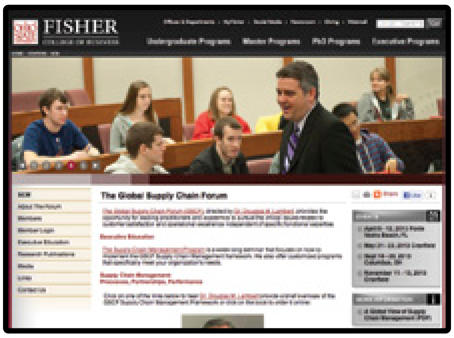


Institute of Logistical Management (ILM) • www.logisticseducation.edu

ILM offers quality, cost-effective, self-paced Professional Certifications in Transportation, Logistics, and Supply Chain for students to achieve competency in the logistics industry. ILM integrates transportation, logistics, and supply chain to certify professionals for "real-world" application. Now offering 8 Certifications. For further information, contact us at 888-456-4600 or info@logisticseducation.edu.

Ohio State University Fisher College of Business
http://fisher.osu.edu/centers/scm

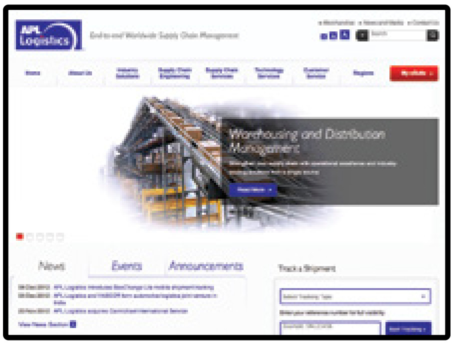
Fisher College of Business offers open enrollment executive education programs in supply chain management that focus on the management of essential business processes, both cross-functionally and with key members of the supply chain. In the seminar you will learn the key business processes: customer relationship management, supplier relationship management, demand management, order fulfillment, manufacturing flow management, product development and commercialization, and returns management. For programs in 2013, visit our Web site or call 614-292-0331.



University of Wisconsin-Superior Center for Continuing Education
www.uwsuper.edu/ilctl

The University of Wisconsin-Superior's Center for Continuing Education offers the Certified in Transportation and Logistics (CTL) online program. This entirely online program satisfies the academic requirements to achieve CTL certification through the American Society of Transportation and Logistics (ASTL). Complete this program and get certified in as little as six months from the convenience of your home or office. For more information, contact us at ctl@uwsuper.edu or 800-370-9882.

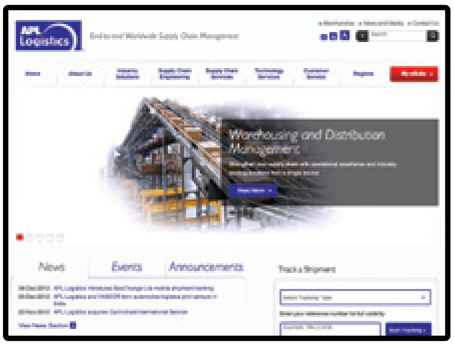
FREIGHT MANAGEMENT



APL Logistics • www.apllogistics.com

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

FULFILLMENT



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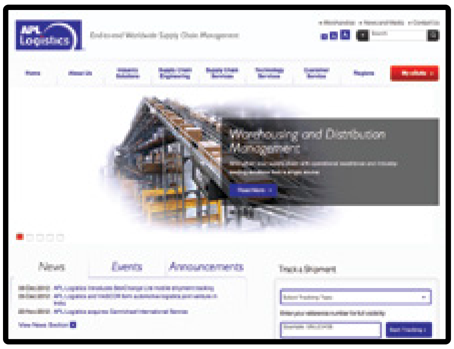
LOGISTICS IT

Gray Peaks • www.graypeaks.com

Gray Peaks delivers big data through its advanced technology devices, and drives your global supply chain with mission-critical and world-class end-to-end global supply chain solutions on demand. Gray Peaks specifically designed its on-demand solutions for the cloud; retrofitting older technology was not an option. Discover the benefits of partnering with Gray Peaks by visiting the Web site.

RAIL/INTERMODAL



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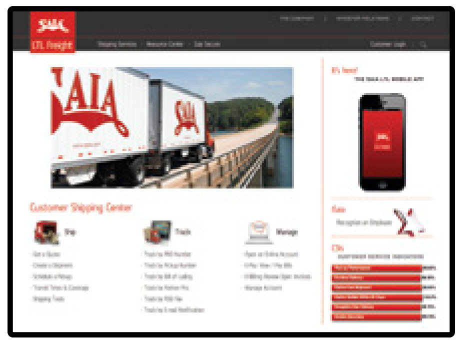
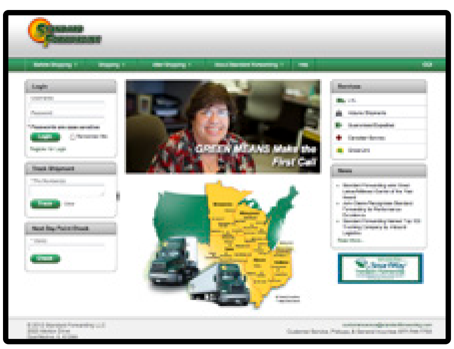
TRUCKING

Saia • www.saia.com

For nearly 90 years, Saia has been providing customers with fast, reliable regional and interregional shipping. With 148 terminals located in 34 states, Saia offers a range of products and services that are backed up by a guarantee like no other in the industry. Our Customer Service Indicators, or CSIs, allow us to measure our performance each month against a set of six indices that our shippers said are the most important to them.





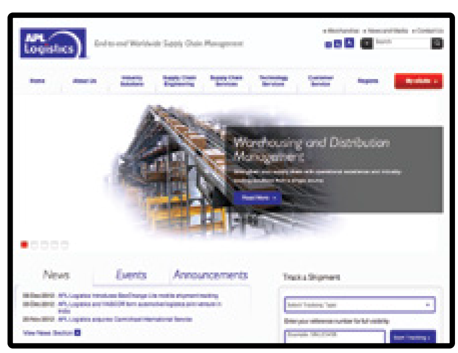
Standard Forwarding • www.standardforwarding.com

Standard Forwarding has grown from a dedicated contract carrier for John Deere to a diversified Midwest regional LTL carrier. With service in a five-state region that includes Illinois, Indiana, Iowa, Minnesota, and Wisconsin, Standard also provides service to Omaha, Neb., and St. Louis, Mo. Standard Forwarding offers reliable, overnight delivery; competitive rates; superior service; and an extremely low claims ratio.

WAREHOUSING

APL Logistics • www.apllogistics.com

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



White Paper Digest

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

Exel

TITLE: ***Globally Local: The New Face of Right-Shoring***
DOWNLOAD: *http://bit.ly/WwKtr2*
SUMMARY: There is a revolution in today's supply chain as global corporations find more risk than reward in manufacturing thousands of miles away from customers. As a result, companies are shifting toward globally local supply chain operations or "right-shoring." In this whitepaper, Exel explores right-shoring, highlighting what it means for supply chain operations across geographies and industries.

Choice Logistics

TITLE: ***Gaining a Competitive Advantage: The Need for Global Management of Mission-Critical Service Parts***
DOWNLOAD: *http://bit.ly/WwKF9w*
SUMMARY: As corporate budgets shrink, spending on high-tech equipment decreases, challenging high-tech manufacturers and service providers with greater demands on repair and maintenance. A reliable supply chain is essential for parts availability to meet aggressive service level agreements, especially for mission-critical systems. Learn why organizations are enlisting outside experts to establish a comprehensive service parts logistics strategy that encompasses a global IT platform, real-time visibility, and flexible scalability.

enVista

TITLE: ***Don't Just Report on Vendor Non-Compliance, Minimize It***

DOWNLOAD: *http://bit.ly/1227e40*

SUMMARY: Improved vendor management offers several important implications to your business, including: improved customer service, minimized lost sales, and significantly increased profits. In this whitepaper from enVista, you'll learn how to develop strategic vendor management programs to achieve significant cost savings, and ways to effectively mitigate vendor non-compliance activity before it happens.

3PL Central

TITLE: ***Mobile Bar-code Scanning For Today's 3PLs—From Nice-to-Have To Necessity***

DOWNLOAD: *http://bit.ly/UFeQN3*

SUMMARY: Ready to learn how mobile bar-code scanning can help your 3PL slash its costs, increase its accuracy -and attract whole new legions of fans? Then download 3PL Central's latest free whitepaper, *Mobile Bar-code Scanning For Today's 3PLs—From Nice-to-Have To Necessity*, today.

Vitronic

TITLE: ***Camera-Based AutoID Systems Boost Profits Through Smarter Distribution***

DOWNLOAD: *http://bit.ly/11PYmUv*

SUMMARY: More distribution channels, shorter delivery times, and growing product portfolios add pressure to all parts of the supply chain. Distribution centers need better visibility to meet today's challenges. Learn how camera-based auto-ID systems are better than laser bar-code scanners for both manual and automated sorting and picking operations, offering better accuracy, greater capability, and better return on investment.

Accellos

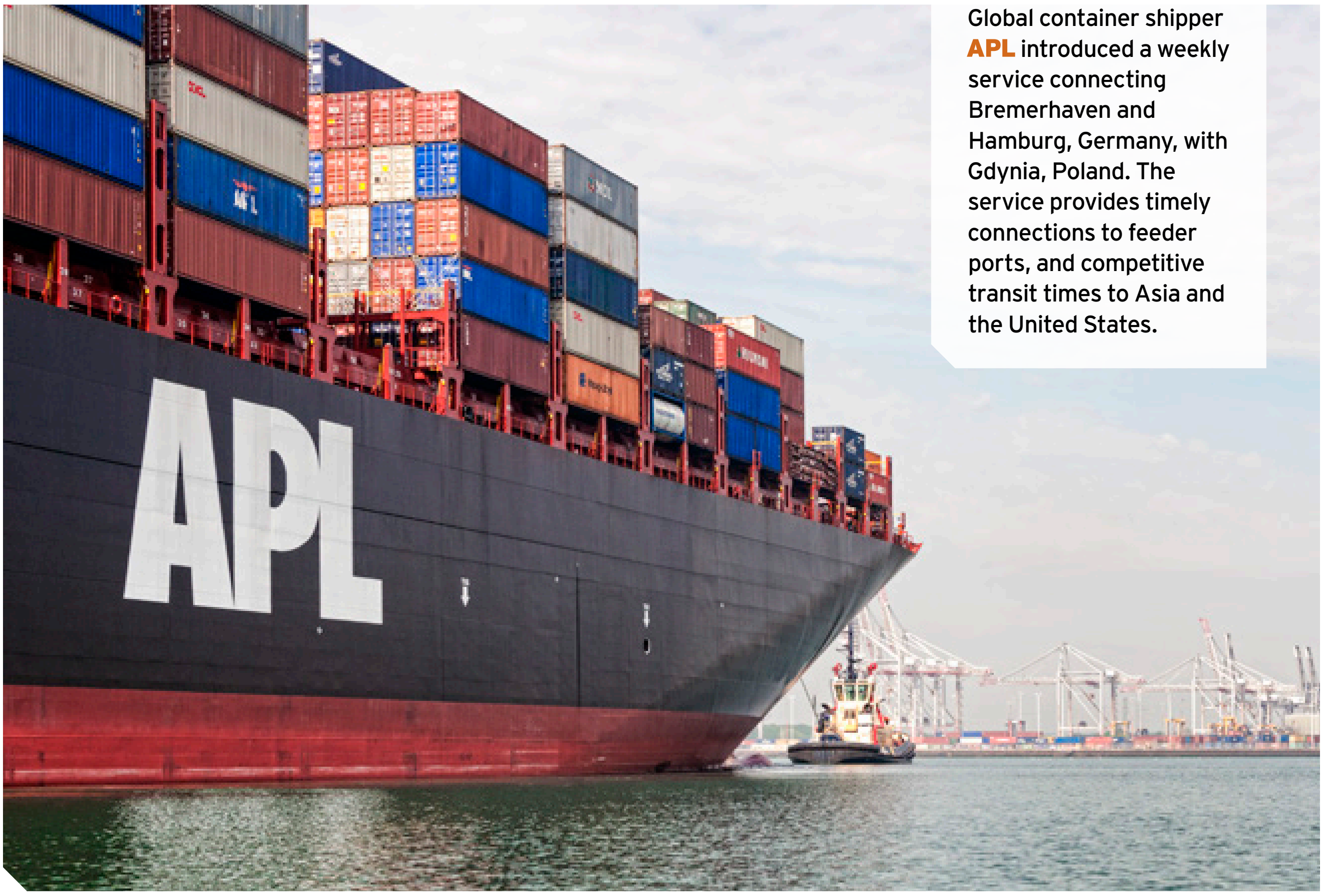
TITLE: ***ERP vs. Best-of-Breed WMS***

DOWNLOAD: *http://bit.ly/WL1cqD*

SUMMARY: This whitepaper examines the factors influencing the ERP vs. best-of-breed WMS decision, from the varying viewpoints of a mid-size company's C-suite. After reviewing the considerations for each key stakeholder, the whitepaper provides recommendations for reconciling the perspectives and coming to a sound decision.

Share your whitepaper with *IL* readers!

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



Global container shipper **APL** introduced a weekly service connecting Bremerhaven and Hamburg, Germany, with Gdynia, Poland. The service provides timely connections to feeder ports, and competitive transit times to Asia and the United States.

// Transportation //

East Coast regional parcel carrier **Eastern Connection** now provides two-day service to Pittsburgh, Pa; Charleston, W.Va.; Cleveland, Columbus, and Cincinnati, Ohio; Lexington, Ky.; Indianapolis, Ind.; and Detroit, Mich. New investments in handheld digital scanners and an overhead parcel scanner system allow for increased efficiency.

CSX began operating New England's first doublestack-cleared intermodal route between New York and Massachusetts. The new service reduces transit time by nearly one day and benefits shippers throughout New England.

Maritime transport provider **Inchcape Shipping Services** created a dedicated U.S. Gulf Documentation Department to streamline import and export activity for foreign shippers and carriers operating in U.S. ports. The new department provides oversight and guidance across the U.S. Gulf region.

XTRA Lease added 2,000 trailers to its fleet, making a mix of dry vans, reefers, flatbeds, chassis, and lift-gated van trailers available to shippers and trucking companies.

Aerodynamic side skirts and low-rolling resistance tires cut fuel costs by up to five percent.

Global logistics provider **SBS Worldwide** launched a new fixed-day airfreight consolidation service, operating from New York to Amsterdam. The service departs John F. Kennedy Airport on Tuesday, Thursday, and Saturday, and offers two- to three-day origin-to-destination transit times.

In May 2013, the **G6 Alliance** will deploy more than 50 ships in the Trans-Pacific trade, calling at almost 30 ports in Asia, the North American East Coast, Canada, Central America, the Caribbean, the Indian Sub-continent, the Mediterranean, and the Middle East.

Old Dominion Freight Line opened a service center in Flagstaff, Ariz., bolstering the company's presence in the southwestern United States. The facility allows Old Dominion to more effectively manage freight traffic in northern Arizona, the Verde Valley, and the White Mountains.

//Technology//

A new online *Sustainability Calculator* is available from **Terra Technology**, a software provider for the transportation and warehousing industries. The software helps companies cut unnecessary inventory across all operations to enable more sustainable manufacturing practices.

Cleveland, Ohio-based Kinetic Technologies developed a hydraulic tilt cart for use in production plants. The cart features a bolt-on upper tilt frame that can be removed to allow the base cart to be used as a standard flat deck dolly, and includes self-stowing, a spring-loaded towbar, compact auto jaw hitch, a built-in lift pocket, and a 2,000-pound maximum capacity.

CEVA Logistics' *CEVA Matrix* e-fulfillment solution gives visibility to customer data, sales, and returns, providing the information necessary for effective supply chain management.

Infor, a supplier of business application software, added more than 100 new features to its *Infor Supply Chain Execution* software solution for transportation, warehousing, labor management, and billing. New features include voice-activated control, and integration with ERP systems.

TranSolutions' updated version of *MyEZClaim*, its freight claim management software, organizes shipment information, creates claim forms, records payments, generates reminder letters based on claim status, and allows shippers to mine data for trends to identify problem routes or carriers.

Llamasoft's *Supply Chain Sherpa* mobile supply chain modeling app enables users to model a supply chain network using an iPad, and visualize metrics including service, cost, logistics, sustainability, and risk on configurable maps and graphs.

The Freight Estimator, a maritime transportation management system launched by **Amphora**, gives companies the ability to calculate cargo break-even rates and perform what-if scenario evaluations.

Users can access near-real-time order compliance information with **ClearTrack's** new shipment approval mobile app. The app allows shippers to ensure all required government and corporate regulations have been satisfied prior to authorizing supply chain partners to proceed with shipment.

Four Soft, a software solutions provider, developed *4SePlanner*, a freight optimization software that can be used for air, sea, and truck transport. The software is customizable based on commodities, transit duration, carriers, service levels, and service types.

Supply chain management software provider **HighJump Software** enhanced its *TrueCommerce EDI* solution with built-in transaction history and reporting features to make it easier for shippers to track and report on EDI data.

A new office in Bangkok allowed **FedEx Trade Networks** to expand freight forwarding services to and from Thailand and the Asia Pacific. FedEx Trade Networks opened the new office in response to increasing demand for freight forwarding services in the country.

//Services//

Menlo Worldwide Logistics' new 400,000-square-foot warehousing and distribution center in Singapore is equipped for picking and packing, customized labeling, and returns management. The facility features advanced building design and construction materials emphasizing environmental sustainability and high levels of energy and water-use efficiency.

Baltimore, Md., is home to a new office for **Purolator International,** a provider of cross-border logistics. The location helps facilitate logistics for shipments traveling between the United States and Canada.

Advanced Logistics and Fulfillment added 90,000 square feet to its Kansas City facility at Hunt Midwest SubTropolis to adjust for recent growth. The new warehouse provides additional fulfillment space and services.

Saddle Creek Logistics Services grew its network with a new 225,000-square-foot facility in Birmingham, Ala., offering food-grade, climate-controlled space, and rail service.

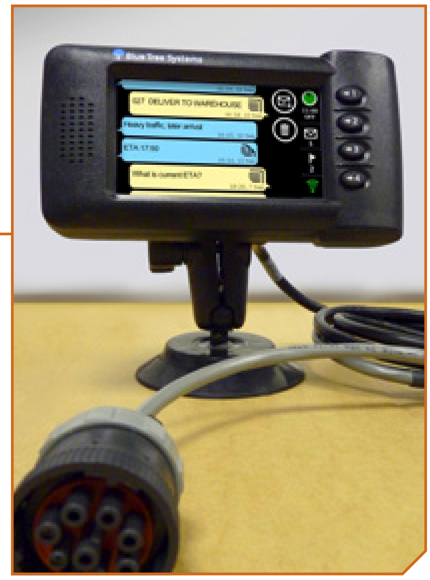
Port Everglades began building a new international and domestic cargo rail facility. The facility will enable the port to handle freight volumes carried by Panamax-sized ships, and allow easier cargo transfer to the main rail lines.

ROAR Logistics expanded its operations to the West Coast with a new office in Temecula, Calif. The facility puts ROAR closer to West Coast ports and extends the company's reach into Mexico.

Rickmers-Linie, a breakbulk, heavy lift, and project cargo specialist, established a Singapore division to strengthen its presence in Southeast Asia. The new office takes over existing operations from former third-party agents in Singapore.

UPS expanded its North American healthcare distribution network, adding nearly 800,000 square feet to its operations in five cities: Burlington, Ontario; Louisville, Ky.; Mira Loma, Calif.; Atlanta, Ga.; and Reno, Nev.

Blue Tree Systems, a provider of fleet management solutions, released a one-piece portable version of its R:COM In-Cab communication system. The tool allows shippers to send job details to drivers, along with navigation coordinates based on the physical restrictions of the truck. It also reports a constant estimated time of arrival from truck to shipper.



CALENDAR

YOUR LOGISTICS **DATEBOOK**

March 18-19, 2013, American Association of Port Authorities Spring Conference, Washington, D.C. This event examines issues in the maritime industry relevant to all Western Hemisphere ports, including export and federal port security initiatives, economic development opportunities, and infrastructure funding and policy reform.

703-684-5700
www.aapa-ports.org

March 19-20, 2013, 5th Annual Georgia Logistics Summit, Atlanta, Ga. The Georgia Logistics Summit is a unique event packed with valuable business information and networking opportunities. Leaders from every transport mode – truck, rail, air, and ocean – will provide updates. Keynote speakers will address topics relevant to the operation and logistics success of your business. A question-and-answer session will let attendees speak directly to some of the industry's most recognized experts.

610-758-5157
www.georgialogistics.com

March 22-23, 2013, Creating a Lean Supply Chain, Bethlehem, Pa. Learn how to apply lean principles up and down the supply chain – from your supplier's supplier to your customer's customer. This Lehigh University seminar addresses a wider set of wastes than the traditional view of lean; stresses a broader set of measures, tools, and approaches for applying lean principles; and moves beyond traditional and often narrow views of lean to focus on an end-to-end perspective.

912-966-7867
bit.ly/LeanSC

April 11-12, 2013, Port & Terminal Technology USA, Norfolk, Va. The 5th Annual Port & Terminal Technology USA event was specially designed for those involved in the effective development and operation of container ports and terminals around the globe. A niche technical exhibition, comprised of a select handful of industry experts, allows attendees prime networking opportunities.

+44 1628-820-046
www.millenniumconferences.com

April 15-17, 2013, National Logistics & Distribution Conference (NLDC), Atlanta, Ga. Organized for senior-level supply chain executives by Georgia Tech's Supply Chain & Logistics Institute, NLDC offers three educational tracks – Identifying Change: Supply Chain Tipping Points; Digital Change: Technology's Impact on Customers and Commerce Within the Supply Chain; and Leading Change: Executive Leadership in Strategic Planning.

800-998-6517
www.nldcinfo.com

April 17, 2013, Momentum 2013, Kansas City, Mo. KC SmartPort will host its second annual industry-briefing event highlighting the third-party logistics (3PL) industry. Momentum will feature a panel of senior-level executives from the 3PL industry, both locally and nationally, to discuss current and future trends.

816-374-5640
www.kcsmartport.com

April 21-24, 2013, COSTHA Annual Forum and Expo, San Diego, Calif. The Council on Safe Transportation of Hazardous Articles (COSTHA) guides attendees through navigating the evolving regulations for shipping dangerous goods. The program explores new technologies, legal trends, and strategies for protecting corporate profits through enhanced compliance, risk management, and training.

703-451-4031
www.costha.com

April 21-24, 2013, NASSTRAC Logistics Conference & Expo, Orlando, Fla. Hosted by the National Shippers Strategic Transportation Council (NASSTRAC), this conference attracts transportation and supply chain executives from manufacturers, retailers, and distributors, as well as 3PLs and carriers. Educational sessions feature leading motor carrier and logistics service provider executives discussing issues facing the trucking industry and logistics sector; and shippers explaining best practices in their supply chain strategies. The event also features an exhibition showcasing new transportation services and solutions.

952-442-8850 x208
www.nasstrac.org

May 5-12, 2013, Supply Chain Logistics Management, Lansing, Mich. Offered by Michigan State University's Executive Programs, and co-sponsored by the Council of Supply Chain Management Professionals, this program emphasizes supply chain integration, performance measurement, technological application, organizational dynamics, and the lessons learned from global world-class logistics organizations.

800-356-5705
execed.broad.msu.edu

May 6-8, 2013, Global SCM Leaders On Demand, Atlanta, Ga. Learn how you can improve logistics processes and drive transformation every day through innovative technology. Separate breakout tracks allow attendees to choose which topics they want to explore. Keynote speakers include shipping leaders and C-level executives who will give expert advice on managing your supply chain.

919-451-4700
www.GlobalSCMonDemand.com

May 20-23, 2013, Secrets to Success, Platteville, Wis. This University of Wisconsin-Platteville conference will explore critical themes in supply chain and operations management. These themes include: developing supply chain talent, benchmarking metrics, the Panama Canal's effect on freight, offshore/re-shore decisions, and sustainability management.

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INDEX

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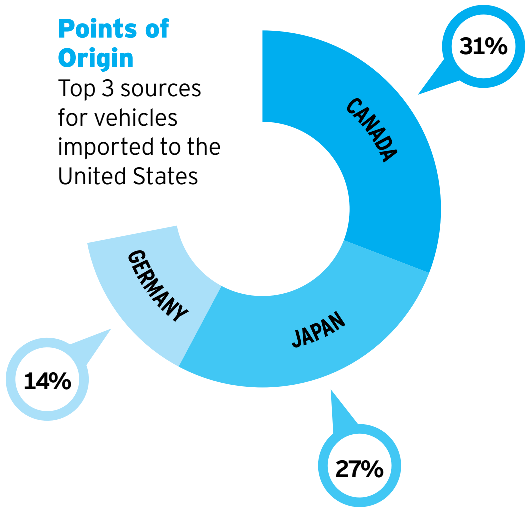
Import Traffic Report

If it seems more cars are filling the road during your daily commute, you may be right. More than $71-billion worth of passenger vehicles were imported to the United States in the first half of 2012 — a 26-percent increase over the same period in 2011. Here's a look at where they came from, and how they arrived.

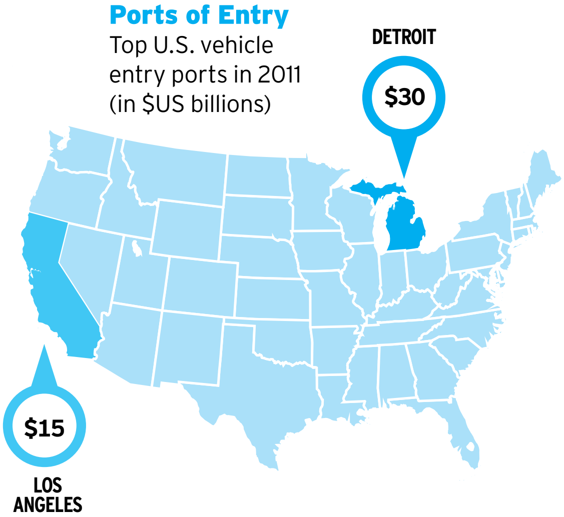
Points of Origin

Top 3 sources for vehicles imported to the United States



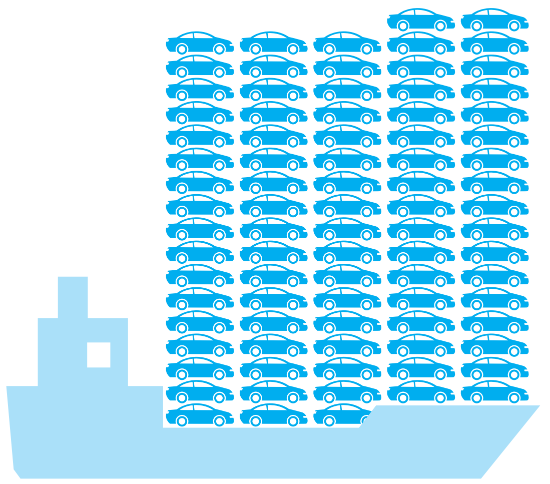
Ports of Entry

Top U.S. vehicle entry ports in 2011 (in $US billions)



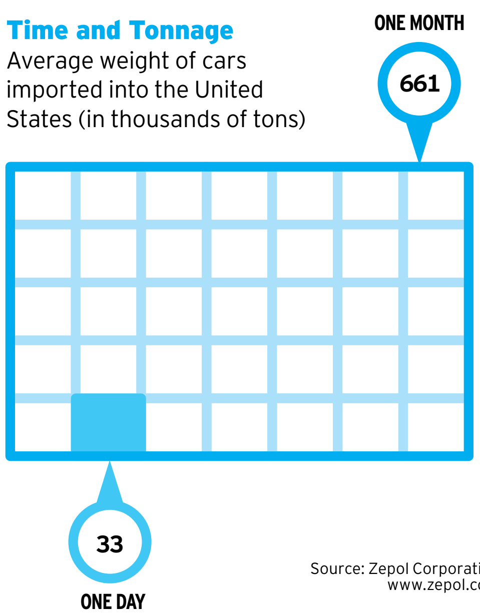
Maximum Capacity

The largest cargo ships can transport up to 8,500 vehicles in a single voyage



Time and Tonnage

Average weight of cars imported into the United States (in thousands of tons)



Source: Zepol Corporation
www.zepol.com