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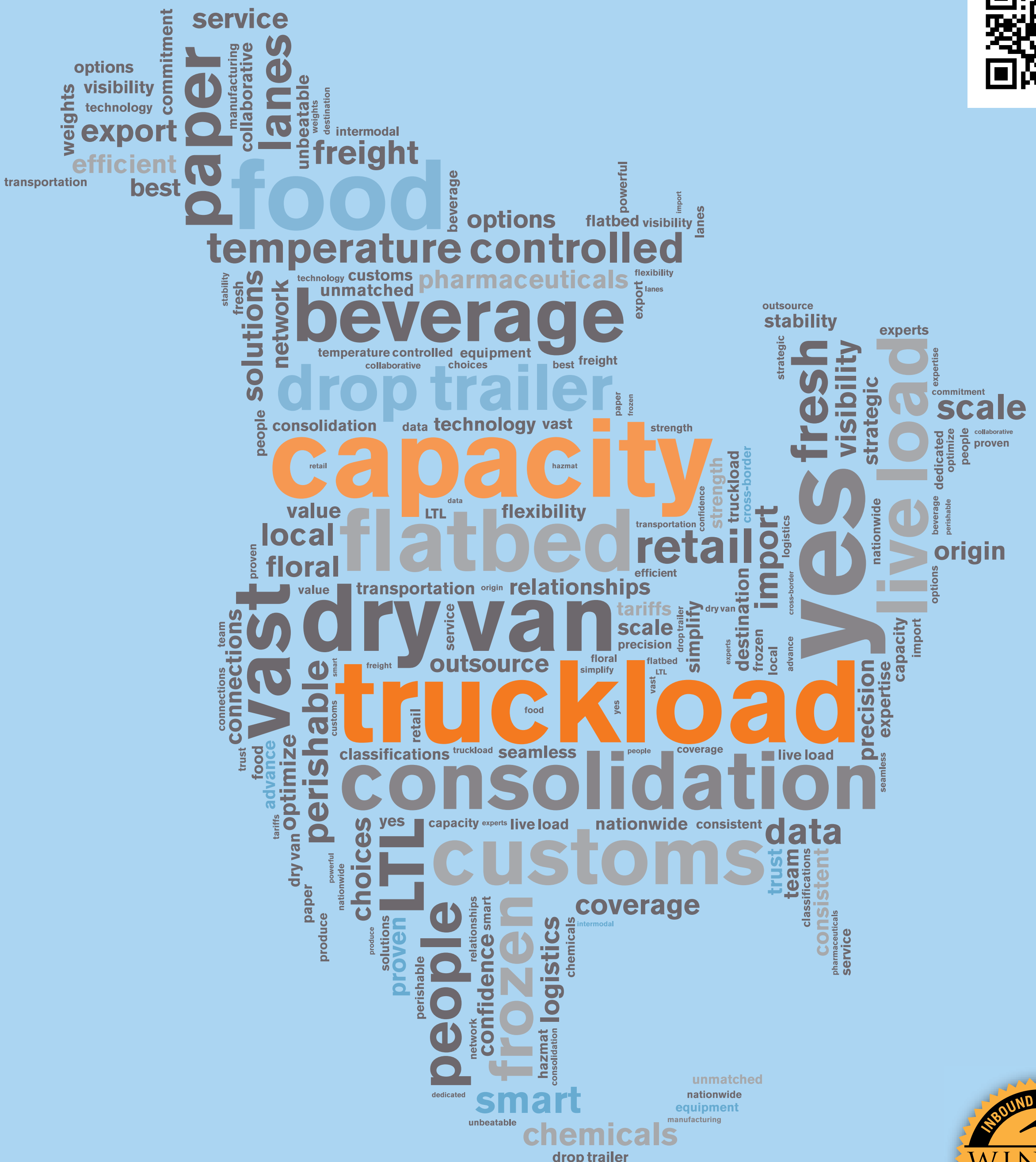

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Felecia Stratton

by Felecia Stratton | **Editor**

What Sandy Showed Me

As the editor of *Inbound Logistics*, my job is to provide information about keeping product moving from source to selling point. In my nearly 30 years in the industry, I have read, written, and edited many articles about supply chain disruptions. But words are just words. It was quite different to experience disruption with my own eyes, in my own town.

I work in New York, but live in Sea Bright, N.J., a small town bookended on one side by the Atlantic Ocean and on the other by the Shrewsbury River. As a long-time resident, I've dealt with my share of ordinary street flooding from nor'easters, high tides, and full moons. But Sandy was no ordinary storm.

The morning after Sandy struck, as the sun came up, I peered out the second-floor window of my flooded home. I saw houses ripped from their foundations, storefronts shattered, and roads made impassable by mountains of sand.

Despite a sense of despair in the days that followed, hope and optimism emerged quickly as the supply chain industry rushed to the aid of those in need. Ryder disaster recovery teams and American Red Cross trucks sped emergency provisions to Sea Bright. Elsewhere across the Northeast, transportation and logistics companies stepped up and did what they do best: match supply to demand.

The American Logistics Aid Network engaged private industry and logistics services companies to facilitate the needs of disaster relief organizations. Hub Group provided vehicles to owner-operators who lost their own so they could keep trucking. ROAR Logistics collected donations and transported supplies to displaced residents. Norfolk Southern, Canadian Pacific, RIM Logistics, UPS, DHL, and FedEx pledged millions of dollars toward relief efforts. These companies, and countless others, gave comfort to those left hopeless and homeless by Sandy.

The supply chain community also rallied around a local Sea Bright fixture: Bain's Hardware. Their motto: *If we don't have it, you don't need it*. Recognizing that if there's one thing a town needs in the aftermath of a hurricane, it's a local hardware store, Frank Bain's suppliers and carriers dispatched volunteers to demolish and rebuild the store, and deliver replacement inventory. Thanks to these supply chain partners, Bain's reopened on Dec. 12; the first Sea Bright business to do so.

Sandy showed me the true nature of the people who work in supply chain management. I saw them provide product without credit, transportation under the harshest circumstances, and warm bodies to help clean up and restock shelves. I saw their generous donations of time, resources, and money.

For me, and many others, it will be a long road back. But the supply chain industry gave Sandy victims hope, help, and a headstart to recovery. ■

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CLOSER THAN THEY APPEAR

10TIPS

STEP-BY-STEP **SOLUTIONS**

by Deborah Catalano Ruriani

Cutting LTL Costs

Saving money on less-than-truckload (LTL) procurement is a laudable goal – except when operational problems eclipse savings gains. Shippers who prioritize securing the lowest price from carriers may actually end up paying more because of costs embedded in carrier expenses – resulting in problems such as service degradation and supply chain disruption. Danny Slaton, executive vice president of supply chain technology provider SMC³, offers these tips for more effective request for pricing (RFP) bidding.

1 **Develop clear bid objectives, mandates, and supply chain change requirements.** Pre-bid supply chain and customer analysis helps LTL shippers define strategic bid objectives, such as reducing costs or number of carriers, delivering goods to market more quickly, and addressing freight challenges within certain geographic areas.

2 **Carefully select RFP questions.** Shippers structure a successful RFP when they align themselves with carriers that fit their shipping profile. Shippers should collect information on carriers' financial performance, customer service, IT quality/capabilities, exact fleet size, type of equipment used, and even CSA scores.

3 **Gather quality shipment data reflecting all LTL movements for the past 12 months.** Data entry errors do occur, so pre-bid data cleansing and accurate commodity descriptions are critical for successful LTL bids.

4 **Select carriers based on pre-defined objectives and requirements.** Shippers with too many carriers in their mix risk creating carrier management problems – and often can't leverage their volumes effectively.

5 **Set reasonable RFP deadlines.** Carriers need a clear review period and realistic deadlines to assess their own capabilities, post questions, and provide detailed, effective RFP responses. Snap decisions can be costly to all parties.

6 **Analyze bids for optimal pricing and service scenarios.** Due diligence is a shipper's most important step in successful bid analysis. By drawing both hard and soft data, shippers can establish service-level agreements, conduct sensitivity analyses, and perform reference checks on prospective carrier partners.

7 **Conduct face-to-face negotiations with contending carriers.** In-person meetings with a director of pricing or pricing analyst let shippers see the carrier's level of commitment, professionalism, and interest; discuss the service map; and explore detailed carrier capabilities prior to competitive rebidding.

8 **Supply well-written, universally adopted corporate routing guides.** Routing guides optimize freight lanes and remove excess shipping costs. Best practices mean incorporating electronic shipment-level detail from all carriers and routing guide rules into a central database; treating the guide as a company-wide shipping mandate; employing weekly or daily shipment data imports; and cross-referencing shipment data against routing guide rules for reporting.

9 **Meet with senior operations personnel at each contracted carrier.** These meetings establish solid working relationships and facilitate implementation planning, routing guide review, and contract signing.

10 **Agree on criteria and measurements for performance evaluation.** Create a methodology and metrics explicitly stating your expectations, measuring effective carrier performance, and alerting both carriers and shippers if carriers are underperforming. ■

R E A D E R

PROFILE

as told to Merrill Douglas

Victor Hougan: Finding a Love for Logistics

AFTER WORKING IN CONSTRUCTION AND INFORMATION technology, I took a job in 2002 as a delivery coordinator at ISEC, a large construction contractor. I soon fell in love with transportation and warehousing, and later with inventory management, distribution, and Lean manufacturing.

I enjoy knowing how the physical movement of material correlates with planning and execution. Logistics involves many factors at one time, all working together.

One tricky aspect of my work is that as a shipper, we don't own the capacity our partners use to get the job done. We rely on our partners to take what we created in perfect condition and deliver it to customers in the same condition. It takes trust, and collaboration over time, to get everyone working not only to make a profit, but to do a good job.

One example occurred when I worked at Sensitech, a manufacturer of electronic devices used to monitor and maintain the cold chain in a variety of industries. An injection mold machine part that we used in manufacturing broke. We had to order a replacement and have it shipped from overseas via air freight.

As that shipment progressed, I monitored status updates around the clock to avoid delivery delays. Without that mold, our production department wouldn't have had parts to assemble. Both our supplier and our freight carrier came through.

Because these relationships are so important, whenever I bring on a new carrier or vendor, I hold a meeting to outline

Victor Hougan joined Primus International, a Bellevue, Wash.-based Tier II supplier of engineered metallic and composite parts, kits, and assemblies to the global aerospace industry, in the fall of 2012. His role in its logistics operation is still evolving.

EXPERIENCE

Finish carpenter in the construction industry; computer technician; delivery coordinator, ISEC Inc.; warehouse manager, Elegant Gourmet; shipping/receiving manager, Sensitech (a division of Carrier/UTC).

EDUCATION

Certifications: Microsoft Certified Professional, 2000; Logistics, Materials and Supply Chain Management, Georgia Tech, 2009; Logistics, Materials and Supply Chain Management, APICS, 2011.

The Big Questions

What has been your scariest career decision?
Leaving my first career in construction. I was good at it, and it paid well, but I wanted a bigger challenge.

Do you have a hidden talent?
I like cooking and trying new recipes, especially in the summer when produce is fresh.

What's on your Bucket List?
Traveling the world, skydiving, and learning a second language.

How do you recharge your batteries when you're not working?
I spend time with my family, including my three-year-old son, 15-year-old daughter, and my wife—without her, I wouldn't be where I am today.

our expectations and explain the metrics we use to evaluate performance. If they succeed in these areas, they will continue to have our business.

One of the proudest episodes of my career took place when I worked at Sensitech. The distribution strategy we were using for one product category was less efficient than it could have been, resulting in lead times of up to three months. I recommended a change.

Instead of using a third-party logistics company, my team started distributing products made in-house and all electronic items made by our overseas manufacturing site — roughly one million units in the first year.

Some co-workers and I redesigned the transportation network, changing from a less-than-containerload/air transportation mix to only full containerload shipments directly into our facility. We cross-docked 90 percent of the inventory that arrived daily into three less-than-truckload shipments with up to 20 pallets, then moved them out the same day.

These shipments fulfilled all domestic locations weekly. The changes we implemented reduced the cost of goods by five percent and transit times by two weeks.

I also created a dashboard to track ocean shipments and give my colleagues at-a-glance visibility into inventory. The dashboard provided data for a bi-weekly conference call that included all our domestic fulfillment locations, reducing communications errors and increasing order fulfillment accuracy.

I received an award for my work on this project. When I left Sensitech, we were distributing close to six million units annually without adding labor. ■

NOTED

THE SUPPLY CHAIN IN BRIEF

GREEN SEEDS

► **Yusen Logistics** has installed its largest solar power generation system at its Port Murray, N.J., warehouse facility. The system is comprised of 6,246 solar panels arranged in 11 rows, covering a 14,700-square-foot plot next to the Yusen Logistics warehouse. The 500-kilowatt (kW) system is expected to generate around 650,000 kW hours of electricity per year, and will help power the warehouse with clean, solar electricity. Yusen will sell surplus electricity from the project to local power companies, and expects the overall reduction in carbon emissions to exceed 200 tons annually.

▲ **FedEx Freight** began beta-testing two new tractors powered by liquefied natural gas-only engines. The pre-production engine used in the new tractors is slated for limited release in 2013, and is currently the only all-natural gas engine that meets the size and power needs of Class 8 trucks.

DHL expanded its GOGREEN environmental program with two new carbon reporting services. DHL GOGREEN Carbon Estimate provides customers with a single, high-level estimate of their CO_2 footprint for their most recent three-month period based on global average carbon emission factors. DHL GOGREEN Carbon Footprint provides detailed transparency of customers' actual CO_2 footprint emissions for a calendar year.

UP THE CHAIN

Cabinetry maker **American Woodmark Corporation** promoted **Cary Dunston**, its senior vice president of manufacturing and logistics, to executive vice president, operations. Dunston assumes leadership of American Woodmark's operations, including manufacturing and logistics, quality, product development, purchasing, and sales and marketing.

Brad Pederson was named supply chain manager for **Caravan Ingredients,** a provider of functional food ingredients, nutritional pre-mixes, and baking supplies. In his new role, Pederson manages the corporate demand planning and scheduling functions. He also leads key initiatives, including SKU and inventory optimization, and collaborative planning.

Newell Rubbermaid Inc. hired **Meredith "Meri" Stevens** for the newly created position of chief supply chain officer. She'll join the Atlanta-based consumer products giant in January 2013. Stevens formerly headed the Global Fire & Security Install and Service Supply Chain at Tyco.

m&a

NCR Corporation announced a definitive agreement to acquire **Retalix Ltd.,** a global provider of retail software and services. The addition of Retalix continues NCR's commitment to transforming to a hardware-enabled, software-driven business model, delivering solutions that improve business processes while enabling seamless consumer experiences across touchpoints, locations, and channels.

Roadrunner Transportation Systems Inc. acquired all the outstanding stock of **A&A Express,** a provider of truckload services based in Brandon, S.D. A&A transports primarily refrigerated product throughout the United States utilizing a combination of independent contractors and employee drivers. The acquisition expands Roadrunner's refrigerated capacity in key lanes, and broadens its customer base.

SEALED DEALS

◀ **LEGO Group,** one of the world´s largest manufacturers of play material, has implemented a logistics e-commerce platform and warehouse management system from **Kuehne + Nagel Belgium**. LEGO direct-to-consumer Internet orders are processed for deliveries in Europe, Australia, and New Zealand from the platform in Geel.

Pallet-pooling solutions provider **CHEP** signed a new contract with **Del Monte Fresh Produce,** one of the nation's largest marketers and distributors of fresh and fresh-cut fruit and vegetables. Del Monte Fresh Produce transports branded bananas, melons, and pineapples to supermarket chains, club stores, foodservice distributors, and wholesalers across North America on CHEP pallets.

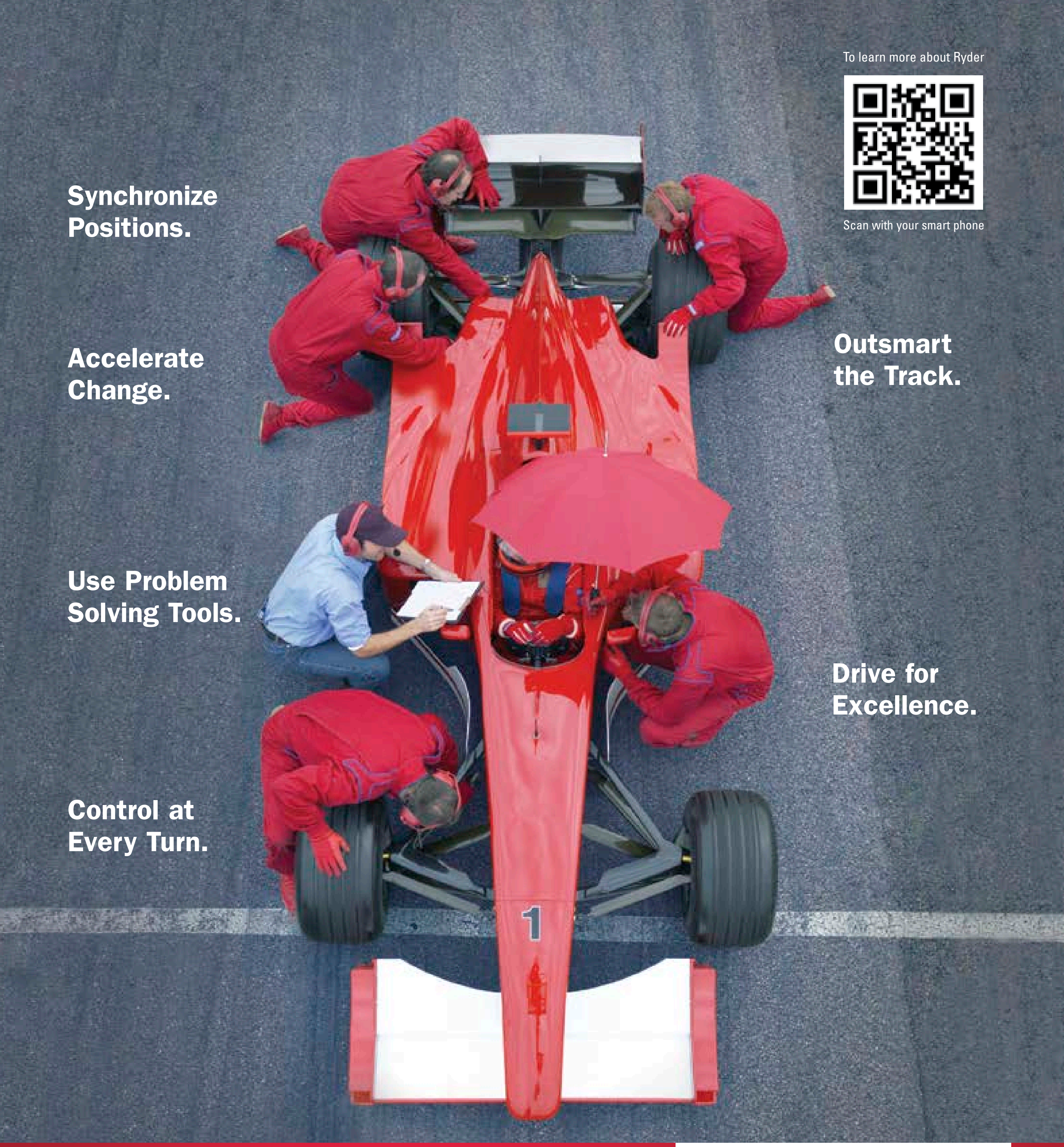
recognition

▲ **Lufthansa Cargo** landed a **2012 ÖkoGlobe** award for ecological innovations in recognition of its development and use of lightweight containers. The cargo airline won third place in the mobility platform and logistics structure category.

ABF earned the **2012 Excellence in Claims and Loss Prevention Award** from the American Trucking Associations' Supply Chain Security and Loss Prevention Council. ABF is the only six-time winner of this award, which honors carriers that have set the bar for claims management, loss prevention, and damage control.

For the second straight year, **Averitt Express** was named **LTL Carrier of the Year** by Parker Hannifin, a manufacturer of motion and control technologies. The award is based on carrier performance, as well as results of a survey completed by Parker Hannifin's 250 North America shipping locations.

Premium wine company Constellation Brands Inc. honored four recipients of its **Core Carrier Awards,** which recognize the company's top domestic freight providers in the United States. Awards were presented to **J.B. Hunt Intermodal, Schneider National Intermodal, Hub Group, and Wheels Clipper.** Since 2009, Constellation Brands has presented the annual Core Carrier Awards to freight providers that meet several performance factors.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TRENDS

SHAPING THE FUTURE OF LOGISTICS

The Army commissioned a study to learn better ways to manage supplies and predict shortfalls in its supply chain.

Bringing Logistics Efficiency To the Front Line

by Joseph O'Reilly

In *The Art of War*, Sun Tsu teaches that "every battle is won or lost before it is ever fought." It is a reminder of the planning and logistics necessary to move and replenish supplies and armaments during successful military operations. The completion of a three-year study conducted by the University of Alabama in Huntsville (UAH) on behalf of the U.S. Army provides further credence to Tsu's teachings.

"The Army wanted us to think about how they conduct business from a logistics and supply chain perspective," says Dr. David Berkowitz, associate dean and principal investigator at the Integrated Enterprise Lab in the UAH College of Business Administration. "They needed us to show them how to assess their data and report it in a way that would give them a forewarning."

The study—initiated by Army Aviation and Missile Command, and later expanded by Army Materiel Command—involved UAH researchers, students, and a team of other faculty and staff examining performance, wait times, quality, and reliability along the supply chain. They evaluated how the Army assessed inventory based on demand for each item, then the predictable wait times for shipping those items. The team also factored in supply disruptions based on unpredictable factors, such as power outages or factory problems.

"You can never say with 100-percent certainty that the supply chain will work a particular way," Berkowitz says. "All you can do is set up the tolerances, see where they've been violated, determine the root cause, and devise a workable solution to get back on track."

Researchers analyzed the Army's supply chain on all levels, from senior leadership to item managers. They then developed end-to-end supply chain metrics that funneled data from multiple sources into a single supply chain dashboard for analysis and reporting.

The team used information from the civilian and military worlds as part of its research. They visited a Ford factory, John Deere tractor manufacturer, Army depot, and Army transmission supplier. Each supplier was graded on customer wait times, then the team incorporated those elements into its recommendations.

UAH researchers and military officials expect this research will create measurements to help the Army manage its supply chain and predict shortfalls.

Competition Kindles Big Box Battle

The Big Box battles are heating up as Walmart recently followed Target's example with its decision to stop selling Amazon Kindle e-readers and tablets in the lead up to the 2012 holiday shopping season. The move comes as Amazon continues to stoke competitive interests with its brick-and-mortar peers, while Walmart and Target look to grow their online presence.

Walmart and Target pulled the plug on selling Amazon's Kindle in their stores, fueling a battle of the retail giants.

Increasingly, the Kindle has become a shopping cart of sorts for mobile consumers, allowing them to compare and buy millions of SKUs beyond digital books. Walmart and Target were selling Amazon's trademark product in their stores, thereby cannibalizing potential sales. Now they have both smartened up.

While Target and Walmart will now focus on other tablets and e-readers—notably Apple products—Amazon may be in store for its own retailing incarnation. Absent a presence in two major retail chains, speculation abounds that the company may consider opening its own stores to sell Kindle and related products. The rumor adds further kindling to a fire Amazon sparked earlier in 2012 when it acquired Kiva Systems and its robotic warehouse automation capabilities as a measure to improve productivity within its own e-fulfillment operations.

The competition doesn't stop there. Walmart and Amazon are looking to push even more value to consumers by

Mondelēz Sweetens Sustainability Investment

The world's largest chocolate company, Chicago-based Mondelēz International (formerly Kraft Foods), plans to invest $400 million over the next decade to help suppliers enhance productivity and improve sustainability efforts. The multinational's Cocoa Life program is modeled on subsidiary Cadbury's efforts in Ghana, India, and the Dominican Republic to help farmers boost productivity while reducing environmental impacts and accelerating development efforts.

Cadbury is sweet on sustainability efforts that help cocoa farmers boost productivity.

Cadbury has already committed to invest $70 million in its sustainable supply chain program between 2008 and 2018, and has seen significant success in Ghana, where cocoa farmers have increased yields 20 percent. Mondelēz is looking to follow suit with funding earmarked to support 75,000 farmers in Côte d'Ivoire, the world's largest cocoa-producing country. The program also targets operations in Indonesia, Brazil, Ghana, India, and the Dominican Republic, with the objective of improving the livelihoods of cocoa farmers while accelerating the adoption of sustainability best practices.

The move comes as global food companies face increasing scrutiny in how they manage their supply chains from source to shelf, especially in terms of corporate social responsibility. Earlier in 2012, Swiss food company Nestlé announced its partnership with Washington, D.C., lobby Fair Labor Association to oversee operations in Côte d'Ivoire amid claims of child labor abuse among cocoa farm suppliers.

expanding and expediting their delivery options. Amazon Local Express Delivery offers same-day delivery in 10 metropolitan areas. Meanwhile, Walmart To Go offers shoppers $10 same-day delivery service in select test markets such as Philadelphia, northern Virginia, and Minneapolis.

Not to be outdone, Target is looking to quell the e-commerce storm by matching some online retailers' prices—including Amazon, Walmart, BestBuy, and Toys R Us—during the 2012 holiday season.

Drought Mires Trade Flow

The drought that hit the U.S. midwest in spring 2012, and impacted grain production throughout the heartland, is now bringing Mississippi River trade to a halt. Water levels are expected to hit record lows by the end of 2012, delaying barges carrying everything from grains and coal to steel and petroleum, according to *Bloomberg News*.

The U.S. agriculture industry, which has experienced an upswing in grain exports over the past few years as Asian demand grows and mandates for energy independence tighten certain ag markets, is likely to lose out as crop production—and their means to market via the Mississippi River—ebbs. Corn harvests are expected to yield 13 percent less than 2011, despite the fact that farmers planted the most acres since 1937, reports the U.S. Department of Agriculture.

Mississippi River barges handle 60 percent of grain exports moving through the U.S. Gulf Coast, and the threat of the waterway becoming too shallow where it joins with the Ohio River could have significant financial repercussions for U.S. growers. Apart from heeding barge draft and tow restrictions, ag shippers will be forced to rely on the railroads to help divert cargo. Railcar shipments through late October and into November were up 12 percent compared to the same period in 2011, and that trend is likely to continue as agribusinesses and growers look to secure capacity. ■

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GLOBAL

THE WORLD AT A GLANCE

by Joseph O'Reilly

AP Moller-Maersk will focus more on oil and drilling operations, and less on container shipping.

Maersk Digs Drilling, Ditches Shipping

The name most synonymous with container shipping is taking a break from navigating an increasingly agitated ocean trade. Denmark's AP Moller-Maersk is shifting the focus of its business activity from shipping, choosing instead to concentrate on its oil, drilling rigs, and port operations, according to a *Financial Times* report.

AP Moller-Maersk will reduce investment in Maersk Line, the company's shipping container operation. The carrier is the world's largest steamship line, with a 16-percent share of the global market. The move will diversify and bring more balance and stability to AP Moller-Maersk's different operating areas.

"We will move away from the shipping side and toward higher profit generators and more stable businesses," says Nils Andersen, CEO, AP Moller-Maersk. "When we have made that shift, more than 50 percent of our capital will be tied up in our three other businesses. Maersk Line will then account for 25 percent to 30 percent of capital. We will have four businesses of almost equal size."

DHL Eyes Retail Expansion In India

Deutsche Post DHL's Indian arm plans to invest $129 million via its supply chain division to build new warehouses and transport facilities in India as it positions itself to tap the opening up of the retail sector.

"With government investments in infrastructure on the rise, coupled with streamlining of regulatory policies, we are enthusiastic about the fast-paced growth in the logistics market," says Paul Graham, chief operating officer of DHL's supply chain division for Asia. "We want to be ready when shippers look to expand."

India recently made the politically risky decision of allowing foreign direct investment in its supermarket industry. The expectation is that this exposure will attract greater investment in India's much-maligned infrastructure, which has presented major challenges distributing product to retail stores.

"The new retail legislation places emphasis on making India a sourcing hub, and that is important," says Graham, adding that DHL was ready to bring its global retail logistics expertise to India.

Europe Recycles Conventional Transport

Amid economic recession and recurring congestion issues, Europe is turning to a conventional means of transport to reduce costs and ease carbon emissions. Thanks in part to the European Union-funded pilot project, CycleLogistics, and a reputation for progressive environmental policies, some continental shippers are using bicycles to move parcels and small shipments in urban areas.

While free-wheeling messenger services are not foreign to major metropolitan cities in the United States and elsewhere around the world, the European Union is making a concerted effort to shift motorized freight to bicycles. Research suggests that as much as 25 percent of all cargo traffic in European cities could make the switch. And if companies integrate traditional van delivery hub-and-spoke urban delivery operations with pedal pushers that make local deliveries and pick-ups, the percentage could grow even more.

La Petite Reine operates a fleet of cargocycles for DHL, which uses them to deliver parcels to congested areas of Paris.

CycleLogistics expects that its current pilot projects, which span 12 European countries, will expand this niche market into a serious alternative for transporting light goods in inner cities.

China Ramps Up Rail Investment

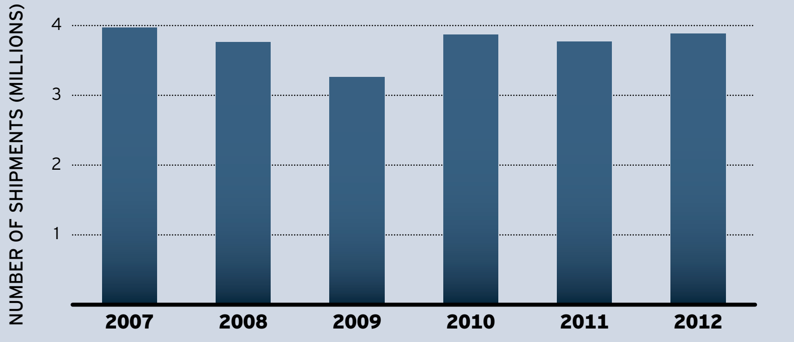
As yet another sign of China's inward-focused domestic investment yen, the country recently raised its planned railway investment by $3.2 billion from its initial $100-billion earmark, the third such increase in 2012. The revised budget comes as the government tries to shield the world's second-largest economy from stiff global headwinds, including fast-tracking infrastructure projects—adding to its already august and progressive reputation in that regard.

The government has approved 25 rail projects that could be worth more than $112 billion as part of measures to stimulate the country's slowing economy. China's rail investments slowed sharply in 2011 after a fatal high-speed train crash that led to a shakeup in the railway ministry staff. But the government has been trying to boost investment since then, approving rail projects and giving the green light for the ministry to raise money through corporate bonds.

The government hopes these efforts will help stave off speculation that the continuing euro zone crisis, and the United States' sluggish economic recovery, will erode its economic growth forecasts even further. [ ]

U.S. Import Shipments During Peak Season June-October

U.S. import shipments are up three percent in the 2012 holiday season compared to 2011, and are at their highest level in five years.



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[IT MATTERS]

BY BILL MICHALSKI
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Measuring the Value of Collaboration

Structured, achievable supply chain collaboration that drives savings relies on the relationship between purchasing and inbound logistics departments. Without real collaboration, two distinct decision-making processes exist based on separate performance metrics and personnel incentives.

Buyers determine what orders to place. Logistics planners determine how to route the shipments. Buyers strive to avoid stock-outs while keeping inventory levels low. Logistics planners work to avoid service failures, while minimizing freight costs.

The problem is, this two-step decision process can result in adjusting an order to save $50 in inventory carrying costs, at the expense of $500 in lost freight savings. In most networks, up to 30 percent in logistics savings may be left on the table.

In a true collaborative relationship between purchasing and logistics, order and routing pattern planning comprise a single, optimized decision process.

The prevailing assumption across many supply chains is that logistics savings improvements require ordering more full truckloads of product – a theory that feeds the gap between purchasing and logistics. Buyers and their purchasing systems can adopt the concept of ordering full truckloads whenever feasible, so why is a deeper collaboration necessary?

Optimization technology provides the answer. If companies use a planning-based optimization engine to consider all feasible possibilities for order size, timing, and frequency, while simultaneously considering all routing options, a significant percentage of the resulting solutions will recommend reducing order sizes to align them for the highest-possible trailer utilization.

In many freight lanes, the engine will still propose bigger orders. At a summary level, however, in most inbound networks, the proposed solutions have proven to reduce inventory levels, increasing turns while generating significant new freight savings.

This changes the game, removing the barrier to joint planning by delivering wins for both purchasing and logistics departments. It also creates a clear, measurable return on the collaborative activity.

This approach requires implementing new processes and technology, but the following strategies can make this solution extremely palatable, and begin driving results without wholesale change:

- **Implement the collaboration as a tangential planning process.** Establish guidelines for ordering and routing, without generating the orders and loads. Most purchasing systems can accept the ordering guidelines users create, and most transportation management systems find the most efficient routes once the orders are optimally placed. The respective teams retain process ownership.
- **Don't rely on spreadsheets.** Route optimization is nearly impossible without optimization software. Adding inventory constraints and order pattern flexibility exponentially increases the number of possible solutions. Hunting and pecking for the opportunities will simply never find the savings.
- **Don't forget the inbound freight you don't manage today.** By incorporating planning for inbound lanes currently managed by shippers, you will find new opportunities in lanes that previously seemed out of alignment with your network.
- **Measure, monitor, and close the feedback loop.** Your solutions are not just guidelines—they are performance targets to measure against. They can also drive compliance monitoring as orders are generated, and provide the means to correct savings shortfalls before the loads are tendered.

It's time to stop talking about collaboration, and start measuring it. ■

SMART MOVES
Education & Career Advancement

BY DR. JENNIFER S. BATCHELOR
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Logistics: It's Where The Jobs Are

Effectively managing human capital is more vital than ever to businesses and organizations, and higher education will continue to play a critical role in training the next generation of transportation and logistics management (TLM) leaders.

The Bureau of Labor Statistics projects increases in TLM occupation employment growth and replacement needs, which are on the rise due to individuals in the field retiring, transitioning into new fields, or leaving the workforce.

Promising career opportunities await new TLM professionals within the decade. According to the labor bureau's estimates:

- Transportation and materials handling careers are up 15 percent, and will create 1.3 million new positions.
- Retail trade logistics employment is up 12 percent, and will create more than 1.8 million new jobs.
- Transportation and warehousing is up by 20 percent, and will generate 853,000 new jobs.
- Overall, high-level logistics management employment will increase by a modest projection of seven percent within the next seven years.

This growth creates a need for educational programs to help fill job openings with a skilled and knowledgeable workforce. The American Public University System (APUS) created its Industry Advisory Council to work collaboratively with industry experts to address current and evolving trends in the industry, and integrate them into the APUS curriculum. Leaders from organizations such as the General Services Administration, a leading international shipping company, and a maritime association have contributed to this discussion.

Among the insights gained are that automation will drive many new logistics jobs, and warehousing will require technology skills not often covered in new employee training.

Leadership Know-How

The need for education goes beyond entry-level workers, however. C-level executives need to know more than just the basics about TLM. For logisticians looking to enhance their career growth prospects, gaining specialized knowledge through advanced coursework is vital.

Any formal education or training in TLM needs to tie into supply managers' everyday experiences. Content has to be geared to the real world to help make that critical connection.

Leadership expertise will be more vital than ever for logisticians at the tactical, strategic, and operational levels. Employees need to understand processes and build efficiencies, while motivating others through leadership.

Focus Areas

In addition to the importance of advanced education and leadership training, the following specialty areas represent top priorities for the logistics sector:

- **Environmental concerns.** Hazardous materials regulations and public policy issues shape logistics and transportation operations.
- **Technological support.** Tools such as RFID and track-and-trace capabilities are key to account and shipment management.
- **Quality control.** Purchasing agents, and storage and distribution managers are in demand because of concerns about sourcing, domestic threats, and international terrorism.

At APUS, we often discuss the "perfect process" concept, which allows students to consider a three-dimensional view of logistics. Isn't that the goal for all of us?

Leadership at all levels of the transportation and logistics profession will be critical as we hire and train new talent, communicate with upper management, and look to a future of fast growth in technology applications. ■

THE LEAN SUPPLY CHAIN

BY PAUL A. MYERSON
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Playing the Waiting Game

We all want to do our jobs, and are paid to do so. Often, however, we must wait for information or materials from suppliers, supervisors, other departments, and even customers. While we wait, we can get distracted and end up wasting even more time.

In Lean terms, waiting is one of the eight wastes. Identifying the root causes of delay allows us to improve the flow of materials, people, and information through the supply chain.

Working as a team using some basic Lean tools is a good way to begin reducing this type of waste. In a warehouse environment, for example, the start of a shift or wave can be unproductive as workers stand around waiting for assignments. Observing the current process for non-value-added activities enables us to make significant improvements.

Ask the following questions to streamline your warehouse shift or wave start-up:

1. Do you have a standardized, visual start-up process? Creating visual job aids with digital pictures and easy-to-understand steps in English, Spanish, or any language relevant to your workforce speeds activities such as putaway, picking, packing, staging, and loading—and results in less variation in worker performance.

2. Is the layout conducive to flow? If workers have to wait or search for instructions and tools instead of going to a set area to get the information themselves, they will waste time. For a receiving area, ensure documents and instructions are easy to find and ready to go. It's also a great idea to set up supply carts with all the tools and forms workers need to unload and receive shipments or load trucks.

THE 8 WASTES

1. Transportation
2. Inventory
3. Motion
4. Waiting
5. Overproduction
6. Overprocessing
7. Defects
8. Underused employees

3. Is there a place for everything? Use clearly visible and understandable signs to organize tools, materials, and information. Workers won't have to wait or search for items such as cleaning tools, handtrucks, forklifts, and supply carts.

Simplify Supply Lines

When workers in a warehouse shipping or receiving area run out of supplies and materials, they must wait for the needed items to be re-supplied. A kanban system—material replenishment based on the pull of downstream demand—is a useful, visual tool to ensure a steady supply of materials. Create a simple kanban by putting a line on a wall indicating the level at which materials need to be replenished. To be successful, you need to occasionally adjust the line based on the current average demand.

If a kitting or assembly line is unbalanced, people on the line will spend time waiting. A good way to identify imbalances is to use a Time Observation Form to document each step in the process, evaluating each activity's actual processing time compared to its estimated Takt time (demand rate).

Additionally, if forklifts, trucks, and conveyors aren't properly maintained, the operators must wait, and other supported processes suffer from delays. A Lean tool called Total Productive Maintenance focuses on minimizing equipment-related waste by improving equipment uptime and productivity.

If we resign ourselves to waiting, and assume it is part of the job, nothing will change. Focus on non-value-added waste to make your workplace more productive. ■

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

VIEWPOINT

BY JOEL ANDERSON
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3PLs Create a Unified Supply Chain Voice

The International Warehouse Logistics Association (IWLA) created its new Public Policy Center to ensure third-party logistics (3PL) providers are knowledgeable players in the public policy arena. Its goal is policy creation that makes sense and benefits all businesses, employers, and employees throughout the supply chain.

The IWLA and its active, policy-aware members have experience leading this fight. One example occurred in 2007, when the Michigan state legislature, in a midnight maneuver, adopted a six-percent tax on warehouse, logistics, consulting, and courier services – without holding a hearing or debate.

IWLA swiftly commissioned a Michigan State University study, which showed that, if allowed to remain in place, the tax would result in a net annual loss of $55 million in tax revenues for state and local governments, and would eliminate more than 7,000 warehouse-related jobs. Because of the study's persuasive findings, the state legislature voted to withdraw the tax.

More recently, IWLA Washington Representative Pat O'Connor organized educational visits to warehouse operations by Food and Drug Administration (FDA) inspectors. These visits came after an FDA inspector entered an IWLA member's warehouse facility and demanded to see the warehouse owner's sales receipts for the inventory of vitamin supplements – and could not understand that the warehouse was merely storing the vitamins for a customer.

Guiding Policy Makers

IWLA members twice yearly take part in organized visits to their members of Congress on Capitol Hill. Some have furthered the education of our lawmakers by inviting them to visit logistics facilities so they can see how the supply chain really works.

We have found these efforts to be effective in putting a human face on the consequences of government policy. For a public awareness campaign to work, however, a daily commitment to telling our industry's story is required. This is a never-ending effort.

Warehouses, other 3PLs, and the broader supply chain sector need to make a greater effort to manage our collective public image by deploying facts and the truth. This is where the IWLA Public Policy Center comes in. It is driven by four guiding objectives:

1. Commission intellectually rigorous and credible studies from non-partisan, Class I research academic institutions that have a recognized supply chain discipline program.

2. Leverage the research by deploying a robust and effective communications campaign.

3. Retain legal counsel to develop briefs in regulatory proceedings as required where the industry's legal protection is in question.

4. Engage additional grassroots resources on an issue-by-issue basis to realize our goals.

The IWLA Public Policy Center is now commissioning original research on the role of the warehouse-based 3PL sector in creating jobs and career ladders. This research will also assess the multiplier impact this employment has outside the industry.

IWLA will disseminate the facts across multiple media platforms to clarify the important role of 3PLs and their supply chain partners as valued contributors to the economy and society. ■


¡Vamonos!
(Let's Go!)
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One key step to finding answers to any logistics problem is knowing the right questions to ask.

Inbound Logistics asked supply chain experts for their perspectives on the important logistics challenges and opportunities impacting your business.

On the following pages, Bill Johnson of PortMiami addresses maritime trade developments, and Greg Brady of One Network Enterprises explains how trading partners can connect in the cloud to optimize supply chain operations.

THOUGHT LEADERS

Ports and Shippers Prepare for the Post-Panamax Age

Q: What are the key issues shaping the future of maritime trade?

A: One of the greatest opportunities coming to the maritime sector is the widening of the Panama Canal, which will be completed in 2015. It will impact the face of global commerce, and affect trade patterns to the U.S. East Coast. Shippers bringing in goods from Asia will be able to import containers directly to East Coast ports, instead of offloading cargo on the West Coast and shipping goods across the nation via rail and highway. Ports that serve the East Coast will begin to play a larger role in handling Asian cargo as trade patterns shift from West Coast to East Coast ports.

Q: How is the maritime sector preparing to handle these changes and meet shippers' needs in the future?

A: Ports up and down the East Coast are preparing themselves to accept the new post-Panamax class of mega cargo ships—with capacity of more than 10,000 TEUs—that will begin passing through the expanded Panama Canal. By dredging harbors, expanding rail lines, and improving port facilities and distribution centers, the maritime sector is ensuring it will be ready to accommodate these large cargo vessels and better serve the global shipping community.

At PortMiami, for example, we are undertaking more than $2 billion in infrastructure improvements to be ready to welcome these ships in 2015. These critical investments will allow PortMiami to take advantage of its position as the closest major East Coast port to the expanded Panama Canal. Deepening our harbor and directly connecting the port to the nation's rail and highway system will enable PortMiami to double its cargo capacity and help it grow as a global logistics hub serving shippers around the world.

Q: What features should shippers look for in a port to ensure the facility is able to handle their cargo needs in the post-Panamax era?

A: Deep dredging is one of the most important aspects of preparation for the new class of post-Panamax ships. Upon completing our $180-million deep-dredge project, PortMiami will be at minus 50 feet when the expanded Panama Canal opens. Shippers should also select a port with crane infrastructure that has been upgraded to receive new Panamax ships. By purchasing four additional Super Post-Panamax cranes, PortMiami will be able to service these larger ships with the increased speed and efficiency shippers demand.

In addition, shippers need a port with ample access to well-connected infrastructure that can expedite the movement of goods and cut down on overall transportation time. At PortMiami, we have embarked on a $50-million plan to re-connect the port with the national rail system, and speed shipments throughout Florida and into the continental United States. These new efforts will help containerized cargo that comes through our port reach 70 percent of the U.S. population in one to four days. By functioning as a global logistics hub, PortMiami can offer shippers key advantages.

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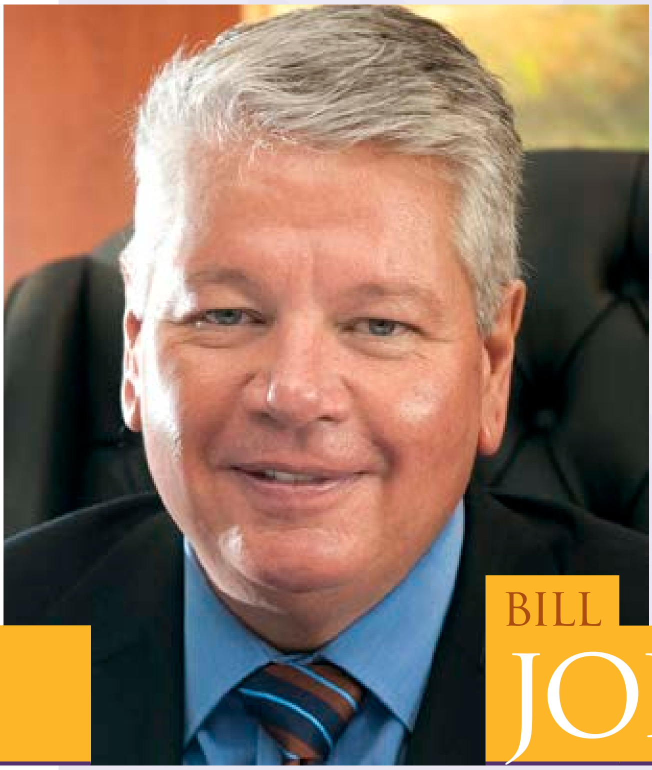

BILL
JOHNSON
Port Director
PortMiami

Connecting Through an Online Network Gives Supply Chain Partners Strength in Numbers

Q: What is the Real Time Value Network, and what differentiates it from traditional technologies?

A: The Real Time Value Network is a cloud-based "many-to-many" network platform that enables a virtually unlimited number of trading partners to plan, execute, monitor, optimize, and synchronize in real time all of the business processes and events that take place throughout their extended supply chains. The Real Time Value Network is also a pre-existing community of more than 30,000 trading partners, including major logistics companies such as Menlo Worldwide Logistics, and parcel delivery services such as Greyhound Line's PackageXpress. Companies that connect to the Real Time Value Network gain the ability to transact with any organization on the network.

GREG BRADY

CEO
One Network Enterprises

Q: What is a "many-to-many" network platform, and what are the benefits of connecting to it?

A: It's very simple. A company connects once to the network and has the ability to transact, coordinate, and plan with any other company already on the network. The question then becomes whether any two given companies want to transact, and if so, what information they decide to share and what integrated workflows they want to share. This is very similar to what happens when you join LinkedIn; you have hundreds of millions of potential "connections," but you must both agree to connect and decide what information you want to share. A many-to-many network is the best way to create supply chains that are incredibly responsive to customers, from end to end.

Q: Demand for capacity is raising the profile of smaller parcel and package delivery companies. What challenges do they face?

A: Traditional parcel management systems have been custom-written because of the size and complexity of the problem. From a technology perspective, smaller parcel and package delivery companies are struggling to overcome the limitations of these homegrown solutions. These systems are sufficient for companies with global established networks such as FedEx and UPS. But for regional providers who want to offer a global footprint, some degree of collaboration with other providers will be necessary. The Real Time Value Network allows parcel and package delivery companies to easily connect and collaborate with each other.

Q: How does the Real Time Value Network optimize parcel management and delivery capabilities?

A: In addition to gaining the ability to easily connect with their customers, other parcel companies, and other trading partners, the Real Time Value Network also offers a full suite of services that manages the entire lifecycle of the parcel business, including planning, execution, shipment visibility, claims and settlement, and business analytics. In addition, connected mobile computers from partners such as Honeywell enable real-time track-and-trace capabilities and streamline labor operations in the terminal. All this occurs within the same cloud-based system, accessible on demand anywhere in the world via an Internet browser.

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MEASURING CUSTOMER SERVICE

THE UP-AND-COMING KPI

Using key performance indicators (KPIs) tied to customer service metrics helps logistics providers benchmark their value to shippers.

By Lisa Terry

Delivering highly anticipated video games and movie releases to stores three days prior to their street date is practically a law in the entertainment industry. So when Camarillo, Calif.-based Technicolor Global Logistics, the supply chain and logistics arm of entertainment technology company Technicolor Worldwide, learned that an air shipment headed to Alaska would not make it on time, its customer service team jumped into action, asking its local last-mile service provider to call every store expecting delivery and convince the management to stay open extra hours so Technicolor could make the three-day window.

Technicolor Global Logistics works hard to deliver that level of service, says Elaine Singleton, the company's vice president of supply chain.

Every company knows customer service is important; but it is seldom well-defined, and even more rarely measured in logistics operations.

Many logistics service providers tout their customer service excellence, and shippers give equal voice to the importance of customer service, particularly when the vendor relationship is more than transactional. But it is often easier to spot a customer service failure than to define excellence.

Many providers cite standard key performance indicators (KPIs) such as on-time delivery and order fill rate as proof of their customer service prowess. Others, however, insist customer service falls into its own category, and deserves its own standards of measurement.

"Customer service is often lumped with service execution, and many businesses don't differentiate between the two," says Jim Craig, chief marketing officer with third-party logistics (3PL) provider BNSF Logistics, a wholly owned subsidiary of Burlington Northern Santa Fe with domestic headquarters in Springdale, Ark. "The KPIs we provide are related to service. Timely delivery of those KPIs equates to good customer service."

The focus on customer service is starting to increase as some shippers and their service providers work to develop deeper, more collaborative, and mutually beneficial relationships. At this level, competently executing services such as warehousing and transportation procurement is expected. Service providers stand out by adding value, and customer service is a substantial part of the equation. Its growing importance means customer service must be made more measurable — as the adage goes, you can't manage what you can't measure.

THE CHALLENGE OF MEASURING GOOD SERVICE

Measuring customer service is not easy. In addition to being a soft benefit that defies a uniform definition, it is also relatively unexamined. Most shippers serve end customers via the supply chain, so any definition of a satisfactory experience has to start with those end customers' expectations.

"Often, however, the 3PL's customer has not defined customer service," says Karl Manrodt, Ph.D., associate professor in the department of management, marketing, and logistics at Georgia Southern University, Statesboro, Ga. Any definition of good customer service is incomplete if it is not based on customer views.

Another challenge is making aspects of customer service measurable. Not every quality lends itself to a numerical scale — honesty, for example.

"I expect 3PLs to be honest with me, and to let me know if they can't meet my expectations. That's my greatest customer service need," says Mary Barker, office manager and logistics supervisor for Fixture Finders. The Wyoming, Mich., store fixtures liquidator books trucks through Columbus, Ohio-based transportation and logistics provider Zipline Logistics so it can clear out stores quickly to avoid rental fees.

Then there's the issue of leveraging the cost of good service. Service providers such as 3PLs must invest in people, processes, and technology to deliver high-quality service, but not all shippers are willing to pay for that. So the provider must develop strategies to serve each shipper at its desired level of service, without creating fragmented processes that result in inefficiency.

DEFINING CUSTOMER SERVICE METRICS

Even a metric as seemingly clear-cut as on-time delivery (OTD) is subject to opinion. A carrier might exclude deliveries missed due to emergency construction, for example, while a consignee stills counts that shipment as late. In researching their book *Keeping Score: Measuring the Business Value of Logistics in the Supply Chain*, Dr. Manrodt and his co-authors found two in five respondents did not know how their OTD metric was defined.

Nailing down a quantifiable metric for something as variable as customer service is that much more difficult. In some cases, it is 3PLs rather than shippers that are advocating for the use of customer service KPIs.

"It's rare for shippers to ask for customer service KPIs," says BNSF's Craig. "We often raise the subject, and they are typically in favor of it. After a few months, they say they would miss having the data if we stopped providing it. We think it's a competitive differentiator."

So what is a customer service KPI? Some examples include:

- Time taken to answer calls or fulfill quote requests.
- Timeliness of electronic data interchange transactions, status updates, and reporting.

Kane Is Able promotes better customer service by communicating with warehouse workers about how their performance affects end customers.


LTL SERVICE
LOGISTICS
FREIGHT
ASSET-BASED
SERVICES
REFRIGERATED
FLEXIBILITY
TRUCKLOAD
INTERMODAL
TRANSPORT
EXPEDITED
SHIPPING
DELIVERY
AIR CARGO
COMMUNICATION
DOOR-TO-DOOR
TEMPERATURE CONTROLLED
SUPPLY CHAIN MANAGEMENT
WAREHOUSE SERVICES

■ Frequency of end-customer visits and customer surveys.

■ Flexibility demonstrated by the service provider.

■ Engagement demonstrated by customer service staff.

■ Performance in executing escalation processes and decision trees.

■ Frequency and quality of supply chain recommendations.

Many of BNSF's customer service KPIs focus on the processes and technologies it uses to provide shippers with visibility, such as moving to a phone call when an exchange with a customer exceeds two back-and-forth e-mails.

"Customer service is synonymous with communication," says Craig. "If two 3PLs are similar on price and service, customer service is the way one stands out. 3PLs make themselves more valuable through communication, accessibility, and engagement."

GATHERING FEEDBACK

All the metrics in the world are meaningless unless there is an infrastructure to measure them, and that's where customer service KPIs can fail to deliver. Assessing a factor as subjective as satisfaction requires a human to assign a rating. Shippers report more success in measuring subjective customer service ratings in business-to-consumer logistics than in business-to-business.

Last-mile logistics provider 3PD capitalizes on this opportunity. The Atlanta-based company recognized that as a last-mile delivery provider for home goods retailers and manufacturers, its services represented an extension of those brands. So eight years ago, the 3PL initiated a post-delivery audit program.

Fifteen minutes after 3PD's driver captures a consumer's signature, the consumer receives a two-minute, five-question call, with the chance to leave any comments via voice mail. Low scores are routed to a marketing manager who can quickly seek to appease dissatisfied customers. The brand also receives feedback, which is shared at the next morning's meeting with drivers.

"Our entire company — even the information technology staff — receives bonuses based on our quality score," says Tim Dreffer, senior vice president at 3PD. "Two companies can have all the same processes, but we stand out because of our execution."

Ann Arbor, Mich.-based cabinet manufacturer Masco Cabinetry — which consists of brands KraftMaid, Merillat, Quality, and Denova — lost critical visibility into the customer delivery experience of the KraftMaid brand. In 2000, the company exited the delivery business in the face of mounting transportation regulations. The 3PL it first used failed horribly.

It took several years for KraftMaid to establish a network of three 3PLs that met its requirements. Just one of these, 3PD, offers automated post-delivery audits, which Masco considers critical.

"The delivery experience is a vital part of purchasing a KraftMaid cabinet," says Tom Bolden, director of logistics for Masco. "We believe our final-mile carriers are an extension of the KraftMaid brand, and 3PD's post-delivery audit allows us to have immediate and constant feedback about what our consumers are experiencing. This feedback drives accountability all the way to the drivers and their helpers. If consumers are not happy with the delivery, we are not happy.

"3PD's internal KPIs are very stringent," Bolden adds. "They can tell us the direction operations are going, what consumers are experiencing, whether drivers are performing as they should, and if they're satisfying the customer. 3PD can document its performance based on actual survey data, compared to other 3PLs who have no survey data to support their statements."

Because kitchen cabinets are a seldom-repeated purchase, Masco Cabinetry's big concern is having dissatisfied consumers. With the ease of posting complaints on social media, Masco wants to prevent any unacceptable experience from occurring.

"3PD's post-delivery audit survey holds drivers accountable for their performance," Bolden says.

Zipline Logistics' executive partners *(l. to r.)* Edward Williams, John Rodeheffer, and Andrew Lynch added carrier CSA scores to the metrics they provide their customers.

With about 30 percent of its orders delivered to businesses, Masco tried using post-delivery audits to monitor those deliveries as well. "Unfortunately, some retail businesses don't like to receive those calls," says Bolden. "We tried, but we had 3PD shut it off after receiving some negative feedback from retailers."

3PD's Dreffer notes it can be hard to ensure the recipient of a text, e-mail, or phone-based survey in a business was actually there for the delivery, and standing

End customers receiving shipments from last-mile logistics provider 3PD offer feedback via post-delivery audit surveys, making drivers accountable for their performance. The company's entire staff receives bonuses based on these quality scores.

over a customer while they complete it tends to skew the results.

Setting up KPIs for customer service is similar to crafting metrics around execution performance. But it does require looking carefully at assumptions and expectations that have not been closely examined in the past. Here are some steps to customer service KPI success:

1. Determine the need. Shippers and 3PLs must understand expectations in order to ensure they are fulfilled. Many 3PLs start their plan for defining and measuring the customer service they provide a shipper during the pre-sale and on-boarding process. Compliance mandates are often part of the service definition. Some shippers base customer service metrics on their own research into customer needs, and prefer to keep their 3PLs and customers away from one another; others encourage their service providers to talk to end customers directly.

One large shipper customer of Kane Is Able, a 3PL serving the U.S. consumer packaged goods market, requires its 3PLs to conduct at least eight customer visits a year to discuss service issues, supplementing these with their own visits.

"We talk about how we're meeting their supply chain needs, what defines a failure, and the impact," says Steve Buckman, vice president of operations at the Scranton, Pa.-based 3PL. Those in-person visits enhance relationships, particularly with the shipper's customer service representative (CSR), making future issues easier to resolve. Shippers tend to feel strongly aligned with their CSRs, Buckman notes.

Surveys are another popular tool to supplement anecdotal reports and customer visits. In its customer survey, MD Logistics, an Indianapolis 3PL specializing in life sciences and pharmaceuticals, retail and consumer goods, and transportation services, found "the feedback is positive overall, but there were some surprising results," says John Sell, vice president, retail and transportation solutions at MD Logistics. "It brought to light some service elements we hadn't thought about."

Some 3PLs serving the retail industry also survey store managers to gather direct feedback on customer service matters.

2. Segment by expectation. Not every shipper seeks high value from its 3PLs, and shippers vary widely in their definition of customer service. Shippers need to assess their own expectations and the value they place on services before engaging a 3PL.

For 3PLs, tailoring processes to every customer can be costly, a lesson learned by UTi Worldwide, a non-asset-based supply chain management company in Long Beach, Calif. "We started at one end of the spectrum, customizing every service," recalls Jeff Bauer, global vice president, client services for UTi. "It was expensive."

The 3PL began segmenting its customer base, offering a menu of about 30 services it could provide all clients and another 30 that are more customized. Clients choose the additional services they want to procure, and UTi's IT helps workers ensure those services and metrics are implemented appropriately for each customer.

"The larger the customer, the more we move from configurable to customized," explains Ed Feitzinger, executive vice president, global operations for UTi.

SETTING HIGH STANDARDS

Another way to tackle discrepancies in customer service expectations is to set internal standards that are higher than most shippers would request on their own. Technicolor Global Logistics achieves this goal by investing heavily in processes and technology such as visibility,

business intelligence, and planning systems that ensure high performance levels and provide customers with real-time shipment information.

3. Define customer service-specific KPIs. The onboarding process for any shipper-3PL relationship includes establishing KPIs. Clarity is critical in this step; if two parties can have different definitions for something as seemingly clear-cut as on-time delivery, then a softer metric such as customer service is even more important to spell out.

Greg Younghans, vice president of operations for UTi, recommends no more than 10 to 15 core metrics, including hard and soft measures. "While it's important to measure, you don't want to be paralyzed by analysis," he says.

For Zipline Logistics, working with high-quality partners is a part of its commitment to customer service. The 3PL has incorporated into its customer reporting metrics the Federal Motor Carrier Safety Administration's Compliance, Safety, Accountability (CSA) scores for the carriers Zipline selects on the shipper's behalf.

"Choosing the right carriers to work with is critical," says John Rodeheffer, a partner at Zipline. "It's important that they be quality providers of both equipment and service."

4. Ensure an internal 3PL infrastructure that emphasizes and rewards customer service. Many 3PLs credit technology with enabling the processes they need to ensure each shipper receives the expected customer service levels. Systems help employees track the services each customer expects, and how they're measured. Technology also enables 3PLs to provide shippers with visibility into KPI compliance at all times.

Continual data gathering and reporting ensures 3PL performance aligns with KPIs. "It drives accountability," says Masco Cabinetry's Bolden.

CULTURE CLUB

Internal culture is also a key factor in providing quality customer service. BNSF, for example, maintains a celebratory environment that recognizes and rewards employees for their customer service efforts. Employees even came up with the company's tag line: "Yeah, we can do that."

Tracking customer service KPIs enables the 3PL to analyze services provided to an individual customer down to the office level, so others can adopt the best practices used by the location that delivers the best service numbers to that shipper.

Customer service KPIs help Kane Is Able close the loop with internal staff, allowing them to see the direct impact of their services on the 3PL's long-term relationship with the customer.

"Delivering concrete information to an associate is more compelling than simply stating we should perform better," says Buckman. "Associates can see that when they load a shipment, someone else is unloading it, and experiences a real impact if a loading error occurs."

Shippers also look for a culture of continuous improvement. It's all well and good for a 3PL to address customer service and other requirements at the outset of a relationship, says Bolden, but he also judges 3PLs on their ability to monitor the business and offer ideas to optimize the network as the business changes.

"This allows us to control our freight spend to the best of our ability and be a leader in the industry," he notes.

> "I expect 3PLs to be honest with me, and to let me know if they can't meet my expectations. That's my greatest customer service need."
>
> —**Mary Barker,** Logistics Supervisor, Fixture Finders

Excellent customer service has become table stakes for 3PLs offering value-added services. But that doesn't mean they can always afford to absorb the cost. 3PLs sometimes look for rewards, revenue-sharing opportunities, long-term contracts, or a combination of these when they commit to delivering customer services that have a significant impact on boosting growth or reducing costs for shippers.

PROVING THE VALUE

3PD proves the value offered by its post-delivery audit services by determining the potential impact of providing excellent customer service for potential retail clients. It calculates the lifetime value of a customer to that retailer multiplied by preserving the loyalty of half of those who interacted with customer service in a post-audit survey. So if the average lifetime value is $5,000, for example, and of the 2,500 customers providing comments, half are preserved, that represents $6.25 million.

"Many companies are thinking more strategically and long-term," says Dr. Manrodt. "They're saying, 'If the 3PL saves money, I save money,' while 3PLs are saying, 'If I bring transformation to an organization, I need to get paid for it.'"

A bonus might be tied to a positive assessment of end-customer happiness, he adds.

"Most shippers that take a partnering approach are willing to pay incentives on a few very measurable items," explains UTi's Feitzinger. "On the other hand, if service providers do not meet some metrics, they also pay a penalty."

Shippers' interest in these arrangements may be cyclical, depending on economic factors such as available capacity and corporate cost-cutting initiatives. That makes it hard for 3PLs to continue providing high customer service levels — even though 3PLs say shippers' expectations don't tend to decline alongside the budget.

In general, however, the supply chain industry is "becoming more focused on defining standards and networks," says UTi's Younghans. "More performance data is available, which makes more customer service activities possible.

"Companies are differentiating themselves from competitors based on how they interact with customers," he adds. ■

WEAVING A NEW, STRONG NORTH AMERICAN PRESENCE

Geodis Wilson helps fashion powerhouse Desigual establish its U.S. operations and ensure the latest fashions are immediately delivered.

THE CUSTOMER

Desigual
New York, New York (N.A. HQ)
www.desigual.com
Desigual is an international clothing/fashion designer, manufacturer, retailer, distributor, and wholesaler. It sells 25 million garments annually in 72 countries. It has opened more than 14 of its own U.S. stores since 2010. Its motto resides on designing pieces that generate positive feelings at an affordable price.

THE PARTNER

Geodis Wilson
Iselin, New Jersey (N.A. HQ)
www.geodiswilson.com
With 7,300 employees in more than 50 countries, Geodis Wilson is one of the world's largest freight forwarders and 3PLs, building partnerships and serving customers with integrated supply chain solutions that deliver cargo by air, ocean, and ground worldwide. Its Fashion and Lifestyle vertical division helps global brands deliver on time and reduce costs by optimizing their supply chain.

When apparel company Desigual began U.S. operations in 2009, it had no retail presence or local resources. Having worked with Geodis Wilson in Europe and Asia since 2006, Desigual turned to its partner for assistance with building its U.S. operations. In 2010, Geodis Wilson helped the European fashion label open a dozen retail stores in major U.S. cities, with 11 more to follow in the next two years. Now Geodis Wilson handles 80 percent of the one million garments Desigual moves in North America annually.

Before Geodis Wilson stepped in, Desigual had problems with its warehouse, particularly in inventory control, product visibility, and delivering and receiving processes. Geodis Wilson integrated Desigual's information systems, streamlining efficiencies in imports, customs brokerage, and overall track-and-trace capabilities from point of origin to delivery to Desigual's retail stores.

THE FABRIC OF A STRONG PARTNERSHIP

"Geodis Wilson has done so much to help us succeed, I feel like they are truly an extension of our company," says Priscila Lopez, Desigual's North American operational manager.

Geodis Wilson has demonstrated its substantial commitment to Desigual in the following ways:

- Providing 24/7 service and a single point of contact. Geodis Wilson intimately knows Desigual's business, and is fully accountable at all levels.

- The Geodis Wilson team built partnerships with Desigual's warehousing and manufacturing entities in China, India, and the United States to understand its supply chain operations and systems; further integrate processes; and ensure solid customer service, connectivity, efficiencies, and cost and time savings. "They know these facilities as well as or better than I do," says Lopez.
- Geodis Wilson provides Desigual with ideas to enhance supply chain operations, information, and processes to reduce costs and improve service.
- Customs brokerage is crucial, as different restriction and classification codes apply to each garment entering the United States. Geodis Wilson works with Desigual every year to help sort thousands of garments entering the country, which enables shipments to clear efficiently and on time.

"Geodis Wilson has gone far beyond my expectations," Lopez says. "They put tremendous effort into getting to know our business. We are fortunate to have a true, totally dedicated partner."

A WINDOW OF OPPORTUNITY

Window and door maker Simonton Windows partners with Cardinal Logistics to open the door to new efficiencies.

THE CUSTOMER

Simonton Windows

Columbus, Ohio

www.simonton.com

Simonton Windows, part of Fortune Brands Home and Security (FBHS), produces ENERGY STAR-qualified replacement and new construction windows and doors, including a line of impact-resistant products.

THE PARTNER

Cardinal Logistics Management

Concord, North Carolina

www.cardlog.com

Cardinal develops and implements customized transportation solutions for its clients' unique supply chains. Services include dedicated contract carriage, home and jobsite delivery, bulk transport, transportation management, and Software-as-a-Service solutions.

Simonton Windows manufactures award-recognized products nationwide to key markets throughout the 48 contiguous United States and in Canada. Cardinal provides dedicated delivery to Simonton's dealers and big box retailers across the United States.

Simonton's hallmark is delivering the industry's shortest, most dependable lead times. Partnering with Cardinal has enabled the company to continue its award-winning order-to-delivery time.

Simonton operates three manufacturing plants located in sparsely populated areas. Cardinal analyzed Simonton's facility locations relative to its customer base and delivery points, and created several remote domiciles throughout the country. In some cases, one-way carriers now deliver windows from the manufacturing plants to the domiciles

in more densely populated areas and closer to customers. Cardinal drivers receive the loaded trailers from the one-way carriers and deliver the product, reducing empty miles returning to the plants, and shortening lead times. Third-party backhauls play a key role in minimizing costs.

Cardinal also implemented routing and scheduling technology to achieve better equipment and driver utilization. Simonton's business can experience seasonality, and Cardinal's ability to add and delete resources is a key part of the program. In the aftermath of Hurricane Sandy, the partnership proved beneficial to support Simonton's additional volume for emergency response. Cardinal's expansive driver and management infrastructure allowed it to move loads on short notice.

Cardinal's proprietary mobile handheld technology, Cardinal Activity Tracker, provides real-time status updates and assists drivers to ensure delivery accuracy at multiple stops along a single route. Each delivery is tracked through a route monitor so Cardinal, Simonton, and Simonton's customers are aware of completed on-time deliveries and delays as they happen.

Partnering with Cardinal brings new efficiencies to Simonton's already acclaimed lead times and customer service. Key measurements are closely monitored to identify new opportunities, and future plans call for Cardinal to automate notifying customers of delivery times and manifests.

"Our partnership with Cardinal has allowed us greater efficiencies and the ability to maintain the most important value propositions we offer our customers: excellence in delivery, and industry lead times that are second to none," says Andy Shashlo, senior vice president of operations, Simonton.

FOOD LOGISTICS TAPS INTO TECH SOLUTIONS

Smart technology helps cold chain shippers prevent product spoilage and loss.

by Marty Weil

FROM THE TIME FOOD IS HARVESTED, CONTAMINATION RISK EXISTS in every phase from farm to fork. Washing and cleaning produce seems like a safe step—but not if the process involves tainted water. Unsanitary packaging, handling, and transportation equipment represent additional sources of contamination.

Some food products are at higher risk than others. "Cantaloupes had a bad year in 2012," notes Kevin Payne, senior director at Santa Clara, Calif.-based Intelleflex, a global supplier of on-demand data visibility solutions. An August 2012 salmonella outbreak linked to cantaloupes infected 178 people, resulting in 62 hospitalizations and two deaths, according to the Centers for Disease Control and Prevention.

"A number of variables impact safe food handling during transport from field to table, and all of them are difficult to control," explains Payne. "Nearly every food item has some level of bacteria. It is impossible to remove it all, and cantaloupe is particularly difficult because of the nature of the rind. If handlers store and manage the product properly through the cold chain, however, they can nearly eliminate the risk of bacterial infection."

An unbroken cold chain comprises an uninterrupted series of storage and distribution activities that maintain a given temperature range. It is used to help ensure product safety and extend the shelf life of items such as fresh agricultural produce, seafood, frozen food, photographic film, chemicals, and pharmaceutical drugs.

"The cantaloupe-related outbreak illustrates several cold chain challenges," Payne continues. "One is identifying at-risk product, which results from improper temperature management. Another is speeding the recalls of bad product."

Recent legislation may help shippers and cold chain logistics providers address both challenges. The Food Safety Modernization Act, passed in 2010, requires food facilities to evaluate hazards, implement preventive controls, and create food safety plans.

"The legislation was the first major overhaul to food safety laws since the Food, Drug, and Cosmetic Act in the 1930s," Payne says. "It was long overdue, and changed the philosophy behind food safety from reactive to proactive, which is a fundamental shift."

Today, the proactive approach is to document proper product handling and temperature maintenance from the field through the retailer. A range of new technologies supports these efforts.

Tagging the Goods

The principal tool used for tracking and tracing perishables is the temperature tag, or "temp tag."

"Temperature tags provide real-time temperature data, and allow handlers to respond to any problems," says Rod Bernard, director of quality assurance and food safety at Pompano Beach, Fla.-based produce supplier Southern Specialties. "They gather data continuously, in contrast to point-driven downloads by data recorders."

Southern Specialties uses a tag called Xsense, manufactured by Israeli technology firm BT9 Ltd. The Xsense system monitors, analyzes, and disseminates relevant shipment data, and recommends how to manage products throughout the entire cold chain, ensuring the viability of a product's optimal environment from start to finish. The data it provides gives cold chain stakeholders transparency and control over their perishables, no matter where they are.

"Xsense communicates with a control unit," Bernard notes. "This is valuable because the tag is placed during packing, so we monitor the shipment's condition from that instant until it arrives at the Southern Specialties facility."

Some companies apply tags only on departure, leaving shippers unable to monitor pre-departure conditions. One shipment of berries arrived at a Southern Specialties facility showing only a two-degree difference in temperature from departure to arrival. The historical data from the temp tags, however, noted a 10-degree shift had occurred in transit.

"This information allows us to adjust how we handle the product, because it will have a shorter shelf life," Bernard says. "We can take action such as shipping shorter distances, cooling the products, and continually monitoring the shipment."

Monitoring perishable products is vital because of the "cliff of spoilage." "When product moves through the supply chain, it doesn't appear to spoil until just before it does," Payne explains. "We call this the cliff of spoilage."

Because of the cliff of spoilage, shipment rejections tend to occur at the end of the supply chain, a cost ultimately borne by the grower. Although growers typically estimate that loss, called shrink, at two to four percent of production, Intelleflex tags have demonstrated that eight to 10 percent may be more accurate—and that loss rates can reach 20 percent for some growers.

"Growers are losing more of their crop than they think," says Payne. "Monitoring temperature allows shippers and cold chain logistics providers to gauge relative shelf life." This allows them to reprioritize distribution to move product with a short shelf life to market faster.

"Instead of losing 10 percent of a crop to spoilage, cold chain shippers can save all but one or two percent," notes Payne.

Including temperature tags in perishables shipments allows shippers and logistics providers to monitor in-transit conditions for any deviation from the required temperature.

Steps Toward Consumer Safety

In addition to preventing shrink, cold chain monitoring tools help minimize consumer health risks. "Using these technologies has allowed us to minimize the food safety risk when transporting fresh and frozen seafood products," says Sal Battaglia, director of operations at Vaughan, Ontario-based Seacore Seafoods.

Seacore uses both GPS tracking and downloadable temperature data loggers on its trucks. "These tools ensure that products remain at the ideal temperature, and that

the shipment comes straight to our facility without any delays," he explains. "With these technologies in place, we can tell right away if the inbound logistics played any part in a food safety or product quality issue."

Establishing the Links

One challenge cold chain shippers face is coordinating safe post-harvest handling, freight forwarding, and the latest technology.

"The University of Florida Food Science Technology Center has trained our staff to better understand grower and packer procedures, and how logistics and post-harvest processes can work together to maintain the cold chain and ensure hygiene across the supply chain," says Frank Cascante, head of consumer and perishable logistics at DHL Global Forwarding.

DHL uses GPS-driven data temperature tags based on radio frequency identification technology. "These sensors are not just data recorders; they're data loggers," says Cascante. "Recorders register temperature and humidity at a relay point—such as logistics site, departure point, and destination—but loggers report hourly or even minute-by-minute history."

The data the loggers provide gives shippers and logistics providers valuable insight. "For a shipment of Peruvian asparagus, temperature and humidity monitoring tags were installed as one of our first protocols," Cascante recalls. "The container was exported from a new packing facility in Peru that we hadn't worked with before, and it was an urgent load during the peak of the European season.

"When we downloaded the temp tags in Panama, we determined that the temperature regulations had not been met post-harvest; the proper pre-cooling had not been done at the facility," he continues. "In fact, there was already some odor of decay. Immediately, we notified both origin and destination parties that the product was going to decay extremely fast. The consignee agreed with the shipper not to receive that load."

That critical decision helped DHL avoid a significant claim; because this was the seasonal peak, an asparagus load could have cost $70,000 to $80,000.

Cold chain monitoring detects not only temperature fluctuations, but possible occurrences of intentional shipment contamination.

DHL's Smart Sensor data loggers register shipment temperature and humidity in real time to detect fluctuations and help prevent spoilage.

Beyond Food Safety: Food Defense

"The biggest challenge food companies face is 'food defense'—preventing the intentional adulteration of food," says Don Hsieh, director of commercial industrial marketing at Boca Raton, Fla.-based security solutions provider Tyco Integrated Security. "This threat is probably greatest during movement through the supply chain."

The food supply chain has grown increasingly longer over the past few years, primarily because consumers want year-round access to produce that used to be sold seasonally.

To meet this demand, products are being sourced from uncommon areas, such as Asia and the Southern Hemisphere. The longer the supply chain, the greater the exposure and risk.

Cargo theft has also increased. Food and beverage thefts accounted for the highest number of cargo thefts of any industry in 2010 and 2011, according to FreightWatch International, which tracks U.S. cargo theft. This is the first time food and beverage has topped the list, which used to be led by high-value products such as electronics.

Food theft becomes a safety concern for products requiring refrigeration. Thieves steal the product to resell it, but they have no concern that the product stays within the prescribed temperature range. If it is resold into the legitimate supply chain and causes foodborne illness, the manufacturer's reputation suffers.

The same technologies that ensure temperature integrity of perishables in the cold chain can help track and monitor food defense concerns.

Patterns of Improvement

Traceability is increasingly important in a food supply chain that is becoming more global in scope. "It isn't sufficient to know where a product was manufactured; you must know the origin of the individual ingredients that make up the finished product, as well as the condition they were kept in at all points along the supply chain," says Keith Sherry, general manager of supply chain services at BT Global Services, a technology provider with U.S. headquarters in Englewood Cliffs, N.J.

A loaf of multigrain bread made in the United States, for example, contains seven ingredients, sourced from 18 different countries. It is sold in 224,000 retail food stores and 935,000 retail food outlets. A contamination issue with any of the bread's ingredients can affect thousands of consumers, so manufacturers must be able to track every component.

Today's technology makes this visibility possible. From monitoring temperatures to detecting shipment tampering, cold chain tracking tools are helping perishables shippers keep their cool. ■


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PANAMA CANAL

More Questions Than Answers

As the Panama Canal expansion nears completion, shippers could gain a viable all-water alternative for transporting product from Asia to U.S. East Coast and Gulf Coast ports. Is there a boom on the horizon?

by Joseph O'Reilly

What goes around comes around. It's an adage that accurately reflects the ebbs and flows of global supply chains. Economic cycles trigger shifts in sourcing patterns as new manufacturing locations come online and consumption markets grow. Then there is the Panama Canal. As its centennial coincides with the expansion of a third set of locks, the Canal is poised to charter a new reckoning for 21st-century shippers. What goes around comes around.

Investment and development have picked up at ports on the U.S. East and Gulf coasts, and specifically in the southeastern United States. Industry prognosticators have suggested a subtle container volume shift from the U.S. West Coast to the East Coast—mere percentage-point gains that could create a cargo bonanza in places such as Miami, Savannah, Charleston, and Norfolk.

There is precedent for this shift, although it was largely unfulfilled. A decade ago, following the 2002 West Coast port strike, industry began exploring Asia-to-U.S. East Coast routings. In 2005, increasing congestion at West Coast ports—combined with growing capacity constraints and greater demand for supply chain predictability—compelled global shippers to stay the course. While ports such as New York/New Jersey and Savannah experienced marked gains, a seismic shuffle in East Coast-West Coast container trade balance predicted by some failed to materialize.

Today, speculation outside the East Coast is grounded by reality. Ocean carriers and shippers undoubtedly stand to gain economies when larger vessels transit the Canal. A bifurcation in asset use will likely occur as mega containerships load and unload at fewer ports, and smaller feeder ships ferry freight from transshipment hubs.

What remains to be seen is how ocean carriers adjust their services and rates across the country—adjustments that will ultimately be predicated by whether shippers find enough total landed cost gains in all-water transit to the East Coast versus traditional West Coast intermodal landbridge designs.

While businesses are exercising caution as they consider how to prepare for a Panama Canal surge, equal intrigue exists regarding how this trade could play within the broader global framework. All-water East Coast routings provide yet another viable option for transporting product into the United States—and in this day and age, shippers can never have too many options. But ongoing development in Panama, a coalescing business case for near-sourcing,

Florida's Port Manatee, the closest U.S. deepwater seaport to the Panama Canal, is expanding to prepare for increased vessel traffic.

PHOTO CREDIT: Manatee County Port Authority and South America's economic awakening may ultimately be the forces that tip the balance in favor of one direction—or both.

Circumnavigating Labor Unease

The International Longshoremen's Association's (ILA) latest strike threat at the Ports of Long Beach and Los Angeles has put industry on notice—if it wasn't already. The ILA's summer 2012 contract standoff at U.S. East and Gulf Coast ports—a resolution that is still pending—forced many shippers to plan for possible disruptions.

One Georgia-based importer, for example, shifted some domestic production back to China so it could bring more finished goods through its West Coast facility rather than the Port of Savannah. A California ports strike might turn that scenario on end.

Similar narratives are unfolding across the country as the hint of labor discord continues to feed contingency machines. There is reason for concern. The 2002 West Coast ports lockout stranded freight-laden ships at sea for 10 days during the busiest shipping season of the year. At the time, one consultant pegged the total economic impact at $5 billion, while more conservative estimates came in closer to $1 billion. Today, with the threat of a fiscal cliff looming, any further work stoppage at U.S. ports will send an already sputtering economy into a tailspin.

The current labor predicament demonstrates a need for sourcing and transportation flexibility. And that's what brought the Panama Canal into focus a decade ago.

"Beginning with the ports strike in 2002, shippers began diversifying to other ports — and that remained a trend the past 10 years," says David Twist, head of research for San Francisco-based industrial real estate developer ProLogis. "Over time, more capacity has flowed to the East Coast."

Ten years removed from the crisis, the Panama Canal still remains on the horizon. All-water sailings to the East Coast – with the added benefit of slow-steaming to reduce fuel use and cost—pose new intrigue. The expansion project is creating more buzz, and poses more supply chain risk than in 2002.

"Because the strike happened a decade ago, people forget," says Jose Acosta, vice president, public affairs and strategy, UPS Latin America. "The Panama Canal shift will not be cataclysmic; it will be gradual. Companies will dip their toe in the water to see how it works, and how they can manage that balance going forward."

Many logistics experts share Acosta's opinion. The Panama Canal expansion brings flexibility to the table in terms of unlocking capacity and alleviating a critical global bottleneck. In effect, it creates a counterbalance to West Coast-centric sourcing strategies. Asia at large, and China specifically, command U.S. interests and resources, with many companies making significant long-term investments there.

Surveying the Options

Even compared to 10 years ago, new transportation options are emerging on the West Coast of North America, mitigating latent capacity and congestion concerns. British Columbia's Port of Prince Rupert, for example, is the closest deepwater North American port to Asia, and has direct intermodal connections to the U.S. Midwest with Canadian National Railway. In Mexico, the Pacific Coast ports of Lázaro Cárdenas and Manzanillo provide backdoor access to the U.S. Southwest. Even the U.S. East Coast-Suez trade has grown as Asian manufacturing continues to migrate west, and India's economy slowly opens up.

What has changed is that U.S. shippers and importers are looking at the supply chain from a strategic advantage standpoint. They are taking a more analytical approach to optimizing inventories and costs, and streamlining the entire process.

"The Panama Canal gives us options to create flexible solutions," explains Kim Wertheimer, executive vice president, strategic development for global logistics solutions provider CEVA Logistics. "Shippers are concerned about labor disruptions on the West Coast. So we're working with them to assess current routings and economics to find options that enable them to improve transit time speed and velocity; total landed costs; and supply chain reliability in terms of minimizing disruptions and dwell times."

Leaning on Supply Chain Flexibility

Shippers are considerably more exposed to risk today than they were in 2002. On the whiplash end of a major economic recession, companies can't afford any supply chain disruptions that threaten the bottom line—especially during the lucrative holiday season.

More telling, companies have been running much leaner in the past few years, a consequence of the flush credit, bloated inventories, and fixed networks that exacerbated their vulnerability when the recession grabbed hold in 2009.

"Although inventory-to-sales ratios don't indicate this, industry is trying to become more sophisticated and run tighter on inventory," says David Caines, president of Kenco Logistic Services, a Chattanooga, Tenn.-based 3PL. "Companies are more sensitive to any supply chain wrinkle that creates a bigger wake.

"Companies see the Panama Canal expansion as an opportunity to add new elements into their network optimization studies—factors they wouldn't have considered before," he adds. "It's part of the conversation as companies look forward three to five years and plan what they will do with their networks. But I don't see many pushing to be first in line."

Kenco recently secured its first port-related new site contract going into Savannah for a Chinese manufacturer. The customer is taking a three-pronged approach in how it brings product into the United States, specifying Los Angeles, Savannah, and New York/New Jersey as ports of entry. It plans to serve those markets directly from those ports.

While Kenco hasn't seen a marked port-centric shift among its clients, shippers are favoring smaller facilities in more locations. "A company may specify that it doesn't want just an east-and-west presence, a two-node network," Caines says. "It may want a five-node network with a smaller footprint in each city. That is the trend."

While Caines cites the Chinese manufacturer as a classic example of what companies might do, he doesn't expect a tidal wave. Shippers are exploring all their options. Whether it's shipping through the Panama Canal and coming up the East Coast, or going through Prince Rupert

Construction on the Panama Canal's third set of locks should be completed by 2015.

and using the intermodal landbridge to access Midwest markets, companies want to create agility and identify secondary and tertiary positions to flow product.

That's also why Wertheimer sees shippers turning to all-water options through the Panama Canal as a matter of contingency, rather than a permanent East Coast-West Coast balance. Cost remains the most critical component in any sourcing decision, especially for commoditized trades where margins have been razor-thin over the past few years. When the expanded Panama Canal comes online, ocean carriers will have to weigh the economics of serving East and West Coast ports—and shippers will have to follow suit.

"Typically, ocean transit from Asia to the U.S. West Coast takes about 12 days," Wertheimer says. "Intermodal adds another five to eight days to the East Coast or Southeast—so transit time is 18 days on average. It takes 24-plus days through the Panama Canal. That makes a big difference in cost and inventory implications. And West Coast intermodal infrastructure is well-developed by comparison."

Building in Reliability, Scalability

Whether shippers are seeking sourcing balance or merely creating another transportation contingency by exploring Panama Canal routings may be a matter of semantics. Either way, building more reliability and scalability into global networks is compulsory. Some companies are looking at new global markets they can source from and sell into, while at the same time creating overlaps and redundancies in their supply chains. This places equal burden on domestic networks to flex with changing supply locations.

The reverse logic also holds true. Companies that have built scalability into their U.S. domestic networks—whether through multiple ports of entry, variable-cost-driven 3PL partnerships, or fixed assets in strategic locations—have more latitude to adapt their sourcing activities.

Acosta, like others, says human nature will dictate how companies react to the Panama Canal expansion. "People like familiarity, so they won't jump off a cliff," he says. "But once the Panama Canal opens, someone will take advantage of the idea. If it adds to their profit margin, then others will follow. There could be an incremental increase, then companies will seek a balance somewhere in between."

Companies that are thinking about the Panama Canal today are inevitably looking at the future state of their supply chain—perhaps prioritizing investment in the Southeast to tap a rapidly growing consumer base or serve as a stepping stone into the Latin American market. The real potential of the Panama Canal may have less to do with the Canal itself than with Panama at large.

Latin America's Singapore

As much as industry sources remain guarded in their assessment of the Panama Canal's effect on U.S. distribution patterns moving forward, they have fewer reservations about Panama's prospects.

"President Ricardo Martinelli and others have a vision of what they need to do in Panama—and it's not just about the Canal," says Acosta. "They want to transform Panama into something akin to what Singapore has become for Asia. Its strategic location in the region will be important in terms of enhancing the Canal and making the country a logistics hub."

Acosta, who has met with President Martinelli and Colombia President Juan Manuel Santos to discuss their respective countries' roles in facilitating trade throughout the region, is bullish about Panama's potential as a major redistribution hub. The leaders have an infrastructure plan in place for improving ports, airports, road networks, and technology. All these factors tie together with the goal of making this hub vision a reality.

While transforming Panama into Latin America's Singapore may be stretching the realm of possibility—given the city-state's unique combination of business and cultural discipline—the ambition is striking, if not contagious. It frames Panama in a much different context: as a global pivot, not simply a conduit for trade. This

North American Routing Options

When the Panama Canal expansion opens in 2015, shippers moving cargo from Asia to North America will have to carefully consider the efficiency of bringing goods in through the various East and West Coast ports. Here, for example, are estimated transit times (in days) from Shanghai to North American destinations.

Port Traffic (TEUs, 2008)

- More Than 2.5 Million
- 1 Million to 2.5 Million
- 0.5 Million to 1 Million
- Less Than 0.5 Million

00 **Days in Transit**

Source: Adapted from *Global Supply Chain Trends and the Impact on North American Distribution Markets*, G. Arnold (2009), Talking Freight Seminar, U.S. Department of Transportation – Federal Highway Administration.

could be the catalyst that puts a different spin on how U.S. companies view the Panama Canal.

While offshore business over the past decade has been largely focused on Asia's labor cost differential, that dynamic is now changing. China's wages have risen. U.S. shippers are looking more closely at total landed costs and near-sourcing opportunities that reduce transportation expenses and boost speed to market. The possibility of holding inventory in Panama for redistribution—or any other value-added manufacturing or contract logistics activity—presents a new dynamic that affects sourcing strategy, mode utilization, and DC network alignment.

"If you throw Panama into the equation, you have to think about inventory management and the total cost of logistics," explains Acosta. "It places a greater emphasis on the rest of the supply chain—what companies do with technology to manage inventories, just-in-time strategies, brick-and-mortar investments, and back-office costs, among other considerations."

Familiar Territory

Other benefits to operating in Panama are its dollar-based economy and wide use of English. Both are consequences of more than 80 years of U.S. occupation in the Canal zone.

"Panama is familiar," says Acosta. "It provides a comfort level to business people who seek continuity to invest. That drives U.S. foreign direct investment, and creates a pivot to penetrate South American markets."

Wertheimer has also seen an uptick in discussions about Panama as a distribution point, especially with regards to providing direct access from Asia and North America to South America.

"CEVA often brings containers through the West Coast into Miami, then redistributes from Miami to Latin America," he explains. "A need for continued infrastructure development exists within Panama, as well as ocean and air carrier services that would be able to support this growth."

Now that the long-awaited U.S.-Panama Trade Promotion Agreement has finally entered into force (*see sidebar, page 60*), even stronger incentive argues for U.S. investment in Panama. The agreement—which removes most barriers to trade between the United States and Panama, and will greatly benefit American consumers and manufacturers alike—follows the U.S.-Colombia trade pact that went into effect in May 2012. Momentum is building in Central and South America that will no doubt keep U.S. companies tuned in to changing developments.

The Winds of Change

Change is the operative word. So much variability exists in today's supply chain that companies are compelled to keep their options open. Economic starts and stops at home and abroad are rapidly shifting supply and demand dynamics. Fluctuating fuel prices continue to be a concern. A rash of natural disasters, on top of recurring labor strife, has placed a premium on risk assessment and management. Much as security became a part of standard operating procedures following the Sept. 11 attacks, contingency planning is now an expectation of the "new normal."

What impacts the Panama Canal expansion will have on U.S. sourcing and transportation strategies and distribution alignment is currently moot. For myriad other reasons, successful companies are building flexibility into their U.S. networks so they can respond to supply and demand shifts as economically and efficiently as possible. This prepares them to explore new U.S. and Latin American markets if the business case supports investment.

The trend toward transportation and logistics outsourcing will only grow. And perhaps more than in previous years, the decision is not exclusively tied to economy. Rather, the incentive for working more closely with third-party logistics providers, forwarders, carriers, and brokers—and investing in technology—will also be predicated by a need for variable-cost flexibility, market agility, demand responsiveness, and risk aversion.

"Companies that operate a DC and

put up bricks and mortar are tying themselves to inflexible infrastructure for their logistics needs," says Acosta. "They can't adjust those fixed costs if demand changes. Companies have to be adept at growing and shrinking with demand, and being able to manage variable costs at a higher rate than before so they can scale operations as needed."

That sensibility holds true now, and will likely remain germane in three years when the Panama Canal expansion is complete. If nothing else, ongoing speculation about the efficacy of all-water routings to the U.S. East Coast presents shippers with a platform to re-evaluate their supply chain networks.

Predicting the Unpredictable

Currently, the Panama Canal expansion raises more questions than answers. But given the current economic environment, shippers are no strangers to forecasting the unpredictable.

If Panama's development potential as an Americas distribution hub materializes as some suggest, it could be the game changer that completely reshapes how companies look at opportunities in South America and elsewhere. And it could be the trigger that ensures a more fixed focus on Panama Canal transits, and perhaps a more balanced East and West Coast sourcing paradigm.

What goes around may come around—and stay. ■

Prelude to Expansion: U.S.-Panama Free Trade Agreement

The lengthy drama surrounding the U.S.-Panama Trade Promotion Agreement finally came to a cathartic ending on Oct. 31, 2012 when, after six years of negotiations, the pact entered into force. For the U.S. agriculture and manufacturing industries especially, the free trade agreement (FTA) promises to increase trade activity between the two countries—and it couldn't happen at a better time, given the Panama Canal's imminent expansion.

The agreement, which was originally negotiated in 2006 and ratified by Panama's National Assembly one year later, was finally approved by Congress in 2011, then signed into law by President Obama—along with the Colombia and Korea FTAs. Much of the delay was attributed to the United States re-negotiating finer points for Congressional consent, and Panama ironing out details regarding intellectual property rights and tariff rate quotas. But U.S. businesses were impacted the most by these recurring stops and starts, says Jon Fee, partner in Washington-based law firm Alston & Bird.

"Goods from Panama already came into the United States duty-free under the Caribbean Basin Economic Recovery Act of 1983," Fee explains. "What really mattered was U.S. exports to Panama. Companies in the United States were champing at the bit trying to get duty-free access to agriculture and consumer goods markets in Panama.

"On the day the agreement went into effect, 87 percent of consumer goods exported from the United States to Panama changed from dutiable to non-dutiable," he adds.

While the Colombia and Panama FTAs together don't even come close to the scale and scope of the United States' pact with Korea—given the size of Korea's economy and attractiveness as a market for U.S. goods—growing trade cohesion in Central and South America bodes well for future U.S. activity in the region.

"Panama is surrounded by U.S. free trade partners—all of Central America, Colombia, and Peru," says Fee. "U.S. interests will find it easier to trade in that region because FTAs tend to harmonize some trade rules among all U.S. partners."

Trade harmonization among Latin American countries has always been a sticking point for economic development. Cross-border freight regulations are notoriously nebulous and restrictive, thwarting best-laid plans for growing intra-regional commerce. Better synergies with U.S. trading partners and continuing U.S. foreign direct investment will only help standardize regulatory policy across borders, and enhance transportation and distribution networks.

With the Panama Canal expansion three years away, and Panama digging its own foundation as an Americas logistics hub, building new platforms for business to engage in a more seamless fashion will have a positive impact on U.S. growth in the region.

Open for Business

To date, the United States has free trade agreements in force with the following 20 countries around the world.

- Australia
- Bahrain
- Chile
- Colombia
- DR-CAFTA (Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua)
- Israel
- Jordan
- Korea
- Morocco
- NAFTA (Canada and Mexico)
- Oman
- Panama
- Peru
- Singapore


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CLOSING THE TALENT GAP

With an eye toward the looming logistics labor shortage, some companies are working studiously to attract millennials.

by Justine Brown

Despite the struggling economy and high unemployment rates, skilled logistics professionals are in high demand. The U.S. logistics sector is expected to create more than one million job openings between 2013 and 2016, according to the U.S. Department of Labor.

"The economy may be struggling now, but as it recovers, more products will need to move," says Page Siplon, executive director of the Georgia Center of Innovation for Logistics, a division of the Georgia Department of Economic Development. "The more products sell, the more people will be needed to fill logistics jobs."

While projected economic and business growth is certainly good news, there is also cause for concern. Current evidence suggests the education system is not keeping pace with demand. The nation's 7,642 educational institutions currently generate 75,277 formally trained, degreed, or certified workers annually. That will fill only about 28 percent of the projected job openings each year, according to *Logistics of Education and Education of Logistics*, a new report from the Georgia Center of Innovation for Logistics.

"The pending logistics jobs shortfall will impact both corporate sales and revenues, and consumer costs," says Siplon.

But numbers alone tell only part of the story. Evidence also suggests that graduates emerging from college may not be as prepared as they'll need to be to tackle tomorrow's logistics jobs.

"It is difficult for education to keep up with the needs of industry, particularly logistics, because they are evolving so quickly," says Siplon. "The content has to be more current, and we need more of it." For example, only one program in the United States currently offers freight rail technical training.

Further evidence of the growing challenge: CEOs of the top third-party logistics (3PL) providers cite the talent shortage as the most significant problem they face, according to the results of the 2012 *3PL Provider CEO Perspective Survey* conducted by Dr. Robert Lieb at Northeastern University.

Managing Millennials

Also complicating the logistics labor challenge are issues revolving around so-called "millennials" (Generation Y, 18-34 year olds) and the unique approach to employment and work that they tend to embody.

"Millennials are tech-savvy and smart, and they know what they want," says Charlie Wilgus, general manager of manufacturing search for Lucas Group, a New York-based executive search firm that specializes in the logistics sector. "They don't want to start at the bottom; they want to start at the top. Yet the jobs that are available in logistics aren't at the top. Logistics companies need people who are willing to learn from senior employees. That makes it difficult to build bench strength."

Recent college graduates David Robinson *(left)* and Justin Lottie are among the participants in Penske Logistics' Supply Chain Leadership Program.

Aram Lulla, general manager of the resources practice at Lucas Group, agrees millennials are not big proponents of starting at the bottom and working their way up the ladder. In his whitepaper, *Recruiting and Managing Millennials*, Lulla notes millennials also have great expectations for themselves and major demands of those around them; and they loathe authority, believe in the power of the individual, and care far more about what their friends say than what their boss thinks.

Lulla poses this question: "If millennials receive most of their validation from outside their professional network, what leverage does the leadership of a logistics organization have to shape raw talent into valuable current and future leaders?"

Fast-Tracking Talent

Potential long-term solutions to the logistics labor shortage include earlier logistics visibility in high schools and colleges, increased internships providing real-world experiences, better coordination and support for technical colleges, reduced or eliminated hurdles for military personnel transitioning into civilian life, and enhanced marketing of logistics education, according to Siplon.

Several logistics companies looking to get ahead of the talent shortage have begun to offer on-the-job training programs designed to quickly turn new-hire potential into supply chain expertise. The ability of such programs to fast-track talent also makes them more appealing to millennials.

For example, Reading, Pa.-based logistics solutions provider Penske Logistics offers a Supply Chain Leadership Program (SCLP), a challenging two-year entry-level rotational program designed to groom participants for key positions in the United States and abroad.

"In October 2010, we started thinking about how to bring into the organization new talent who would be mobile," recalls Jeff Stoicheff, senior vice president of human resources for Penske Logistics. "Business was beginning to pick up again after a terrible 2008 and 2009, but we didn't have enough talent available that we could relocate. We also wanted to begin to build the company's future leadership.

"We typically fill around 100 positions at the supervisor level each year. But instead of just hiring supervisors away from competitors, we decided to go directly to the colleges and hire graduates with supply chain backgrounds, put them in supervisory roles, then augment that on-the-job learning with solid educational classroom training."

Today, 25 people participate in the SCLP program, which allows participants to take on supervisory roles for one-year rotations in two of three logistics functions: dedicated contract carriage, distribution center management, or transportation management. Participants are required to relocate when they move between rotations. The goal is to slate participants into leadership roles within the company once they complete their two-year rotation.

"We are trying to build leaders," says Stoicheff. "The program is a balance of functional and behavioral knowledge: How to communicate, how to develop a team — all built on a foundation of our culture."

Penske definitely had millennials in mind as it developed the program, according to Stoicheff. In fact, one of the key program developers was a millennial. "Providing millennials an opportunity to learn and develop, and move their career at a quicker pace than other companies and other industries, appeals to them," says Stoicheff. "We are confident that the return will be great."

Filling the Knowledge Gap

Transplace, a Frisco, Texas-based third-party provider of supply chain software and solutions, launched a similar initiative in 2012 called the Professional Development Program (PDP). "We see a gap not in talent supply, but in talent knowledge and expertise," says Adrianne Court, chief human resources officer at Transplace. "We created the PDP to fill that gap."

Transplace's PDP has two primary objectives: to attract and hire new grads who will grow into leadership roles during the next three to five years and beyond, and to build relationships with key schools — the University of Arkansas, University of Texas Austin, University of North Texas, University of Tennessee, Iowa State University, and Penn State University — in order to tap the top minds in logistics, transportation, and supply chain education.

Transplace's PDP is a two-year rotational program in which participants take on various transportation and operational roles. During their rotations, Transplace PDP employees also participate in cross-functional special projects, working with different groups within the company and developing direct relationships with the executive team. The 3PL also ensures program participants receive an industry certification during their tenure.

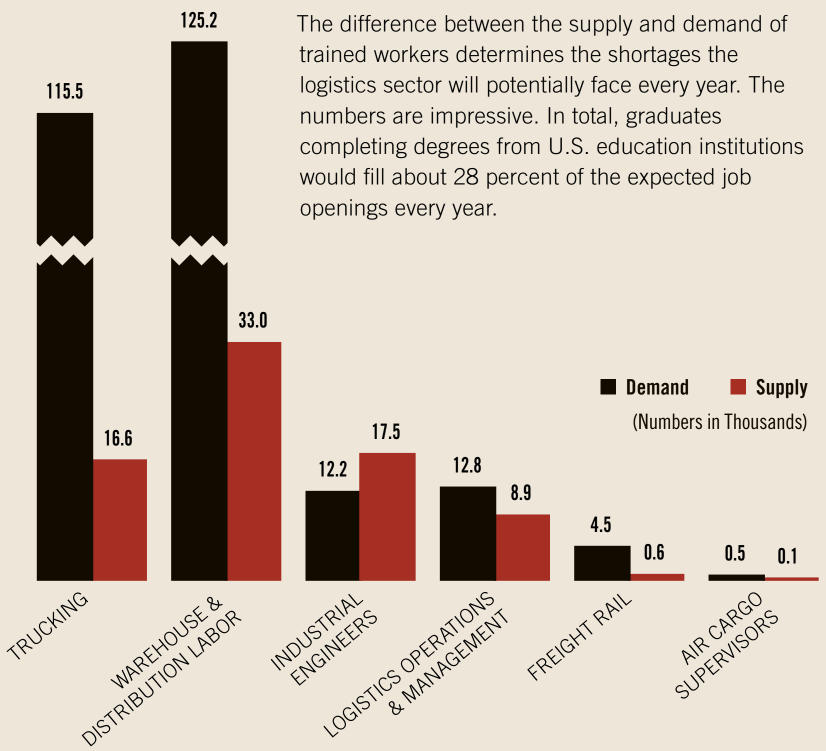
Participants also must be open to relocation. "Unlike prior generations, millennials tend to not want to relocate," says Court. "Finding candidates who are willing to relocate has been a challenge. But, millennials also want to find a job opportunity with growth potential. As an employer, it is important to outline and sell the career path that our company offers beyond the entry-level job."

Reaping the Rewards

Transplace reaps many rewards from its program. "Training top-notch college graduates, and adapting them to our corporate culture, can result in a large return

THE LOGISTICS TALENT GAP

The difference between the supply and demand of trained workers determines the shortages the logistics sector will potentially face every year. The numbers are impressive. In total, graduates completing degrees from U.S. education institutions would fill about 28 percent of the expected job openings every year.



Source: *The Logistics of Education and Education of Logistics*, The Georgia Center of Innovation for Logistics on investment," says Court. "They will be more likely to stay with Transplace while they grow as employees, and become familiar with the environment."

Transplace provides PDP participants a one-year guarantee. If they are not happy with the program, the 3PL assists them with networking, coaching, and resume writing to help secure another position.

Encouraging Emerging Leaders

Menlo Worldwide Logistics offers a similar program called Emerging Leaders. The San Mateo, Calif.-based 3PL works with three universities that have strong supply chain programs—Michigan State, Arizona State, and Georgia Tech—to recruit graduates. Currently in its first year, Emerging Leaders employs six people in a rotational program designed to provide exposure to various components of the company.

"We've always had a strong desire to promote from within and build good leaders," says Julie Tyler-Brown, Menlo's manager of human resources. "But with this program we've refocused. We now have renewed interest in developing talent for the future. We want to make sure we are hiring today for what we need tomorrow."

For each rotation, employees must meet a list of objectives. Participants work closely with rotation managers, and move on to a new assignment only when the manager feels they are ready. Once participants complete their rotations, which may last as few as three years or as many as five years, they can examine available positions within the company. The program may involve relocation, but it is not required.

"The core piece of the program is exposing participants to our Lean culture in all of their rotations," says Tyler-Brown. "We also want to help them understand and get engaged in the Menlo way of doing things. Future leaders need to be well-rounded and developed, not just in the technical aspect of the work, but also in how we want to operate as a company."

(continued on page 68)

8 TIPS FOR RECRUITING AND MANAGING MILLENNIALS

How to successfully recruit and manage the next generation of executive talent.

1 EVERYTHING IN MODERATION. Some managers and companies go too far in trying to appeal to Gen Y employees, and in the process they upset their business practices and organizational culture. Think of a parent attempting to placate an unruly child in a store ("Just be quiet and sit still, and Daddy will get you whatever you want") and you immediately understand the problem with this approach. Hiring and encouraging bad behavior can ruin a company's ethos.

Other companies make the opposite mistake. They pay no attention whatsoever, and keep doing things the way they've always done them.

Both approaches are wrong. The world evolves, people change, and companies are forever adapting. Change for change's sake (or change to merely keep abreast of the latest trends) is poor leadership. But thoughtful change that leverages technology, global diversity, and market forces is something to embrace.

2 THIS IS NOTHING NEW. The Greatest Generation was undoubtedly viewed as a pack of fuzzy-cheeked lightweights by those who survived the mustard gases of World War I and lived to forge successful careers. And few LBJ-era executives knew what to do with the peace-loving, bell-bottom-wearing, soap-and-water-challenged ingrates pouring out of U.S. colleges and universities in the 1960s and 1970s looking for fame and personal realization.

But everyone ultimately adjusted. Executives learned to open up the decision-making process to encourage creative competition, and 1960s anarchists eventually became both corporate leaders and regulars in the member-member tournaments at their clubs. Every generation evolves and adjusts to the next. The key is not to overcompensate one way or the other while continuing to steer a course for success.

3 FOR EVERY STEREOTYPE, THERE ARE EXCEPTIONS. Not every young professional is brooding, self-absorbed, and disdainful of anyone older than 40. You undoubtedly can recall at least two young professionals who possess a solid work ethic, go the extra mile to accomplish a task, and are pleasant to be around. These are the people you want to target through your talent acquisition process.

4 EMBRACE INTELLIGENCE AND DIVERSITY; THEY ARE YOUR FUTURE. The ethnic mix that makes the United States a unique, international power should work to your advantage. If you don't understand or appreciate this diversity and quest for educational achievement, it's time to start. Force yourself to diversify. Your competition isn't just across the street; it's around the world. Read *The World is Flat* by Thomas Friedman while sipping darjeeling tea. Watch *Outsourced* as you nibble on some kebab koutbane and couscous. Attend an international relations-related lecture at your local college or university.

A diversified workforce is not simply a nicety. It's a competitive imperative in today's global economy. Make sure you're able to understand why and how to achieve it.

5 SLACKERS AREN'T BORN, THEY'RE MADE. In the age-old debate between nature and nurture, nurture wins when it comes to this undesirability. That's good news for you because you can:

- Look for "slacker warning signs" (see Tip #6).
- Flush slacker traits out of your company's workforce through intelligent management.
- Focus your recruiting efforts on finding people who are hungry, resourceful, highly intelligent, adaptable, and possess strong interpersonal communications skills.
- Maintain a strong culture of success, while keeping an open mind to the skills and perspectives brought by new talent. This is the formula employed by many of the world's most successful companies.

6 WEED OUT THE SLACKER PSYCHOLOGY. It's good to know how to listen for traits and behavior that may hinder business success. These five interview questions can be highly revelatory:

- Did you have a job in high school or college?
- What is your most memorable accomplishment?
- What led to your most memorable mistake?
- To what do you attribute your success to date?
- From whom have you learned the most in your professional career?

In listening to the answers to these questions, pay close attention to the candidates' takes on work ethic, their ability to constructively work in a team environment, their perspectives of other people, and a clear sense of personal and professional responsibility. Too many ego-centric references and/or a focus on natural talent as their main differentiator should raise warning signs.

7 STAY ABREAST OF TECHNOLOGY – OR RISK BEING BURIED BY IT. In my middle-aged life, I've seen the introduction of push-button phones, personal computers, the Internet, cell phones, Facebook, Twitter, Skype, and a host of other communications technologies. At any point, I could have scoffed at the new technology and simply said, "I love my Selectric and I see no need to replace it with the latest passing fad."

But I didn't. I kept abreast. And while I may not Tweet much, I do understand what Twitter is and how it works. You should, too, if you want to remain professionally conversant. While we've not yet devised a more effective means of communication than the one-on-one conversation, it's not always possible or pragmatic.

Interview candidates over Skype. Do your social media research when searching for executive talent. Facebook, LinkedIn, and Twitter have replaced the town square or the men's grill as the place to go to get the real story on people you're considering. While content is king, the choices of communications media are ever-expanding. An intelligent mix of old and new is appropriate for you. Further, you will undoubtedly find that utilizing a mix of communication technology saves both time and money.

8 GREAT PEOPLE – REGARDLESS OF AGE – MAKE GREAT COMPANIES. One of the biggest mistakes any company can make is to enable bad behavior and compromise core values in the pursuit of perceived talent. The risks are rarely worth the rewards. It's fine to hire occasional prima donnas, as long as they can really, really sing. But for the majority of executive hires, these are the traits to look for in recruiting executive talent:

- Proven work ethic.
- Willingness to go the extra mile.
- Is being merely competent an acceptable trait?
- Willingness to put in long hours if success requires it.
- Strong value system.
- Respect for authority and a sense of professional integrity.
- Self-confidence without unbearable arrogance.
- The capacity to treat clients as they would like to be treated themselves.
- Proven or potential leadership.
- College or early work history that would indicate leadership capabilities.
- A dedication to self-improvement.
- Credible ideas for the future while maintaining an open mind to new ideas and approaches.

Adapted from Recruiting and Managing Millennials*, a whitepaper by Aram Lulla, National Practice Leader – Human Resources, Lucas Group*

(continued from page 66)

Menlo intends to grow the program but will continue to keep groups small enough to allow participants a good deal of hands-on development working closely with staff. "It's about making sure we hire and grow employees who are a good match for building the future of the company," says Tyler-Brown. "The program needs to drive engagement and retention, and help support future growth."

The first group of Emerging Leaders participants is already adding value to the organization. Consider Jonathan Santiago, an Emerging Leaders participant from Miami. Santiago attended Georgia Tech out of high school but soon dropped out to work full-time. A few years later, disappointed with the corporate experience, he returned to college to pursue a degree in industrial engineering. He had no exposure to Menlo previously, but was intrigued by the Emerging Leaders program.

Small groups focused on hands-on development and close relationships with staff members are key elements of Menlo Worldwide Logistics' Emerging Leaders program.

"I was impressed by the program's concept," says Santiago. "I wanted to work for a company that cared about me personally, and this was pitched as a program providing a lot of exposure and help in developing talent. While other companies were just asking what I could do for them, Menlo's program looked like a two-way street."

Santiago's favorite part of the program is working with the organization's leaders. "I love being around leaders who are willing to teach," he says. "Menlo's managers have been very positive and willing to spend time with me. My previous experience in the corporate world amounted to a non-personal grind, but the exposure to people and talent around Menlo has been amazing."

Preparing for the approaching logistics talent shortage will require companies to take action. Competing for talent is serious business, and companies that are well-prepared are more likely to appeal to new graduates than those that are not.

"Companies doing well have a story to tell, and a career infrastructure to show new hires a growth path to the top," says Wilgus.

Being prepared also means being technically savvy. New graduates are immersed in technology, and they expect their employers to be up to speed on the latest technologies as well.

"Millennials tend to conduct a lot of research before they interview with a company," adds Wilgus. "If the company isn't using the latest technology, it simply won't be able to compete for talent."

Who's Responsible?

But it's not solely up to the companies. "Educational institutions and companies can't do it all on their own; millennials or new grads need to take on some responsibility, too," says Siplon. "Students should take it upon themselves to find resources and get educated on current industry trends."

State government should also play a role. "States need to do a better job preparing employees to keep up with the demands of the industry," says Siplon.

Georgia, for example, is working to increase the number of available trained workers by extensively investing in logistics programs from the high school level to Ph.D. programs.

Finally, educational institutions have to rise to the occasion. "We need the education community to acknowledge that supply chain management and logistics is critical to so many industries," says Siplon. "Then they need to help connect students to private industry so they can gain critical real-world experience."

The good news is, a lot of great jobs are available in logistics, and that trend looks likely to continue for years to come.

"It's a great story to tell," Siplon notes. "We just have to be able to fill the gaps." ■

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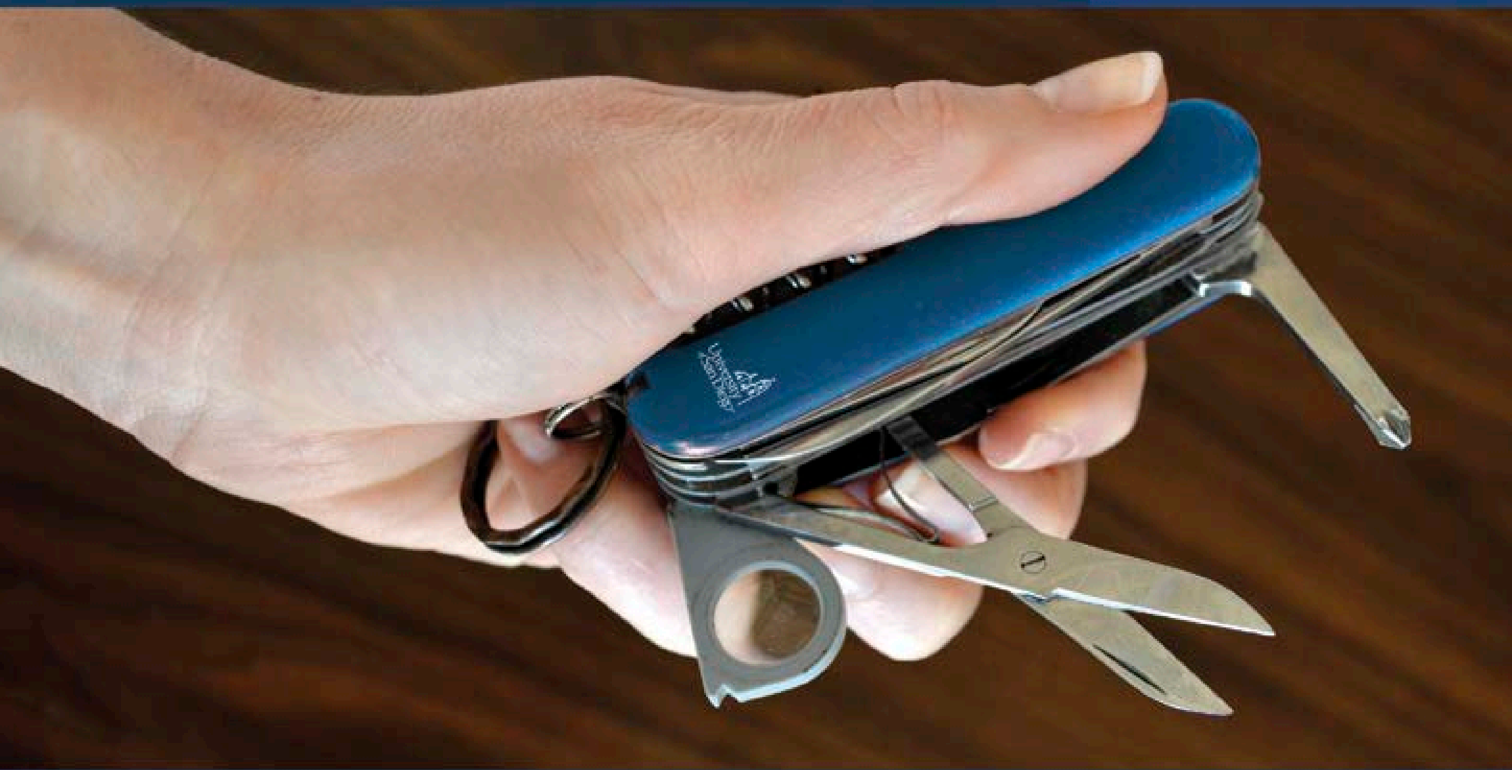

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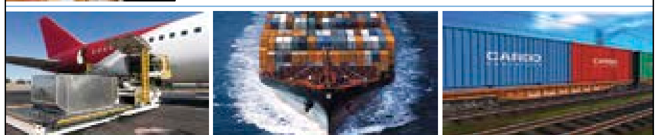

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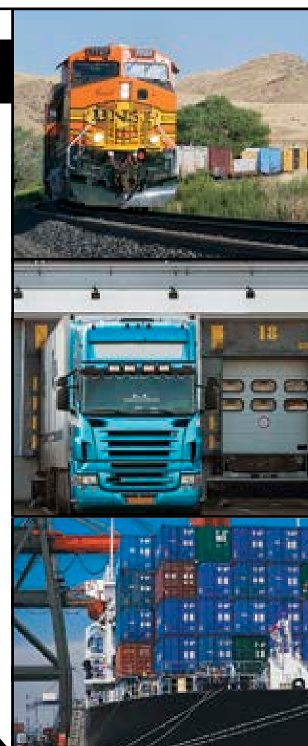

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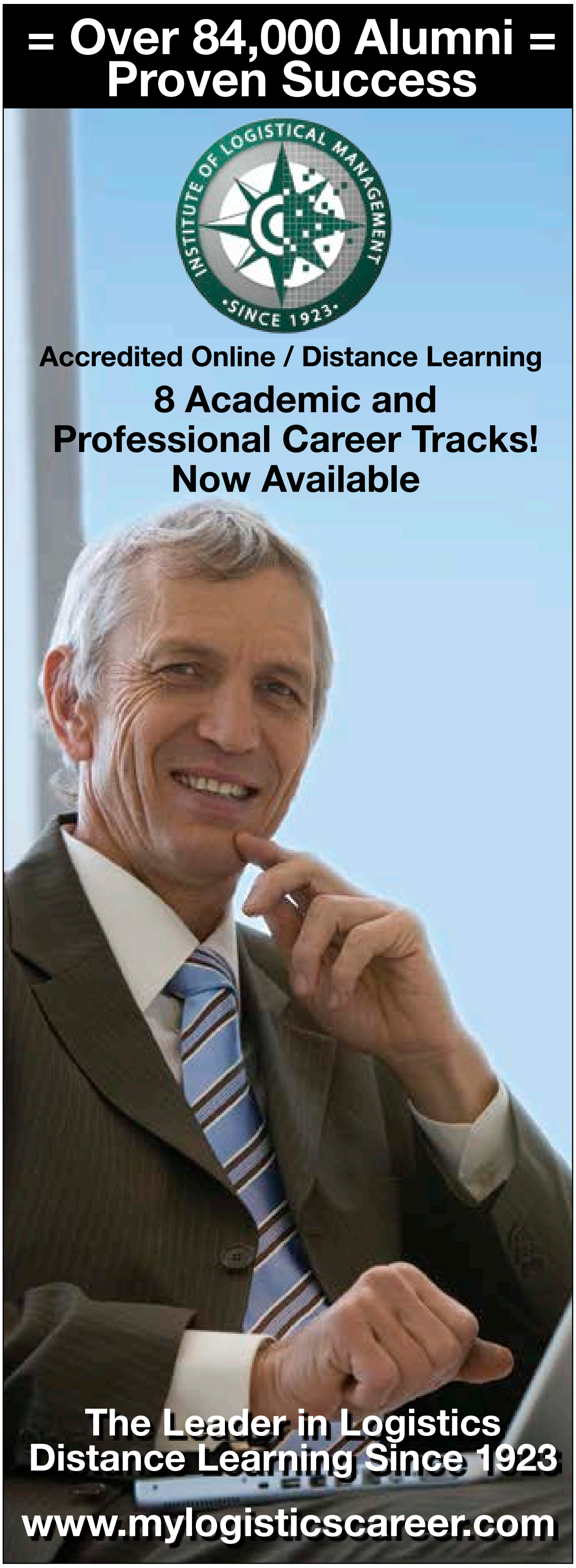
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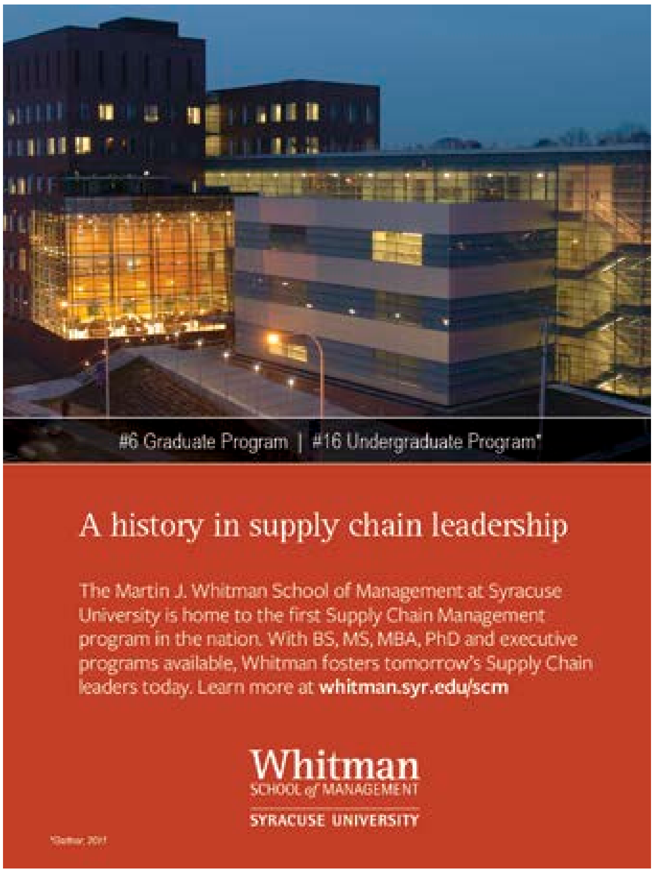
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DC Solutions | by Amy Roach Partridge

An Appetite for Refrigerated Warehousing Improvement

When food company Bob Evans farmed out its warehousing and distribution operations, it engaged more than a provider – it found a true business partner that optimized its processes.

Every company that opts to outsource some portion of its supply chain—be it transportation, warehousing, freight bill payment, or any other critical function—seeks to build a strong relationship with the third-party provider. But it's a rare feat when a partnership reaches a level where the companies involved become truly integral to one another's businesses.

For Bob Evans Foods and its third-party warehouse provider, Millard Refrigerated Services, reaching that vaulted level is not just a goal, but a reality. The two companies share a symbiotic relationship, says Dathel Nimmons, vice president, operational business development for Bob Evans Foods, a wholly owned subsidiary of restaurant, retail, and foodservice company Bob Evans Farms Inc.

Columbus, Ohio-based Bob Evans Foods first partnered with Millard in 2010 to distribute its product lines to retail and foodservice customers throughout the southern and western United States from Millard's facility in Sunnyvale, Texas. The success of that outsourced arrangement led Bob Evans to sell its own Springfield, Ohio, distribution center (DC) to Millard in 2011. Millard took over operating the 127,000-square-foot-facility, and continues to ship Bob Evans brand products to retail and foodservice customers in the eastern and southern United States.

When Millard acquired the Springfield DC, the Bob Evans workers became Millard employees; today the Millard-owned facility houses a suite of offices for Bob Evans executives, including a logistics leader and two master plant schedulers. And Bob Evans recently opened a new $5-million transportation facility directly across the street from the Millard DC. This blurring of the lines is intentional—and indicates the level of cooperation that exists between the two companies.

"With the product volume that moves through this facility, seamless partnering in scheduling, manufacturing, and transportation is essential," Nimmons explains.

Behind the Sale

Selling a distribution center to a third-party provider is an unusual action for a shipper, but one that made perfect sense for Bob Evans. The company had historically used a direct-to-store distribution (DSD) model, but began to realize it needed better economies of scale to support future growth initiatives. It also wanted to trade the reactive nature of the DSD business for the proactive planning that comes with warehouse processes.

"About five years ago, we began scaling back our DSD operations," Nimmons says. "Two-and-a-half years ago, we completely changed from DSD to warehouse."

But running warehouses was not Bob Evans' core competency, and the company knew it would have to continue making significant investments in processes and technologies to retain a cutting-edge distribution facility.

"You have to decide who you are as a company," Nimmons says. "The answer for us is: we are a food company, not a distribution company." The decision to partner with a provider who could give Bob Evans a distribution edge was a no-brainer, she adds.

The sale provided a win-win for both companies. Bob Evans is now better able to focus on its core competency as a food manufacturer, while using Millard's warehouse management expertise to drive its supply chain forward. In turn, by purchasing the Springfield DC, Millard gained the opportunity to increase its footprint in the market with the possibility of expanding the building to offer third-party warehousing services to other companies in the region.

"A key driver in the decision to purchase this facility was the potential for growth at both companies—either in the current footprint via productivity gains or through acquisitions, and/or expanding to serve the end-market needs of customers that don't currently use a public warehouse in that geographic area," says Tim Smith, Millard's senior vice president of sales.

Teaming up with warehouse provider Millard Refrigerated Services enabled Bob Evans to focus on its core business.

A Fresh Perspective

The Springfield DC is a modern facility that contains two blast freezers and a loading dock large enough to stage entire truckloads, so Bob Evans was not looking for Millard to provide physical or equipment upgrades as much as a burst of intellectual capital to improve processes and efficiency.

"Bob Evans relies on us to identify ongoing and sustainable efficiencies that continue to drive costs out of the supply chain," says Smith. "Then it can leverage the DC we operate as part of its key strategic initiatives."

"Millard has challenged us to think about our business in new and innovative ways because of its historical perspective," Nimmons adds. "It forced us to ask ourselves if the way we operate is the best way."

For example, Millard has helped Bob Evans better utilize full-pallet shipments. While evaluating the DC's processes and procedures early in the transition, Millard assisted Bob Evans in a rigorous analysis of key metrics that resulted in identifying areas for optimization, including full-pallet sales opportunities. Instead of having workers cherry-pick less-than-optimal cases for shipments, Bob Evans implemented Millard's picking philosophy, which allowed for better utilization on full pallets.

"Millard helped us realize we could realign the warehouse in order to improve our full-pallet quantities," Nimmons explains.

"We evaluated the Springfield facility for ways we could implement best practices we have within our network," Smith notes.

Conversely, Millard faced a learning curve on some unique aspects of the food distribution business. Sell-by dates, for instance, rule the roost. Bob Evans cannot ship products with either too many or too few days of shelf life remaining—leaving a very small margin of error. "It has been crucial for us to identify the right inventory turns so we are not shipping out too young or too old a product," Nimmons says.

Another challenge was determining how best to handle receiving during the holiday peak season. Demand for Bob Evans sausage and side dish products hit their peak from October to December, spiking about 40 percent from regular demand. As a result, the DC hires additional seasonal labor to help with the increased number of trucks arriving to unload. And because the Bob Evans manufacturing plants do not have enough room to store the additional goods they are producing during the holiday season, the DC must be prepared to receive shipments throughout the day.

To help optimize labor management at the DC, Millard and Bob Evans moved to a schedule of receiving production loads around the clock and handling outbound loads only on the third shift.

Both companies' willingness to embrace new ideas has been a key factor in the partnership's success. Even the official document created to guide the acquisition and transition processes has been flexible.

"It has always been okay to deviate from our original plan when needed," Nimmons says. "The basic principles, structure, and framework still exist, but the nuances have changed—and that was never a problem."

A phased approach helped ease the ownership transition. While the deal was sealed in October 2011, Millard continued to operate the warehouse using Bob Evans' systems until February 2012. Both companies wanted to use that time for training and testing to ramp up slowly and ensure a smooth transition.

Benefits for Today—and Tomorrow

The approach—and the acquisition overall—has paid off for Bob Evans. Millard's experience and precision in running warehouses has helped bring a more sophisticated and predictable approach to the distribution side of Bob Evans' business.

"We now have a better understanding of our distribution spend; we fully understand what it costs to move a certain number of pounds or cases," Nimmons explains. "This insight allows us to better forecast our budget needs and lock in rates.

"As we continue to grow—and Millard continues to grow in Springfield—we hope to leverage additional cost efficiencies through economies of scale," she adds.

For example, both companies are interested in implementing a consolidation program. As Millard adds customers to the Springfield facility, it will have the opportunity to create more full truckload shipments by consolidating Bob Evans' loads with those from other Millard customers. "That ability will allow us to fully optimize all our trucks, and reduce shippers' costs," Nimmons says.

The new warehouse management system (WMS) Millard is implementing will bring another efficiency boost to Bob Evans. While Millard will maintain the solution, the WMS will feed data directly to Bob Evans' systems, including a new enterprise resource planning solution Bob Evans is currently implementing.

"The Millard WMS will give us visibility into the metrics that drive utilization and performance," says Nimmons. "The data, in turn, will help us determine what areas of the business need to be more fully optimized."

For now, both companies are relishing the more fully optimized distribution center—and the myriad benefits of a relationship that is truly a partnership in every sense. ■

3PLs

Amware Logistics Services • www.amwarelogistics.com

Amware Logistics is a leading third-party logistics company that is dedicated to craftsmanship in delivering customer-focused, quality-driven, cost-appropriate logistics solutions for our customers. Amware's strategically located fulfillment warehouses are in Atlanta, Phoenix, Connecticut, Pennsylvania, and Toronto, Canada.

Saddle Creek Logistics Services • www.sclogistics.com

Saddle Creek Logistics Services is a third-party logistics company. We leverage our broad array of capabilities—including warehousing, transportation, packaging and fulfillment—to provide integrated solutions that support our customers' business objectives. For more information, visit sclogistics.com.

Weber Logistics • www.weberlogistics.com

As a full-service, complete logistics provider, we are experts at non-asset freight management; asset-based LTL and TL services, including temperature-controlled; dedicated and shared warehousing; distribution; cross-docking/pool distribution; transloading; network optimization modeling and analysis; retail compliance; order fulfillment; material handling; supply chain management; real estate development; and personnel staffing. We have been in business for 85 years and specialize in working with importers; retailers; food, beverage, and CPG companies; and chemical and paper manufacturers.

AIR/EXPEDITED

Purolator International • www.purolatorinternational.com

Purolator International is the U.S.-based freight forwarding subsidiary of Purolator Inc., Canada's leading overnight courier company. Purolator International specializes in air and surface forwarding of express, parcel, and freight shipments, with enhanced supply chain solutions to offer delivery to, from, and within Canada. Purolator International offers preferred access to an extensive distribution network in Canada, which includes 11,000 dedicated employees, the leading air fleet, and ground network with the most guaranteed delivery points in Canada.

IN THIS SECTION:
DCC – Fulfillment

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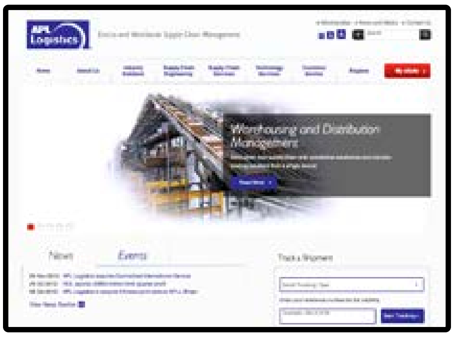

APL Logistics • www.apllogistics.com

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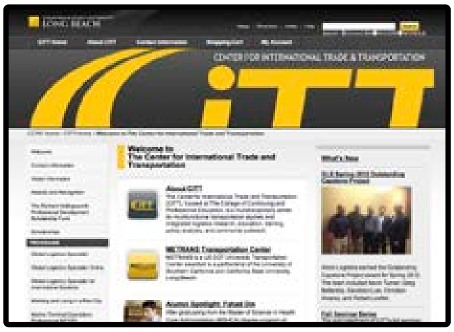
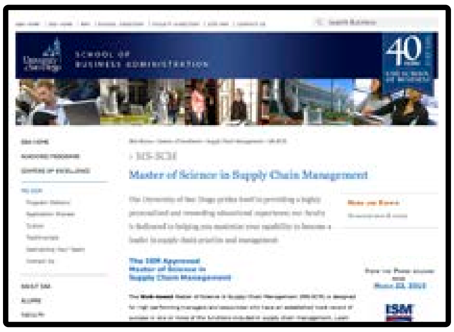
EDUCATION

California State University-Long Beach • www.ccpe.csulb.edu/citt

The Center for International Trade and Transportation (CITT) acts as a catalyst for growth, and offers a neutral ground for addressing issues along the entire global logistics pipeline. CITT is a partner with METRANS, a University Transportation Center funded by the U.S. DOT and Caltrans. The Global Logistics Specialist (GLS) and the Marine Terminal Operations Professional (MTOP) are industry-driven training programs. The GLS serves both users and providers of global logistics services. Classes are offered on the CSULB campus and in an innovative online format. The MTOP program addresses all aspects of terminal operations from container terminals, breakbulk, and RoRo to cruise terminals. For more information, visit this Web site.





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FULFILLMENT

Fifth Gear • www.infifthgear.com

Fifth Gear offers outsourced order fulfillment, customer contact centers, retail technology, and marketing services for e-commerce retailers, catalogers, and brand manufacturers. With more than 30 years of experience, Fifth Gear manages its clients' back-office operations so that they can concentrate on growth opportunities. Today, Fifth Gear proudly serves many of retail's most successful D2C brands.

IN THIS SECTION:

Global Logistics – Supply Chain Mgmt.

GLOBAL LOGISTICS

APL Logistics • www.apllogistics.com

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PORTS

Port of Charleston, South Carolina • www.port-of-charleston.com

South Carolina's seaports have been one of the state's most vital resources for hundreds of years. Today, the South Carolina Ports Authority operates the state's vital seaport assets in Charleston and Georgetown, a $45 billion-a-year economic engine generating hundreds of thousands of jobs in the state and beyond. Operating for the public's benefit, the Ports Authority exists to drive economic investment to South Carolina.

SUPPLY CHAIN MANAGEMENT

NFI • www.nfiindustries.com

NFI is a fully integrated supply chain management provider offering logistics, distribution, warehousing, intermodal, global, commercial real estate, consulting, transportation brokerage, and solar services across the U.S. and Canada. NFI owns facilities nationwide and globally, more than 2,000 tractors, and more than 7,000 trailers. Privately held by one family since its inception in 1932, NFI operates more than 21 million square feet of contract and public warehouse and distribution space, and generates $1 billion in revenue annually. NFI is an EPA Smartway Transport and WasteWise Partner and is dedicated to increasing energy efficiency and reducing the impact of the freight industry upon the environment.

IN THIS SECTION:
Trucking • Warehousing

TRUCKING

Continental Expedited Services • www.shipces.com

Continental Expedited Services (CES) is one of the largest and fastest-growing providers of premium transportation services in North America, accommodating a full range of transportation solutions with one-call, door-to-door services to and from almost any location in the world. CES's 24-hour service center can provide, within minutes, a competitive price and response time for your time-sensitive freight. When you have a critical shipping emergency, call CES for the most reliable expedited service throughout the United States, Mexico, Canada, and now around the world.

CRST International • www.crst.com

When it comes to today's complicated supply chain environment, it's important to look at the big picture. Through its five divisions, CRST provides a broad array of transportation solutions, including van and flatbed as well as brokerage and transportation management services. CRST's operating divisions are made up of CRST Logistics and CRST's asset-based Carrier Group, which consists of CRST Van Expedited, CRST Malone, CRST Dedicated Services, and CRST Capacity Solutions. For more information, visit www.crst.com.

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.

WAREHOUSING

ClearSpan Fabric Structures • www.clearspan.com/ADIL

ClearSpan Fabric Structures provides energy-efficient, economical structures for a variety of warehousing, manufacturing, and equipment storage needs. State-of-the-art ClearSpan Hercules Truss Arch Buildings feature exceptional height and wide-open spaces with ample clearance for access and ease of movement. Rip-stop polyethylene covers let natural light shine through, eliminating the need for daytime artificial lighting and lowering energy costs. Constructed in the USA from the highest quality steel and fabric, these buildings can be built to any length and up to 300 feet wide. For more information, visit www.ClearSpan.com/ADIL or call 1-866-643-1010 to speak with a ClearSpan specialist.

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.


KRONOS
The Perfect Labor Management Storm
Steering Clear of Driver Hazards, Cost Damage, and Areas of Poor Visibility

Kronos

TITLE: ***The Perfect Labor Management Storm—Steering Clear of Driver Hazards, Cost Damage, and Areas of Poor Visibility***

LENGTH: *9 pages*

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

SUMMARY: Driver shortages, Hours-of-Service regulations, and increasing competition are causing capacity shortages, escalating costs, and limited price increases for logistics organizations. While some of these issues are out of your control, labor is your most controllable expense. Learn how labor management solutions can help you uncover hidden capacity, consistently enforce attendance and safety policies, improve hiring efficiency, and control costs to boost profit margins.

GT Nexus

TITLE: ***Holistic Supply Chain Management***

LENGTH: *7 pages*

DOWNLOAD: *http://mktforms.gtnexus.com/IL201211HolisticSCMgmt_Reg.html*

SUMMARY: There has been a renewal of interest in the past few years around optimizing working capital in the supply chain, and cloud technology makes it easier. Visibility on a cloud-based platform, and having standardized, electronic documentation over the network, gives managers the tools they need to free up as much cash as possible in the supply chain. This whitepaper provides a tactical approach to improving supply chain operations with a focus on working capital management.

WhitePaperDigest

TMW Systems

TITLE: ***Diversified Transportation Service Providers – Accelerating Performance***
LENGTH: *12 pages*
DOWNLOAD: *http://bit.ly/W1kt7A*
SUMMARY: Transportation service providers today are increasingly multi-faceted businesses. 3PLs run fleets to assure capacity; private fleets offer the same security for shippers; and for-hire carriers offer logistics services, dedicated carriage, and intermodal operations. A comprehensive Transportation Management System (TMS) technology platform from TMW Systems can uniquely support all the business and functional diversity of these mission-critical providers.

RWI Transportation

TITLE: ***2012 Temperature-Controlled Transportation Report***
LENGTH: *16 pages*
DOWNLOAD: *http://rwitrans.com/resources/whitepapers.asp*
SUMMARY: This study, based on a survey of North American shippers, examines the top challenges faced in temperature-controlled transportation. It provides interesting insights and information about best practices, common challenges, and emerging trends in today's temperature-controlled market. The report is provided by RWI Transportation, an asset-based logistics company offering temperature-controlled transportation. RWI manages in excess of 100,000 shipments annually, including both temperature-controlled and dry freight.

GENCO

TITLE: ***Evaluating Your Inbound Supply Chain***
LENGTH: *5 pages*
DOWNLOAD: *http://bit.ly/Tx5m5o*
SUMMARY: How is your supply chain performing? The inability to do the necessary supply chain analysis can have consequences, both financially and operationally. Smart companies follow a repeatable, consistent approach that determines whether a change can be implemented and identifies the associated risks. Download *Evaluating Your Inbound Supply Chain* to discover GENCO's process for evaluating supply chains.

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INBRIEF NEW SERVICES & SOLUTIONS

//Services//

American Global Logistics opened a new branch in Charlotte, N.C., to provide customized logistics solutions, ocean and air transportation, and freight forwarding.

SEKO Global Logistics opened offices in Uganda and Ethiopia to serve Africa's energy, mining, and technology industry sectors. The new locations offer air and ocean forwarding, project cargo, ground transportation, warehousing, fulfillment, and customizable information technology solutions.

Think Logistics' new 124,000-square-foot facility in Vaughan, Ontario, features Kiva Systems robotic fulfillment systems. The built-in garment-on-hanger and flat pack capabilities make it suitable for apparel, and flexible storage supports products ranging from small parts to large consumer items.

//Transportation//

Virgin Atlantic Cargo began daily Airbus A330 cargo flights between Mumbai and London, expediting shipments bound for the United States. Fast transfers in London mean exports leaving Mumbai on the carrier's daily 3:10 a.m. flights arrive the same day at New York's Kennedy Airport by 4:50 p.m. and Los Angeles by 6:55 p.m. Virgin Atlantic also offers shippers in India next-day deliveries to other U.S. destinations.

Inchcape Shipping Services opened a new North Africa operations desk to coordinate shipper requirements across ports in Libya, Algeria, and Morocco. The service covers offshore, roll-on/roll-off, and container liner agencies; project cargo; dry bulk ports and terminals; and oil and gas ports and terminals. This resource provides common operating and service levels across multiple countries, and on-site support for complex operations.

Roadrunner Transportation Systems opened a new less-than-truckload outbound service center in Boston to serve New England. The facility provides outbound service from Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

ABF Global Supply Chain Services now serves Europe and Turkey with ocean transport, providing a single contact for full containerload and expedited less-than-containerload supply chain solutions. Previously, ABF introduced ocean service for countries throughout Asia, including India.

FedEx Freight enhanced its Canada and Mexico services, with expanded geographic coverage and upgrades to shipping tools that help shippers process less-than-truckload shipments. A new Rochester, N.Y., service center expands FedEx Freight Priority next-day service between 13 U.S. markets and Canada, connecting cross-border shipments to and from Toronto and Montreal. In Mexico, two new service centers in Culiacán and Silao cover northwestern and north-central Mexico, respectively.

Air, ocean freight, and trucking company **Towne Air Freight** relocated its terminal serving Los Angeles to a new Leadership in Energy and Environmental Design certified facility in Carson, Calif. The new facility triples the size of Towne's former location, and features 64 dock doors.

// Products //

TMI introduced Guide-Pro Truck Lights, a dock safety solution that provides a visual guide for truck drivers by illuminating the loading dock face. By utilizing this visual reference, drivers can safely align the dock face in their mirrors, preventing crooked entry and dock overrun mishaps.

Pentalift's RS 800 RainStop Dock Seal prevents rain from entering the loading dock area and causing slippery and unsafe conditions. The seal uses a 5.5-inch foam-filled header curtain to create a positive seal on top of trailers, diverting water away from the trailer and building entrance.

Designed for use in distribution centers, manufacturing plants, warehouses, and other facilities, **Zoneworks'** Wind-Block Curtain acts as a barrier to separate open dock areas from production lines or other worker zones, preventing cold winds from reaching employees to help maintain maximum worker comfort, safety, and productivity. The curtain can be installed as a series of sliding or stationary panels; can be insulated or non-insulated; is custom engineered to ensure a proper fit around corners and obstructions; and includes galvanized drop pins and floor sockets for stability in high winds.

Grant Instruments and **CAS Data Loggers** partnered to enhance the portable SQ2020 Squirrel Data Logger with a configurable LCD display and updated design. The data collection systems are compatible with many types of cargo temperature and humidity sensors, and can also measure ambient temperature.

LEWISBins+ added new ventilated containers to its Stack-N-Nest line. Available in 20 x 13-inch, 20 x 14-inch, and 24 x 18-inch footprints, the containers stack when full and nest when empty, are FDA-approved for direct food contact, and are manufactured in high-density polyethylene for enhanced durability.

SANY America introduced the RSC45C2 Port Reach Stacker, which offers a maximum hoisting height of 49 feet, and a maximum load of nearly 50 U.S. tons to efficiently move heavy laden containers. The reach stacker's long boom allows the machine to stack standard ISO containers three deep by five high for enhanced productivity in a port environment.

//Technology//

UPS enhanced its global ocean and airfreight forwarding product, UPS Supplier Management, with the introduction of UPS Order Watch, a cloud-based technology platform that allows shippers to more efficiently collaborate with international suppliers. The enhancements include added capabilities to enable greater accuracy and timeliness of overseas vendor bookings; improved supplier processing and management; near real-time shipment status and detailed line-level visibility of in-transit inventory; and facilitation of purchase order consolidation and optimized shipping plans.

Sealed Air's Restore Mushroom Packaging provides a 100-percent renewable protective packaging solution made from non-food agricultural byproducts and mycelium, or "mushroom roots." The Restore cushions are custom-engineered to meet shippers' individual needs, and grown through a low-energy automated process that involves filling the raw materials evenly into forms that allow them to take their final shape. Restore can be used in most cushioning, blocking, and bracing scenarios for nearly any application, including automotive parts, lighting fixtures, and electronics.

January 21-23, 2013, Jump Start 2013, Atlanta, Ga. Join shippers, carriers, and logistics service providers at this transportation conference, sponsored by SMC[3]. Session topics include next steps in CSA compliance, capacity shifts, transportation technology innovations, cross-border trade, and cold chain loss prevention and claims. Best-selling author Daniel Pink delivers a keynote presentation on the science of motivation.

800-845-8090
www.smc3jumpstart.com

January 21-24, 2013, ProMat, Chicago, Ill. See the latest materials handling solutions and innovations the industry has to offer. At this event, sponsored by the Material Handling Industry of America, attendees learn to streamline transportation and logistics operations and improve visibility; maximize efficiency, flexibility, and supply chain security; cut costs; and reduce their carbon footprint.

800-345-1815
www.promatshow.com

February 3-5, 2013, Georgia Foreign Trade Conference, Sea Island, Ga. Hosted by the Georgia Ports Authority, this event offers business sessions to senior-level shippers and maritime executives from across North America. An elite panel of speakers addresses issues facing shippers, carriers, ports, terminals, and the maritime community into the next century, as well as the changing legislation and new technologies affecting business.

888-645-7304
gaforeigntrade.com

February 11-14, 2013, Reverse Logistics Association Conference and Expo, Las Vegas, Nev. Seminars cover reverse logistics-focused topics of interest to original equipment manufacturers, retailers, and third-party service providers. Learn the latest best practices, trends, and strategies for returns processing, Lean repair, service logistics, warranty support, and asset management.

801-331-8949
http://rltshows.com

February 17-20, 2013, Retail Supply Chain Conference – Logistics 2013, Orlando, Fla. Retail is becoming more and more multi-channel. It's imperative that your supply chain provide seamless transitions whether customers purchase online, in the store, or over the phone. This RILA conference brings you the content, people, and solutions to make that happen.

801-331-8949
www.retailsupplychain.org

March 18-19, 2013, American Association of Port Authorities Spring Conference, Washington, DC. 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

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 21-24, 2013, COSTHA Annual Forum and Expo, San Diego, Calif. The Council on Safe Transportation of Hazardous Articles presents guidance on navigating the evolving regulations for shipping dangerous goods. The program's offerings explore new technologies, legal trends, and strategies for protecting corporate profits through enhanced compliance, risk management, and training.

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- L ◯ Packaging/Labeling Systems
- N ◯ Intl. Shipping Services, Freight Forwarding
- P ◯ Fleet Operations, Dedicated Contract Carriers
- R ◯ Site, Port, or Facility Selection
- X ◯ Other: ____________
- Z ◯ None of the above

3 Number of people at your location.
(YOURSELF PLUS OTHERS)

- M ◯ 1000+
- L ◯ 500-999
- K ◯ 250-499
- J ◯ 100-249
- E ◯ 1-99

4 Business category.
(CHECK THE BEST ONE)

- 1 ◯ Manufacturer/Producer (any product)
- 2 ◯ Retailer, Wholesaler, Distributor
- 6 ◯ Services: (Medical/Health, Financial, Insurance, Legal, Gov't., Consulting, etc.)
- 3 ◯ Agri., Construction, Engineering, Mining
- 4 ◯ Utilities (Water, Power, Electric, Gas), Telecommunications
- 5 ◯ Transportation, Logistics & Supply Chain Services (Carrier, Broker, Freight Forwarder, Transportation Intermediary, 3PL, Warehouse/DC)
- 9 ◯ Other: ____________

5 Your job classification.
(CHECK THE BEST ONE)

- N ◯ Corporate Management
- Q ◯ Logistics, Transportation, Traffic Mgmt.
- P ◯ Supply Chain Management, Purchasing, Procurement
- R ◯ Warehousing, Distribution, Inventory, Materials Management
- S ◯ Operations, Production, Quality Mgmt.
- T ◯ Customer Service, Marketing, Sales Mgmt.
- Z ◯ Other: ____________

*PASS THIS **FREE SUBSCRIPTION** OFFER ALONG TO OTHERS ON YOUR STAFF.*

PLEASE SIGN AND ANSWER ALL QUESTIONS TO VALIDATE FORM.

▲ NAME ▲ TITLE

▲ COMPANY

▲ ADDRESS

▲ CITY ▲ STATE ▲ ZIP

▲ PHONE ▲ FAX

▲ E-MAIL

SIGNATURE (required) **DATE**

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Click and Mortar: The Numbers Behind Amazon's Fulfillment Centers

80

Total number of Amazon global fulfillment centers.

1.2 million

Square footage of Amazon's largest fulfillment center, located in Phoenix, Ariz.

1,509 lbs.

Weight of the heaviest item Amazon will ship for free: the six-foot-tall Cannon Safe CO54 Commander Series Premium 90 Minute Fire Safe (cost: $3,486.57).

28

Number of football fields the Phoenix facility could contain; some items might be located miles apart.

200

Number of items per second Amazon sold on Cyber Monday in 2011.

20 mph

Speed at which conveyor belts move items through the fulfillment center.

70

number of employees (in thousands) who typically work at Amazon's U.S.-based fulfillment centers during the holidays.

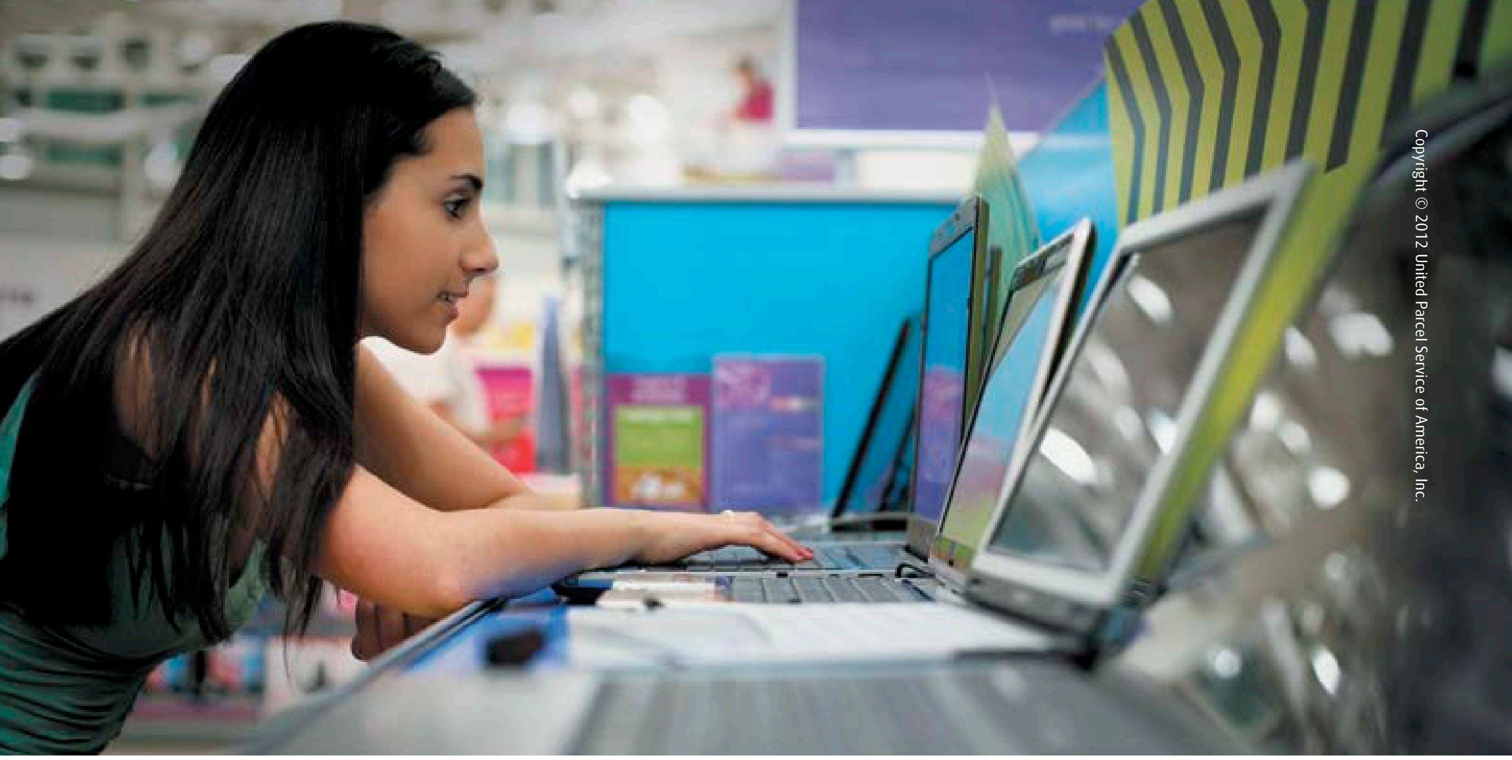
50

number of additional employees (in thousands) Amazon brought in to handle the 2012 holiday volume.

M T W Th F S Su

2,086,548

Most items moved from the shelves to the loading docks in one week.



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