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& Market Research**

**Supply Chain Modeling:
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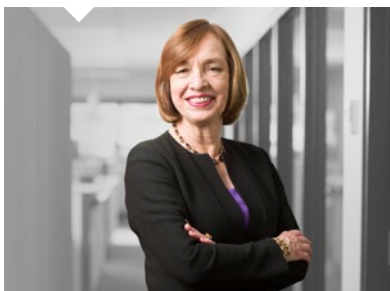
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This collection of leading transportation, logistics, and technology sites makes searching the web for supply chain solutions a snap.



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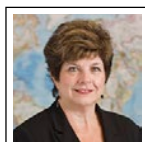
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Protect Your Cargo With Vehicle Tracking bit.ly/VehicleTrackingIL

Sue Rutherford, Vice President of Marketing, ORBCOMM

Cargo in transit is one of the most vulnerable parts of the supply chain and the level of theft sophistication is on the rise. Vehicle tracking provides layers of assurance for shippers and carriers.



How the Hub-and-Spoke Model Can Improve Distribution for Rail Networks bit.ly/HubAndSpoke

Bill Johnson, Senior Business Analyst, Professional Services Group, Tideworks

There's no derailing hub-and-spoke networks. Find out why their adoption is arguably as significant an event in shipping efficiency as containerization.



Enterprise Labeling for a Connected, Flexible, And Efficient Supply Chain bit.ly/EnterpriseLabelingSC

Josh Roffman, Vice President of Product Management, Lofware

Companies are beginning to understand that they need to develop a labeling strategy to meet all the compliance challenges of today's global supply chain. Here's how to implement an enterprise labeling approach.

LOGISTICS IT RESOURCES

Find a Logistics IT Company bit.ly/1BOFWoj

The Logistics IT Decision Support Tool allows you to select the information technology characteristics that match your needs, then generates a list of companies with those capabilities.

Logistics IT RFP bit.ly/1EHmx5V

Describe your technology challenge, and select specific companies to receive your RFP. Logistics experts will look at your unique IT challenges and needs, and give you free, no-obligation advice, solutions, and information to meet your request.

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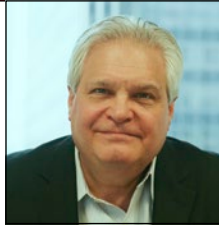
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CHECKING IN

Keith Biondo

by Keith Biondo | **Publisher**



Perfect Security by 2025?

Our annual technology issue highlights evolving approaches that drive supply chain performance. New technology will also bring advances to security. Here's a look at what I envision for security in 2025:

Wi-Fi umbrellas cover entire areas, making any movement or off-baseline measurement (such as heat or sound) cause for alarm once the facility is locked down.

Geofencing anomalies are reported to a global satellite-fed database (think OnStar), enabling near real-time police response.

Cheap micro-cameras (think backup cameras on your car) attached to the outside of trailers stream shots triggered by movement when the trailer is in a yard. Alerts are sent to the driver when in a rest stop, or security monitoring services when not.

Drones currently used to monitor rail track conditions and follow intruders are applied to yards and facilities for real-time security monitoring based on infrared or motion/sound detection. If an intruder is detected, drones trail the miscreant and broadcast GPS coordinates, enabling police to identify and apprehend the trespasser quickly. As they follow intruders, the drones could squirt hard-to-remove markers on them, making deterrence and apprehension more likely.

Secure "water guns" placed in high-risk areas spray intruders with indelible markers, and audio alert them that they have been so marked.

Indelible markers placed on fence tops tag trespassers, making post-event identification easier once detected by other security measures.

Hundreds of tiny, inexpensive online cameras that are easily hidden in a warehouse or cross-dock facility will snap and dump pictures of security anomalies for post-incident forensics.

Cameras pointed outside secure facilities will report suspicious behavior based on algorithms of previous criminal activity at like facilities to predict intrusions. Like facilities will share security data in a cloud database cataloging past criminal behavior and suspects.

Face recognition software cross-linked with personnel, and the shared cloud database of security files, will deter inside jobs as cameras recognize and auto alert the thief by name when possible. If the names are not available, police are provided a detailed description, including height, weight, clothing, and other identifiers.

Sensors placed in high-risk areas will scan for intruder cellphone identifiers, logging them for use in post-incident forensics. When appropriate, the scanners will call the identified phone number and inform the intruder that he or she is busted.

These are my supply chain musings; what do you envision? Email me: publisher@inboundlogistics.com

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in EXCHANGE

Supply Chain Education: Ask the Professors

Leading professors offer answers about supply chain education and pursuing a career in the field. bit.ly/asktheprofs

Jacey Murphy

Exceptional article for SCM students who want a definitive outlook on their career potential, myself included. I wonder how long it will take companies in the supply chain field to offer as many intern and entry-level positions as other mainstream business paths, such as finance. I have noticed that most companies require three to five years of industry experience, even for entry-level job descriptions for supply chain, operations, or logistics. It seems the opportunities are limited to gain the experience needed to meet the demands of employers.

HOT TOPICS | IL articles getting the most impressions on LinkedIn:

Good Question: Who's more important—your customers or your employees? bit.ly/employeesORcustomers • Supply Chains that Rock Around the Clock: bit.ly/rockingsupplychains • Trending Now: Supply Chains Get Social: bit.ly/socialmediaSC • Transportation 2016 (And Beyond): The Old Rules Don't Apply: bit.ly/transportationtrends16 • Supply Chain Education: Ask the Professors: bit.ly/asktheprofs

SOUNDBITE

“Organizations should address the impact of carbon on their supply chain, as a significant percentage of a product's value is derived from it. When consumers purchase a product they are also buying the supply chain that delivers that particular service.”

— **RALTON MOSES**, Divisional Director of Operations, UTi Pharma, which built a green facility in South Africa, consolidating eight of its nine operations into one



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IoT in the Supply Chain bit.ly/IOTinSC

Warehouse Automation: The Next Generation bit.ly/hightechDC

10 Tips to Mitigate Supply Chain Risk bit.ly/minimizeSCrisk

READER EMAIL

Custom Education: Guaranteeing a Perfect Fit bit.ly/customeducation

Customized education renders traditional open-enrollment education obsolete. And, knowing many of the players cited, particularly at Ohio State University, Georgia Tech, and Penn State, I admire the strides they have made.

In addition, independent training and education organizations (full disclosure: I am part of such an education enterprise) create and deliver comprehensive custom education solutions. They have advantages of exceptional agility and flexibility in program construct and conduct, in content, in varying class sizes, in drop-of-a-hat changes in direction, and in on-the-fly curriculum adjustments.

Art van Bodegraven
Managing Principal,
Van Bodegraven Associates
Founding Principal,
Discovery Executive Services

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We are excited to announce that the Inbound Logistics' voting poll is open for the Top 10 3PLs for 2016. For the past seven years, Unyson was voted a Top 10 3PL. The award reiterates the value we are providing and is a true testament to what we do every day and how you—our clients, carriers and peers—view us in our industry.

It would be our highest honor to get your vote as a Top 10 3PL. The polls are open at the following link:

<http://www.inboundlogistics.com/cms/top-10-vote/>

Top 10 or not, your vote and confidence in us is an award all on its own, and we hope you choose us as an Inbound Logistics' Top 10 3PL provider.



VOTE UNYSON TOP 3PL

Good Question...

READERS WEIGH IN

What hobbies/activities make you better at supply chain and logistics management?

Supply chain management is like cooking a complicated meal. You must plan well, execute with excellence, and serve perfectly and promptly. Have great tools and multitask. Be creative to create outstanding results.

Hannah Kain
President & CEO, ALOM

Staying active and participating in team sports definitely translates to my ability to succeed at supply chain management and logistics. As an individual, I have an obligation to my teammates, and I don't want to let them down—whether it's on the field or in the warehouse.

Jon Wiederecht
Director of Lean Enterprise & Operations
ModusLink

Running builds the required endurance. Weight lifting develops the strength needed for success. Hot yoga builds the flexibility and balance required for an agile supply chain. And reading is essential to keep up to date on a fast-changing field.

Tom Sanderson
CEO, Transplace

A techie at heart, I'm always reading up on or testing out new consumer and commercial products. It inspires me to figure out how I can incorporate these innovations to better my business and continue to modernize the logistics field.

Shani Atapattu
Vice President, Overseas Cargo Inc.

Comments from *LinkedIn*

Traveling makes you better at scheduling and planning.

Running a household teaches you how to juggle tasks especially if you have children. You learn quickly what has to take priority at the time. You learn what it takes to get things done.

Playing golf teaches you how to reach goals, one hole at a time in as few shots as possible. Planning is key, and mistakes are costly. Everything successful requires making a plan and sticking to it but having the vision to redirect if necessary. We never plan to get in the hazards but have to know how to recover.

Chess, puzzles, and singing. You have to understand how the supply chain is connected, and have a good voice to communicate that to others.

Simulation games in logistics and other fields are realistic and excellent for mind training.

Karaoke builds self-confidence and gives valuable insight into how people react positively or negatively to your performance.

World travelers improve their mastery of online freight and logistics tools by booking and managing their vacations on the internet—whether it be purchasing plane tickets and hotel rooms, researching top attractions or hailing a cab.

Augie Grasis
Founder & CEO, ShipX



HAVE A GREAT ANSWER TO A GOOD QUESTION?

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10TIPS

STEP-BY-STEP SOLUTIONS



Creating a Lean and Green Culture

Focusing on saving money or going green doesn't have to be an either/or proposition. Fabio Duque, global head of consumer vertical for APL Logistics, offers tips for creating efficiencies that have both environmental and financial benefits.

1 Re-examine your international expedited transportation mix. If you routinely use air cargo to expedite global shipments, consider switching to time-definite ocean shipping. It's often just as reliable, costs 75 percent less than air, and leaves a drastically smaller carbon footprint.

2 Consider DC bypass. If you have retail operations or customers near a particular port, but don't operate a distribution center in the area, find a deconsolidation center close by to direct-ship products. This could shave up to 24,000 kilowatts and 6,500 kilograms of carbon dioxide emissions per 40-foot container shipment off your carbon footprint — and save considerable money, too.

3 Stay on track. Trains are a far greener form of land transportation than trucks because they emit two-thirds less carbon dioxide. Plus they're less expensive, even when factoring in recent drops in fuel prices. Use rail for the final leg of your products' journey whenever you can.

4 Add a new dimension to trailer cube utilization. Encourage your Lean or engineering team to study and measure the specific contents of outbound trucks. Then run new trailer cube utilizations with the help of the refreshed data. This allows additional pallets, boxes, or cases onto outgoing loads and reduces transits.

5 Invest in bright ideas. Switching from halide or fluorescent to fixtures such as T5 or T8 lamps may result in using 70 percent less light-related electricity than you once did, and potentially racking up big savings. Consider using natural light at your facilities where appropriate.

6 Slam the door on heating and cooling loss. Dock doors that open and close slowly, contain inadequate insulation, or have breaches in the sealing around them waste money and energy, and could add hundreds of thousands of dollars of temperature loss and energy waste per year. Consider installing newer, faster moving truck doors or revamp the sealing around current doors. This will help your facilities hold warm or cold air in longer and significantly reduce associated heating and cooling bills.

7 Enhance pallet loadability. A Lean project that focuses on pallet loadability could play an instrumental role in

increasing the average number of cases your company can ship per pallet and ultimately allow you to use fewer pallets and truckloads per year.

8 Optimize warehousing networks and layouts. Warehouses can either be a big part of the problem or a major part of the solution. Thorough and frequent network optimization will ensure not only that your company has the best warehouse locations from a cost/customer service perspective, but also that you use the least amount of fuel for the greatest amount of productivity.

9 Re-package. Letting suppliers choose supply chain packaging is akin to shipping dollars out the door because most tend to err on the side of over-protection. Retool this largely untapped area of your supply chain to make your supply chain packaging work smarter, not harder.

10 Participate in SmartWay. The many companies that participate in the Environmental Protection Agency's SmartWay Transport Partnership have made significant strides in reducing our industry's energy use. Even if your company has not been able to participate, try to work with partners who do. ■



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Jim Lambo is director of supplier management and procurement at Insitu in Bingen, Wash. He joined the company in 2007.

RESPONSIBILITIES

Procurement and supplier management for all goods and services, including both indirect procurement and production.

EXPERIENCE

Assistant plant manager, Merlini's Italian Foods; procurement manager, Boeing Commercial Airplane Group, material division; senior manager, international programs, Integrated Defense Systems, Joint Strike Fighter; senior manager, partnerships and new ventures, Boeing Phantom-Works, advanced unmanned systems; global partners co-leader, 787 Propulsion Life Cycle Product Team, Boeing Commercial Airplanes.

EDUCATION

BA, business administration and marketing, Seattle University, 1980; MBA, finance, Seattle University, 1987.

Jim Lambo: Eye in the Sky

MY FIRST SUPPLY CHAIN JOB WAS AS A BUYER AT Boeing Electronics. It's amazing how relationships helped me: The senior manager who hired me was my scoutmaster from my days as an Eagle Scout.

I worked at Boeing for almost 27 years before moving to Insitu, a small but quickly growing business that is now a wholly owned Boeing subsidiary. We design and manufacture unmanned aerial vehicles. Many people refer to them as drones, but we in the industry don't like that word. A drone is an unthinking vehicle; ours are extremely smart. Customers in the civil, commercial, and defense sectors use our aircraft for everything from fighting forest fires to inspecting infrastructure to supporting military operations.

As director of supplier management and procurement, I'm responsible for all company expenditures except for wages, insurance, and utilities. I oversee a team of 42 people, including buyers, supply chain

analysts, and managers. I report to Insitu's chief operating officer.

We try to procure as much as we can from local suppliers in the Columbia Gorge. But we're also branching out, with a supply chain that extends across the United States and around the world. Because Insitu started out small, we're proud that more than 70 percent of the money we spend goes to small businesses.

The biggest challenge in my job arises from the rapid rate of change in technology. For example, I might procure an avionics module — the guidance package — for an aircraft. Then, while this component is on its way from our supplier, our engineers decide to make an upgrade, to make the product more capable for the

The Big Questions

What do you do to de-stress?

I read a lot, especially science fiction and fantasy. Also, I make wine. It's fun to make and drink. My wife and I are partners in a winery.

What's the biggest surprise a job has thrown your way?

Coming from a large corporation with a highly structured environment, I wasn't prepared for the lack of documentation I'd find at a small company. I didn't know the extent to which I'd be writing most of the procurement procedures myself.

When you were a child, what did you want to be when you grew up?

An astronaut. It was the early sixties: We were going to the moon, and *Star Trek* was on TV. No wonder I ended up working in aerospace all my life.

What's the most unusual item in your office?

In my bookcase, I keep a piece of hardware called septimized core. It's made of honeycombed composite or metal, with fabric inside, and used for sound reduction around the engine of a Boeing 787.

customer. The engineering team always comes up with new ideas, and shares those ideas with customers. Then the customers want the improvements right away.

The product that's coming in can't be retrofitted with the upgrade here. If we send it back to the supplier for a new board, we won't have components for production. So we have to temper our customers' enthusiasm, making sure they understand that we can't rush new products into the field without significant impact to the supply chain.

We get the business development teams involved, so we all work together as a true integrated production team.

For the near future, one of my top priorities is to implement new technology tools. Although Insitu is part of Boeing, we don't have access to its systems, including its supplier portal. I plan to implement a portal of our own, to foster better communications with our supplier base. I also want to implement an electronic system for documenting our procurement

activities. Both systems will help my group work smarter while saving money.

When I came to Insitu, my department employed only two or three clerks and a supplier manager. I was charged with building an organization that could pass a government appraisal called the Contractor Purchasing System Review (CPSR). We went through our first CPSR in 2015 and passed. Only one percent of companies pass the first time around. I'm proud of the achievement. ■



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LEADERSHIP

*Conversations With
The Captains of Industry*

By Merrill Douglas



Ann Drake
CEO
DSC Logistics

AWESOME Outlook

ANN DRAKE STUDIES PEOPLE FOR A LIVING. JOIN HER team at DSC Logistics, and she'll soon discover what makes you tick. Then she'll make sure to assign you projects that mesh with your interests and play to your strengths.

CLINTON CONNECTION

The leader who inspires Ann Drake the most is Hillary Clinton, and that admiration started long before most of us ever heard of the former First Lady, senator, Secretary of State, and current presidential candidate.

"We grew up together. I've known her since we were eight years old," Drake says.

One of the qualities Drake most admires in her childhood friend is her staying power. "I'm tenacious, but she sets the bar," Drake says. "Also, she stays positive. And to be as visible as she is—I can't imagine what that's like." Clinton's multitasking powers are admirable as well, she adds.

"It's fun for me to see how this highly visible person interacts with the public and the media, and know that she's the real deal."

Drake has served as CEO of DSC Logistics in Des Plaines, Ill., since 1994, when she brought together the 22 entities that made up the Dry Storage network to create a unified company. *Inbound Logistics* recently talked with Drake about her leadership style, her drive to foster collaboration and innovation, and why she works so hard to increase opportunities for women in supply chain management.

IL: What early experiences in your career helped to make you the leader you are today?

Before I started in business, I spent eight years teaching freshman and sophomore English in high school. One lesson I learned was the importance of helping people understand where you want them to go. For example, if we were reading a play, I had to give the students a good reason to want to engage with that material. I had to be a full-time cheerleader and relater,

making the classes meaningful to their wants, needs, and desires. I do the same in business. One of my favorite definitions of leadership is taking people where they wouldn't go themselves.

Another lesson learned from those early days is "communicate, communicate, communicate." You need to understand the other person's point of view. It's not just a matter of what they're saying; what they're not saying is also important. You also need to communicate back to them so they can relate to what you're saying. Teaching and business leadership are both about moving people in particular directions.

IL: Why do you think you've been successful as an executive?

It's because I care about people, and they know it. I'm a visible CEO: I talk to people and find out how things are going with them and their families. Also, I was raised by a father whose motto was, "Do a better job tomorrow than you did today." Nothing is ever good enough; it can always be improved. I'm open minded about finding new and better processes, and I try to drive that in my organization. We can't rest on our laurels for one second. I tell people

they can celebrate tonight, but then they've got to move on and make new strides tomorrow.

IL: How has your leadership style evolved over the years?

Early in my business career, organizations were much more siloed than I thought they should be. I found it hard to gain the courage to knock down those walls. It seemed like a giant, scary project. Today, the supply chain field is constantly knocking down barriers between companies, between people, and between departments. I hesitated about doing that at all as a leader in the early years. Now, it's what we do all day, inside and outside the company.

IL: You have started an initiative to promote the inclusion of both men and women at DSC. Why is this so important?

We continually need to develop new points of view. I think men and women notice and value different qualities. The difference is subtle, but it's real. Gaining diverse points of view and moving the industry in a more comprehensive way promotes stronger innovation — stronger everything. That will give you a competitive advantage.

IL: What do you do to cultivate female talent within the company?

I put some focus groups together, talking with our men — because the company is mostly men — to learn what actions foster more inclusionary leadership. We all became convinced that the issue was invisible, and no one was being exclusionary on purpose. I had them read a book, *Work with Me*, by Barbara Annis and John Gray, which discusses the differences between men's and women's styles. Then we created a women's leadership council inside our company and selected key women — all high-potential middle managers — to help move it along, so women can play an equal role and become part of the leadership within our male-dominated organization.

IL: You also promote women's empowerment outside DSC. Tell us about that.

For some years, I'd been participating in several women's organizations that work in this area. Then, in 2013, I founded AWESOME (Achieving Women's Excellence in Supply Chain Operations, Management, and Education). That organization is moving the needle in incredible ways. We have built a network of more than 700 senior women in supply chain. Through them,

we have raised awareness of the opportunities to advance women leaders, as well as the challenges we face. We've celebrated success, given visibility to the accomplishments of successful women in the field, and provided opportunities for emerging leaders and young professionals to learn from role models and develop their leadership skills. When we bring together these women leaders in various supply chain roles, they are thrilled to find themselves in the same room with other smart women in our field, where they have a chance to network and exchange ideas.

IL: What makes you excited to get up and go to work in the morning?

It's definitely AWESOME. This group is the confluence of four topics that have been important to me over the past 20 years: the principles of leadership, women's leadership, the supply chain, and what's needed in the future for America to succeed. AWESOME is about leadership in the 21st century. The collaboration skills, visionary skills, and transformational skills that women are particularly good at are what America needs today and tomorrow.

IL: What do you enjoy about going to work?

I love winning and overcoming challenges. I enjoy envisioning and articulating what we can be as an organization, maybe seeing what others can't see, helping people convert possibilities into realities, and executing upon those realities.

IL: What advice would you give to your 20-year-old self?

Gain confidence more quickly. Developing networks and friends outside your company helps a great deal in that regard. I'd tell myself to focus on gaining assertiveness, developing as a leader, and breaking out of the mold. "Group think" drives me crazy. You need to aggressively, happily follow your own path.

When you're young and a high achiever, you may think you have to do everything on your own, and using a network is like cheating. I don't know where that point of view comes from. Networking helps you gain confidence, new thinking, and additional resources.

IL: Outside of work, how do you like to spend your time?

I spend as much time as possible with my four wonderful granddaughters. I play golf, but not as often as I'd like. And I like to go on special trips when I can. Some of those trips — for instance, a recent one to the Czech Republic — are built around my interest in art glass, which I started collecting about six years ago. ■

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NOTED

THE SUPPLY CHAIN IN BRIEF

SEALED DEALS

Costa Farms, a grower of ornamental plants, selected the **Cloud Logistics** TMS to help manage its distribution network, reduce freight costs, and provide visibility into inventory and shipments. Costa Farms uses the TMS to optimize carrier selection, which is critical to its seasonal business.



GOOD WORKS



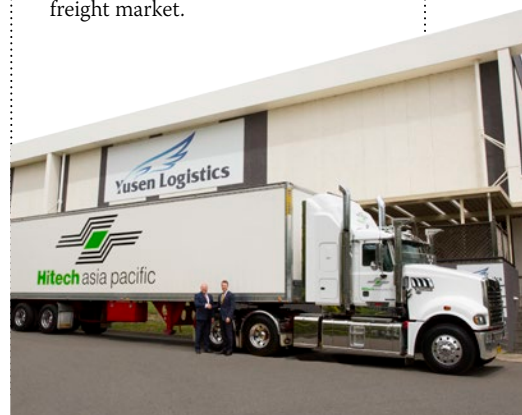
◀ **DHL Express**, a global express and logistics company, and the **Girl Scouts of Nassau County** joined forces to send more than 1.3 million Girl Scout Cookies to U.S. military stationed overseas as part of the 11th annual Operation Cookie program. With the help of DHL Express, more than 65,000 boxes of cookies were shipped to troops in overseas installations, including those in Afghanistan and Bahrain, as well as to local Long Island military bases.

Redwood Logistics, a logistics provider, partnered with Walgreens, a Redwood Multimodal customer, to organize a drive to collect and donate kits containing personal essentials to the Lincoln Park Community Shelter (LPCS). The LPCS helps the homeless around Chicago's Lincoln Park neighborhood.

m&a

Supply chain operating network **E2open** acquired **Terra Technology**, a provider of supply chain solutions that help large consumer product companies manage market volatility to make better business decisions. The acquisition provides more intelligence on the demand side of E2open's network, enabling it to create supply chains that dynamically sense market changes and synchronize operations from retailers through to suppliers.

▼ **Yusen Logistics Australia** acquired the **Hitech Asia Pacific** brand businesses from the Hitech Express Group, a logistics provider. Hitech specializes in domestic logistics, including transporting, installing, and calibrating sensitive freight such as medical and business machinery. The acquisition enables Yusen Logistics to better serve the high-value-added sensitive freight market.



GREEN SEEDS



◀ **Moran Transportation** purchased its first electric yard spotter for use in its Chicago operation. Helping to reduce the LTL carrier's carbon footprint, the new electric truck is expected to cut the daily energy consumption for this spotting unit by more than 80 percent.

UPS is set to build an additional 12 compressed natural gas (CNG) fueling stations and add 380 new CNG tractors to its growing alternative fuel and advanced technology fleet. The CNG fueling stations and vehicle purchases totaling \$100 million are part of UPS's ongoing commitment to diversify fuel sources and reduce environmental impact.

UP THE CHAIN

Dunkin' Brands Group, the parent company of Dunkin' Donuts and Baskin-Robbins, appointed two supply chain vice presidents to its management team. **David Gill** was named VP, supply chain U.S. and Canada for Dunkin' Donuts and Baskin-Robbins. **Pete Jensen** was promoted to VP, supply chain international. Jensen leads international manufacturing and sourcing, logistics and service, regulatory compliance, supplier quality and food safety, new product commercialization, and in-store equipment innovation for Dunkin' Donuts and Baskin-Robbins.

Duncan Family Farms, a grower of certified organic produce, promoted **Pete Guerrero** to vice president of operations. Guerrero began as a food safety manager and worked up to director of supply chain and procurement during his eight years with the company. He also played a critical role in strengthening its food safety program.

m&a

CRYO International, an Air Liquide group subsidiary specializing in temperature-controlled logistics solutions, acquired **PDP Couriers**, which transports high-value-added products for the pharmaceutical and biotechnology industries. With the acquisition,

CRYO International offers shippers customized temperature-controlled logistics solutions worldwide.

Rockfarm Supply Chain Solutions, a logistics service company, acquired **Global Distribution & Logistics**, an international forwarder. The deal strengthens Rockfarm's international forwarding and customs brokerage service and allows it to offer improved integrated international services to shippers.

recognition

LeanLogistics, a provider of TMS applications and supply chain services, received the **2015 Top Supplier in Transportation & Warehousing Award** from Ferrara Candy Company. The confectionary manufacturer engaged LeanLogistics in 2015 to improve overall transportation operations. Ferrara implemented *LeanTMS* and initiated strategic improvements in carrier selection, procurement, load planning, optimization, and tendering.



▲ Manufacturer **GMR Safety's** PowerChock vehicle restraint system was selected by Club Demeter Environment & Logistics as an **outstanding innovation**. Supply chain action group Club Demeter annually recognizes outstanding examples of product development showing originality, practicality, and sustainability. The PowerChock series of truck and trailer restraint systems is designed to prevent trailer-creep and premature driveway, two major causes of accidents in warehouse loading bays.

Averitt Express was honored by Mastio & Company, an independent research agency that specializes in the LTL industry, as its 2015 overall **Mastio Quality Award** winner, as well as its Inter-Regional Carrier Award winner. In its 11th annual LTL Carrier Customer Value/Loyalty Benchmarking Study, Mastio & Company interviewed more than 2,000 major shippers to determine which carriers best meet their customers' needs. Averitt received the highest overall score in the industry.

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TRENDS

SHAPING THE FUTURE OF LOGISTICS



What Will Smart Cities Mean For the Supply Chain?

by **Jason McDowell**

One decade ago, we were still getting used to the idea that our mobile phones were smarter than us. Today, thanks to an Internet of Things that links all our computerized devices, we have smart watches, smart toothbrushes, smart cars, smart factories, and countless other interconnected devices.

So it is no surprise that the U.S. Department of Transportation (USDOT) and Google's Sidewalk Labs have put forth a program to develop the world's first smart city, which will gather data to fuel solutions to myriad urban issues ranging from housing to pollution

to traffic management. To help address transportation concerns, a smart city would have infrastructure and smart sensors in place ready to handle self-driving and connected vehicles, and integrate with Google Maps (and potentially other GPS programs) to monitor and direct traffic flows.

With Congress' continued failure to pass any kind of meaningful infrastructure funding, USDOT is seeking innovative ways to work around the problem. Transportation Secretary Anthony Foxx hopes that smart cities might relieve some of the burden on the nation's

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transportation budget. “Smart cities are not adequate against chronic under-investment,” he said in a press call, “but what we’re introducing is the possibility of technology innovation to solve some of our mobility challenges differently. This could be a way to flatten the curve of the infrastructure deficit a little bit.”

Where will the smart city be located? USDOT has narrowed down the finalists to seven cities: Austin, Texas; Columbus, Ohio; Denver; Kansas City, Mo.; Pittsburgh; Portland, Ore.; and San Francisco. The finalists are currently developing proposals to introduce smart technologies into their cities, and the winner will receive \$50 million toward implementing its plan.

A smart city environment would have a drastic impact on the supply chain. Driverless vehicles would open up a new world of transportation, logistics, and technology solutions, and the impact of the commercial driver shortage would likely be far less dire in these areas. Automated cars and trucks would also improve delivery efficiency and lower environmental impact, according to a DHL report.

Also, a smart city presents an optimal location to finally begin public urban use of commercial drones for delivery. This depends heavily on the Federal Aviation Administration releasing the long-awaited commercial drone regulations, which may not happen soon considering that the deadline for

those regulations gets kicked down the road about as often as infrastructure funding bills do. Still, developing a connected city lays the groundwork for future drone use.

It’s difficult to predict what benefits and technologies the first smart city will bring until the finalists release their individual plans. But whatever surprises are in store, there can be little doubt that the impact on the supply chain will be substantial.

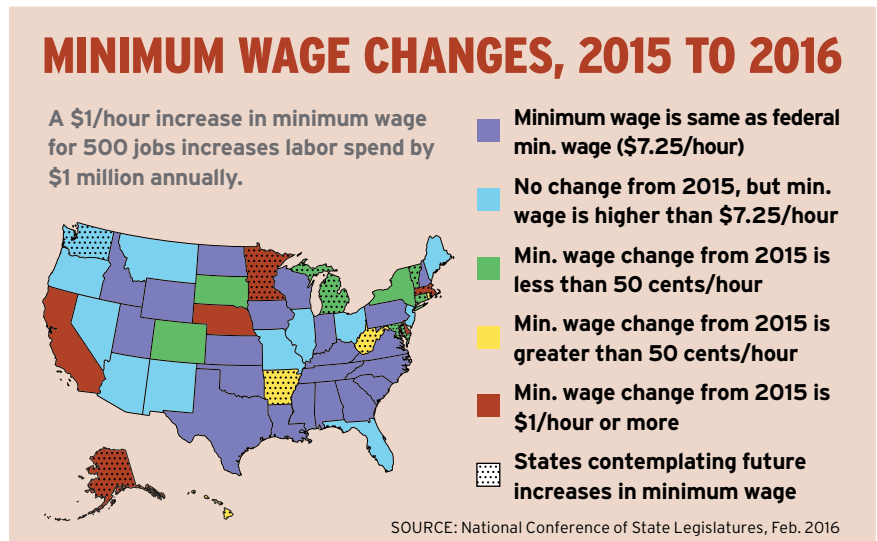


Minimum Wage Hike May Have Maximum Supply Chain Impact

Amid all the issues being debated and discussed in U.S. politics, the country’s current \$7.25 federal hourly minimum wage has been a hot topic. Many argue that minimum wage has failed to keep pace with inflation, and needs a substantial increase to restore working class America’s buying power and economic stability.

The most common number suggested in recent months for a new federal minimum wage has been \$15 per hour. In fact, some cities and states have already implemented these wages on their own. Such a large hike has many stakeholders across the supply chain concerned about how those increases would affect operational costs. For a warehouse employing 500 people, the annual cost of a wage increase amounts to \$1 million annually for each dollar raised, according to a new report from real estate brokerage firm CBRE (*see chart*).

With e-commerce sales continually rising, and online retailers looking to open warehouses and distribution centers near metro areas to meet the fast delivery demands of consumers, companies that refuse to expand in these areas will have trouble remaining competitive. Yet, these metro areas



are the same locations where support for a minimum wage increase is fiercest.

Proponents of a \$15 per hour minimum wage argue that costs such as these will be offset because consumers will have more to spend, putting money back into retailers’ pockets. The federal minimum wage has lost 8.1 percent of its purchasing power since 1968, and a minimum wage properly adjusted for inflation should rest at about

\$12 per hour, according to Pew Research. So, in theory, consumers who make more will eventually spend more.

However, labor accounts for 20 percent of supply chain costs, according to the CBRE report, so even if consumers do eventually spend enough to nullify increased labor expenses, companies must still be prepared for an initial impact that will negatively affect the bottom line.

Supply Chain Disruptors: The Storm After The Calm

A quiet storm has been brewing beneath the relative calm that the transportation and logistics sector enjoyed in 2015, according to a report by professional services firm PwC. Customers' changing needs have made shipper supply chains more complex, revealing five key trends that are disrupting the status quo:

1. Supply chain fracturing. Global supply chains increasingly feature a mix of offshore, nearshore, and onshore locations, and an expanding number of nodes in shipper distribution networks aimed at reducing delivery time to customers from days to hours.

2. Rising recognition that transportation and logistics should be a strategy, not a commodity. As shippers learn that logistics can yield a considerable competitive advantage, they no longer consider shipping a tactical decision influenced solely by cost, but rather a strategic consideration based on factors such as customer expectations, sales volume, and product mix.

3. Increased need for enhanced services to high-margin product shippers. Shippers selling valuable and sensitive products, such as specialty pharmaceuticals and fragile electronic equipment, require their transportation partners to provide exceptional handling, security, reliability, and tracking.

4. Large-scale events that cause shippers to reevaluate their procurement tactics. The frequency and magnitude of disruptive events — higher peaks in demand, “100-year” storms and other natural disasters, labor strikes, and geopolitical uncertainties — cause shippers to reevaluate their procurement tactics and the efficacy of their logistics networks.

5. E-commerce growth and the inroads it is making in shipment complexity within the business-to-business arena. The rise in e-commerce is resulting in greater shipment complexity, and more demanding transparency and tracking requirements.

These trends are creating new demand patterns as shippers want logistics partners that can operate across diverse supply chains and distribution networks and that

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- Tampa, FL

are strategically inclined — as comfortable in the C-suite as in a buyer's office, according to PwC. Shippers particularly seek carriers that can accommodate spikes in volume and maintain high performance levels during disruptions. And they are looking for business-enhancing opportunities, such as 3D printing and digitally enabled solutions, that provide visibility into multiple vendors, greater price transparency, and a consumer-like user experience. ■

High Fiber Diet

In 2012, Google launched Google Fiber—a project to build a fiber optic communications infrastructure. Since then, the company has rapidly expanded the project across America, with many cities either currently or soon to be online (see list, right).

With Google Fiber's super-fast Internet connection of up to 1,000 megabits per second, a bigger pipe means less compression. “For the first time, I don't think about the pipe,” says Google Fiber customer Marcelo Vergara of Propaganda 3, a developer of interactive software, games, websites, mobile apps, and supporting technologies, located in Kansas City.

Given the growing importance of e-commerce operations, supply chain Software-as-a-Service, and the impact of technology on transportation and logistics operations, having access to near light-speed web tone can drive efficiencies. When making your next site selection decision, it might be worth evaluating Google Fiber cities for your logistics, manufacturing, and service operations to continually drive supply chain speed.

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GLOBAL

by Jason McDowell



Air Cargo Struggles to Find Its Wings

Times are tough for the air cargo industry. Despite the fact that the rest of the world seems to be recovering from the global financial crisis, air freight just can't seem to sustain any type of upward momentum. The industry has gone from a \$67-billion annual profit in 2011 to just \$50 billion in 2015, according to a report presented at the Air Cargo World Symposium in Berlin in March 2016.

Many factors are choking the air cargo sector and causing some cargo-only airlines to cease operations. These include:

■ **The big shots.** E-commerce retailers rely on the big three in logistics to handle most of their cargo. UPS, FedEx, and DHL operate with seemingly unlimited resources, making it hard for other providers to compete. Amazon's recent moves toward its own air fleet will likely make competition even more difficult in years to come.

■ **Belly up.** Many airlines rely on selling extra belly space in passenger planes to

move cargo. Increased passenger demand over the past several years has meant increased belly space as well, but this also means that some airlines are inadvertently using passenger planes to compete against their own cargo fleets. As such, air carriers are only using an average of 43.5 percent of their total capacity, according to *The Economist*.

■ **Rate troubles.** Sea-freight rates have fallen 75 percent since 2012, says *The Economist*. Because moving cargo by sea has traditionally been less expensive, those types of rate drops don't make it any easier to convince shippers to move cargo by air. In response, air cargo carriers are forced to cut their own rates to remain competitive.

So what can the air cargo industry do? The International Air Transport Association (IATA) thinks the way forward lies in technological advancement. If the airfreight industry wants to stay in the clouds, changes will have to be

made — and quickly.

“Developments such as e-tickets, bar-coded boarding passes, airport self-check-in kiosks, and in-flight Wi-Fi have transformed the passenger experience. Is it a coincidence that after a decade of change, load factors are at record highs and airlines are finally rewarding their investors with adequate returns?” says Tony Tyler, IATA director and CEO. “We need similar breakthroughs on the cargo side of the business.”

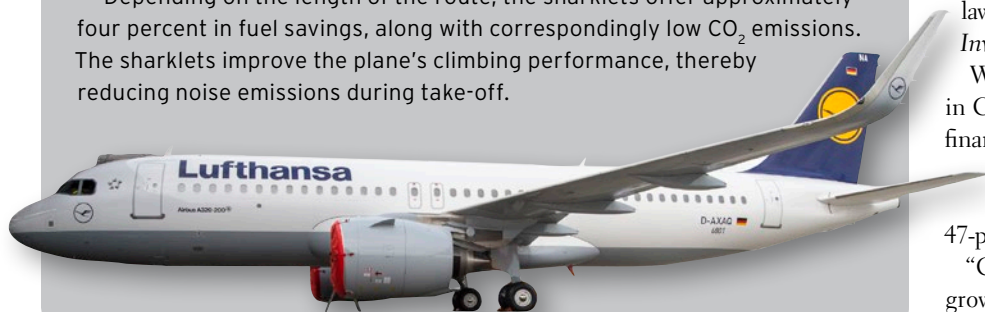
“There are lots of potential disruptors out there — data-sharing platforms, new market entrants, and e-commerce,” he adds. “The challenge is to stay one step ahead in satisfying customer expectations.”

This may be easier said than done, but with the IATA predicting another 5.5-percent drop in cargo yields in 2016, the industry may no longer have any choice but to implement new practices, make major technology and service investments, and then hope for the best.

A Quiet Shark Attack

To address new airport noise regulations, Lufthansa is fitting its medium-haul Airbus A320 fleet with “sharklets,” which are 7.8-foot wingtip extensions. The sharklets’ design is modeled after nature. Large birds, such as cranes and condors, bend their outer feathers upward and thus fly in a more energy-efficient way. Accordingly, sharklets reduce lift-dependent resistance and improve aerodynamics at the wingtips.

Depending on the length of the route, the sharklets offer approximately four percent in fuel savings, along with correspondingly low CO₂ emissions. The sharklets improve the plane’s climbing performance, thereby reducing noise emissions during take-off.



U.S. Attracts Chinese Investors

Things don’t look good for economic growth in China, but that looks good for Chinese investment in the United States. Thanks to stock market problems and poor economic growth, Chinese companies have begun to diversify their assets by investing in the United States, according to law firm O’Melveny’s 2016 *Foreign Direct Investment Report*.

With limited opportunities for growth in China, nearly half of the strategic and financial investors responding to the survey are setting their sights across the ocean to the United States and its 47-percent economic growth potential.

“Companies that were accustomed to growing 15 percent to 20 percent just by relying on the Chinese economy to supply



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them demand can no longer grow like that,” says Nima Amini, a partner in O’Melveny’s Hong Kong office. “Additionally, the competitive landscape in China is dramatically increasing.”

The survey results also contradict themselves, with 38 percent of respondents viewing U.S. regulatory structure and laws as attractive, while 48 percent see the same legal structure as an investment barrier.

“The very attributes that make the United States the most attractive destination for investment in the world can also present challenges to investors,” says Steve Olson, a partner in O’Melveny’s Los Angeles location.

“We are the largest fully developed consumer market in the world, but a highly competitive market,” he adds. “We’re the most open economy in the world, but certain foreign investments will be

reviewed for national security implications. We’re blessed with an effective and predictable legal system, but U.S. businesses face a high rate of litigation.”

A fair share of the Chinese investment will come from the industrial and manufacturing sectors, with nine percent of respondents claiming that field as their line of business. Three percent of respondents claim transportation.

If the survey results prove accurate, the manufacturing and transportation sectors can expect significant investment offers from potential Chinese partners in the months to come.

Here are some additional key results of the O’Melveny report:

■ 84 percent of survey respondents say that their investment in the United States will be higher in 2016 than in previous years.

■ 62.5 percent rank the United States as one of their top 10 markets for investment; 13 percent rank it the No. 1 spot for investment.

■ 47 percent agree or strongly agree that the United States is the most attractive market for investment.

■ Two-thirds of respondents will target public or privately held companies for investment.

■ U.S. laws and regulations, while seen by some as an attractive factor, also ranks as the top reason for the greatest barrier to U.S. investment.

■ Respondents identify the frequency of litigation and industry-specific regulations as the biggest areas of concern regarding U.S. investment.

■ Respondents see economic growth potential as the most attractive factor for investment in the United States. [1]



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Industry, Hewlett Packard Enterprise

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Chief Commercial Officer,
SEKO Logistics



Using RFPs to Optimize Partnerships

Requests for proposal are rewarding but time-intensive processes that ideally result in both parties entering into a years-long logistics partnership. The significant amount of time invested in the RFP process helps ensure the provider and client are a good fit. Developing a strong partnership with a best-fit 3PL also can help your company optimize long-standing supply chain processes. However, throughout the process, both parties can experience confusing scenarios that could be avoided given proper communication. Following are six guidelines for your 3PL-seeking company to be cognizant of during the RFP process:

1. Consider sending an RFI first. Sometimes, a company will send an RFP to 40 or 50 providers, which each have to expend resources responding. "Requests for Information" generally are less time-intensive and more informal. The question-and-answer process in RFIs allows your company to narrow its list of providers quickly and easily, without the provider or your organization expending significant time. Similarly, responding in stages also allows the 3PL to get to know the needs of your company and decide at each stage whether they wish to remain in the process.

2. Have a clear idea of your company's objective. Many times, companies will seek logistics providers through the RFP process to lower overall supply chain costs, increase responsiveness to their customers' needs, shorten delivery times or all of the above. Know what your company needs. If your company provides a large amount of data and asks for solutions without clearly defining what it wants, it can slow down the selection process. If given the proper information, the potential 3PL provider can accurately anticipate the company's needs and save time for both your company and its own operation.

3. Involve top decision-makers during the 3PL selection process. In a recent WSI blog post (bit.ly/3PLProcurement), we encourage the revolution of procurement departments and emphasize how 3PLs can help companies with procurement. By working strategically with other members of your organization, procurement and purchasing leaders can design a robust selection process, taking into account key areas of criteria, "such as customer service, responsiveness, financial stability, and international scope, if applicable." As a recent University of Tennessee study found, companies still struggle to include top leaders in their 3PL selection process. Engaging in an analytical and strategic RFP process with 3PL service providers can help discover previously unseen points

of stagnancy within your company and help to eliminate those inefficiencies.

4. Analyze factors other than bottom-line costs. As stated above, a multi-disciplinary approach involving key leaders in your company is essential to developing a long-term relationship with a 3PL provider. Additionally, some companies use RFPs as a way to price check with no intention of switching vendors. The faux-bidding often induces the intended effect of encouraging a company's current 3PL provider to reduce its prices. Open communication about price expectations could reduce the need for a manufactured bidding competition, with numerous 3PLs spending resources on a contract a company has no intention of giving them.

5. Make sure outside advisors know your business and industry. If your company uses a logistics consultant, the consultant may know the logistics industry well but may not understand your specific organization's needs. For example, your company hires a consultant, who doesn't fully understand the retail industry, to seek a logistics provider for your company's retail division. The consultant therefore does not consider the costs of compliance, chargebacks and expenses incurred for shipment variations. A logistics provider in the company's RFP bid also "forgets" about these expenses—or does not think to consider them in the first place—and wins the business over another more-informed 3PL with retail experience, based on price alone. Typically, given the importance of the overlooked factors to your company's logistics business, your organization ends up parting ways with the ill-fitting 3PL provider after a short time. The provider's expectations for the work and your company's expectations for the costs ultimately do not match.

6. Accurate data is essential to the RFP process. If your company knows typical order sizes, inventory levels, SKUs, an approximate amount of rush orders and standard transactional data, it will find a logistics provider that is a good match for those factors. If your company does not know or have this data, the discrepancy between expectations will become rapidly apparent during the onboarding and start-up process. The better the RFP data, the better the implementation of start-up. Anything clients can do to ease the start-up process on the front end will benefit them.

In short, transparency and communication are key in the RFP process, to develop a true and lasting partnership with a 3PL provider. Is your business seeking a true partnership? Contact WSI (www.wsinc.com) today.



The 'Direct-to-Consumer' Trend: Retail Shift Affects Logistics Operations

Lured by the promise of bigger sales, better access to consumers, and even their ultimate survival, wholesale brands are increasingly looking to circumvent traditional retailers and reach their customers directly—with “direct-to-consumer selling” or DTC. Recently, several prominent apparel and footwear brands have announced plans to expand their own retail stores in the U.S. and globally, including Nike, New Balance, and Under Armour.

The shift in sales channels offers significant opportunities for DTC retailers and wholesale brands to better control their supply chain operations by cutting out the middleman, or retailer. To do so, DTC retailers will need to take note of how these consumers shop, develop their omni-channel strategies, and strengthen their supply chains, including fulfillment, inventory flow, and costly resource-heavy returns processing.

The supply chain must be reshaped to handle more fulfillment locations, increased singles picking for customer orders, and the “click and collect” sales process (which allows customers to check if a product is available, then reserve it to pick up in store), while offering choice and convenience in its own brick and mortar locations.

This also means DTC brands and retailers have to unify their functional teams across the supply chain, using several technology features:

- **Greater transparency into their supply chain:** Better end-to-end visibility ensures each decision along the system results in long-term success.
- **A single end-to-end platform for supply chain teams:** This platform should cover sourcing, global trade, import/export, and logistics management. Enterprise-wide information accessibility and collaboration will break down the silos between product development, sourcing, manufacturing, merchandising, and distribution.
- **Real-time tracking:** Ensure the flow of goods is following the desired timeline—and take the right actions along the way.
- **The ability to manage the unexpected:** Companies must identify key metrics and create alerts to enhance their management-by-exception capabilities and take immediate corrective action when necessary. With better

visibility, DTC retailers can manage out-of-tolerance replenishment criteria for suppliers, reorder points, safety stock levels, and minimum or maximum inventory levels.

- **Trading partner collaboration:** Global companies must manage a tremendous amount of information to maintain regulatory compliance. Importers must collaborate with extended trading partners (suppliers, brokers, carriers, and freight forwarders) to ensure complete and accurate information accompanies inbound shipments and documents, and that other information is readily available to the parties that need it.
- **Landed cost calculation:** Brands and retailers must have a clear understanding of landed cost to correctly set prices, make accurate sourcing decisions, and select transportation options. A constantly updated and maintained knowledge base makes it possible to factor the complete spectrum of landed cost components—including global duties, taxes and fees—into the picture.

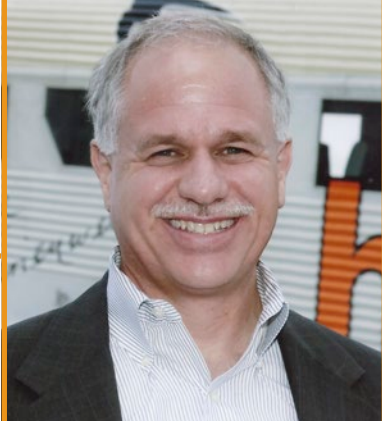
Greater profitability isn't the only benefit of DTC operations. An overwhelming 72% of brand manufacturers believe that “building a closer relationship directly with the customer” is a critical benefit of DTC, according to a 2015 Forrester report.

Manufacturers can collect data directly from customers and leverage it to provide personalized services and customized products applicable to individual preferences without relying on point-of-sale data being sent back to them.

Even with all these advantages, some industry experts speculate that DTC may alienate retail partners. However, research has found that only 9% of companies reported a negative impact in retailer relationships by executing a DTC business¹. For example, Dick's Sporting Goods expanded in-store Under Armour “shops” even as Under Armour opened more of its own stores.

DTC is where the omni-channel strategy becomes truly powerful. A manufacturer can sell from its own stores and website, reduce the cost of logistics for its retail partners, and grow customer relationships.

¹Internet Retailer, 2014. <<https://www.internetretailer.com/2014/06/10/when-manufacturers-sell-directly-consumers-online-retailers>>



Analyzing Freight & Logistics Operations

Disruption is the new normal in freight and logistics. Customers now demand greater speed and value, and want detailed information on the status of their shipments. Shoppers are increasingly mobile and connected, and shop across multiple channels. Manufacturers and retailers are rushing to re-introduce direct-to-door deliveries. The emerging Internet of Things allows companies to capture location and movement, temperature, audio, video and other information.

At the same time, tough and nimble competitors are moving into the sector. Some of the world's largest and most successful e-commerce players are reshaping the delivery landscape. In recent months, we've seen online giants acquire regional shipping firms, and make other plans that may include delivery fleets, drones, and aircraft leases.

A new as-a-service shipping and delivery model may now be emerging—and it poses significant operational challenges to companies across the global supply chain.

Customer and Operational Performance

How can you survive and prosper in a faster, more nimble transportation environment?

Data and analytics are the key. More than ever before, freight and logistics firms need real-time information to understand and manage their operations. Forward-looking firms are already using advanced analytics to gain end-to-end and near real-time visibility into mission-critical variables.

Those can include evaluating product pipelines and shipping patterns, weather-related events and other seasonal issues, understanding developing bottlenecks, and competitive challenges. Astute executives now leverage performance-based analytics to gain 360 degree views across line haul, pickup and delivery, and cross-dock operations.

Many are now using root cause analysis to identify and rectify service failures, labor requirements, and other issues. Data management and analytics allow companies to optimize freight mix and handling, routing and last-mile efficiencies, consolidated deliveries, and other operational strategies.

On-board telematics provide the data needed to document, understand, and improve driver performance. Not surprisingly, those same capabilities can help reduce accidents, improve driver recruitment and retention, and reduce worker's compensation claims. A robust business intelligence system can also simplify and strengthen regulatory and compliance efforts.

An e-Commerce Shift

Global online sellers are moving into the shipping and distribution space, and that means big changes for consumers, for manufacturers—and for freight and logistics companies of all kinds.

UPS, FedEx and others have traditionally handled the lion's share of last-mile deliveries. But serious problems during the 2013 holiday shopping season led more than one e-commerce firm to re-think that model. Those giant e-sellers are making noticeable moves into the trillion-dollar freight sector.

It's a move that started some time ago. Those data-oriented firms started by leveraging technology and efficiencies to create internal platforms—and then to roll them into a range of as-a-service innovations. Just look at their advances in e-commerce checkout and payments, cloud computing, and retail sales.

Now inbound logistics and delivery may be in the tech-giant crosshairs. In recent months, non-traditional firms have explored warehouse robotics, drones, truck and air fleets, and crowdsource deliveries. To meet those disruptive challenges, freight and logistics firms are embracing the new power of data and analytics.

Measurable Gains

Data and analytics can yield real operational and business advantages. Improved visibility allows freight and logistics firms to identify customer needs, mitigate risks, and understand their competitors. It provides the insights needed to bypass intermediaries and to link operational performance indicators to strategic business goals.

Disruption is coming to the freight and logistics industry. By seeing and understanding the full spectrum of operations, transport-oriented firms can survive and succeed in a dramatically changed environment.



Mark White, Chief Commercial Officer, SEKO Logistics
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Crossborder E-commerce Into the US Just Got a Lot Easier – US Retailers Should Take Note and Plan Accordingly

E-commerce retailers worldwide are celebrating the passing of a new bill, which sees the U.S. de minimis rate increase from \$200 to \$800. Below the new threshold, the U.S. does not require any formal customs procedures, and no duties or taxes need to be paid by the consumer. This creates a huge opportunity for e-commerce retailers who want to sell into the U.S. – not only because of the reduced cost, but also because it enables them to offer their products to a vastly increased audience.

Previously, any single import over \$200 would need to have duty calculated, which varied depending on country of origin and on the goods being shipped, making the entire process extremely complex. The new higher de minimis rate allows for a far more streamlined approach, enabling foreign e-commerce retailers to see the benefit of faster customs procedures and border clearance, which in turn will accelerate the speed of international delivery, and mitigate to some degree the requirement to hold stock in the US to be cost and service competitive. For U.S. retailers, this changes the calculation modelling costs to fulfil e-commerce orders from offshore logistics hub locations.

Paperwork is reduced, as are compliance costs, making the entire process more efficient, and removing the barriers to U.S. e-commerce for global retailers. The consumer experience is also enhanced, as not only will purchases be cheaper, but delivery will

be faster, and the entire process of receiving their goods will be streamlined.

This really is a game changer, that will lead to increased sales and accelerated business growth for e-commerce retailers worldwide. U.S. consumers are now much easier to reach, so whether you're looking to sell into this market for the first time, or grow your U.S. e-commerce sales order volumes, now is the time to do it. U.S. retailers should take note and evaluate how they can leverage fulfilling orders from Asia, Europe and other countries by using their 3PL's logistics infrastructure and know-how.

Shippers should be leveraging their partners for a complete solution which unites shipping, logistics, and distribution, with e-commerce website design expertise and innovative business software. This solution should include airfreight consolidation, allowing individual packages which fall under the de minimis threshold to be bundled together, no matter the destination, into a single airfreight shipment while still remaining duty free.

U.S. shipping labels can be printed in the country of export, and a full manifest customs declaration created, which details each line item and the value of each order separately.

This delivers an international shipping solution for e-commerce retailers that is around two-thirds cheaper than more standard providers.

SEKO Logistics is a provider of omni-channel logistics services. SEKO's lean and nimble structure increases their decision-making speed and gives them an ability to implement customized solutions. For more information, go to www.sekologistics.com.



THE FINE PRINT

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The Trials and Errors of Preventability Determinations

After a motor vehicle accident, it is common for motor carriers to determine whether their driver could have prevented the accident. This positive, safety-oriented process is known as a preventability determination.

Carriers make this assessment for several reasons: to evaluate and possibly change company policies and procedures to prevent similar accidents, to determine whether it should impose discipline, or to address safer driving.

A company representative conducts an investigation into the accident. This often includes a review of police reports, witness statements, and interviews. The motor carrier then decides whether or not the accident was preventable.

Unfortunately, the preventability determination can have a negative impact when introduced in a lawsuit where the commercial driver's negligence is in dispute. The primary problem lies in the fact that a motor carrier's definition of preventability and the standard for negligence are often drastically different. Fortunately, there are arguments that support excluding the preventability determination from trial, and courts have excluded the determination for these reasons.

The ability to successfully argue that a preventability determination is

not admissible at trial depends largely on the motor carrier's preventability determination and process. For instance, if the preventability standard the motor carrier employs is the same, or substantially the same, as a negligence standard, then courts are less likely to exclude the preventability determination. This would make it more difficult to exclude such evidence on the basis that it is misleading to the jury.

Motor carriers should have a definition of preventability that applies to its review of accidents. The definition could be the same as the definitions crafted by the National Safety Council and Federal Motor Carrier Safety Administration, or it could be created by the carrier's staff.

The preventability definition should not be similar to a negligence standard of ordinary care. For instance, a motor carrier assessing an accident as preventable if the driver was at least one-percent negligent could be construed as an admission of negligence. A preventability definition that focuses

on defensive driving and accident prevention is more likely to be excluded at trial than a preventability definition that uses a negligence standard.

If the motor carrier uses the preventability determination to make recommendations and changes to company policy regarding driver conduct, that purpose should be clear from an outsider's perspective. That outsider may be a judge, determining whether to permit the jury to learn about the carrier's preventability determination.

Have Clear Policies in Place

Documentation related to the preventability determination process should expressly state the purpose and use of the determination as a way to evaluate company policy and recommend changes. It should be clear that the focus of the preventability determination is not to assign fault, but is part of an overall safety-conscious effort by the carrier.

The motor carrier's safety director should be prepared to explain the company's preventability determination during a deposition. It will be largely that person's testimony, along with any documentation related to the preventability process, that will support the motion to exclude the determination at trial. ■



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[SMART MOVES]

BY LAUREN WILLISON

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How STEM Is Revolutionizing The Future of Logistics

All across higher education, we have seen an increase in the number of students who decide to pursue a degree in logistics. With the logistics sector adopting new technology, more businesses and organizations are looking to hire graduates with a logistics background and the ability to plan, execute, and strategically maximize efficiencies within their role. Science, technology, engineering, and math (STEM) disciplines allow logistics personnel to do just that.

Advancements in communication and data technologies throughout the past decade have positively influenced business structure and logistics processes. Logistics and supply chain practitioners use technologically advanced formulas and skills such as algorithm-based forecasting and radio frequency identification. As a result, logistics management has become a profitable and lucrative business.

Technology Enlightens Logistics

Individuals working in logistics are responsible for planning, implementing, controlling, and forwarding the information, good, or service from the point of origin to consumption. Technology has enhanced the efficiency and effectiveness of the movement and consumption process.

With accurate visibility, logistics managers are able to increase service

accuracy, optimize supply and demand, and determine the exact location and delivery time down to the specific minute and second.

The advancement in technology and the demand to hire logistics professionals have pushed many universities to provide the necessary curriculum, experience, and knowledge for students to excel in logistics. The advancing field requires students to complete coursework in economics, logistics management, statistics, and business. In addition, they must obtain internship experience and develop strong competencies in technical aspects of production, transportation, and information management.

Students also should be familiar with conceptual skills associated with economics such as customer service, asset management, process integration, and trade globalization.

Individuals working in logistics have a wealth of data at their fingertips. The increase of STEM within the field enables companies to improve logistics efficiency by developing software and IT for enterprise warehousing or fleet management, and even calculating price negotiations for different aspects of transportation.

The field of logistics requires data-driven analysis, which is now a key tool for logistics managers to control costs and ensure the best customer service.

Advancements Stem from STEM

In the 1970s, transportation was a commodity involving cars, trucks, and trains. A few decades later, shippers can now track and move shipments by land, air, and sea through various methods. The advancement of STEM disciplines has allowed for new processes, techniques, and modes of movement.

STEM disciplines broaden logistics and industry standards by involving process strategies, planning, implementation tactics, and supply and demand optimization. Students recognize this and are capitalizing on it. Graduates prepared to enter logistics will be able to meet the growing demands of global industries and push the envelope of this emerging field. ■

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Europe Raises the Compliance Bar. Is Your Supply Chain Prepared?

Sweeping regulatory changes in the European Union (EU) are raising complex questions for businesses and introducing new tensions along the world's supply chains.

Manufacturers and importers will soon be tasked with reporting the origin of some metals and materials used in their products. They also will be responsible for disclosing aspects of their suppliers' human rights and environmental activities, involving detailed due diligence policies.

The EU currently is considering a conflict minerals law modeled on the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Section 1502. This U.S. law requires American manufacturers of consumer products that contain tin, tantalum, tungsten, or gold to report whether the metals come from a "conflict mine" in one of 10 countries in Africa's Congo region.

The corresponding EU law would also require companies to exercise due diligence in their supply chains to reduce the risks of sourcing metals in their products from a conflict area. In a significant departure, the EU law would apply not just to the Congo, but also to materials from any "high-risk or conflict-afflicted area" around the globe.

The European Parliament has passed the regulation, and it is now the subject

of negotiations between Parliament and the European Council.

European countries have also imposed new restrictions on chemical biocides common in shampoos, resins, and a range of consumer products. The EU's Biocidal Products Regulation requires manufacturers and importers to obtain authorization before placing a product containing biocides on the market. The regulation calls for these companies to evaluate supplier credibility as part of the compliance process, a new prerequisite that parallels the conflict minerals requirements.

Nonfinancial Disclosures

A third major regulatory reform, the nonfinancial disclosure reporting rule, requires companies in the EU to report on aspects of social, environmental, anticorruption, human rights, and employee-related matters. Starting in 2017, listed companies will be required to disclose information related to due diligence processes, outcomes of stated policies, and the principal risks related to these matters throughout the company's operations.

The EU's new laws have serious implications for manufacturer and supplier operations, due diligence, and credibility. Suppliers and sub-suppliers will likely have to adjust operations, policies, and practices to demonstrate to their downstream business partners that they have met conflict minerals standards, have been certified to sell biocidal products, and have implemented standards to support human rights, and social and environmental practices.

To keep supply chains moving, shippers in Europe will need to develop systems to collect and synthesize information about materials and pending regulations. All stakeholders need an advanced system for engaging suppliers and managing data. With far-reaching regulatory changes in sight, information about suppliers' values and internal policies is invaluable.

The anticipated shifts in the European regulatory landscape should create a sense of urgency in any organization. Businesses must look to education, collaboration, and corrective-action programs for suppliers to reap rewards. Reinforcing systems to manage data helps prompt compliance and mitigate risks from regulatory obligations. When the tide of change begins to rise, it's time to prepare your supply chain. ■



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Ted Stevens Anchorage International Airport ranks number two in the United States for landed weight of cargo aircraft, and in the top five in the world for cargo throughput.

As proven by the popularity of TV shows such as *Alaska: The Last Frontier* and *Ice Road Truckers*, people are intrigued by the stories of the men and women who live and work in Alaska. After all, there are few places in the world quite like it.

Despite Alaska's vastness — it encompasses more than 660,000 square miles of land, one-fifth the size of the contiguous United States — its population remains below 750,000, even though 58 years have passed since it was admitted as the 49th state. Located 500 miles from Washington (its nearest state), less than half of Alaska's roads are paved, and its weather is very unpredictable, to say the least.

Considering the state's location, rural highway system, and size, it is difficult for Alaska-based companies to accurately plan their shipment arrivals, let alone costs. But, with the assistance of logistics professionals, many of whom have been transporting goods to, from, and within Alaska for decades, companies can minimize shipment service interruptions, as well as costs.

"At Lynden we do all we can to keep the end-to-end costs as low as possible, even when we are shipping to Alaska's most remote areas," says Steve Hartmann,

vice president of sales and marketing at Anchorage-based Lynden Transport, which pioneered scheduled truck service between Alaska and the Pacific Northwest in 1954.

For more than half a century, the Alaska-based Lynden family of companies, including Alaska Marine Lines, Alaska West Express, Lynden Air Cargo, Lynden International, and Lynden Transport, has offered customers a full range of transportation options to ship freight to, from, and within Alaska — exactly how and when it is needed.

For instance, Lynden provides twice weekly scheduled barge service to southeast Alaska, as well as twice weekly scheduled ship, barge, and over-the-road QuickTrans service to central Alaska. For shipments that are destined to a remote area, such as Alaska's Bush points, Lynden Transport will first route them to Anchorage, where they are taken to Lynden's facility at the Ted Stevens Anchorage International Airport. From there, Lynden Air Cargo or Lynden

International, a freight forwarding services company, will forward the shipments to virtually any remote destination point.

TAKING FLIGHT

Alaska Airlines is also dedicated to serving customers throughout The Last Frontier. After acquiring cargo from the Seattle-Tacoma International Airport (its largest hub), via combi or freighter aircraft, Alaska Airlines distributes products on a scheduled service — from its hub in Anchorage to various locations around the state. If shipments are large and time-sensitive, they will typically be transported by the company's Priority Air Freight service; next available flight services are also offered through the company's Goldstreak Package Express service, as long as they weigh 150 pounds or less.

"For these smaller parcels, we offer connections to Anchorage through many gateways, including Chicago, Los Angeles, and Portland," says Jason Berry, managing director, air cargo for Alaska Airlines. "After they are delivered to Anchorage, the parcels can then be distributed quickly and easily to customers around the state."

As a major contributor to industries such as commercial fishing, construction,

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natural gas, and oil, Alaska-based companies also have thousands of goods that must be transported daily outside of the state.

To serve these customers, Alaska Airlines also transfers goods from various commercial primary and non-primary airports — with locations ranging from Fairbanks to Sitka — to its hubs in Seattle and Anchorage. Upon arrival, the goods will then be shipped to Hawaii and the lower 48 states, as well as countries within and outside of North and Central America.

MINIMIZING THE IMPACT OF ALASKA'S VASTNESS

As an alternative to airfreight services, Lynden Transport also provides expedited over-the-road service via the Alcan Highway. By offering two QuickTrans scheduled departures every week, the company's trucks are able to depart from Fife, Wash., on Tuesday and Friday

to oil industry locations — from Texas and Oklahoma through North Dakota and Alberta, Canada — prior to arriving at the North Slope of Alaska. While doing so, they travel over the Alcan highway system, so they are able to service other communities along the way as well.

Furthermore, cargo that is moving southbound from Alaska can be shipped at whichever speed customers require, as service options like air, barge, highway (QuickTrans), and ship are all available. While using Lynden Transport's QuickTrans southbound service, commodities like fresh seafood move on regular scheduled departures. At the same time, Lynden International flies cargo from the state's commercial primary and nonprimary airports to the Ted Stevens Anchorage International Airport; from there, they will forward the cargo, via air freight services, to communities throughout the world.

to the acquisition, Reddaway had worked alongside Pacific Alaska Freightways as a service partner.

Currently, Reddaway has two types of product deliveries to the Port of Tacoma: Standard and Guaranteed, a service that is typically only provided when time is of the essence. Regardless of shipment needs, the company guarantees that customers' products arrive at the Port of Tacoma safely and on-time for one of two weekly sailings — Wednesday and Friday. Aside from its timeliness, the company is also renowned for its 99.9 percent damage-free delivery, as well as a claim ratio that is lower than one percent.

"Our commitment to quality is unmistakable: e-track trailers, loading decks, airbags, dunnage, and cargo straps are prominent throughout our system," says Steve Selvig, vice president of sales and marketing at Reddaway, a Tualatin, Ore.-based company. "Our customers' supply chain needs to Alaska are met with the seamless integration of Reddaway's and Span Alaska's domestic services."

He adds, "It has been said that the supply chain is only as strong as the weakest link and, with respect to Alaska, the two common 'weak links' are the integrated transition from domestic to ocean transport, as well as continuous shipment visibility. Reddaway and Span Alaska have become proficient at both — with a seamless shipment flow, complemented by multiple electronic data interchange (EDI) updates that provide visibility to all key events that occur door-to-door."

Through this proficiency, as well as the fact that the company owns and operates each of its own terminals in cities like Anchorage, Fairbanks, and Kenai, Span Alaska is able to provide direct service, including final mile delivery, to approximately 95 percent of the state's population.

"A majority of the freight moves from the Port of Tacoma to the Port of Anchorage within four to five days," says Chuck Onstott, vice president of operations, Anchorage-based Span Alaska. "However, southeast Alaska only receives goods via air and barge services. The barge currently leaves the Port of Seattle twice a week (on Wednesdays and Fridays) and arrives to its destinations five to six days later."



An Alaska West Express truck moves its oversized load over an icy road in Alaska.

evenings and arrive in Anchorage and Fairbanks 54 to 56 hours later — on Friday and Monday mornings, respectively.

"QuickTrans is a great alternative to air service, as it allows freight to move over the weekend for Monday morning delivery, resulting in significant savings, when compared to standard air services," Hartmann explains.

In addition to departing from Fife, Wash., Lynden Transport's trucks also depart from Houston and Dallas, thereby providing scheduled, over-the-road service

COMMITMENT TO QUALITY

Reddaway, a part of YRC Worldwide's YRC Regional Transportation since 2008, has a more narrow focus, as it currently transports goods from 11 western states, along with British Columbia, to the Port of Tacoma. After arriving in Washington, the goods are then delivered on ocean carriers to locations like Anchorage, Kenai, Kodiak, and Wasilla — as a direct result of Reddaway's partnership with Span Alaska, which acquired Pacific Alaska Freightways' assets in 2015. For roughly 20 years prior



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Unlike Reddaway, Span Alaska receives freight from the lower 48 states at its Auburn, Wash., 93-door consolidation terminal. From there, a majority of the shipments are crossdocked and loaded into ocean containers, which are then directed to appropriate delivering terminals. Upon arrival, Span Alaska's trucks will transport goods to a majority of the state's regions.

Aside from their shipping partnership, Reddaway and Span Alaska are also connected in other ways. First, Span Alaska's transportation service fees are added to Reddaway's delivery receipts, so Reddaway customers will only receive one invoice with itemized charges. Furthermore, Reddaway and Span Alaska are also linked through EDI.

"Since scanned images of shipping documents and shipment status updates are available, customers can monitor their delivery status from the western United States all the way to their Alaskan destinations," states Selvig. "We can transport any size shipment, from pallet to truckload, on time and damage free."

Span Alaska also partners with Reddaway to transport goods from Alaska to the lower 48 states. All cargo is acquired by Span Alaska's trucks and then transferred to one of the company's six terminals — Anchorage, Anchorage South, Fairbanks, Kenai, Kodiak, and Wasilla.

"After shipments are direct loaded from Span Alaska's terminals, they will set sail to the Port of Tacoma, where they are picked up and delivered stateside with our damage-free service," Selvig says. "By transporting goods to and from Alaska as partners, Reddaway and Span Alaska's alliance has resulted in the single largest freight forwarding team serving the state, with faster delivery times, as well as expanded geographies."

RAIL-WATER-RAIL: SERVICE FROM MEXICO TO ALASKA

Companies based in The Last Frontier also often choose to utilize the services of rail companies such as Alaska Railroad. Not only is rail the most fuel-efficient option, but, according to Alaska Railroad's director of freight sales and marketing, Tim Williams, it can also handle more capacity than any other transportation method.

Although the company's train only

TED STEVENS AIRPORT: LOCATION PROVIDES UNLIMITED POTENTIAL

At Ted Stevens Anchorage International Airport (ANC) in Alaska, location is a cornerstone of its ongoing success in the global marketplace. The airport's unique geographic placement is a competitive advantage. With three runways (10,600+ feet/3,200+ meters), special ramp facilities and procedures, and federal government tariff exemptions, ANC serves as a critical refueling stop for cargo carriers flying between Asia and North America.

The bulk of ANC's traffic is generated by pure geography. Nestled on the south-central coast of Alaska, Anchorage is roughly equidistant from Tokyo and New York City. That puts ANC within a 9.5-hour flight from 90 percent of the industrialized world. Roughly 80 percent of all air cargo traffic between Asia and North America passes through ANC.

With more than 500 wide-body cargo plane landings per week, mostly 747s, Anchorage International is the fifth-largest airport in the world in terms of cargo throughput and the second largest airport in North America in terms of landed cargo weight.

Most international cargo carriers have two choices: carry more fuel and less cargo, which increases range but reduces per flight revenue; or carry more cargo and less fuel, which reduces flying range but boosts revenue. A stop at ANC gives carriers the best of all worlds. Carriers can shoulder an extra 100,000 pounds of cargo just by making a fuel stop in Anchorage. Conservative estimates indicate that carriers have the ability to increase revenue by more than \$150 million. Expenses incurred during stops amount to less than 10 percent of the additional revenue carriers can earn. That is the main reason why almost every carrier that serves trade routes between Asia and North America stops in Anchorage. It's a sound business model.

Unconventional operation is the convention, and all similarities to traditional airports end at the runway. Unlike other cargo hubs that handle similar annual tonnage, ANC has no vast complexes of cargo warehouses and support facilities, railroad lines, or even special roads for transport trucks. They simply aren't necessary. Most of the day-to-day business is conducted on the ramps.

The airport maintains 14 parking spots for wide-body aircraft, with third-party developers providing even more capability. The ramp's central location makes it easy for cargo planes to clear a landing runway, taxi to the parking spots, receive service from ground handlers, and then depart. Cargo planes can go from central parking spots to a departure runway in less than two minutes. And fueling is faster. ANC relies on an underground hydrant system. Fuel stations can pump fuel from both sides of an aircraft at the same time. Operations are completely fluid, efficiency maximized.

On top of all that—ANC offers federal tariff exemptions unique to Alaska. In an effort to stimulate economic growth and make national cargo shipping more efficient and economical, the U.S. Department of Transportation granted the airport a partial exemption from the Jones Act in the late 1990s.

Like most airports, ANC is an economic driver of the area's economy; so its continued growth and viability are important. Currently, the airport directly employs 380 people; and one out of every 10 jobs in Anchorage (over 15,000) is dependent on ANC.

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arrives in Alaska once per week, generally on Wednesday, it can move shipments from anywhere in the contiguous United States, as well as Canada and Mexico. The Anchorage-based company can also arrange for pickup at the point of origin, along with delivery for any non-rail served customers.

More often than not, customers choose Alaska Railroad if they are moving large, cumbersome items such as bridge girders, building materials, and lumber either to or within the state. And, even if its customers are working in remote areas that are “off the rail,” Alaska Railroad strives to deliver products on time and under budget.

“When it comes to moving bulk commodities such as cement, chemicals, coal, hazardous materials, and raw and refined petroleum products, no freight operator has the hauling capabilities of the Alaska Railroad,” Williams says.

To transport freight from Canada, Mexico, and the contiguous United States to Alaska, Alaska Railroad relies on its rail-water-rail service, known formally as Alaska Rail-Marine Service. Once a week, the company’s railcars are rolled onto rail-equipped barges in Seattle, and then transported to Whittier, Alaska. The barges usually leave on Wednesday evening or Thursday morning and arrive at Whittier Harbor seven days later.

“Throughout this entire transportation process, the freight never needs to be transloaded, whether the barges are arriving in Whittier or returning to Seattle,” Williams continues. “By providing timely service, Alaska Rail-Marine Service is

able to move approximately 2,100 loaded railcars annually.”

Upon arrival, Alaska Railroad’s customers can receive a single invoice for loading and delivery, regardless of the shipment methods they require (barge, railcar, or truck), another benefit of the company’s services. This proof of purchase method does not vary according to the locations of customers or the sizes and weights of the products that are shipped.

OCEAN CARRIERS STRENGTHEN ALASKA’S SUPPLY CHAIN

Time after time, Alaska’s vastness has been recognized as a primary obstacle to freight transportation companies, especially as they strive to improve upon the accuracy and timeliness of their shipments. However, the challenges of ocean carrier transportation should not be underestimated either.

For more than 130 years, Matson, a Honolulu-based ocean carrier, has transported goods to the remote communities of Hawaii. But, starting on May 29, 2015, the carrier began to offer twice a week, lift on/lift off (LO/LO) container service to the Alaska market as well, after purchasing Horizon Lines. Prior to the acquisition, Horizon Lines, which was previously known as Sea-Land Services Inc., had transported goods to Alaska for 51 years.

Since acquiring Horizon Lines, Matson has helped strengthen the state’s supply chain by investing approximately \$30 million in its Alaskan operations. So far, the carrier has purchased a new crane

at Kodiak’s port, as well as hundreds of insulated and regular containers, trucks, and power equipment.

“Matson has the financial depth to continually reinvest in its operations and make the kinds of capital investments that will maintain its high standards for reliability and customer service,” says Kenny Gill, vice president, Alaska, Matson.

On a weekly basis, the carrier’s vessels depart from the Port of Tacoma on Wednesday and Friday. Four days later, on Sunday and Tuesday, respectively, the vessels’ cargo will arrive at the Port of Anchorage; all remaining cargo will then be transported to Kodiak (arriving on Monday and Wednesday, respectively) and Dutch Harbor (arriving on Friday).

According to Gill, Matson ships roughly 70,000 containers each year in the Alaska market. Nearly all commodities can be shipped, including construction materials, groceries, heavy equipment, military goods, seafood, and vehicles. Gill believes this aggregate will rise in the coming years, as more shippers learn about Matson and its reputation for quality and reliability.

BY THE SEA

Since 1975, another ocean carrier, TOTE Maritime Alaska (formerly known as Totem Ocean Trailer Express), has also improved the state’s supply chain by shipping cargo from anywhere in the United States to the Port of Anchorage. But, rather than offering LO/LO container service, the carrier owns and operates two Orca Class, roll on/roll off (RO/RO) vessels instead.

The Alaska Railroad provides complete service for loading and delivery to, from, and within Alaska, the lower 48 states, Canada, and Mexico.



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The vessels, which were built by NASSCO, have been in service since 2003. In fact, they were specifically designed for voyages to Alaska, as they have ice-strengthened hulls at their bow, as well as reinforced propellers and rudders. They also have a capacity of 600 40-foot equivalents of trailer cargo and 250 automobiles.

“The size of the equipment we are able to handle is extremely flexible, so distribution centers in the lower 48 states, which are accustomed to shipping 53-foot trailers, can serve their Alaska stores the same way they would serve a store in Seattle, for instance,” says Bill Crawford, vice president of sales and marketing at Federal Way, Wash.-based TOTE Maritime Alaska.

Each week, the carrier’s vessels depart from the Port of Tacoma on Thursday and Saturday mornings; three days later, they arrive at the Port of Anchorage. After about eight hours of loading and discharge time, they immediately depart back to the Port of Tacoma to prepare for another shipment delivery.

To ensure the carrier remained aware of its carbon footprint, especially as its Orca Class vessels travel from Alaska to Washington and back, TOTE Maritime Alaska announced in 2012 that it would convert its fleet to operate strictly on liquefied natural gas. The company’s first vessel is scheduled for conversion in late 2016, while its second vessel will be converted in late 2017. Once the conversion has been completed, the Orca Class vessels will be the third and fourth cargo ships in the United States (second only to TOTE Maritime Puerto Rico’s Marlin Class ships) to run on liquefied natural gas.

“As a result of this conversion, vessel emissions such as sulphur oxide, nitrogen oxide, and carbon dioxide will decline by 100, 90, and 35 percent, respectively,” Crawford adds. “Emissions reductions will also lead to healthier air quality for TOTE Maritime Alaska employees, as well as the communities they serve.”

Even though Matson and TOTE Maritime Alaska annually serve thousands of customers through their shipments to Anchorage, Kodiak, and Dutch Harbor, thousands of other Alaskans do not acquire cargo from either of these carriers, as they live and work in remote areas.



Span Alaska offers innovative solutions for customers doing business in the Alaska transportation market.

To serve these customers, many of whom are based in southeast Alaska, Lynden’s Alaska Marine Lines offers twice a week barge services to and from southeast Alaska. Alaska Marine Lines also reaches the Aleutian Islands with regular service to Dutch Harbor; additionally, during the ice-free season, the company offers services to western Alaska and the Arctic.

According to Kevin Anderson, president of Alaska Marine Lines, the twice weekly scheduled barge service to central Alaska is a viable economic option, as roughly 20 percent of the goods that are transported between central Alaska and the lower 48 states are moved via barge, including general commodities, building supplies, dry and frozen goods, and seafood.

“Barge is an effective, low-cost solution,

especially for customers that have known inventory turnover cycles for non-perishable types of goods,” Anderson states. “Although the service time is longer for barge than ship service, it is generally less expensive.”

SHIPPING WITHIN THE LAST FRONTIER

In the meantime, residents of Alaska’s remote areas are also able to ship goods throughout the state for personal and business-related purposes, due to Lynden’s flexibility and multiple transportation options.

“In addition to providing Alaska intra-state service in central Alaska, Lynden Transport offers service between central and southeast Alaska, thereby economically

MIDNIGHT SUN

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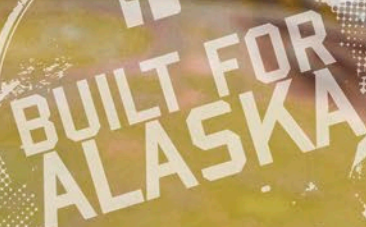
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connecting these two geographically separated areas,” Hartmann says.

Alaskans in populated areas such as Anchorage and Wasilla can also transfer goods within the state through the services of companies like Span Alaska.

“A majority of the Alaskan population is centered in the state’s south central region,” Span Alaska’s Chuck Onstott says. “Through Span Alaska’s network of brick and mortar terminals, the company can provide intra-Alaska service to the local communities of these populated cities as well.”

UNIQUE SERVICE PROVIDERS FOR A DISTINCT MARKET

There are few places in the world quite like Alaska. The Last Frontier’s erratic weather conditions — ice, snow, avalanches — offer even the most experienced logistics professionals daunting challenges to consider as they transport goods to, from, and within the state.

But when one considers the geography of the state as well, from its mountains to its forests, not to mention the magnitude

of its vastness (over 660,000 square miles), the value of timely, accurate transportation service becomes even more apparent.

“Prior to shipping goods to or from Alaska, companies must find logistics providers who understand their unique needs,” Onstott says. “Then, after finding proper providers, companies should build long-term relationships that are based on positive results, effective communication, and a proven track record.”

Sometimes providers will also work together through an integrated partnership, much like Reddaway and Span Alaska, to help streamline the overall shipment process.

“With this integrated partnership, the shipment of goods to Alaska, through the assistance of Reddaway and Span Alaska, has become very similar to domestic freight movement,” Reddaway’s Steve Selvig explains. “Customers should also consider aligning with asset-based carriers that provide direct loading, which reduces handling and transit times. They may also be interested in maintaining constant shipment visibility via multiple EDI updates,

and using their own Alaska-based terminal networks, so that local residents can work with other local residents.”

Meanwhile, if companies are shipping products to Alaska’s stores for customer purchases, they must remember that goods are shipped to Alaska much differently than they are shipped to the lower 48 states.

“Because of extreme weather, as well as ocean transit, products must be loaded differently on ships that are travelling to Alaska,” TOTE Maritime Alaska’s Bill Crawford says. “And, since most Alaska-based stores don’t have distribution centers, they receive products only once or twice each week. If companies are interested in selling products in Alaska, they should remember both of these shipping components as they prepare their inventory.”

Lynden’s Steve Hartmann agrees with Crawford’s sentiment, adding, “If companies research their options and choose logistics providers and solutions that best suit their unique needs, they can enjoy success and growth as they participate in the Alaskan market.” ■

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The Alaska International Airport System is comprised of Ted Stevens Anchorage International Airport (ANC) and Fairbanks International Airport (FAI). Together they offer an unbeatable combination of location, flexibility, certainty, capacity, throughput, handling, and economy.



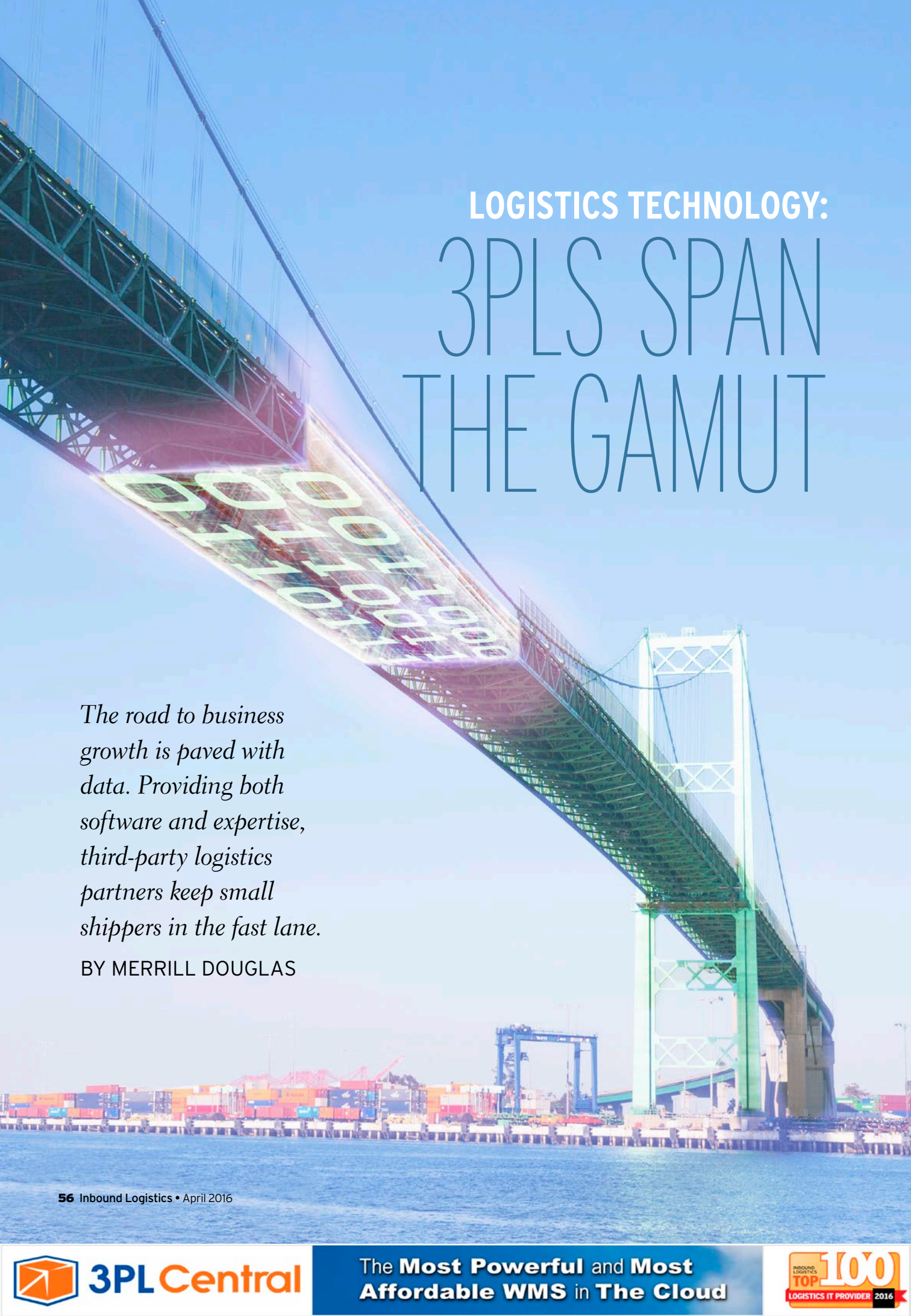
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LOGISTICS TECHNOLOGY: 3PLS SPAN THE GAMUT

The road to business growth is paved with data. Providing both software and expertise, third-party logistics partners keep small shippers in the fast lane.

BY MERRILL DOUGLAS

Third-party logistics (3PL) providers and logistics software vendors once played distinct roles in the lives of shippers. Today, the difference is less clear cut. Besides using software to manage logistics operations for their customers, many 3PLs now offer software solutions that shippers use themselves.

Often, a 3PL provides information technology (IT) as an adjunct to its services. The 3PL still manages transportation, warehousing, or other functions for its clients, but also gives shippers tools for extracting extra value from its data systems. Shippers use those tools, for example, to track shipment status, evaluate supplier and carrier performance, or analyze their operations to support future business decisions.

Some 3PLs also sell software that shippers use to manage their own activities — whether or not the shipper outsources to the 3PL. And some 3PLs provide consulting services, helping shippers choose and implement solutions from third-party software vendors.

Small and midsize businesses (SMBs) often lack the resources and expertise to implement sophisticated IT solutions on their own. But they need the advantages — efficiency, visibility, and business intelligence — that IT solutions provide.

“Small companies are coming to understand that technology is the path to growth,” says John Riske, vice president of business development at Next Generation Logistics (NGL), a non-asset-based 3PL based in Inverness, Ill.

Businesses that depend on spreadsheets, paper documents, and emails are waking up to the advantages of more advanced tools. “They realize they can no longer survive in a manual world,” Riske says. “They need more structure and more visibility into the data.”

Many SMBs today look to 3PLs to lead them on their journey from a manual world to a data-driven world. “In effect, the 3PL becomes a small company’s IT department,” says Dan Sellers, chief information officer at WSI, a 3PL based in Appleton, Wis.

LOGISTICS TECHNOLOGY: 3PLS SPAN THE GAMUT

Many 3PLs provide IT solutions mainly to supplement their own logistics services. One example is LynnCo Supply Chain Solutions of Tulsa, Okla., which offers *SuiteEdge*, a collection of cloud-based tools that includes a proprietary supplier accountability module, a transportation management system (TMS) from IT vendor MercuryGate, a reporting system, a freight claim tracking tool, and a proprietary analytics engine. The system integrates with a variety of warehouse management systems (WMS).

“We like to call it a mini-supply chain ERP [enterprise resource planning system],” says Wendy Buxton, LynnCo’s president. “The system is designed to implement and automate best practices, with the intent of doing more than just pushing buttons to order or ship a product.”

A customer obtains *SuiteEdge* as part of an overall program of services from LynnCo. When the relationship starts, LynnCo uses a proprietary data mapping procedure to integrate its tools with the shipper’s ERP or other operating systems.

“We don’t want shippers to have to allocate IT resources to make this work,” Buxton says. “They’re already strapped with implementing ERP systems or operational systems to run their business.” With an IT partner to take on the heavy lifting, the shipper needn’t devote a great deal of time, money, or staff to implementation, or to learning how to benefit from the system.

TRIUMPH REVS UP LOGISTICS

For Triumph Motorcycles America, based in Atlanta, much of the value that *SuiteEdge* delivers boils down to visibility and analytics.

Triumph Motorcycles America is a wholly owned subsidiary of Bloor Holdings, which also owns the global business, Triumph Motorcycles Ltd. The North America business employs about 60 people, selling motorcycles, parts, accessories, and clothing through 200 dealerships.

“In a small business, head count is always a challenge,” says Matt Sheahan, the company’s chief operating officer. “So



Companies that outsource some or all of their logistics activities to APL Logistics gain access to two modules in the 3PL’s Visual Technology Suite—a series of tools providing tactical and strategic insights into supply chain operations.

it’s great to have tools that make a small staff more productive.”

Triumph uses *SuiteEdge* to monitor day-to-day logistics performance and to dig into historical data for insights on how to improve operations.

“I can quickly look at the dashboards to see on-time deliveries, damages, pickup times—all the activity—and any kind of exceptions,” says Brandon Keller, Triumph’s operations manager. “Then I can get into specific data mining to find out details I need to make informed business decisions.”

LynnCo helped Triumph America both redesign its supply chain and implement the new technology. The two companies started by outlining Triumph’s vision for its future supply chain operations in North America.

Mapping that vision on whiteboards, the partners discussed which data elements were currently available for use, which elements Triumph wanted to capture in the future, and how to obtain that new data.

Because *SuiteEdge* makes shipments visible, Triumph can keep dealers up to date on incoming product, and dealers

can share that information with consumers. That visibility and the reliable data behind it are two big benefits *SuiteEdge* offers. “Being able to use that data to provide good service to our dealers is a stepping stone to providing the next level of customer service,” Keller says.

SuiteEdge also helps Triumph understand the factors that drive its shipping costs. “That leads to discussions on how to manage allocations, order releases, shipping times, and customers’ shipping expectations, to make sure we’re making the right decisions to improve our business and our dealers’ business,” Sheahan says.

TACTICAL AND STRATEGIC TOOLS

One major technology offering from APL Logistics is its *Visual Technology Suite*, a series of cloud-based modules that give shippers both tactical and strategic insights into their operations.

APL Logistics offers two of the suite’s modules—*Visual Operations* and *Visual Analytics*—to companies that outsource some or all of their logistics activities to the 3PL.

Visual Operations lets shippers monitor the progress of their freight, based on data that APL gets from electronic data interchange (EDI) feeds. “It involves blending the data from ocean carriers, and maybe truck and air carriers, into a view, and configuring it for the customer’s needs,” says Thad Bedard, head of North America retail at APL Logistics in Scottsdale, Ariz.

Visual Analytics examines carrier performance, using data from shipment transactions to calculate key performance indicators (KPIs).

GETTING TO THE ROOT OF THE PROBLEM

The third module, *Visual Intelligence*, is available to any shipper, whether or not it outsources to APL Logistics. *Visual Intelligence* blends data from multiple sources—including APL Logistics, other 3PLs or carriers, and the shipper’s internal IT systems—to gain new insights into the shipper’s operations.

“That could mean getting to the root cause of why product is late, figuring the best frequency for manufacturing product to align with sailing schedules, or a host of other information,” Bedard says.

When a customer implements *Visual Intelligence*, the shipper and APL Logistics first talk about current supply chain challenges and goals. Then APL Logistics and the shipper mine the data for causes and opportunities.

“Many supply chain questions or problems that customers have are not about technology,” Bedard says. “They’re about embedded processes and systems that are governing a logistics flow.”

At one customer, for example, 20 percent of the line items in its purchase orders (POs) were arriving late. Tracing the problem back to the company’s ERP system, APL Logistics discovered that when the shipper created POs, the software often miscalculated the lead time for delivery.

“The shipper was actually planning to fail, because it did not use correct integer values in each of the tables to construct the lead time,” Bedard explains.

Transplace, in Frisco, Texas, offers two kinds of assistance to shippers that don’t outsource their logistics management. The client can license the Transplace TMS, a Software-as-a-Service (SaaS) solution, or Transplace can help the shipper choose a solution from a third party.

The SaaS option gets the shipper up and

running quickly, without any large capital expense up front.

This cloud-based strategy also has drawbacks. “A company does not get the complete custom application that it might want in a perfect world,” notes Brooks Bentz, president of supply chain consulting at Transplace.

But Transplace’s TMS will probably meet most SMB needs. “The system’s speed and economics outweigh any difficulties,” he adds.

For most shippers who choose the SaaS option, implementation takes between 10 and 16 weeks. Transplace employs certified project managers to lead shippers through the process, including initiation, planning, execution, monitoring and control, and closeout.

When Transplace serves as a neutral partner in choosing a technology solution, it first assesses how the shipper is using its current systems. It’s also important to examine current freight volumes and transportation modes. “For example, most standard TMS solutions don’t do well with rail,” Bentz explains.

The geographic scope of the company’s shipments is another important factor. Finally, what problems does the company hope to solve with new software?

AVOIDING ROADBLOCKS

Once the shipper chooses a TMS, Transplace helps to build a business case to present to upper management. That’s a point where roadblocks often appear. “People have a difficult time substantiating a powerful business case promising a 30 percent return on investment or a one-year payback,” Bentz says. “Many benefits are difficult to quantify.”

Whichever technology option the shipper chooses, Transplace provides extensive support. “Our focus is on doing as much of the legwork as possible for the shippers, so that the impact on IT and on the business is minimized,” says Steve Barber, Transplace’s vice president of operations and solutions design.

At NGL, the flagship software product



Triumph Motorcycles America sells motorcycles, parts, accessories, and clothing through 200 dealerships. The company uses *SuiteEdge* from LynnCo Supply Chain Solutions to track logistics performance and to mine data for insights on how to improve operations.

LOGISTICS TECHNOLOGY: 3PLS SPAN THE GAMUT

is *FreightMaster*, a TMS that shippers can license or lease to install on their own servers, or implement in the cloud. NGL can integrate this system with a variety of ERP systems. The 3PL also offers *Dynamics TMS*, a version of *FreightMaster* specifically designed to integrate with *Microsoft Dynamics* ERP solutions.

A supplementary offering, *NexTrack*, provides access to the TMS through a web portal, for use by customer service representatives, high-level managers, and

WSI has created a separate brand, *360data*, for its collection of IT applications. Although the company calls the product a suite, shippers can buy the modules individually. They include:

- B2B collaboration/EDI integration, which allows the exchange of data within a company, among corporate divisions, or between a company and its trading partners. “The shipper can use everything from standard EDI transactions to Excel spreadsheets,” says Sellers. “We can even

with its ERP or another internal system, WSI collaborates with IT staff on that part of the project. “Then we manage the whole process for them, from training to implementation and follow-up afterward,” Sellers says.

After the shipper has been using the system for a while, WSI returns to do some retraining and to make sure users are taking maximum advantage of the solution’s features.

For an SMB, bringing new technology into the business can create a competitive advantage. For example, many large customers — the Walmarts of the world — won’t do business with vendors that can’t exchange data electronically. “When small companies can do EDI, all of a sudden they are on the same footing as the large providers,” notes Sellers.

WITH AN IT PARTNER TO TAKE ON THE HEAVY LIFTING,
THE SHIPPER NEEDN'T DEVOTE A GREAT DEAL OF
TIME, MONEY, OR STAFF TO IMPLEMENTING A
SUPPLY CHAIN SYSTEM..

others who need just a few components of the larger system. “They don’t need day-to-day execution functions; they just need functions such as reporting, rate shopping, or dock scheduling,” Riske says.

Most companies that implement these solutions have internal IT staff or contractors who work with NGL on the implementation. NGL can provide assistance to the rest. “We have some internal resources who write code to allow connectivity to various ERP systems,” Riske says.

Although leaders at smaller businesses understand that they need to embrace IT, some fear the potential costs. Resistance to change may also pose an obstacle: End users don’t want to alter the business processes they’ve followed for years.

“But users are touching technology daily with their cellphones,” Riske points out. “So the learning curve for migrating into technology within the business shouldn’t be that difficult. The applications available now are a lot easier to work with than they were in the past.”

translate paper documents or PDFs into an electronic format that we can help integrate with a shipper’s community.”

- A TMS.
- An entry-level WMS.
- An order management system (OMS). Companies that are not EDI-capable use this web portal to send electronic orders to suppliers, or receive them from customers.

A shipper that uses any of the *360data* modules might manage all logistics operations in-house, or might outsource some activities to WSI. For example, a company that used WSI for transportation management would not need the TMS, but it might choose one or more of the other systems.

When a company implements *360data*, WSI manages the project and often provides custom IT services. “I haven’t seen an implementation yet where we didn’t have to write some sort of code because the shipper wanted something a little different,” Sellers says.

If the shipper integrates the software

EVERYTHING IS COLLABORATIVE

At Trinity Logistics in Seaford, Del., the flagship technology product is a cloud-based TMS, which shippers can use in conjunction with Trinity’s logistics services or on its own. This solution is highly customizable.

“We don’t tell clients, ‘Here’s the solution set that works in every instance,’” says Sarah Ruffcorn, Trinity’s senior vice president of strategic development. “The process is collaborative. We spend a lot of time identifying pain points, business needs, and desired outcomes.”

A second IT solution, *ShipDirect*, is a portal for accessing less-than-truckload (LTL) freight rates that Trinity Logistics, as a 3PL, can offer. Optionally, Trinity can also load in the shipper’s own LTL rates.

In addition, Trinity can help integrate a shipper’s IT systems with a variety of WMS products, and with a material requirements planning (MRP) and cloud-based parcel freight management system, provided by third-party partners.

Many of Trinity’s smaller customers have been using manual processes to run their operations. They gain a big boost when they start using software to analyze

transaction data, and dashboards to display the results.

“That helps them develop better budgets and better optimize their shipments,” Ruffcorn says. “For example, should a shipment go LTL, or is it on the breakpoint for parcel, or for truckload?” Such calculations are hard to do on paper or with spreadsheets, she adds.

A CHEMICAL REACTION

Harcros Chemicals in Kansas City, Kansas, has been using Trinity’s TMS for about three years. Harcros also uses Trinity’s truckload transportation services.

The manufacturer produces chemicals — mainly surfactants used by industrial customers — from facilities in Kansas City and Dalton, Ga. It receives raw materials at those sites mainly by rail. For finished product, Harcros uses its own fleet and common carriers to ship product through 29 distribution centers (DCs) to its customers.

Harcros uses the TMS in house to manage all its common carrier freight except for liquid bulk. Before it implemented the Trinity solution, Harcros used a proprietary system that looked up rates but couldn’t tender the shipments to carriers or track shipment status.

The TMS gives Harcros much-needed visibility into the distribution network. “Say our Tampa location has a new customer, and Powder Springs, Ga., stocks the materials the customer needs, but Tampa doesn’t,” says Rebecca Daly, the company’s global traffic manager. “We will order the materials from Powder Springs.” The TMS lets staff at each location keep track of what products are moving from other locations.

Harcros also gains a great deal from the quoting features in the TMS — important features in a competitive and price-sensitive industry. “The price point we give to customers has to include freight,” Daly says. “Trinity gives us a way to send quote requests to all our carriers, so we can obtain those rates prior to a sale — which we absolutely have to do. Before, we were managing that information via email.”



Third-party logistics provider WSI (pictured is its Sauk Village, Ill., distribution center near Chicago) helps small businesses transition from manual to data-driven operations.

Now, a user shoots off a price request to many carriers at once. When the quotes come back, the system retains them for quick retrieval.

Trinity performed the programming needed to get the system up and running for Harcros. The 3PL continually helps the shipper understand how to extract valuable

“The strategy will be the use of more predictive analytics to help transportation providers understand patterns, and situational ideas and concepts, coming from the data they have access to,” Riske says. For example, that strategy could help a consumer goods company predict how much trucking capacity it will need to handle surging demand when a retailer runs a big promotion.

“I foresee smarter systems, almost smart enough that people can head off supply chain disruptions before they happen,” says Buxton.

Smart as those systems may be, they’ll have to grow even smarter. Sources of raw data — including tiny GPS “buttons” that shippers can install on pallets, cartons, or individual items — are proliferating at an astonishing rate. These sources are inundating the world with an unprecedented volume of information, which small shippers must figure out how to put to work.

“The biggest challenge coming down the pike is not that we can access where things are and what they’re doing, but how to make business intelligence out of that information,” says Bentz.

As shippers contend not only with managing floods of information, but with myriad challenges and opportunities arising from today’s interconnected technology systems, 3PLs stand ready to help bridge any knowledge gaps. ■

AS 3PLs CONTINUE TO
HELP SMB SHIPPERS,
EXPECT AN EVEN GREATER
EMPHASIS ON DATA
MINING.

insights from its data. “Trinity excels at knowing what we need from a reporting structure,” Daly says.

As SMB shippers continue to look to 3PLs for technology leadership, expect an even greater emphasis on data mining.

“Big data is key here,” says Riske. And in the future, big data will reveal not only what has been happening in the supply chain, but also what’s going to happen in the future.



Inbound Logistics surveys the logistics technology sector and evaluates the top solutions providers leading the way to supply chain excellence.

TOP 100 Logistics IT Providers & Market Research Survey

THE LOGISTICS TECHNOLOGY SECTOR HAS ITS HEAD IN THE CLOUDS, and that's a good thing. Thanks to cloud computing, also known as Software-as-a-Service (SaaS), shippers no longer have to break the bank to invest in new IT solutions, nor are they forced to struggle with legacy ERP, WMS, and TMS solutions that have not kept pace with the supply chain change dynamic.

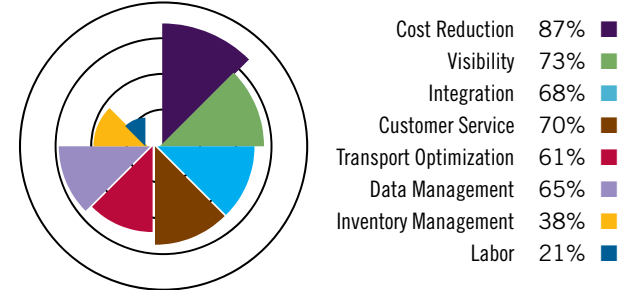
Among the new options available to shippers are crowdsourcing platforms that let them tap into critical mass and gain economies of scale, thus having some weight to throw around when negotiating rates, driving visibility, benchmarking performance, and dealing with their customers' supply chain impatience. The latest logistics technology offerings also enable shared efficiencies to help extract maximum value from your supply chain stakeholders.

Shippers have a choice between going wholesale and acquiring logistics technology solutions from their 3PLs and/or carriers or going retail and purchasing systems directly from IT providers.

IL's annual logistics technology perspective research was created to offer enterprises of all sizes the best information, enabling them to compete on an equal footing with large global competitors and to comply with increasingly stringent customer requirements. IL's research brings to light industry trends to help logistics IT users and buyers stay on top of a rapidly changing market. We solicited more than 250 IT solutions providers to document some trends that make this space so dynamic.

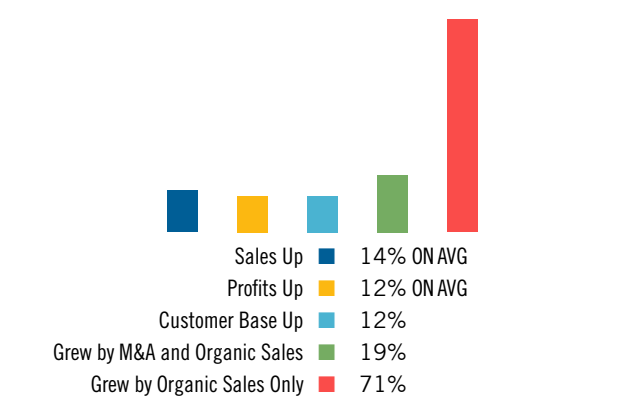
And our annual Top 100 Logistics IT Providers list (*page 66*) highlights leading IT companies that are helping shippers navigate the market challenges and leverage logistics opportunities.

FIG. 1 CHALLENGES: Which transportation and logistics challenges are most critical to enterprises seeking supply chain technology solutions?



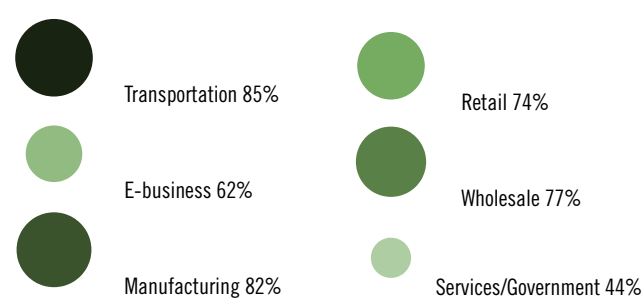
Technology providers offer a broad range of solutions to any business or enterprise interested in improving supply chain performance. This chart shows the customer pain points identified by IT providers. Reducing overall cost of logistics ownership continues to be a strong concern, at almost 87 percent. The growing need for visibility is evident as 73.4 percent cite it as a challenge. As the solutions set matures, past pain points are diminishing in importance. For example, as solutions progress, transportation optimization, inventory management, and integration diminish slightly over last year's reporting figures. But, as technology providers get deeper into their customers' business process, new opportunities for efficiencies rise, particularly with labor management and leveraging big data opportunities, both up over 2015's figures.

FIG. 2 250 SUBMITTING COMPANIES REPORT GROWTH



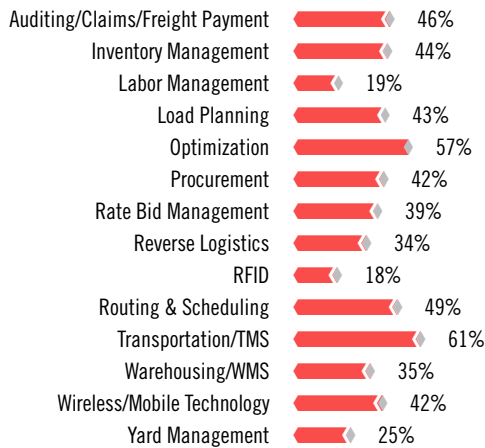
The logistics technology sector is booming, as year over year sales are up an average of almost 14 percent. Bottom line profits for all respondents rose more than 12 percent, and the customer base has grown significantly. Most of the gains were made organically by providing existing customers and their vendors more and deeper solutions that evolve as customer needs evolve. Mergers and acquisitions are also hot, with 19 percent of technology company respondents reporting that they grew by merging with or acquiring other companies.

FIG. 3 INDUSTRY SERVED: What industries do logistics technology providers serve?



The wholesale channel for providing logistics and supply chain technology solutions is robust, with 85 percent of technology company respondents supporting the transportation sector—carriers, forwarders, brokers, 3PLs, and others. Manufacturing gets the same level of support—82 percent—in 2016 as it did in 2015. Interestingly, global IT offerings to manufacturing enterprises are on the rise as companies continue to source and sell globally and consider nearshoring and reshoring opportunities. Companies served in the retail sector are the same as last year, 74 percent, which, given the contraction of the brick retail sector, is fairly strong. Wholesale sector support ticked up a bit, moving to 77 percent in 2016 from 74 percent in 2015. Services/government dropped to 44 percent from 47 percent served by IT providers in 2015.

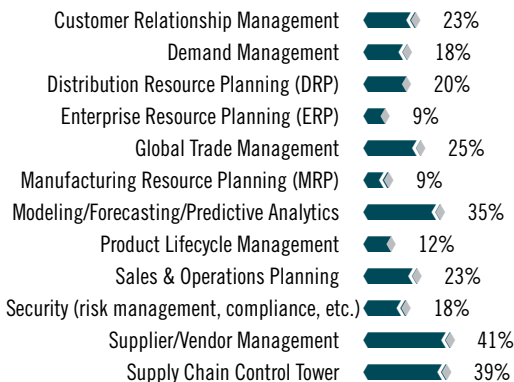
FIG. 4 LOGISTICS SOLUTIONS OFFERED



As we say at *IL*, one inbound stream is another enterprise's outbound stream. The convergence is clear when you consider the similarity between logistics solutions and supply chain solutions offered by survey respondents.

The logistics solutions noted above are, in many cases, transactional or tactical, for example load planning and RFID. The supply chain solutions noted below are more strategic enterprise offerings. The convergence between logistics and supply chain solutions is obvious when you consider that the logistics procurement solution dovetails with the supply chain solutions of DRP and ERP.

FIG. 5 SUPPLY CHAIN SOLUTIONS OFFERED



When we say the logistics technology sector has its head in the clouds, we mean it. The migration to web, cloud, and SaaS solutions continues, as 50 percent of all providers deliver solutions on these platforms. It wasn't that long ago when locally hosted solutions were all the rage, given security requirements. Depending on customer needs, 47 percent of respondents offer both locally hosted and web hosted solutions.

FIG. 6 PLATFORM: How do IT providers deliver their solutions?

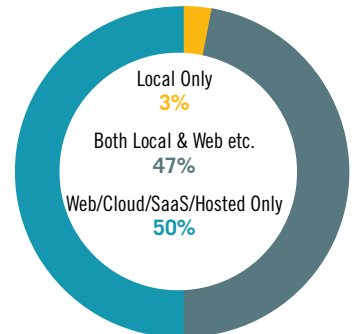
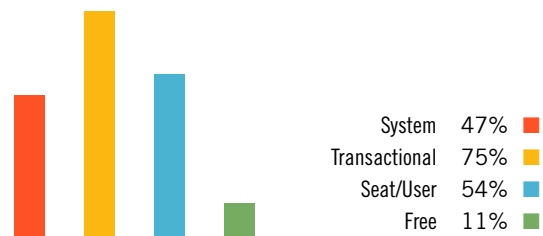


FIG. 7 COST BASIS: How do users pay for technology solutions?



IL has been conducting this survey for a few decades now, and one trend is clear: Customer cost for complex logistics and supply chain solutions continues to fall. Back in the day, only large enterprises could afford the cost, business disruption, and implementation time to get world-class technology solutions. Today, providers offer a growing number of free and transactional solutions. The low cost of these sophisticated systems enables SMEs and mid-tier companies to compete on the same supply chain footing as Fortune 500 companies.

2016 TOP 100 LOGISTICS TECHNOLOGY PROVIDERS

We asked leading technology providers to submit their credentials, and more than 250 answered the call. After a detailed selection process, *IL* editors chose the 2016 awardees that, in their opinion, represent the best of best-in-class.

Editors were particularly looking for IT vendors that

provide core logistics, supply chain and transportation solutions, and offer clear-cut evidence of delivering ROI to *IL* readers. The 2016 Top 100 Logistics IT Providers met our challenge, and will help you meet yours.

Turn the page to access *IL*'s 2016 Top 100 Logistics IT Providers.

TOP 100

LOGISTICS IT PROVIDERS 2016

COMPANY NAME & URL		PHONE	WEB/CLOUD/SaaS/HOSTED	LOCAL	COST				INDUSTRY SERVED						VERTICAL SPECIALIZATION													
					TRANSACTIONAL (SUBSCRIPTION)	SYSTEM	SEAT/USER	FREE	MANUFACTURING (ALL KINDS)	RETAIL	WHOLESALE	E-BUSINESS	SERVICES/GOVERNMENT	TRANSPORTATION	AEROSPACE	AGRICULTURE	APPAREL & TEXTILES	AUTOMOTIVE	CHEMICALS	CONSTRUCTION & BUILDING MATERIALS	CONSUMER PACKAGED GOODS	ELECTRONICS	RENEWABLE ENERGY	FOOD & BEVERAGE	FURNITURE	GROCERY	HEALTHCARE	
360data www.360data.com		920-831-3700	●		●	●				●	●	●	●	●	●	●	●	●	●	●	●	●		●	●			
3PL Central www.3plcentral.com		888-743-0058	●		●					●	●	●	●	●														
A3 Freight Payment www.a3freightpayment.com		901-759-2966	●		●					●	●	●	●	●	●		●	●	●	●	●	●	●	●	●			
Acuitive Solutions www.acuitivesolutions.com		704-321-4992	●		●					●	●	●					●	●					●					
Agistix www.agistix.com		650-362-2000	●		●	●				●	●	●	●	●	●		●	●	●	●	●	●	●		●			
ALC Logistics www.alclogistics.com		800-282-3246	●		●					●	●	●			●		●	●	●	●	●		●		●			
Aljex Software www.aljex.com		732-357-8700	●		●	●	●			●	●		●	●	●			●	●	●	●	●						
Amber Road www.amberroad.com		201-935-8588	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Apprise www.apprise.com		610-991-3900	●	●			●			●		●	●			●	●			●	●		●	●				
Argos Software www.argossoftware.com		559-227-1000	●	●		●	●							●														
ASC Software www.ascsoftware.com		937-429-1428	●	●		●	●			●		●	●		●	●	●	●		●	●		●	●		●		
AscendTMS (InMotion Global) www.thefreetms.com		813-681-5000	●				●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Avercast www.vercast.com		208-538-5380	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
BestTransport www.besttransport.com		614-888-2378	●		●					●		●			●		●	●	●	●				●				
Blue Ridge www.blueridgeglobal.com		877-547-0346	●		●	●				●	●	●	●			●		●	●	●		●	●	●	●	●		
C3 Solutions www.c3solutions.com		514-315-3137	●		●					●	●	●	●		●		●	●		●			●		●	●		
Cadre Technologies www.cadrettech.com		866-252-2373	●	●	●	●					●	●	●		●		●	●	●	●	●	●	●	●	●	●		
CargoSmart Limited www.cargosmart.com		408-325-7600	●		●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Cass Information Systems www.cassinfo.com		314-506-5500	●		●					●	●	●	●	●	●		●	●		●	●		●	●	●	●		
Cheetah Software Systems www.cheetah.com		805-373-7111	●		●	●	●			●	●	●	●	●	●		●	●	●		●	●	●	●	●	●		

	SUPPLY CHAIN SOLUTIONS															LOGISTICS SOLUTIONS												ADDITIONAL SOLUTIONS					
	CUSTOMER RELATIONSHIP MANAGEMENT	DEMAND MANAGEMENT	DISTRIBUTION RESOURCE PLANNING (DRP)	ENTERPRISE RESOURCE PLANNING (ERP)	GLOBAL TRADE MANAGEMENT	MFG. RESOURCE PLANNING (MRP)	MODELING/FORECASTING/PREDICTIVE ANALYTICS	PRODUCT LIFECYCLE MANAGEMENT	SALES & OPERATIONS PLANNING	SECURITY (RISK MGMT., COMPLIANCE, ETC.)	SUPPLIER/VENDOR MANAGEMENT	SUPPLY CHAIN CONTROL TOWER	AUDITING/CLAIMS/FREIGHT PAYMENT	INVENTORY MANAGEMENT	LABOR MANAGEMENT	LOAD PLANNING	OPTIMIZATION	PROCUREMENT	RATE BID MANAGEMENT	REVERSE LOGISTICS	RFID	ROUTING & SCHEDULING	TRANSPORTATION/TMS	WAREHOUSING/WMS	WIRELESS/MOBILE TECHNOLOGY	YARD MANAGEMENT	CATEGORY MANAGEMENT	CONTAINER/CHASSIS MANAGEMENT	EDI	MOBILE ORDER MANAGEMENT	ORDER MANAGEMENT	STRATEGIC SOURCING	
OIL & GAS																																	
PHARMACEUTICALS																																	
TRADE SHOW																																	

TOP 100

LOGISTICS IT PROVIDERS 2016

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ClearTrack Information Network www.cleartrack.com	615-463-2133	●		●				●	●				●			●				●	●			●		
Cloud Logistics www.gocloudlogistics.com	561-800-1212	●		●				●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●
CT Logistics www.ctlogistics.com	216-267-2000	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●		●	●	●	●
CTSI-Global www.ctsi-global.com	888-836-5135	●		●				●	●	●	●	●	●	●		●	●	●	●	●	●	●	●			●
Cypress Inland (YardView) www.yardview.com	303-781-3430	●	●	●	●			●	●	●		●	●													
Data2Logistics www.data2logistics.com	609-577-3756	●		●				●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●
Datex www.datexcorp.com	727-571-4159	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Demand Solutions www.demandsolutions.com	314-991-7177	●	●	●		●		●	●	●		●														
Deposco www.deposco.com	877-770-1110	●		●	●	●		●	●	●	●	●	●			●	●			●	●		●	●		●
Elemica www.elemica.com	484-253-4674	●		●				●			●		●		●		●	●	●	●			●			
Epicor Software www.epicor.com	800-999-1809	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●
Fortigo www.fortigo.com	866-376-8884	●		●				●	●	●	●		●	●						●	●		●			
FourKites www.fourkites.com	888-466-6958	●		●			●	●	●	●			●		●	●			●	●				●	●	
Foxfire Technologies www.foxfiresoftware.com	864-868-5243	●	●		●	●		●	●	●	●	●	●			●	●	●	●	●	●		●	●		
Freight Management Inc. www.freightmgmt.com	714-397-3262	●	●	●	●			●	●	●			●	●		●	●	●	●	●	●		●	●	●	●
Freightquote www.freightquote.com	800-323-5441	●	●	●			●	●	●	●	●	●	●			●			●	●	●		●			●
Hewlett Packard Enterprise www.hpe.com	248-613-7712	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
HighJump www.highjump.com	800-328-3271	●	●	●	●	●		●	●	●	●	●	●			●	●			●			●	●	●	●
Highway 905 www.highway905.com	908-432-2612	●		●				●		●			●	●		●				●	●		●			
Infor www.infor.com	800-260-2640	●	●	●		●		●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●

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LOGISTICS IT PROVIDERS 2016

COMPANY NAME & URL	PHONE	WEB/CLOUD/SaaS/HOSTED	LOCAL	COST				INDUSTRY SERVED						VERTICAL SPECIALIZATION												
				TRANSACTIONAL (SUBSCRIPTION)	SYSTEM	SEAT/USER	FREE	MANUFACTURING (ALL KINDS)	RETAIL	WHOLESALE	E-BUSINESS	SERVICES/GOVERNMENT	TRANSPORTATION	AEROSPACE	AGRICULTURE	APPAREL & TEXTILES	AUTOMOTIVE	CHEMICALS	CONSTRUCTION & BUILDING MATERIALS	CONSUMER PACKAGED GOODS	ELECTRONICS	RENEWABLE ENERGY	FOOD & BEVERAGE	FURNITURE	GROCERY	HEALTHCARE
INSIGHT www.insightoutsmart.com	703-366-3061	●	●		●	●		●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●
Integration Point www.integrationpoint.com	704-576-3678	●		●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Intellect Technologies www.intellecttech.com	609-454-3170	●	●	●		●							●		●	●	●		●	●	●			●		
Interlink Technologies www.thinkinterlink.com	800-655-5465	●	●	●	●	●		●	●	●	●		●		●	●	●	●		●	●		●	●	●	
International Asset Systems www.interasset.com	510-844-3000	●		●	●	●		●	●	●	●		●	●	●	●	●	●	●	●	●		●	●	●	●
International Business Systems www.ibs.net	916-542-2820	●	●	●	●	●			●	●	●		●			●			●				●			●
Invata Intralogistics www.invata.com	610-397-1050		●		●			●	●	●	●	●	●	●		●	●		●	●	●		●		●	●
Kewill www.kewill.com	978-482-2500	●	●	●	●	●		●	●	●	●					●	●	●	●	●	●		●	●		●
LeanLogistics www.leanlogistics.com	866-584-7280	●	●	●				●	●	●	●	●	●		●			●	●	●			●	●	●	
LLamasoft www.llamasoft.com	734-418-3119	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LOG-NET www.log-net.com	732-758-6811	●		●		●		●	●	●	●	●			●	●	●	●	●	●	●	●		●		
LogFire www.logfire.com	678-261-9000	●				●		●	●	●	●	●	●			●			●	●	●		●		●	
Logility www.logility.com	800-762-5207	●	●	●	●	●		●	●	●	●		●	●	●	●	●	●		●	●		●	●		●
Logimax www.e-logimax.com	855-253-8855	●	●		●	●		●		●	●		●													
Logisuite www.logisuite.com	305-222-7084	●	●	●		●							●													
Made4net www.made4net.us	201-645-4345	●	●			●			●	●			●							●			●		●	
Magaya Corporation www.magaya.com	786-845-9150	●	●	●	●	●				●	●		●													
MagicLogic Optimization www.magiclogic.com	250-594-6322	●	●	●	●	●		●	●	●	●		●													
Manhattan Associates www.manh.com	770-955-7070	●	●		●			●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●
McLeod Software www.mcleodsoftware.com	877-362-5363	●	●			●							●													

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LOGISTICS IT PROVIDERS 2016

COMPANY NAME & URL		PHONE	WEB/CLOUD/SaaS/HOSTED	LOCAL	COST				INDUSTRY SERVED						VERTICAL SPECIALIZATION													
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MercuryGate International www.mercurygate.com		919-469-8057	●		●					●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		
ModusLink Global Solutions www.moduslink.com		781-663-5000	●	●	●					●	●	●	●						●	●		●			●			
Navigate www.navigate.com		651-379-5030	●		●	●	●	●		●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		
Next Generation Logistics www.nextgeneration.com		847-963-0007	●	●	●	●				●		●						●		●		●		●				
NGC Software www.ngcsoftware.com		800-690-0642	●	●	●		●			●	●	●	●			●			●				●					
Nulogx www.nulogx.com		905-486-1162	●	●	●	●	●			●	●	●				●			●	●		●		●				
nVision Global www.nvisionglobal.com		770-474-4122	●	●	●	●				●	●	●	●			●		●	●	●	●	●	●	●	●	●		
Omnitracs www.omnitracs.com		800-348-7227	●	●	●	●				●	●	●		●	●		●	●	●	●			●	●	●	●		
Optricity www.optricity.com		919-237-4846		●			●			●	●	●	●	●	●			●	●	●	●		●		●	●		
Oracle www.oracle.com		650-506-7000	●	●	●			●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Paragon Software Systems www.paragontruckrouting.com		972-731-4308		●		●	●			●	●	●	●	●	●			●	●	●	●	●	●	●	●	●		
PINC Solutions www.pincsolutions.com		510-474-7519	●		●					●	●	●	●	●			●		●		●		●	●				
Precision Software (QAD) www.precisionsoftware.com		630-719-4937	●	●	●		●			●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●		
ProAct International www.proact.net		441-745-8163	●			●				●					●	●	●	●	●		●	●		●		●		
QuestaWeb www.questaweb.com		908-838-4328	●	●	●	●				●	●	●			●	●	●	●		●	●		●	●				
Railinc www.railinc.com		877-724-5462	●		●										●		●	●	●			●						
RateLinx www.ratelinx.com		262-565-6150	●	●	●	●	●			●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●		
Robocom Systems www.robocom.com		631-753-2180	●	●			●			●		●	●		●	●			●	●			●	●	●			
SAP www.sap.com		610-661-1000	●	●		●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
ShippersEdge TMS www.shippersedge.com		888-237-2465	●		●					●		●	●		●	●	●	●	●	●	●	●	●	●	●	●		

	OIL & GAS			PHARMACEUTICALS			TRADE SHOW			SUPPLY CHAIN SOLUTIONS										LOGISTICS SOLUTIONS										ADDITIONAL SOLUTIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

TOP 100

LOGISTICS IT PROVIDERS 2016

COMPANY NAME & URL	PHONE	WEB/CLOUD/SaaS/HOSTED	LOCAL	COST				INDUSTRY SERVED						VERTICAL SPECIALIZATION												
				TRANSACTIONAL (SUBSCRIPTION)	SYSTEM	SEAT/USER	FREE	MANUFACTURING (ALL KINDS)	RETAIL	WHOLESALE	E-BUSINESS	SERVICES/GOVERNMENT	TRANSPORTATION	AEROSPACE	AGRICULTURE	APPAREL & TEXTILES	AUTOMOTIVE	CHEMICALS	CONSTRUCTION & BUILDING MATERIALS	CONSUMER PACKAGED GOODS	ELECTRONICS	RENEWABLE ENERGY	FOOD & BEVERAGE	FURNITURE	GROCERY	HEALTHCARE
ShipXpress www.shipxpress.com	904-241-5850	●		●									●	●				●	●	●			●			
SMC ³ www.smc3.com	800-845-8090	●	●	●		●		●	●	●		●	●			●	●	●	●	●	●	●	●	●	●	
Snapfulfil WMS (Synergy Logistics) www.snapfulfil.com	847-577-5007	●	●		●	●		●	●	●	●									●			●	●		●
SphereWMS www.spherewms.com	214-382-2680	●		●	●			●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●
SPS Commerce www.spscommerce.com	866-245-8100	●		●				●	●	●	●	●	●			●				●			●	●	●	
Suntek Systems www.suntekscm.com	949-789-0070	●	●			●							●													
Systems Logic www.warehouseinabox.com	866-967-7226	●	●			●				●	●		●			●	●	●	●	●	●		●	●		
TECSYS www.tecsys.com	514-866-0001	●	●		●	●			●	●	●	●	●				●	●		●	●					●
Terra Technology* www.terratechnology.com	203-847-4007	●	●	●	●	●		●	●	●	●				●	●	●	●	●	●	●		●		●	●
TMW Systems www.tmwsystems.com	800-401-6682	●	●	●	●	●		●	●	●			●		●	●	●	●	●				●	●	●	●
ToolsGroup www.toolsgroup.com	617-600-7522	●	●	●	●	●		●	●	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●
TOPS Software www.topseng.com	972-739-8677	●	●	●	●	●		●	●	●		●	●													
Trans-i Technologies www.trans-i.com	954-524-1501	●	●	●	●	●		●			●		●	●						●						
TRANSPOREON Group Americas www.transporeon.com/us	267-281-6980	●		●		●		●	●				●		●		●	●	●	●			●			
TransportGistics www.transportgistics.com	631-567-4100	●	●	●	●			●	●	●	●	●	●	●		●	●			●	●		●	●	●	
Transwide www.transwide.com	877-763-3240	●		●				●	●	●			●	●	●	●	●	●	●	●			●		●	
TransWorks www.trnswrks.com	800-435-4691	●		●				●		●		●	●	●	●	●	●	●	●	●						
U.S. Bank usbpayment.com/freight-payment	866-274-5898	●		●				●	●	●		●	●													
UltraShipTMS www.ultrashiptms.com	800-731-7512	●		●				●	●	●	●	●			●	●			●	●			●			
Visual Compliance www.visualcompliance.com	877-328-7866	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●		●	●	●			●

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One key step to finding answers to any logistics, supply chain, or technology challenge is knowing the right questions to ask.

Inbound Logistics assembled a team of supply chain and logistics technology leaders, and asked for their perspectives on the important logistics challenges and opportunities impacting your business.

More importantly, these logistics thought leaders can give you guidance when considering improvements to your business processes.

THOUGHT LEADERS

78 RICK ERICKSON

Global Director of Freight
Payment Solutions, U.S. Bank

79 CHRIS TIMMER

Chief Commercial Officer, LeanLogistics

80 SHANNON VAILLANCOURT

President, RateLinx

81 GREG BRAUN

Senior VP Sales and Marketing,
C3 Solutions

82 MARK SELL

President, MD Logistics

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CEO, Aljex Software

84 CHRIS NOBLE

Implementation Manager, UltraShipTMS

85 CHUCK FATTORE

President,
RR Donnelley Logistics

Freight Audit and Payment: An Untapped Source of Working Capital

Q: You said recently, “The art of working capital management has declined.” Why isn’t it a focus?

A: The no- to low-interest-rate environment following the 2008 market crash made it easy. Debt wasn’t as big of a concern, so many companies let their attention to working capital management slip. Now that the Federal Reserve has started to raise rates and the economy is improving, companies are feeling increased pressure to unlock working capital and keep their cost-to-serve down—two essential elements of building a competitive global supply chain.

Q: Why is working capital management so important?

A: Margins are tight for shippers and carriers. In a time when two-day and even same-day shipping is common, consumers expect products to arrive quickly. As any logistics professional knows, speed-to-market impacts overall costs. And it’s not just freight costs that put pressure on companies; they also need to have increased inventory. To compete in this fast-paced economy, companies must look for every efficiency possible within their supply chain. They can then use that preserved cash to reinvest in their business.

Q: What steps have shippers traditionally taken?

A: Some shippers put pressure on their carriers to extend payment terms. While this helps shippers meet their working capital goals, it puts them at odds with carriers. In addition to their own working capital goals, carriers are under enormous pressures with increased regulations, driver shortages, and ever-increasing demand. Shippers are realizing that meeting customers’ demands requires solid relationships with their carriers. So it’s clear that the shippers who treat their carriers well will have an advantage.

Q: How can both shippers and carriers improve working capital?

A: With freight spend 3%-12% for most product-based companies, leveraging this spend to improve working capital through trade finance is a win-win. A freight payment solution with trade finance allows shippers to hold on to their cash beyond the typical 30-day

payment terms. Meanwhile, carriers get paid upon invoice approval. Both sides of the partnership can maintain their highest levels of efficiency without carrying a burden for each other. Trade finance enables companies to easily accelerate cash flow by increasing working capital from 30 up to 90 days without impacting balance sheets.

Q: What examples have you seen of shippers excelling with working capital?

A: A global food and beverage company leveraged supply chain finance strategies for several years to extend terms to suppliers but excluded transportation providers due to their strict 30-day terms and concerns about capacity. By leveraging trade finance through U.S. Bank Freight Payment, this industry leader increased working capital to 75 days and gave more favorable terms to carriers, including payments within four days of invoice approval.

If a company with \$100 million in annual freight costs had access to that money for 90 days instead of 30, it would see a working capital benefit of more than \$1 million, assuming a weighted average cost of capital (WACC) of 10%. Regardless of interest rates, increasing your working capital can greatly impact your bottom line.

U.S. Bank | 866-274-5898

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RICK

ERICKSON

Global Director of Freight
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U.S. Bank

Leveraging a TMS for Domestic and Global Transportation

Q: What are the biggest challenges facing shippers in today's economic environment?

A: In today's market, managing transportation domestically and globally in one system with a single workflow is a key factor for a more efficient and cohesive supply chain. Many businesses still use manual methods or multiple systems to manage freight, with no way to measure service or performance. Other companies are bound to installed/hosted legacy transportation management systems (TMS), which limit the flexibility and control tower visibility necessary for end-to-end supply chain management. With limited metrics and no best practices, companies struggle to improve services and reduce transportation costs.



Chief Commercial Officer
LeanLogistics

CHRIS
TIMMER

Additionally, having access to information to plan and execute an international shipment, shippers need to access many different sources for information including trade compliance, sailing schedules, requesting bookings, import and export filing, and tracking.

Q: How can today's shippers effectively manage domestic and global freight?

A: To support global initiatives, shippers should consider leveraging a Software-as-a-Service (SaaS) TMS with domestic and global functionality. True global logistics technology enables companies to successfully manage all modes of transportation—domestic and global—under one platform with a single workflow while providing complete visibility and direct collaboration between shippers and carriers.

By leveraging a global TMS, shippers are empowered with a comprehensive solution for managing domestic and port-to-port freight that directly impacts the bottom line. Automated communications, processes, and workflow between supply chain partners allow companies to improve efficiencies while gaining visibility into freight payment and discrepancies before they impact the company's finances.

Global transportation technology bridges the gap for multi-divisional enterprises, enabling domestic and global logistics management in one system with a single workflow that delivers significant value for shippers and carriers.

Q: How can companies looking to expand internationally leverage a TMS?

A: Find a TMS with both domestic and global functionality. It provides scalability for those companies that are currently handling domestic freight while looking to expand into international territories, or even those companies that are currently managing international freight outside of their domestic processes but need one flexible platform for domestic and global transportation. Furthermore, with a SaaS TMS solution on one platform that offers a single workflow, companies have visibility to true total landed costs and lead-times to make better sourcing decisions while monitoring and managing supplier performance all over the globe.

A true SaaS solution for transportation management enables companies to reduce overall transportation spend, gain visibility into domestic and global transportation processes, improve collaboration between all global partners of the supply chain, and scale and quickly adapt technology based on domestic and global needs.

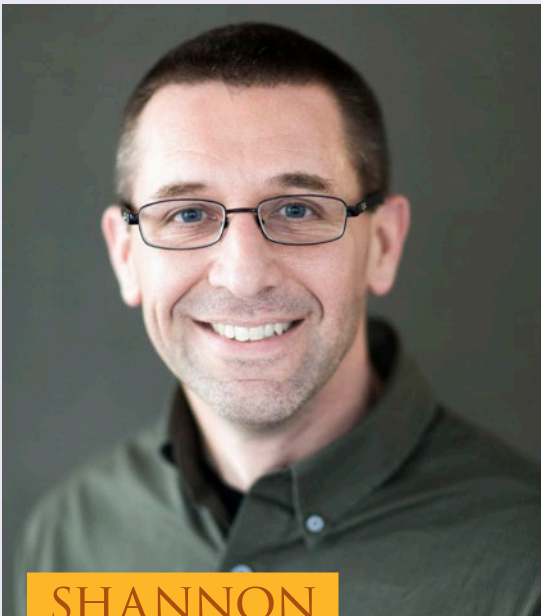
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Customized and Integrated to Create One Strategic Logistics Platform

Q: Why is it important for businesses to create a customized and integrated strategic platform for logistics operations? Why are businesses struggling to achieve this?

A: Changing freight from a tactical necessity to a strategic asset is possible if you have a customized platform for logistics. A customized and strategic platform provides a company with a competitive edge over their competition.

We see many companies across all verticals, not just e-commerce and retail, focusing on creating a competitive edge with their logistics and supply chain operations. However, the challenge they are all facing is the amount of IT resources required to do this. The struggle lies within trying to integrate systems together that were never meant to be part of an integrated strategic platform or ecosystem.



SHANNON

VAILLANCOURT

President
RateLinx

Q: How does a business achieve this strategic platform? What steps do they have to take in order to reduce costs and improve efficiency?

A: The way to achieve this strategic platform is through integrating the order and item level information from the ERP/WMS with the shipment and invoice data from the TMS and carrier. Once this has been done, the next step is to use the visibility to understand what the main cost driver is in your logistics network. Is it an exception to a routing rule or the routing rule itself? Is it a particular order type or item? Or is it a customer or vendor?

Q: Describe how data collection and rate modeling drive the power of an integrated logistics platform. What benefits do these processes provide businesses?

A: Data collection provides the context that is often missing and allows you to answer the seven key questions (who, what, when, where, why, how, and how much). Rate modeling allows you to answer the how question the best—how to implement the new idea the most efficiently. The biggest benefit companies will receive is to know about the unintended consequences of their actions (the new idea) before they implement a change.

Q: What opportunities exist when businesses finally unlock the power of an integrated platform?

A: The opportunities are immense and limitless. Imagine what a company could unlock if they were able to spend the same amount of time and resources on creating logistics strategies rather than spending them on tactical data gathering and cleansing processes today. There is a smarter way.

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SaaS Breathes Life Into Yard Management Systems

Q: How has SaaS rejuvenated Yard Management?

A: Cloud-based systems have been an enabler in many industries and yard management is no exception. The type of operations that are looking to better manage their yards today don't want to be bothered with installing complicated infrastructure and initiating the type of complex projects that go along with these environments. The traditional approach to YMS does not provide an acceptable return on investment and has been a barrier to entry for many operations. Furthermore, operators want their solutions to be collaborative and easily integrated with other systems. Providing clients or carriers visibility on what is happening in the yard should be easy.



GREG

BRAUN

Senior VP Sales and Marketing
C3 Solutions

Q: What are the market forces driving the need for Yard Management?

A: The biggest issue affecting the demand for yard management is the lack of capacity in the transportation network—also known as the driver shortage problem. Common carriers are becoming increasingly intolerant of operations delaying their drivers. Operators are being told if they don't support a "drop and hook" program, carriers will simply not carry their freight. Therefore, operators are under the gun to better manage their yards, not only as a means of reducing cost and improving efficiency, but as a prerequisite to accessing transportation resources.

Q: How does a YMS address these challenges?

A: When identifying bottlenecks in the yard, most often the biggest issue is at the gatehouse. Most operations don't have the visibility to be proactive when it comes to receiving trailers at the facility. Gate guards not only have to perform a security function but they're also constantly on the phone with the warehouse determining where to send trailers. Therefore, to avoid delaying drivers, a YMS needs to provide visibility to which trailers are on-site and which trailers are due to arrive.

This visibility can be gained by receiving a feed from a TMS or a scheduling system. The latter system is essential not only in providing visibility, but also to ensure the schedule adheres to the constraints of the operation and allows the warehouse to proactively assign drivers to parking areas before they arrive.

Q: What other opportunities are out there?

A: There are massive opportunities in the area of streamlining the driver arrival process. We need to look at the advances the airline industry has made with passenger check-in and ask ourselves why can't we apply this technology to driver arrival at the distribution center?

A truck driver destined to a warehouse should be able to pre gate arrive (check-in) at the DC with their smartphone. Once the driver arrives, the gate guard can simply verify the details and send the driver to his pre-assigned spot. Similarly, a self-serve kiosk (touch screen) can direct pre-arrived drivers to their designated parking spots. The added benefit of streamlining the arrival process is it provides precise driver ETA information to the operation.

For these reasons, a cloud-based YMS is not only more financially accessible but opens doors to new solutions.

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Should I Work With a Third-Party Logistics Provider Offering Foreign Trade Zone Services?

As products continue to be sourced globally, companies that import goods are always looking for ways to make their supply chains more efficient. Working with a 3PL partner who also offers foreign trade zones (FTZs) can provide big benefits in the right scenarios.

Q: What is an FTZ?

A: An FTZ is a designated area, supervised by U.S. Customs and Border Protection, where goods, despite having already arrived in the United States, are still considered as being located on foreign soil. FTZs enable companies to defer duty and taxes on those goods until they are either sold into U.S. commerce or moved out of the FTZ.



President
MD Logistics

MARK
SELL

Q: When does it make sense to move product through an FTZ?

A: Here are a handful of scenarios where using a 3PL provider who operates an FTZ makes good business sense.

■ **When moving temperature-controlled product.** The risk of temperature-sensitive product sitting at a non-temperature controlled port is eliminated, as product does not need to wait for customs clearance.

■ **New product launch.** When products are pending FDA approval or have an upcoming product launch date, moving them to an FTZ allows companies to locate their product closer to the customer, thereby increasing speed to market.

■ **High import volume on high-duty product.** Companies that import multiple containers per week of high-duty goods realize cost savings in Merchandise Processing Fees (MPFs) alone when using their 3PL's FTZ. In an FTZ environment, MPFs are required weekly, rather than per container, so processing fees are significantly lowered.

■ **Non-consumed goods.** Goods that are not consumed may sit in an FTZ and be sent back to their country of origin without a company ever paying duty on them because they never entered U.S. commerce.

■ **Zone-to-zone transfers.** For companies that transfer goods between FTZs in the United States, Canada and Mexico, goods can move duty-free from zone to zone until the goods are consumed or re-exported.

Q: What are the benefits?

A: Working with a 3PL that operates an FTZ offers customers the opportunity to realize both cost and time savings. From an economic perspective, companies using an FTZ not only realize a reduction in MPFs, and duty and tax deferment, they are also able to take advantage of an already established FTZ. Doing so reduces the costs associated with becoming an FTZ and the additional personnel required to oversee FTZ management and filings.

From a time-saving perspective, companies using a 3PL FTZ are able to capitalize on speed to market and mitigate risk for temperature-controlled product. In the case of new product launches, this can mean the difference between moving from second to first to market.

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Facilitating a Software Switch

Q: We bought our TMS over 10 years ago and have upgrades coming up. We're considering something cloud-based. What is it like to switch software? The last time it took one year.

A: There are a lot of factors that play into this, but generally it's a lot easier than it used to be. Even so, depending on a number of factors, it can be days, weeks, months, or in the worst cases, years.

Q: What are the main factors involved?

A: A deciding factor is whether to go with a cloud-based or enterprise system. An enterprise system can take months to just get the equipment in place, and then you would be back where you started with expensive updates and server considerations. A cloud system is by far much faster to implement. No servers and equipment to order, configure, and install, plus a lot less training is required.

Q: Can cloud-based systems serve big companies?

A: Yes, some cloud-based systems can do it very well indeed. Depending on how big your company is, they can have a system ready in a day or two. That's the easy part. Size matters—switching a company with hundreds of users can be challenging. Each department and group needs to be trained to make sure the new application will handle their needs. Each business scenario must be looked at carefully to make sure there are no surprises on the first days. Your business continuity is critical.

Q: What are the other factors?

A: Consider the uniqueness factor. If you are doing something unusual, perhaps a process required by an important client, you may need customization. Some systems enable customization, others do not. That should make it easier to decide on a provider. If you need it and they can't do it, they're just not suitable. But remember, even if you don't need customization now, it may become necessary as you grow and take on new customers with unique needs. Ask your potential TMS suppliers about their abilities to customize. How much will it cost? How long will it take? Ask for references to see if their forecasts are accurate compared to previous customization.

Q: What about EDI?

A: That will depend on how many integrations and EDIs you have. EDI is problematic. Integration times vary depending on who your partners are and how busy their IT team is. Some EDIs will be much faster than others. EDIs can take a week, or they can take 6 months.

Q: Months? Why so long?

A: You are always only as fast as your partners. If you get immediate responses, it goes quickly. But, some partners take a week or weeks to reply, so it can drag out. If your big clients are really slow to respond, how much can you really pressure them? The key is planning ahead. Finding out the proper contacts and getting specifications ahead of time can make a world of difference.

Q: What about training my team?

A: Training is really important. Maybe your new system provides some efficiency on day one. But to maximize your investment and save the most time, your people must know how to use what your system has to offer. That means training. Does your potential provider offer training? Do they come to your offices? Do they offer online sessions? You need to ask. Where online resources are concerned, you need to look for yourself.

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CEO
Aljex Software

TOM
HEINE

Avoid Pricing Pitfalls When Selecting a Logistics IT Solution

Q: One of the common gripes voiced by organizations implementing logistics IT solutions is that the solution ends up costing more than expected. Why does this seem to happen so frequently?

A: The roots of this complaint can be traced back to improperly managed expectations during the sales process. Pricing between providers competing for the contract can vary widely and features/functionality included in one provider's quote aren't necessarily included in the competing quote. Take, for example, what is included in a TMS provider's implementation fee. What Provider A includes may be far more comprehensive than Provider B delivers by way of service. Yet buyers generally assume the quoted prices include the commensurate levels of effort and value from both providers.

Q: What are some of the differences between offerings that can result in such discrepancies in cost?

A: There are many that seem intuitive but frequently cause surprise. The provider offering the lower implementation fee and monthly subscription fee likely keeps the quote lower by assuming client resources will be responsible for completing tasks like initial data loading (entering existing carrier rates and other data into

the TMS for example), carrier onboarding, IT support, and even user training. Whereas, the provider offering a somewhat higher price quote may perform all these functions as part of their service at the quoted price.

The lower cost solution provider typically charges extra to help customers complete these tasks when inevitable challenges and issues arise and the customer is unable to execute autonomously. At the end of the year, it's not uncommon for the solution with the more attractive sticker price to end up costing more than the competing solution which includes these services as part of its price quote.

Q: How can customers arrive at an equitable comparison when weighing solutions and costs side-by-side?

A: Get suppliers on record early regarding service levels. Just like you'd require detailed SLAs for technical aspects, ask prospective providers for a line-item breakdown of what's included in their quote and what isn't. Three things you must receive from each provider are:

- Detailed listings of features and functionality
- List of services included during and after implementation (e.g., data loading, training/support, etc.)
- A detailed Statement of Work (SOW) including definitions of standard roles expected to be provided by the provider and the client (e.g. RACI matrix)

If the prospective provider cannot deliver these items, their pricing should be viewed as a risk because there is no expectation of what is included in the price and what will incur additional charges once it is too late to select a different solution.



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Leveraged Platforms: The More Efficient Road Ahead

Q: What is a leveraged platform?

A: A logistics services provider leverages its platform to employ the same best practices to manage its own supply chain needs as it does for its own client base of direct shippers. By augmenting their global scale with a vast network of local stations, these service providers are better able to develop a thorough, real-time understanding of their clients' latest shipping needs and patterns.

Q: What are the benefits of participating in a leveraged platform?

A: Core carriers participating in leveraged platforms typically receive consistent, attractive internal freight volumes and specific lanes of business. Locally-based stations also give less-than-truckload (LTL) carriers highly accurate classification, reducing rebilling that may occur with 3PLs and their central call centers.

virtually every aspect of domestic and international distribution, including scheduling, tracking and pricing.



CHUCK

FATTORE

President
RR Donnelley Logistics

In addition, co-loading large LTL shipments within dedicated networks can alleviate shipment and capacity issues — a current major challenge that will linger well into 2016.

Q: How does technology play into all of this?

A: Today's web-based tools help carriers and shippers dive deep into distribution operations information, precisely tracking shipments, delivery metrics and other trends in real-time that greatly impact project outcomes. Sharing this data helps carriers spot-rate larger shipments to fit backhaul needs, while also helping shippers save through mode optimization and usage of co-load products or truckload (TL) partial when larger LTL shipments may be more expensive.

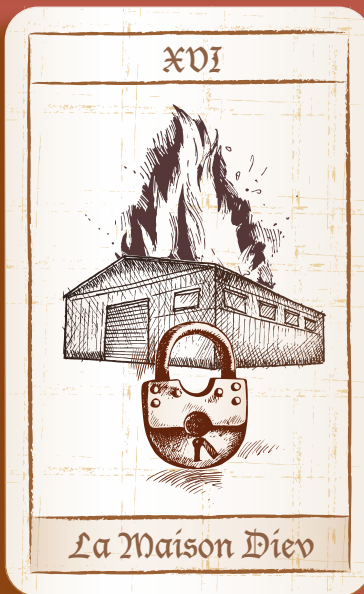
Q: Can leveraged platforms help carriers streamline their processes?

A: Yes. Through a combination of integrated distribution services and extensive global carrier networks, leveraged platforms help streamline shipping processes, optimizing

Q: How can the goals of carriers and 3PLs be aligned?

A: Our 24/7/365 on-demand world means that client needs and lane volumes are continually evolving, requiring constant communication between all parties to keep things running smoothly. Drivers — and the capacity they deliver — can often be retained by finding return loads or by simply asking booking preferences after completing initial TL shipments. In one case, a core vendor expressed needed capacity for inbound freight into California. With a small and simple pricing adjustment, the carrier participating in a leveraged platform delivered twice the critical volume for the core vendor. This kind of solutions-oriented thinking will drive tomorrow's success stories.

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Supply Chain Modeling: What Does the Future Hold?

Sophisticated supply chain modeling and simulation tools help companies predict the outcome of business scenarios and foretell the future.

By Tom Gresham

It was 2008, and JBS S.A., a Brazil-based meat-processing company, was still managing its supply chain and analyzing data to make future decisions using basic spreadsheet tools. Key leaders understood the company had outgrown manual spreadsheets, and it was time to embrace a more sophisticated model.

JBS manages more than 40 industrial facilities in Brazil, each with a range of available resources, capabilities, and certifications. The company moves 1,500 different SKUs per month. “The complexity of our operation is considerable,” says Celso Batista, coordinator of planning and control at JBS in Brazil.

Eight years ago, it became clear to JBS that its low-tech approach to supply chain management caused it to miss out on crucial opportunities because of hazy forecasts and an inadequate ability to study the full spectrum of possible scenarios, Batista says. The company had grown too big and intricate for its old-school modeling and forecasting methods.

JBS elected to radically alter its approach and waded into supply chain modeling and simulation. Wanting a flexible software option that could adapt to its unique circumstances, JBS decided to work with AIMMS, a global decision support technology company that offers an analytics, modeling, and optimization platform. Supply chain modeling helps organizations visualize the future of their supply chains in new ways to identify opportunities, inefficiencies, and risks.

“We sometimes lost track of supply chain opportunities, for example the type of return we can get by changing a location,” Batista says. “We were seeking new ways to identify all the opportunities our business affords.”

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Today, the information that companies can integrate into modeling software applications to develop forecasts and investigate hypothetical scenarios is impressively thorough. For instance, LLamasoft's *Supply Chain Guru* modeling software incorporates attributes such as production facilities, individual lines, capacities, distribution facilities, suppliers, retailers, costs, demand volumes and frequency, sourcing and inventory policies, and transportation modes, among other components, says Toby Brzoznowski, co-founder and executive vice president of Michigan-based LLamasoft, a supply chain optimization software provider.

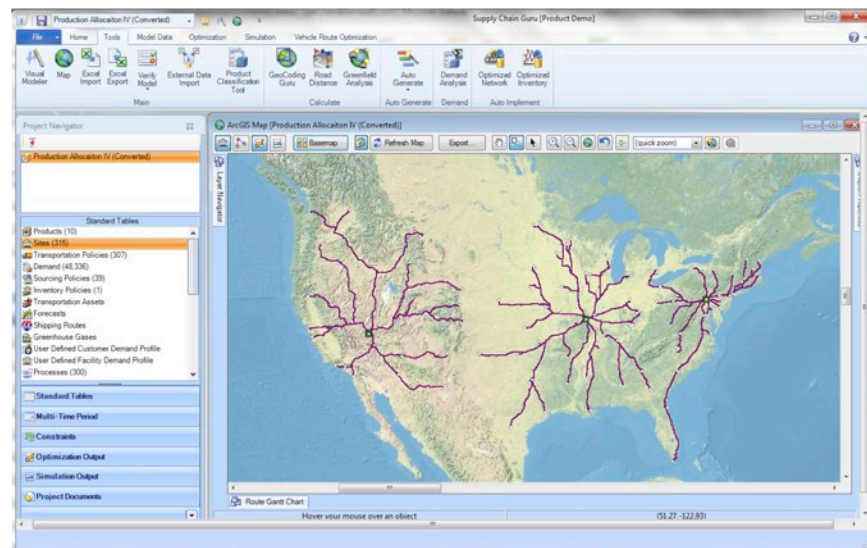
When the model is right, and properly integrated with accurate and comprehensive data — such as through an existing enterprise resource planning (ERP) software — organizations can begin to mimic the real world in a way that allows them to study the future with detailed foresight. They can make decisions conceptually, and peruse projected results in graphs, dashboards, maps, charts, and videos, without any risk.

A SUNNY FORECAST

Advances in the field mean that forecasting is no longer limited to occasional work that requires many hours of staff time to investigate a single scenario. Forecasting now can be performed routinely and swiftly, producing answers to complicated questions in minutes.

For example, organizations can calculate new safety stock levels daily or weekly, instead of automatically maintaining a four-week safety stock level. This results in more precise, less wasteful supply chain management, and frees up cash for other investments, such as developing new products or exploring new markets.

“Companies can start playing with reality without actually affecting reality,” explains Marcel Mourits, supply chain optimization lead at AIMMS, a global company offering integrated multidimensional modeling software. “They can start asking the important question: What if? What if we



Modeling software users can visualize scenarios in different ways, such as maps. This graphic of LLamasoft's *Supply Chain Guru* software shows the baseline model for a hypothetical company's outbound distribution network.

close this warehouse? What if revenue grows by 20 percent? What if we start using multimodal shipping instead of relying only on trucking?”

After making a decision, organizations can use modeling to anticipate possible events resulting from that decision and to develop plans to prepare for them.

For instance, if an organization changes its supply capacity, it can play out a random series of demand scenarios for an upcoming period of time to see what likely will happen. The organization can then identify where both opportunities and problems will develop. Do certain scenarios create inventory or capacity issues? Is a particular product vulnerable to some developments? Does production in a certain country meet special challenges? The supply chain model reveals all.

The model also gives supply chain planners and designers a crucial head start.

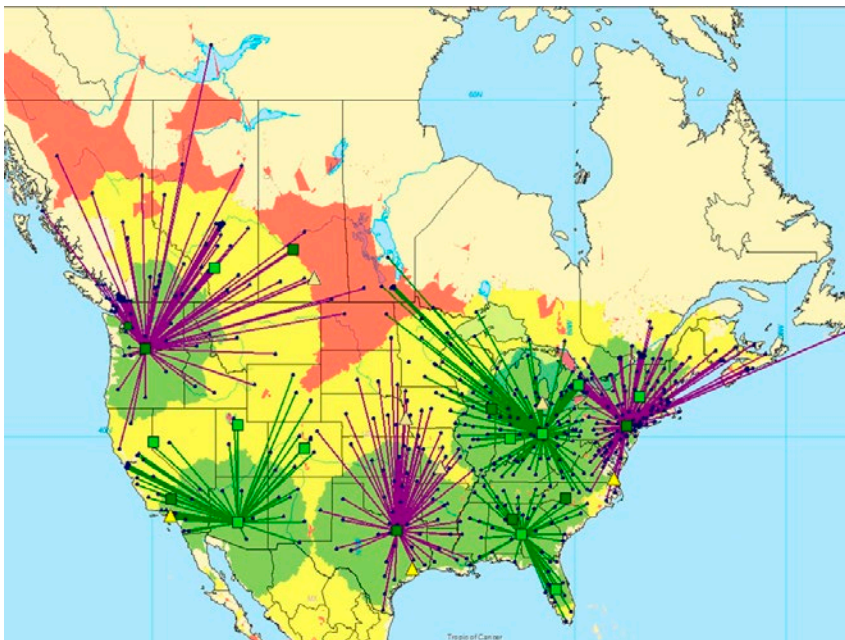
“Simulation allows companies to determine how best to respond to a problem if it occurs, and avoid surprises,” Mourits says. “Simulation software lets companies spend the time now to either mitigate the risk or, if it happens, to respond as quickly as possible, so the situation doesn't deteriorate.”

Off-the-shelf vs. Tailor-made

Supply chain modeling and optimization software can be organized into two primary categories: off-the-shelf and tailor-made. The solution that's right for you depends on your organization.

Off-the-shelf software uses a standardized application. One example is LLamasoft's *Supply Chain Guru*, which is designed for use by companies across a range of industries while still meeting their individual needs.

Tailor-made software offers companies the opportunity to get creative based on their unique characteristics and objectives. Marcel Mourits, supply chain optimization lead at AIMMS, says he is constantly surprised by the applications companies develop on their own for AIMMS' tailor-made software solutions.



GRAPHIC COURTESY OF LLAMASOFT

Event simulation engines let users test supply chain designs to make sure they will function as planned in the face of real-world variables and business needs. This map illustrates possible distribution scenarios identified by simulation tools.

“Modeling and simulation software is all about making decisions, or evaluating the repercussions of a decision, in the digital world before acting on it,” Brzoznowski adds.

MODELING AND SIMULATION AT WORK

Glass is among the materials Nampak uses in its large packaging operation based in South Africa. Glass production represents a nettlesome planning challenge because the process is so delicate. The company uses large, extremely hot furnaces to transform sand and other ingredients into glass bottles for clients around the world. The conditions need to be precise depending on the type of bottle—its size, shape, thickness, and color. As a result, different bottle types cannot be created in the same furnace at the same time, or quality suffers. And if Nampak doesn’t properly build its schedule, delays and gaps in production time can result.

Because of this complexity, Nampak faces tough adjustments when circumstances change. For example, when the company added capacity by installing a

new furnace, it created numerous new planning questions that continually arose.

To address those challenges, Nampak decided to work with AIMMS. Now, if a client calls to change an order from its usual 100,000 bottles per week to 150,000 bottles one week, Nampak can use the software to explore that request. It can study its decision based not solely on cost, but also taking into account revenue, scheduling complexity, margins, and other factors.

The software could show, for example, that fulfilling the request creates a domino effect that would disrupt the schedule for several other clients and prove less profitable than declining the request or only partially fulfilling it. Or, the software could reveal that accepting the request and postponing orders for other clients would produce a windfall.

“What’s transforming for Nampak is that it now has the option to choose the most profitable production schedule for each customer request,” Mourits says.

Like manufacturers, retailers also employ sophisticated modeling tools to develop supply chain forecasts. One

such retailer is Michael Kors, a designer of luxury accessories and ready-to-wear apparel. In recent years, the company has enjoyed rapid growth, resulting in a steady addition of new stores. As it looks to the future, Michael Kors uses LLamasoft’s *Supply Chain Guru* to anticipate how continuing growth affects the supply chain, and how it needs to be adjusted to accommodate that growth.

In particular, Michael Kors can layer its forecasted demand growth on top of demographics, and then use the supply chain software to identify where it will likely face capacity constraints over a particular time, when and where it will need to add capacity, and how to optimize for that over time. This information helps the company prepare to properly support projected growth down the road.

Similarly, when the retailer wanted to study the implications of a more robust e-commerce strategy, it used supply chain modeling to forecast which stores would service the online orders and then need to be replenished.

CHANGING WITH THE TIMES

Organizations vary widely in the emphasis they choose for their supply chain models. They also diverge through cycles when times change and company goals shift with them. For example, Brzoznowski says automakers, including LLamasoft clients Ford and General Motors, used to optimize their supply chains to cost during the recession when the industry encountered tenaciously poor demand. Today, though, as the economic picture has improved, the industry is more apt to optimize to service.

Through supply chain modeling, many organizations learn that they have been squandering opportunities that have gone unnoticed. For instance, JBS used its modeling software to consider a spectrum of scenarios for one of its products, and was baffled when the AIMMS application suggested the company should be producing a much higher volume of that product than historical data indicated was appropriate. The finding seemed far out of



Luxury accessories designer Michael Kors uses supply chain forecasting software to identify capacity constraints and increases, and to prepare for projected future growth.

step with what JBS understood — and had understood for years. Stumped, JBS leaders investigated their historical data more closely, and discovered an error within its ERP software. The error caused the company to view the decision improperly and miss the opportunity that the product's underproduction represented.

JBS consequently revised its approach and increased volumes to the levels the software proposed. The change led to a project payback within just two months. This example was one of many that convinced JBS “we could be missing simple data that represents a lot of value for the company,” Batista says.

GAINING BUY-IN IS A KEY CHALLENGE

Learning to use the new tools, and understanding how to integrate them into the company's operations, proved less challenging than securing buy-in within JBS, including among leaders from a number of different departments. In the early going, when the AIMMS platform suggested alternatives that conflicted with solutions the more traditional methods

“Companies can play with reality without affecting reality. They can start asking the important question: What if?”

— **Marcel Mourits**, Supply Chain Optimization Lead, AIMMS

produced, there inevitably was pushback. Some decision-makers were wary of setting production and sales plans based on data they still did not understand. “It's difficult to change,” Batista admits.

The value and potential of the forecasting tools, however, became evident.

“Heated discussions always revolve around information conflicts, but the modeling system survived,” Batista says. “We improved the quality of the data we were moving, so everyone could see the solution's benefits. The barriers came down.”

“The single biggest challenge is the quality of the data,” agrees Brzoznowski. In the 1990s, it would have been impossible to implement these kinds of projects because of the lack of data standardization within companies. One benefit of Y2K (when 1999 turned to 2000, it was feared that computers would shut down completely), is that it drove many companies to bring their data under a centralized system.

Still, Fortune 1000 companies frequently maintain a number of different ERP software applications, often because of acquisitions made over time. Organizations and service providers must collaborate to access these different data streams and blend them to optimize the supply chain.

COMING UP SHORT

Data shortcomings can slow a move to modeling software. Just ask A.W. Chesterton, a Massachusetts-based manufacturer of sealing solutions, which has undergone a recent major shift, employing business intelligence to improve data management and analytics.

The next step the company wants to take is to add modeling and forecasting software, says Tom Meier, vice president of information technology at A.W. Chesterton. However, the company still has work to do in that area because it only recently adopted data integration capabilities.

“We need more years of historical data to support it,” Meier adds.

Discrete event simulation is another forecasting tool that would have been unthinkable not that long ago. Through discrete event simulation, users can observe where problems will emerge for a specifically defined event before the event occurs, and then adjust accordingly. This differs from supply chain optimization modeling based on averages and flows.

Companies can use this form of simulation, for instance, when designing a new manufacturing plant and wanting to identify where bottlenecks could occur in the internal transportation system, such as among moving products, people, or vehicles. The simulation allows companies to run the events through a model almost as though they were happening.

Sometimes the simulation displays a 2D or 3D image that enables users to observe waiting lines, moving equipment, and congestion in real time — all before the facility has even been built. It is like watching a movie before it has been released.

Users can choose to run the event for a specific time to see how circumstances evolve and how the operation behaves. If key problems arise in the model, then users can change their plans. It is a way of ensuring supply chain design changes

perform as expected. In the case of the hypothetical manufacturing plant, the model can demonstrate if the interior design leads to poor flow of resources, such as a crossing that forces vehicles to wait too frequently or even leads to potential collisions. The user can then alter the design to prevent the problem, and run the new design through the model for fresh testing.

ASKING BETTER QUESTIONS

After switching to supply chain modeling and optimization software eight years ago, JBS today can respond rapidly to market prices that change daily for its products, and make comparisons with the newest demand scenarios, production capabilities, transport possibilities, and different types of costs.

In the future, Batista hopes JBS will be able to better align its use of the software

with its processes and people. “The main factor for continued business success is to tighten the relationship among the software, its processes, and our people,” Batista says.

One key quality of the modeling software is the way it forces businesses to challenge the kind of assumptions and conventional wisdom that can lead to lazy thinking. No matter how JBS uses modeling to peer into the future, the process and tools will challenge the company and force it to scrutinize itself in a way spreadsheets never did, Batista says.

“Modeling software makes companies question their thinking, and get creative,” he says. “It’s not the kind of system that simply provides production plans, and all the user has to do is push ‘print.’

“Solutions that make you think, such as modeling and forecasting software, are the best ones for your business,” he says. ■



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A red toy truck is positioned on the right side of the page. To its left, three alphabet blocks are stacked vertically, spelling out the word 'ACE'. The top block is red with a white 'A', the middle block is yellow with a white 'C', and the bottom block is red with a white 'E'.

The ABCs of Supply Chain Compliance

Understanding the myriad global trade rules and regulations on the horizon is not child's play, and non-compliance could spell T-R-O-U-B-L-E.

By Karen M. Kroll

92 Inbound Logistics • April 2016



While supply chain professionals have always had to understand the regulations that impacted their supply chains and required their organizations' compliance, this role has become even more pronounced. Government agencies across the globe continue to issue rules that affect supply chain operators. "Regulations now seem to be a regular component of international supply chains," says Eric Souza, director of product marketing, ocean freight and customs brokerage with UPS. "Companies need to make sure they have a robust compliance program in place."

A few themes drive most regulations: "modernization, harmonization, transparency, health, safety, and security," says Candace Sider, vice president of regulatory affairs, Canada, with customs brokerage services firm Livingston International. Many regulatory agencies are continuing to shift from paper-based, manual processes to electronic and digital systems. They're also trying to harmonize the standards they use in their countries with those used by most other jurisdictions. These efforts should help streamline the movement of goods across borders.

At the same time, most agencies want to obtain information on the goods coming into their countries so they can help ensure security, protect intellectual property rights, and keep citizens safe.

When the goals of efficiency and security conflict—and they often do—regulatory agencies have to weigh the differing concerns. While shippers may not always agree with the final results, they need to comply with them.

Here is a look at the regulations most likely to impact shippers in the coming year:

The staggered rollout of the U.S. Customs and Border Protection's (CBP) Automated Commercial Environment (ACE) system. ACE is the culmination of an effort to establish one portal through which information on imported goods can electronically flow from businesses to the government agencies that require it. The new system “will help industry and facilitate trade,” says Bob Jacksta, supply chain specialist for Deloitte Consulting. Products will be able to move into the commercial stream more quickly, with better data and less paperwork, he adds.

ACE has been in development for years, and “it’s a monster,” says Tom Gould, senior director, customs and international trade with law firm Sandler, Travis & Rosenberg. “Several dozen government agencies will be collecting information through it.”

ACE’s development took on greater urgency with a 2014 Executive Order that required government agencies, by the end of 2016, to implement the “capabilities, agreements and other requirements in place to utilize the International Trade Data System (ITDS) and supporting systems, such as the Automated Commercial Environment, as the primary means of receiving from users the standard set of data and other relevant documentation.”

“We are now in the final, ‘it’s for real’ phase,” says Jonathan Gold, vice president,



The CBP's ACE system will help streamline and automate manual processes, eliminate paper, and enable global shippers to more easily and efficiently move goods through Customs, as well as comply with U.S. laws and regulations.

supply chain and customs policy with the National Retail Federation, a retail trade association.

ACEing It

At this point, the CBP has automated many of its functions within ACE. For instance, importers can file shipping documents electronically within the system, although some CBP documents still can be filed in the older Automated Commercial System (ACS). Many other federal agencies have yet to provide

functionality through ACE.

A number of entries and entry summaries will shift from ACS to ACE on various dates throughout 2016. For instance, as of March 31, 2016, data required for the National Highway Transportation Safety Administration (NHTSA) and under the USDA Lacey Act needs to be filed in ACE, says Cindy Allen, founder and chief executive officer of consulting firm Trade Force Multiplier.

This deadline could particularly impact importers of vehicles and vehicle parts, Allen says. While most companies should already have the information required, it’s often scattered across multiple systems and departments. Moreover, the NHTSA is expanding the number of data elements it requires. Many companies “are concerned about gathering information and getting it to their brokers in enough time for the brokers to report it before the goods arrive,” Allen says.

On May 28, 2016, even more electronic entries and associated entry summaries shift to ACE.

During July and August, a number of federal agencies — the Centers for Disease Control, the Drug Enforcement Administration, and the Fish and Wildlife Service — are expected to provide functionality for companies to file information via ACE. As of early April, the exact dates had not been published.

By October 2016, ACE will be

Top 6 Global Trade Rules: Are You Ready?

These are the regulations most likely to impact shippers in 2016:

1. The staggered rollout of the U.S. Customs and Border Protection's Automated Commercial Environment (ACE) system.
2. The International Maritime Organization's amendments to the Safety of Life at Sea (SOLAS) Convention.
3. Changes to the Authorized Economic Operator program in the EU, part of the implementation of the EU's Union Custom Code.
4. Amendments to regulations to allow better tracking of containers of goods entering, leaving, and traveling across the European Union.
5. Changes made by the Department of Transportation to more closely align Hazardous Materials Regulations with international standards.
6. The recently signed Trade Facilitation and Trade Enforcement Act of 2015, also known as the Customs Reauthorization Bill.

mandatory for all remaining electronic portions of the CBP cargo process. This includes drawback, protest, reconciliation, and statements.

Finally, as of Dec. 31, 2016, the Executive Order mandates that all agencies and functionalities be complete in ACE.

While the CBP has extended a number of ACE deadlines, experts say that's unlikely to continue. "I don't see a huge chance of further deadline extensions," Gould says. If an importer or broker can't file within the ACE system, and resorts to paper, Customs no longer will be equipped to handle the shipments. Instead, the cargo may languish on the docks.

To minimize that risk, companies should be implementing the processes needed to comply with the regulation. Supply chain professionals need to understand the data requirements and the point at which information needs to be collected, Jacksta says.

Those that provide electronic data feeds to their brokers should ensure they're communicating the data required by all the agencies with whom they interact. They also must check that their brokers are working with Customs-certified software; a list of certified software vendors is available on the Customs website.

Because many new systems can experience hiccups, especially those as complex and expansive as ACE, companies with just-in-time supply chains may want to allow additional time within their processes as ACE rolls out, Allen suggests.

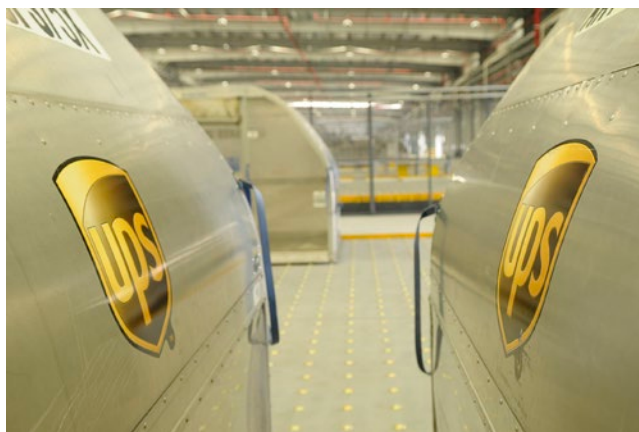
While the transition to ACE will require many organizations to adjust their supply chain systems and procedures, the efforts should pay off. "Once we're over the transition hurdle, ACE will make it easier for importers and exporters to communicate," Gould says.

The International Maritime Organization's (IMO) amendments to the Safety of Life at Sea (SOLAS) Convention. Effective July 1, 2016, amendments to the SOLAS Convention will require containers being loaded onto a

ship for export to include a verified weight that shippers are responsible for providing.

Shippers needing to provide accurate container weights is nothing new. "For the carrier to safely stow the ship, it has to know the container weight; that's not in dispute," says John Butler, president and chief executive officer of the World Shipping Council, a trade group. "However, it has become evident the weights often aren't accurate." A number of ship accident investigations have found inaccurate cargo weight to be a factor.

In addition, if a container is much heavier than anticipated, the terminal might not have the right equipment staged to handle it. In some cases, stacks of containers have collapsed in on themselves because they're heavier than they should be.



To minimize the complexity of complying with trade regulations, many shippers partner with experienced global service providers such as UPS.

The SOLAS amendment is aimed at doing away with these discrepancies, Butler explains. Shippers can either weigh the loaded container, or they can weigh its contents then add the container's tare weight, or its weight when empty.

While few disagree with the regulation's intent, some question the way it tries to achieve its goals. For instance, it's not clear when shippers have to provide this information so they don't risk their cargo being delayed. Do they provide it at booking? Do they provide it to the carrier or freight forwarder? "If the rule is not well-defined, it creates the potential for confusion and delays," Souza says.

Complicating things further, "the majority of shippers don't own the

containers they use," says James Johannes, manager, product operations and procurement, with KPMG LLP's advisory management consulting practice. "This change will require shippers to weigh each loaded and sealed container individually." Obtaining and communicating this information will necessitate changes to shipper computer systems and electronic data interchange (EDI) programs, he adds.

Given the changes required, some have called for delaying the effective dates for one year. But as of early April, no delays appeared imminent. Shippers should prepare for the change. "Ocean carriers won't load your container if you're not SOLAS-compliant," warns Ryan Petersen, chief executive officer of Flexport, a San Francisco-based international freight forwarder.

A first step is to understand the weighing capabilities available at the various locations from which the containers ship, Souza says. Ideally, this will include certified scales. "Shippers also need well-defined contingency plans," he adds.

The recently signed Trade Facilitation and Trade Enforcement Act of 2015, also known as the Customs Reauthorization Bill. This act was signed into law in February 2016, and "is expected to change the landscape over the next few years," says Richard

Mojica, a partner in Miller & Chevalier's customs and import trade practice. "The act advances the CBP's twin goals of trade facilitation and trade enforcement."

For instance, the act simplifies and expands duty drawback, which refers to the refund of duties and taxes collected from a company when it imports goods, once it exports a similar volume of similarly classified goods. The act expands the timeline within which companies can make claims from three years to five. It also provides clarity to the types of goods that qualify for duty drawback. "If shippers use these programs to their advantage, they can lower the landed cost of merchandise brought into the United States," Mojica says.

The act also streamlines the investigative

procedures used in anti-dumping and countervailing duties cases, while expanding the penalties. “Customs is sending a message: ‘If you don’t play by the rules, we’re hiking enforcement,’” Mojica says.

While specific timelines for implementation are yet to come, Customs likely will roll out the provisions over the next few years, Mojica says.

Changes to the Authorized Economic Operator (AEO) program in the European Union, which is part of the implementation of the EU’s Union Customs Code (UCC). The AEO concept is a main element of the EU’s Union Customs Code, which is part of an initiative to modernize customs processes. According to the European Commission, member states can grant AEO status to any economic operator meeting certain criteria, including customs compliance, appropriate record-keeping, financial solvency, and, where relevant, appropriate security and safety standards. The benefit to gaining AEO status? It can mean swifter cargo processing through Customs.

AEO holders will benefit by gaining the ability to clear Customs more easily. For instance, they can self-assess, or provide their own documentation on their shipments. Moreover, businesses that don’t become AEO certified may need to provide financial guarantees to cover duties and VAT associated with customs warehousing, and temporary transits, among other processes.

While AEO holders may be obligated to provide financial guarantees, these may be waived or reduced in some cases, says Jacek Kapica, a Warsaw-based operations director with Sandler & Travis Trade Advisory Services.

As of May 1, 2016, businesses will have to meet new criteria under the AEO program, Kapica says. For instance, applicants will have to show they’re complying not only with customs law, but also with tax law, which wasn’t required before. AEO applicants also need to enable the customs authority to physically or electronically access their accounting systems, as well as commercial and transport records. The extent of the access required will depend on a risk analysis. “It’s a huge change,” Kapica adds.

The changes that make up the larger UCC program are scheduled for completion by 2020. At that point, customs agencies should be fully electronic. However, “the provisions are known and applicable in May 2016,” Kapica says, so countries can start implementing earlier than 2020 if they wish.

EU Antifraud Agency (OLAF). Effective Sept. 1, 2016, carriers will have to file with the OLAF container status messages that tell, for example, when a container is loaded on a ship or moves to a terminal gate. This will enable the creation of “centralized databases containing information on container movements and on the goods entering,

leaving, and transiting the EU,” according to the European Criminal Law Associations’ *Forum*.

“Many fraudulent activities—especially cigarette smuggling or counterfeited goods—are related to container usage,” Kapica says. “The EU has decided to monitor the containers and collect information about their status. All information will be provided electronically.” Because shippers already keep such data, the requirement should not have a big impact on them, he adds.

Regulations in the United States And Around the World

The CBP and other U.S. agencies have been working with their counterparts across the globe to standardize many procedures in customs, shipping, air transport, and other areas.

For example, the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA) amended the Hazardous Materials Regulations to harmonize with international standards, including recent changes made to the International Maritime Dangerous Goods (IMDG) Code, the International Civil Aviation Organization’s Technical Instructions (ICAO TI) for the Safe Transport of Dangerous Goods by Air, and the United Nations Recommendations on the Transport of Dangerous Goods (UN Model Regulations).

The amendments have led to changes in shipping names, hazard classes, packing

The SOLAS Convention is one of the most important international treaties covering ocean vessel safety. The latest amendments require shippers to verify the weight of their containers being loaded onto a ship for export.



Safe Port Act at Risk

The Safe Port Act of 2006 mandated that all containers coming through U.S. ports be screened. The current deadline is July 2016. According to the legislation, the screening would have to consist of either physical inspection or X-rays, says Ryan Petersen, chief executive officer with Flexport, a San Francisco-based freight forwarder and customs broker.

Currently, only a small sampling of containers is X-rayed. "To screen 100 percent of containers would require a massive investment in scanning equipment," Petersen says. On top of that are the space constraints. And examining all containers would require redeveloping the country's ports.

"The Safe Port Act is an unfunded mandate," says Jonathan Gold, vice president of supply chain and customs policy for the National Retail Federation, a retail trade association. A risk-based approach would be more effective, he adds.

As to the July deadline, "I don't think it will happen," Petersen says. "The ports would clog up."

groups, and vessel stowage requirements, among other items. "These changes ensure that domestic hazard classification, hazard communication, and packaging requirements are consistent with those employed throughout the world," according to PHMSA.

Voluntary compliance began Jan. 1, 2015, while compliance with the amendments generally was required beginning Jan. 1, 2016.

A Compliance Culture

While technology and systems will, not surprisingly, be critical to success in complying with many of these regulatory changes, the shifts required in an organization's culture may be even more profound.

"All the additional regulations occurring around the world require a greater degree of process rigor," says Sean Riley, global industry director, manufacturing, supply chain, and logistics, for IT company Software AG. Rather than depending on "back doors" to move shipments, supply chain professionals will need to incorporate upfront the processes that can ensure compliance.

For example, some shippers have been able to lean on their freight forwarders, who, in turn, could lean on enforcement agents to accept shipments with estimated, rather than actual, container weights. No longer.

"Shippers won't be able to say to their forwarders, 'You've pulled this off in the past,'" Riley says. "Now, if the shipper hasn't provided the actual weight, the shipment won't move."

Instead, shippers and freight forwarders need to obtain and record the required

information within their systems. While such changes may sound insignificant, supply chain professionals will need to gain an understanding of the activity, and then add rigor to their processes so they can consistently meet their compliance obligations, Riley says.

When evaluating logistics providers, shippers should ask additional questions relating to compliance. Riley suggests asking:

- How does the provider ensure that it follows correct processes throughout its organization?
- Does the provider maintain a repository of compliance best practices?
- How does the provider keep

compliance processes up to date?

Given their heightened expectations of providers, many shippers will end up focusing less on price, although it will remain important, and more on value. Logistics providers who can't provide the robustness needed to deal with increasing trade regulations won't offer the value shippers require.

Even when they work with outside experts, shippers need to maintain a thorough understanding of the supply chain regulations with which they must comply. "Shippers need to be aware of how their supply chains operate, what the new regulations are, and how they might have an impact," Gold says. ■



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DC Solutions | by Mary Shacklett

Hospitality Supplier Reserves Room to Grow With WMS

As a result of continued expansion, American Hotel Register Company realized it had outgrown its warehouse management system (WMS) and wanted to further streamline daily order processing and picking operations. Through automated, rules-based wave management and replenishment, the company eliminated manual sortation and created multiple, tailored options to proactively release orders by type.

American Hotel Register Company's 150-year-old history dates back to the Lincoln presidency. In those days, the company was a hotel registry printer. It later expanded its business from printing into the distribution of hospitality industry supplies. Today, Vernon Hills, Ill.-based American Hotel Register offers 50,000 items, 1,600 national brands, more than 2,500 best-value registries, and an expanding portfolio of eco-friendly products.

The company's global supply chain includes ownership of the Amsterdam-based Intros Hotel Supplies, which markets its products mainly in Europe, the Middle East, and Africa, and its

extensive network of distribution centers throughout the United States, Canada, and the Caribbean.

"As late as 2005-2006, we were still operating a relatively small distribution network," says Kevin Baker, American Hotel Register's director of distribution. "We realized then that we had outgrown our ability to handle the business growth that we were experiencing, so we made a decision to look into new technology that could stay in step with this growth."

At that time, American Hotel Register was doing its warehouse picking manually, using information on Excel spreadsheets. "We brought in a simple WMS in 2006, and it fit perfectly with

A custom WMS earns
an extended stay by
replacing time-consuming
manual sortation.



our organization at that time, but our business growth soon outpaced it,” says Baker. “We continued to modify the system so we could keep it tuned to the business, but we got to a point where it wasn’t possible to enhance it anymore.”

Picking at Floor Level

Because it serves a hospitality industry that is acutely sensitive to its customers and strives for the highest levels of customer satisfaction, American Hotel Register was likewise keenly aware that its clients expected no less from their trusted suppliers.

“We want to meet our customers’ needs quickly, and we know that optimizing warehouse performance is central to doing that,” says Baker. “If we could introduce more operational automation, such as automated order dispatching, real-time

reporting, and auto alerts on our order and inventory replenishment processes, we could get work done faster and reduce the amount of manual labor.”

American Hotel Register had already performed time studies in its warehouse operations. “We had quantified that we could pick product more efficiently in the warehouse by having it closer to floor level, and that we could fill orders faster,” Baker says. “We wanted to force more of our order picks lower to floor level, and we have been successful in doing that. Since July 2015, we have moved from 80 to 85 percent of our picks close to the floor to 95 to 99 percent of our picks close to the floor on certain days.”

American Hotel Register also wanted to add Lucas Systems’ voice picking technology, which would enable employees to move hands-free throughout the

warehouse without having to hold an RFID phone in one hand, and wanted to link this into a new WMS to help improve overall efficiency in the warehouse.

Finding the Best Fit

American Hotel Register began to look at new warehouse systems. Shortly thereafter, distribution software provider IBS approached the company with a new advanced warehouse system (AWS).

“We decided to kick the tires,” says Baker. “We performed due diligence on different systems, and after we decided to select the IBS Dynamanager system, we wanted to understand upfront where we would need to make modifications. As part of this exercise, we mapped out business processes and documented what changes we would need to make.”

The company was initially most concerned about how existing business processes would be affected by the out-of-the-box functions of the new warehouse system. American Hotel Register worked with IBS Dynamanager IT and engineering experts in a six-month effort to carefully map out existing business processes against the system and to see where business process changes would need to be made.

“Change was one of the factors that we knew we would have to manage carefully, because our employees were used to the ways that they had been doing things, so they would be naturally resistant,” says Baker. “What we told employees is just because a business process might be different doesn’t mean that it’s wrong. Later, when employees saw the benefits of the new system, they understood why it was important to modify our processes so we could keep pace with our growth.”

Smooth Implementation

American Hotel Register was also concerned about integrating the new system into its warehouse operations. The pre-planning and process/system mapping that the company had performed with IBS Dynamanager helped considerably in this area, as the joint project team was able to determine where specific changes



After implementing a new warehouse management system from IBS, American Hotel Register is able to pick nearly 99 percent of its orders at floor level.

needed to be made in either software or business process.

“We knew going into the project that we were going to experience pain points with a system change, and where those pain points were likely to be,” says Baker. “We did experience these pains over the first two or three weeks of implementation, usually because of an errant setting or a piece of code that needed to be changed, but the good part about the process was that everyone was on-site to address issues as they arose. We had a command center staffed with both our own and the vendors’ leads on the project. The system was cutover to production in July 2015 and by the first or second week of August 2015, it was working well.”

Just as critical was training employees on the system and getting them comfortable.

“We started preparing employees for the new system early on,” says Baker. “We walked them through the system, and started training 30 days before system cutover.”

The management team was trained in the first week. In the three weeks that followed, training was held for warehouse employees. All sessions were conducted on the actual system, which had been set up in a test lab environment. In addition to this system, employees also had to learn how to use the new Lucas hands-free headsets that would replace their RFID phones. These devices tell them which location to go to in the warehouse. Employees then read off a code and confirm the location and that the pick was done.

Transforming the Warehouse

“We learned that in preparing employees for a new system, management was often the most challenging to work with,” Baker says. “This group knew the old system well. They had a fear of losing control and their value as employees, because they had acquired expertise in the old system. But once we helped them overcome these challenges, they proved to be incredible partners in getting the new system implemented.”

Baker says the team’s other hesitation



IBS Dynaman provides a single-user interface for initiating actions and tasks with reporting and alerting in real time.

was system integration. “There were many pieces of systems and business processes that were involved, and you can conduct quality assurance checks on these items only to a certain extent. We knew we would just have to flip the switch,” Baker says.

What made the task easier was a failover plan that could recover the company’s old system within 15 minutes. “Fortunately, we didn’t have to go into failover,” says Baker. “The new system came up easily, and the process was seamless for our customers.”

Now with a new system that can handle the needs of an expanding business, Baker sees immediate benefits in the warehouse.

“Our old system was manually intensive,” he says. “It could take two hours to sort and

process. Now we have system automation that can prioritize and orchestrate many tasks. This frees managers so they can get out on the floor more and collaborate with people from other company areas. In the course of implementing this system, we were also able to reduce our head count on the inbound materials side by one full-time employee, and then reassign that person to the outbound side.”



The IBS solution “delivered everything we had hoped for in a WMS and more,” says Baker. For other companies considering a similar system implementation, he offers several recommendations.

“It’s important to have patience, because a total system and workflow transformation can’t be done overnight,” he says. “As you are making changes, a sound change management practice should be in place that takes into account not only system and process changes, but their impact on people who are already accustomed to a set of work practices. Finally, consider every possible way to improve your company’s operations, and don’t always conclude that the system must be modified; a change on the work process side might be warranted.” ■

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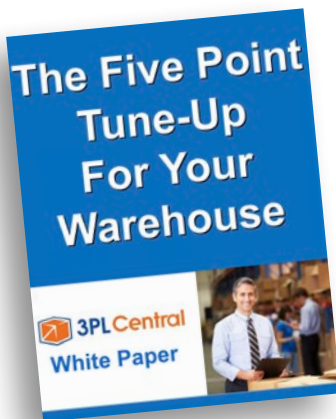
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3PL Central

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SUMMARY: Ready to make your warehouse smarter, stronger, and more profitable in every way? Then download 3PL Central's latest whitepaper. Written by industry professionals, this guide was specifically created to help catapult your warehouse to the next levels of performance and profitability. Download your free copy today.

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TITLE: *Can You Automate Down to a Single Pick?*

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SUMMARY: The benefits of automating your order fulfillment process down to each-pick levels are many. But, implementing automation can appear to be more difficult as shipments move from whole pallets down to individual cases and pieces. Automation for unit-picking or each-picking can indeed be a tough nut to crack. This whitepaper explains how a rigorous systems approach, combined with an awareness of available technologies, can help you select the best technology to make your operation extremely efficient.

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TITLE: *The Engagement Stack*

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SUMMARY: This extensive whitepaper looks at how brands can effectively utilize their data and technology to engage with customers. The author, Dr. Phil Hendrix, managing director at immr, delves into the seven characteristics that distinguish masters of engagement; case studies with Starbucks, Patagonia, and Sephora; and much more. Hendrix also examines the "regret test" by asking: If your company disappeared today, would anyone really care in six months? Would you be sincerely missed and difficult to replace or would your customers move on to the next thing? Download this free resource to identify how your company can become a "master of engagement."





Kane is Able

TITLE: *Retailer-Supplier Collaboration: Identifying and Eliminating Barriers to Improve Supply Chain Performance*

DOWNLOAD: <http://www.kaneisable.com/retailer-supplier-collaboration>

SUMMARY: It's shocking how little true collaboration occurs between retailers and suppliers, despite clear evidence that such collaboration promotes a more profitable retail supply chain. Recent research with logistics executives at both retailers and CPG manufacturers has uncovered the top areas of misalignment. KANE's free report summarizes the results of this research and suggests initiatives you must consider to deliver more profit for your company.

Demand Solutions

TITLE: *42 Principles of Forecasting*

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SUMMARY: Here's a light and readable e-book about forecasting, packed with actionable ideas and filled with links to additional resources. Forecasting is not an exact science, but it's not a game of chance either. It's a process that can be continually refined – with discipline, experience and skill. If you add just a few of the ideas in this e-book to your current process, and apply them with diligence, you'll enjoy more reliable forecasts and a much more effective process.



J.B. Hunt

TITLE: *Electronic Logging Device Impact*

DOWNLOAD: <http://jb.ht/ELDImpact>

SUMMARY: The Federal Motor Carrier Safety Administration passed a regulation in December 2015 that requires all commercial trucks and buses manufactured after 2000 to be equipped with an electronic logging device (ELD). An estimated three million drivers who currently use paper logs will have to convert to a digital log. This may affect Hours of Service compliance and carrier capacity. This executive briefing offers more information about the mandate and how it affects the industry.

DHL

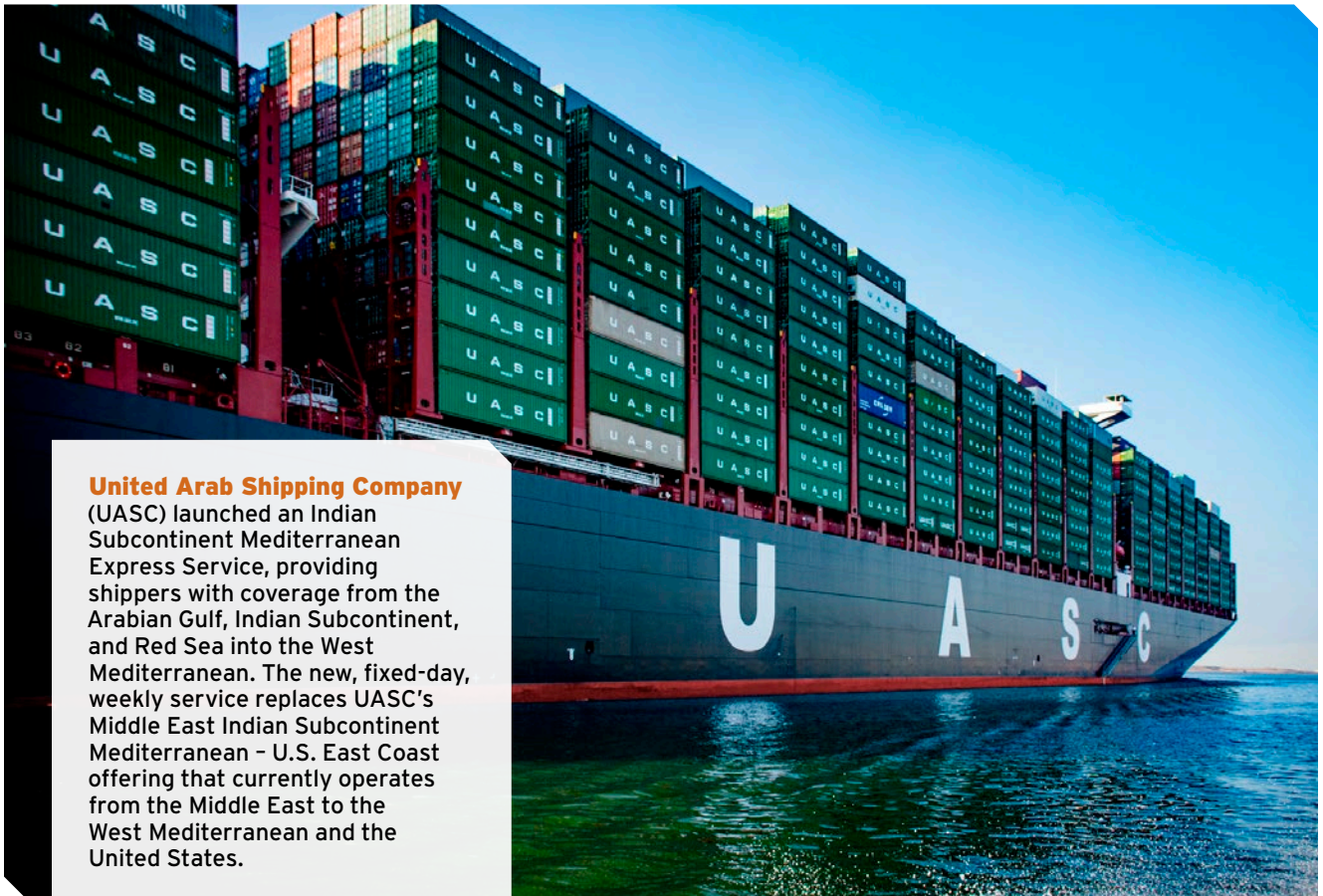
TITLE: *Quiet Revolution: Convergence and the Future Automotive Supply Chain*

DOWNLOAD: <http://bit.ly/1UBzNpD>

SUMMARY: The century-old way of doing business in the automotive industry is now over. The industry is facing a revolutionary convergence with the technology sector that will transform how it manages supply chain operations. This whitepaper reveals that the increasingly high-tech composition of vehicles, driven by growing consumer expectation of product innovation, is propelling this convergence between the two industries. Download your free copy for additional details.

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United Arab Shipping Company (UASC) launched an Indian Subcontinent Mediterranean Express Service, providing shippers with coverage from the Arabian Gulf, Indian Subcontinent, and Red Sea into the West Mediterranean. The new, fixed-day, weekly service replaces UASC's Middle East Indian Subcontinent Mediterranean – U.S. East Coast offering that currently operates from the Middle East to the West Mediterranean and the United States.

//Transportation//

Supply chain management company **CEVA Logistics** launched a weekly LCL service from Shanghai, China, to Budapest, Hungary. The lane operates direct from the port in Shanghai to Koper on Slovenia's Adriatic coast, where containers move by rail to the Hungarian capital. Transit times are 30 days from Shanghai to Koper and then five to seven days for the inland transportation.

Polaris Transportation Group expanded its premium LTL service, Priority Plus, to include Boston and three major metro areas in Ohio: Cleveland, Columbus, and Cincinnati. Guaranteed delivery by noon and delivery by 5 p.m. are available between the Greater Toronto Area and six U.S. premium LTL lanes (Chicago, New York, Boston, Cleveland, Columbus, and Cincinnati).

Worldwide shipping group **CMA CGM** upgraded service to the French West Indies by increasing fleet capacity on the PCRF line, which offers direct connections between the French West Indies and Northern Europe, and adding two new calls at Zeebrugge and Rotterdam. CMA CGM replaced 2,200-TEU capacity vessels with 2,800-TEU capacity vessels to promote regional growth.

Dicom Transportation Group, a transportation and logistics provider, launched Canada and U.S. cross-border ground parcel services. Starting mid-year 2016, the service operates as Dicom Parcel, and serves Ontario and Quebec, along with 12 U.S. states—Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Virginia.

Lufthansa Cargo now offers the belly capacities of Eurowings' long-haul flights to shippers, expanding its cargo network to include more destinations from Cologne/Bonn. This expansion includes routes to the Caribbean (Varadero, Cancun, Dominican Republic) and Thailand (Phuket, Bangkok).

South Carolina Ports Authority enhanced international intermodal rail service between the Port of Charleston and the Charlotte Regional Intermodal Facility at the Charlotte Douglass International Airport. The new two-day Norfolk Southern service operates five days a week connecting Charleston and Charlotte using existing dedicated intermodal trains.

//Technology//

Logware, an enterprise labeling solution provider, unveiled *Spectrum 2.7*—the latest release of its browser-based solution designed to meet complex labeling requirements. *Spectrum 2.7* includes workflow and eSignature

capabilities to provide visibility and control for managing labels in highly regulated industries including chemical, food and beverage, medical device, and pharmaceutical.

Intelligrated, an automated materials handling solutions provider, released a computerized maintenance management software. The *Intelligrated Reliability Intelligence Solution (IRIS)* collects and analyzes data to help plan and execute a preventive lifecycle maintenance program. *IRIS* creates work orders and daily maintenance schedules, maintains inventory of spare parts, and automatically places orders for necessary replacements.

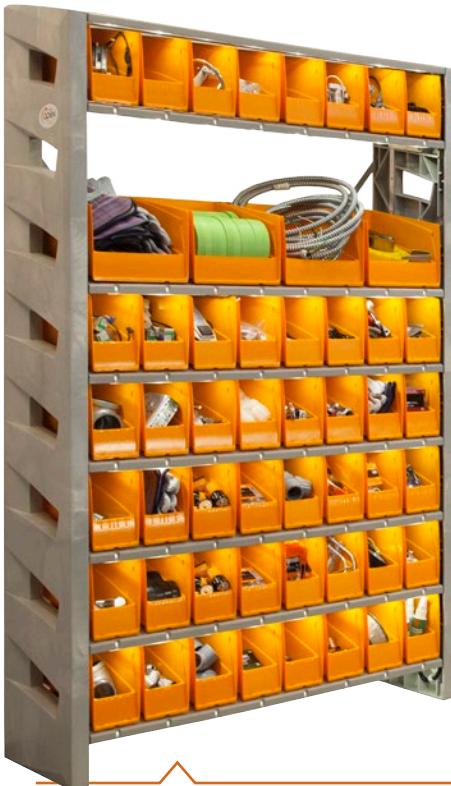
Symphony GOLD, provider of the *GOLD* unified software platform for retailers, launched the latest version of *GOLD Smart Warehouse Voice Operations*, a ready-to-use solution that combines the *GOLD* software application with off-the-shelf Android smart devices. Users can deploy the system in small facilities or scale it to support hundreds of operators daily on multiple shifts.

Vnomics, a provider of advanced fleet analytics software, launched its *Vnomics True Fuel* optimization solution. The standalone system improves fuel economy through real-time driver coaching and fuel use analytics for fleet managers.



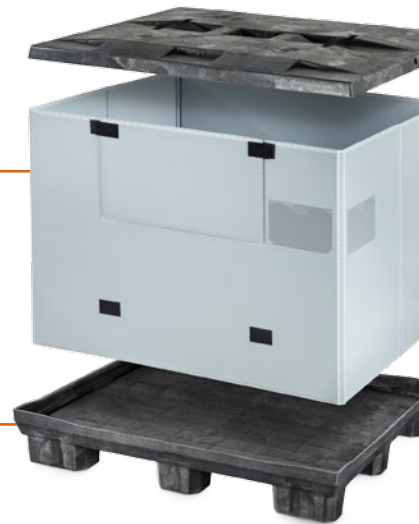
Macfarlane Packaging, a distributor of protective packaging materials, launched an innovation lab designed to create solutions for demanding applications. Experts at the Macfarlane Packaging Innovation Lab in Milton Keynes, U.K., work with shippers to understand the total cost of their packaging process and design solutions that could address all their protective packaging needs.

ALK Technologies, a Trimble Company and provider of *GeoLogistics* solutions and navigation software, released *PC*MILER/Rates*. Developed with transportation management software provider 3GTMS, *PC*MILER/Rates* provides shippers, brokers, and 3PLs with real-time rate calculations and options for multiple LTL and small package carriers.



Apex Supply Chain Technologies, a provider of automated dispensing solutions, launched a smart Kanban/VMI system to manage stock and replace the need for manual counting, flags, labels, and cards. The smart bin technology provides a solution to inventory replenishment issues by sending automated alerts and re-order notifications to suppliers, eliminating the need for counting trips, safety stock, and emergency orders.

Cabka-IPS, a manufacturer of product solutions made from recycled plastic, launched CabCube 2.0, a collapsible large-load carrier. Consisting of three parts—cover, collapsible ring, and pallet—CabCube 2.0 is designed to transport large-volume, yet lightweight components for just-in-time deliveries to production lines and warehouses.



Florida East Coast Railway introduced *EZ Buy*, an online freight booking system for door-to-door intermodal shipments. With this new tool, shippers get dynamic price quotes and can book orders for freight between the Southeast markets of Atlanta, Charlotte, and Jacksonville, and the South Florida markets of Fort Pierce, Fort Lauderdale, and Miami.

Commercial telematics solutions provider **SkyBitz** unveiled *Falcon GXT3100i*, an intermodal chassis tracking and container detection solution. The SkyBitz *Falcon GXT3100i* provides a complete picture of chassis location and whether a container is loaded on it or not via the SkyBitz Container Detection Sensor.

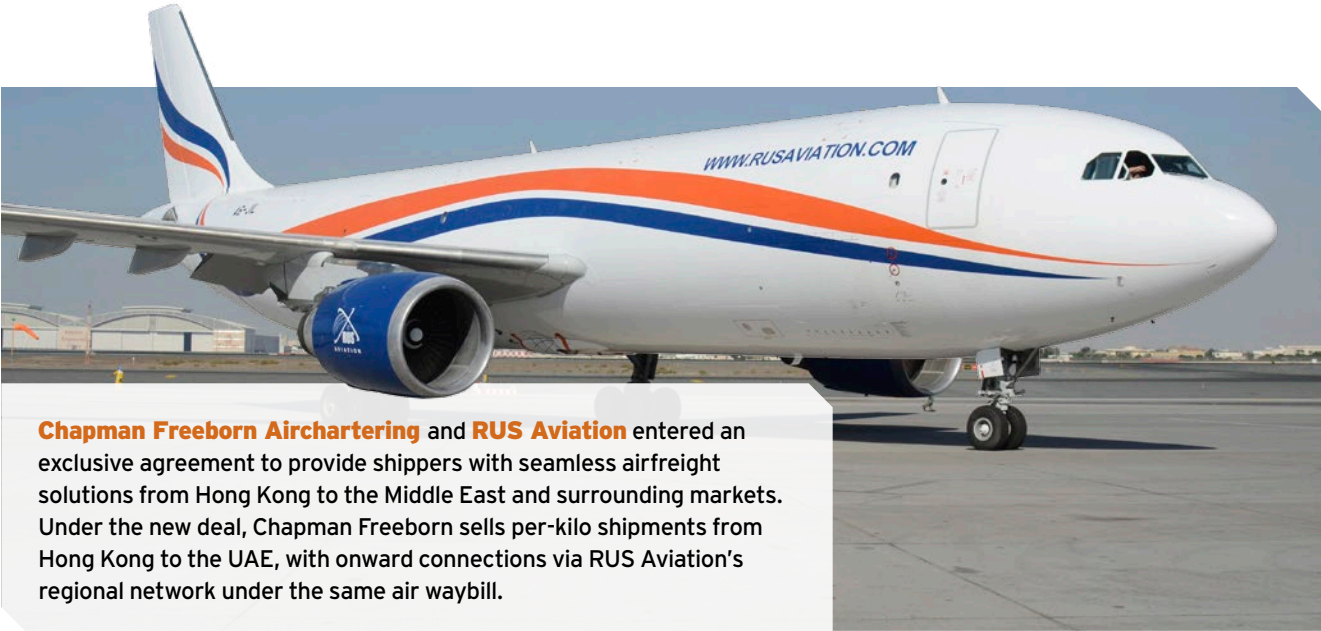
//Services//

American Airlines Cargo bolstered its global temperature-controlled network by expanding facilities in Dallas/Fort Worth (DFW) and San Juan (SJU), which see some of the highest demand for time- and temperature-sensitive goods. The DFW operation facilitates perishable commodities—including produce, Chilean salmon, and fresh cut flowers—transiting from Latin America to Europe and Asia. The SJU facilities include both refrigerated storage and controlled room temperature spaces for pharmaceuticals.

Global logistics provider **Dachser** created a new central organizational unit, Corporate Solutions, Research & Development, to provide industry-specific logistics solutions and bundle research and development activities. The group implements worldwide supply chains for companies from focus industries, and develops value-added delivery services to end customers.

Westfalia Technologies, a logistics solutions provider, developed a multi-million-dollar testing/training facility for testing improvements and new software user interfaces for its solutions and warehouse automation technology. It also serves as a teaching facility to provide hands-on training for using an automated storage and retrieval system.

FedEx Trade Networks, the international freight forwarding arm of FedEx, re-launched Bongo International as FedEx CrossBorder. The service provides e-commerce technology solutions to help e-tailers navigate common cross-border trade challenges, such as regulatory compliance, payment processing, multi-currency pricing, and credit card fraud protection.



Chapman Freeborn Airchartering and **RUS Aviation** entered an exclusive agreement to provide shippers with seamless airfreight solutions from Hong Kong to the Middle East and surrounding markets. Under the new deal, Chapman Freeborn sells per-kilo shipments from Hong Kong to the UAE, with onward connections via RUS Aviation's regional network under the same air waybill.

Freight service provider **Freightquote** expanded its contractor carrier network in Canada to provide more options for shipping freight to and from all provinces. Freightquote supply chain experts guide shippers through the cross-border transportation process, from pickup to customs and delivery. Freightquote's online tool also allows shippers to select a preferred customs broker.

//Products//

ProShip, a Neopost company and provider of shipping and manifesting software solutions, launched the CVP-500 automated packing solution, a system that packs medium-size and large products

with variable dimensions in a custom-fit box. The CVP-500 builds, fills, folds, and labels each parcel in one seamless process; it can create a parcel every seven seconds. The system uses less packing material, saving up to 20 percent on corrugated and eliminating void fill.



Akro-Mils, a manufacturer of storage, organization, and transport products, expanded its line of plastic Nest & Stack Totes by adding new clear totes and lids. Available in nine sizes, Akro-Mils' Nest & Stack Totes are designed for storage, transfer, and shipping applications. Their high-density, industrial-grade polymers retain their shape when fully loaded.

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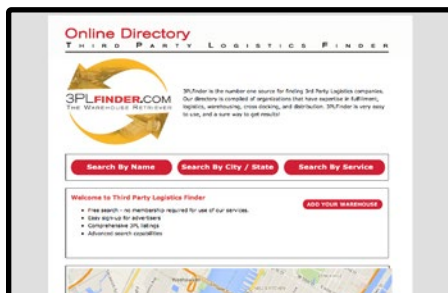
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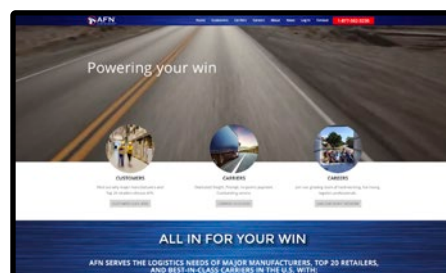
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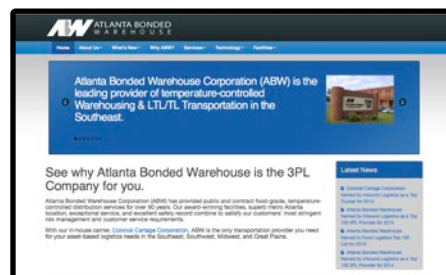
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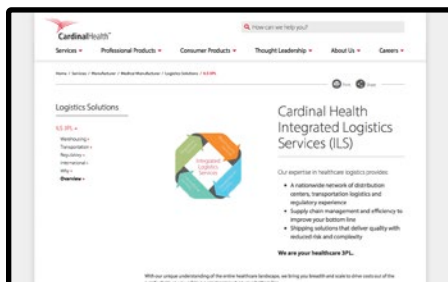
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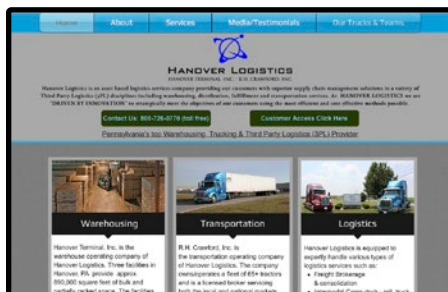
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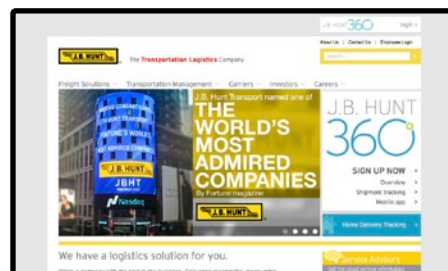


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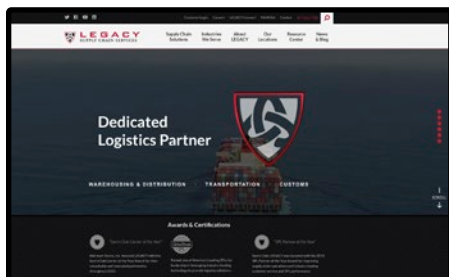
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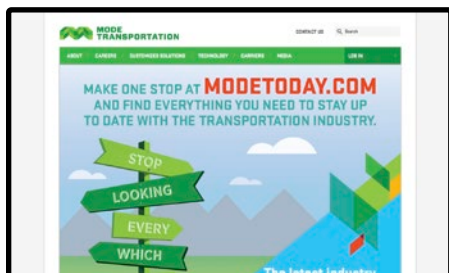


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Metro Park Warehouses is a full-service 3PL offering 2 million square feet in Kansas City of modern food-grade warehousing space, including medical temperature-controlled space, ATF and national pharmaceutical licensed distribution, AIB Superior ratings, and 5 rail facilities, all open to reciprocal switching. Value-added services include end-to-end call center, shipping, and invoicing; retail display building; heat-tunnel packaging and shrink-wrapping; and a dedicated local and regional trucking fleet. Contact Metro Park to gain the competitive edge.

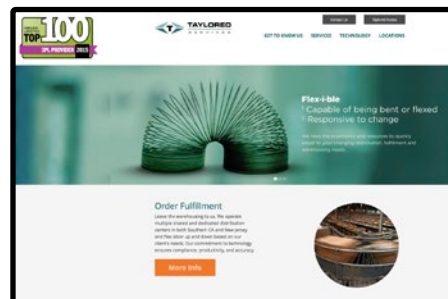


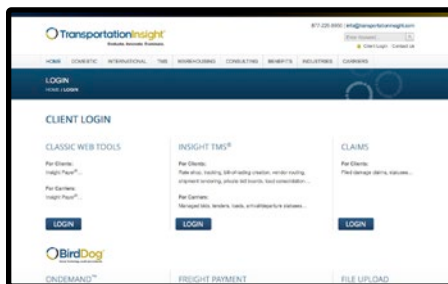
Mode Transportation • www.modetransportation.com

Mode Transportation is a 3PL offering all modes of transportation: TL, LTL, intermodal, rail, and international (air and ocean). Our transportation services are tailored to fit your unique business needs. Mode Transportation draws on decades of experience and a carrier network of 35,000+ providers to manage the efficient and timely transit of your goods. We find capacity when others can't. Our TMS, TRITAN™, offers our customers, carriers, and operations group visibility to your freight from start to finish. Let us tell you more about TRITAN and about us!

Taylorred Services • www.taylorredservices.com

At Taylorred Services, we look at your business as if we were a box moving through your supply chain. Our goal: to provide a comprehensive array of fulfillment services that best fit your business needs. Award-winning retail experts. Strategically located bi-coastal facilities. Expertise in wholesale and retail distribution. Best-in-class systems and technology. A full range of logistics services including: drayage management, transload, DC bypass, crossdock, case distribution, unit fulfillment (B2B, B2C, Digital), and value-added distribution solutions (repacking, reticketing, point of purchase, display assembly, inserts and labeling, returns). Visit www.taylorredservices.com or contact sales@tps-services.com





Transportation Insight • www.t-insight.com

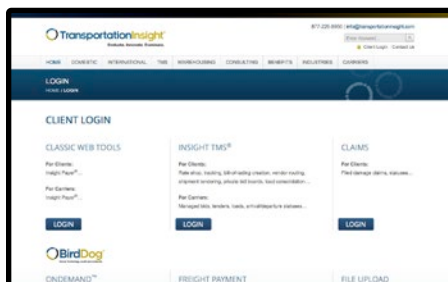
Transportation Insight is one of the largest and most experienced global lead logistics providers in North America. Our service and technology offerings include Tier One North American truckload, LTL and parcel logistics solutions, international freight forwarding and warehousing services – creating end-to-end supply chain solutions. Our core services include carrier sourcing, freight bill audit and payment, transportation management system technology and supply chain analytics and reporting. Other offerings include our Insight Fusion® mobile interactive business intelligence solution, transactional services, LEAN consulting, transportation management and secondary packaging. Contact us at info@transportationinsight.com or call 877-226-9950.

Wagner Logistics • go.wagnerlogistics.com/home

Wagner Logistics offers dedicated warehousing, transportation management, packaging, and assembly operations across the United States with over 3 million square feet of warehousing space. We provide genuine customer service to our customers and our superior onboarding process will make your customers' transition seamless. We work tirelessly to find innovative solutions to reduce supply chain costs while increasing your speed-to-market with our latest award-winning technology.



4PLs



Transportation Insight • www.t-insight.com

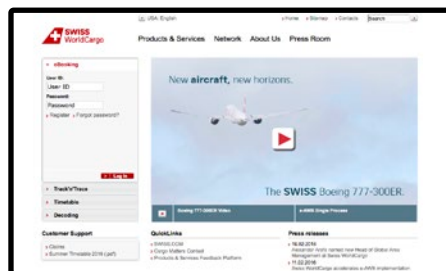
The first 4PL invited to join the International Warehouse Logistics Association (IWLA), Transportation Insight is one of the largest and most experienced global lead logistics providers in North America. Our service and technology offerings include Tier One North American truckload, LTL and parcel logistics solutions, international freight forwarding and warehousing services – creating end-to-end supply chain solutions. Our core services include carrier sourcing, freight bill audit and payment, transportation management system technology and supply chain analytics and reporting. Other offerings include our Insight Fusion® mobile interactive business intelligence solution, transactional services, LEAN consulting, transportation management and secondary packaging. Contact us at info@transportationinsight.com or call 877-226-9950.

AIR CARGO

Swiss WorldCargo • www.swissworldcargo.com

Swiss WorldCargo is the airfreight division of Swiss International Air Lines (SWISS). Headquartered at Zurich Airport, Swiss WorldCargo offers a comprehensive range of logistics solutions for transporting high-value and care-intensive consignments to some 130 destinations in over 80 countries. Its extensive network of air cargo services is supplemented by daily truck connections between key business centers.

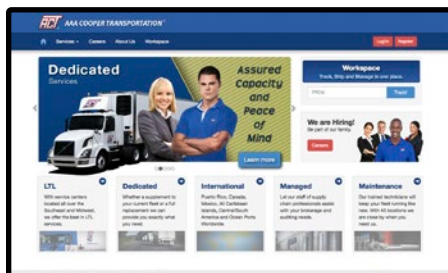
As a reliable and innovative service provider within the Lufthansa Group, Swiss WorldCargo is committed to consistently delivering Swiss quality to its airfreight customers, and makes a substantial contribution to SWISS's overall profitability.



IN THIS SECTION:

Brokerage Services - Chemical Logistics

BROKERAGE SERVICES



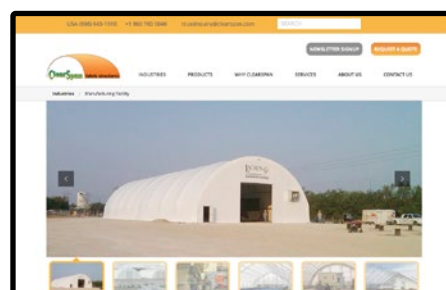
AAA Cooper Transportation • www.aaacooper.com

AAA Cooper Transportation has been delivering safe, efficient transportation for more than 60 years. With strategically located service centers, we are prepared to give individual attention to your shipping needs. AAA Cooper Transportation is dedicated to the long-term sustainability of the environment, and continues to implement processes that will make the world a better place to live for generations to come.

BUILDINGS AND STRUCTURES

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.



BULK: LIQUID-DRY



Lynden • www.lynden.com

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

CHEMICAL LOGISTICS

Lynden • www.lynden.com

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



CONSULTANTS



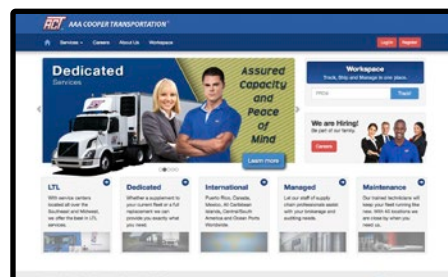
CPC Consultants • www.cpc-consultants.net

CPC Consultants is a global transportation and operations management firm with over 75 years combined experience from the shipper perspective. Backed by a no-risk, performance-based money-back guarantee, our approach is to optimize a program holistically, and provide best practices and market insights while achieving significant savings. CPC evaluates all modes of domestic and international transportation from a multitude of industries and assists medium-to Fortune 500-sized companies such as Toyota, Kawasaki and Epson.

DEDICATED CONTRACT CARRIAGE

AAA Cooper Transportation • www.aaacooper.com

AAA Cooper Transportation has been delivering safe, efficient transportation for more than 60 years. With strategically located service centers, we are prepared to give individual attention to your shipping needs. AAA Cooper Transportation is dedicated to the long-term sustainability of the environment, and continues to implement processes that will make the world a better place to live for generations to come.



EDUCATION



Georgia College • www.gcsu.edu/business/gradbusiness/mlscm

Now fully online, Georgia College has offered a nationally recognized Master of Logistics and Supply Chain Management program for 40 years, preparing thousands of students for success in their chosen careers and professions. The program was ranked in the Top 10 online logistics/SCM programs by BestSchools. The university is also expanding its educational efforts in undergraduate courses focused on a concentration in logistics and transportation.

The Academy, SMC³ • www.smc3academy.com

The Academy was developed by SMC³ for you—the shippers, carriers and logistics providers that North America depends on for a reliable, efficient and affordable supply chain. You can depend on The Academy for learning opportunities that enhance your area of expertise. As a service organization, SMC³ has invested more than 75 years in shaping less-than-truckload transportation. We believe that by sharing our knowledge, we can continue to elevate the greater supply chain.



IN THIS SECTION:

Education - Freight Payment/Audit Services

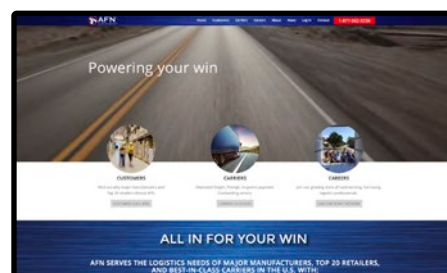
**University of Alaska Anchorage • logistics.alaska.edu**

The Department of Logistics at the University of Alaska Anchorage offers a Master of Science in Global Supply Chain Management (30 credits, 20 months, emphasis on strategy, leadership, knowledge management, and international business practices). Also offered are: a BBA in Global Logistics and Supply Chain Management (4 years); an Associate of Applied Science in Logistics and Supply Chain Operations (2 years); and a Certificate in Logistics and Supply Chain Operations (1 year).

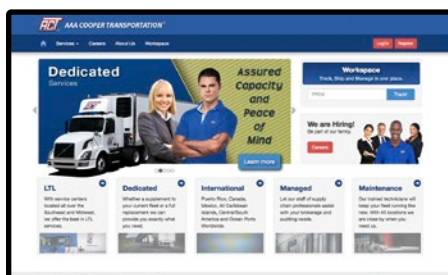
FOOD LOGISTICS

AFN • www.loadafn.com

Since our founding in 2003, AFN has proudly partnered with leading manufacturers, retailers, and motor carriers across North America to develop and deploy innovative and award-winning logistics solutions. While AFN has grown by leaps and bounds, one thing has never changed: our commitment to and focus on the customers and carriers we serve. Our goal is to deliver breakthrough solutions that drive added-value to your supply chain through exceptional service, leading technology, and best practices, resulting in cost reductions, efficiency gains, and risk management.



FREIGHT FORWARDING

**AAA Cooper Transportation • www.aaacooper.com**

AAA Cooper Transportation has been delivering safe, efficient transportation for more than 60 years. With strategically located service centers, we are prepared to give individual attention to your shipping needs. AAA Cooper Transportation is dedicated to the long-term sustainability of the environment, and continues to implement processes that will make the world a better place to live for generations to come.

FREIGHT PAYMENT/AUDIT SERVICES

Lynden • www.lynden.com

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CTSI-Global • www.ctsi-global.com

Since 1957, CTSI-Global has developed industry-leading supply chain management expertise and technology. Shippers and 3PLs manage their global supply chains through CTSI-Global's transportation management system, business intelligence solutions, freight audit and payment, and consulting services. Partnering with one expert provider for all your logistics needs ensures seamless integration to eliminate redundant processes and costs while providing the visibility you need. CTSI-Global is your link to supply chain solutions.

Freight Management, Inc. • www.freightmgmt.com

More than 40 years ago, Freight Management Inc. (FMI) began a revolution in freight cost management and freight audit services, reducing shipping costs for its customers. Today, FMI remains one of the industry's most experienced, knowledgeable, and capable providers of logistics management, including freight audit and payment services. FMI is not a traditional third-party logistics company or freight broker; instead it is a full-service logistics company with superior data management and reporting capabilities.



Trans Audit • www.transaudit.com

Trans Audit, the world's largest and most successful global freight and parcel post audit specialist, has performed worldwide post payment transportation audits on a contingent basis for hundreds of Fortune and Global 1000 corporations. Trans Audit's freight and parcel post audit services address all modes of global transportation and have delivered over \$1 billion of benefit to our clients' bottom line by recovering overbillings and overpayments, correcting erroneous billing, and reducing future expenses.

TransportGistics • www.transportgistics.com

TransportGistics is a global, multi-product and services company that provides market-leading, simple, incremental solutions for transportation management and logistics functions within the supply chain. Our web-based solutions enable our customers to source, procure, and execute transportation services; enable collaboration; reduce costs; improve processes; identify hidden costs of transportation; improve vendor compliance routing guides; improve Supplier Relationship Management; monitor vendor performance; improve shipment visibility; generate automatic, status-driven alerts; and monitor carrier performance with respect to time in transit, service failure, and billing.



IN THIS SECTION:

Fulfillment

FULFILLMENT



DM Fulfillment • www.dmfulfillment.com

DM Fulfillment is a national fulfillment and distribution provider offering comprehensive integration capabilities and speed to customer or shelf via its four strategically located and highly automated distribution centers. An order accuracy rate of 99.9% is reflective of the operational excellence and efficiencies that have resulted from significant investment in technology, automation and real-time reporting. Specializing in fast, cost-effective shipping solutions and omni-channel fulfillment expertise, DM Fulfillment's mission is to deliver an exceptional customer experience with every order. Visit www.dmfulfillment.com to learn more.

Performance Team • www.performanceteam.net

Performance Team is the only thing that should come between your products and your customers. For nearly 25 years, Performance Team has been offering its expertise to the retail and manufacturing industries with a broad range of supply chain services including: trucking, distribution, logistics, and fulfillment. Through 11 domestic hubs, over 5.1 million square feet of warehouse space, and a fleet of more than 400 trucks, Performance Team's skilled team of employees processes approximately \$100 billion in wholesale goods. See why Performance Team continuously earns a reputation as the premier trucking, consolidation, and distribution company in the United States; log on to www.performanceteam.net.

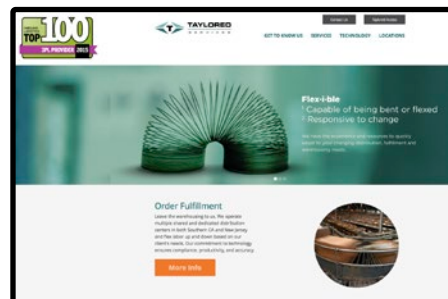


Promotion Fulfillment Center • www.pfcfulfills.com

Promotion Fulfillment Center is a global leader in turnkey integrated e-commerce and omni-channel order fulfillment, looking beyond the traditional product fulfillment methods. Promotion Fulfillment Center's approach provides flexible and unique solutions that reduce clients' operational and shipping costs, improve execution, deliver transparency, and enhance the brand experience at each touchpoint. Promotion Fulfillment Center prides itself on fulfilling its clients' brand experience and exceeding expectations.

Taylorred Services • www.taylorredservices.com

At Taylorred Services, we look at your business as if we were a box moving through your supply chain. Our goal: to provide a comprehensive array of fulfillment services that best fit your business needs. Award-winning retail experts. Strategically located bi-coastal facilities. Expertise in wholesale and retail distribution. Best-in-class systems and technology. A full range of logistics services including: drayage management, transload, DC bypass, crossdock, case distribution, unit fulfillment (B2B, B2C, Digital), and value-added distribution solutions (repacking, reticketing, point of purchase, display assembly, inserts and labeling, returns). Visit www.taylorredservices.com or contact sales@tpservices.com



WEB_CITE CITY

bit.ly/IL_WCC

IN THIS SECTION:

Fulfillment - Global Logistics



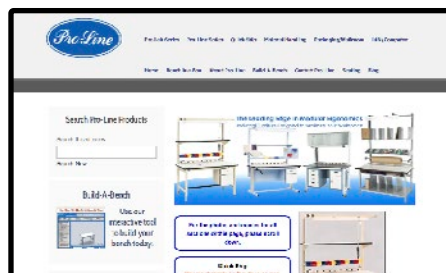
Wagner Logistics • go.wagnerlogistics.com/home

Wagner Logistics offers dedicated warehousing, transportation management, packaging, and assembly operations across the United States with over 3 million square feet of warehousing space. We provide genuine customer service to our customers and our superior onboarding process will make your customers' transition seamless. We work tirelessly to find innovative solutions to reduce supply chain costs while increasing your speed-to-market with our latest award-winning technology.

FURNITURE TRANSPORT & LOGISTICS

Pro-Line • www.1proline.com

Pro-Line is a leader in modular ergonomic industrial workbenches and workstations. From basic four-leg stations to hand-crank or electric height-adjustable stations to top-of-the-line technical systems, we have it all. Retractable ball transfers, seating, packaging stations, and much more. Since 1979, Pro-Line has offered strength, ergonomic design and esthetics all at an affordable price, many models in stock. Our vast array of in-stock optional accessories makes it easy for you to configure a workstation to fit your needs.



GLOBAL LOGISTICS

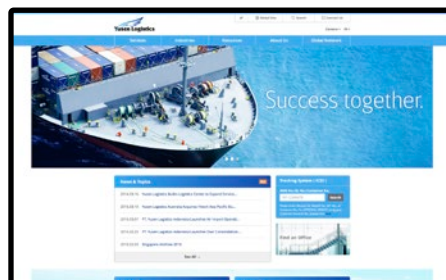


Pilot Freight Services, Inc. • www.PilotDelivers.com

Pilot Freight Services, Inc. is a full-service transportation and logistics provider with over 75 locations throughout North America and Western Europe. The company's freight forwarding services encompass every mode of transportation, including air, ground and ocean, serving all corners of the globe. Pilot's logistics programs offer a complete line of expedited and time-definite services, international shipping solutions, product warehousing, and inventory management. In addition, Pilot's online shipment navigator, CoPilot, makes online shipping fast, convenient and secure. Learn more about Pilot Freight Services at www.PilotDelivers.com.

Yusen Logistics (Americas) Inc. • www.yusen-logistics.com

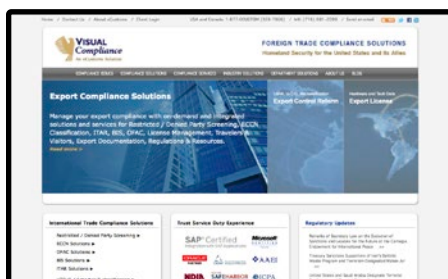
Yusen Logistics offers a complete transport and logistics portfolio of services to some of the world's largest companies. We offer full end-to-end service coverage including origin cargo management, ocean freight forwarding, airfreight forwarding, warehousing, reverse logistics, surface transportation, and integrated supply chain solutions. We are committed to contributing to the sustainable development of our society through safe, environmentally friendly options.



IN THIS SECTION:

Global Trade - Intermodal

GLOBAL TRADE

**eCustoms (Visual Compliance) • www.ecustoms.com**

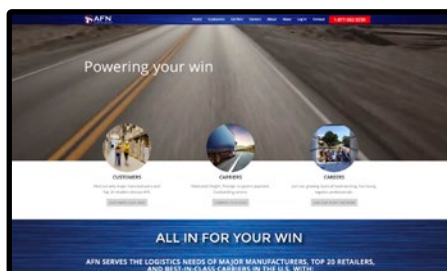
For over 35 years, eCustoms has helped organizations fulfill their foreign trade and cross-border compliance obligations. From our comprehensive suite of Visual Compliance™ solutions for restricted party screening, audit, classification, and import and export automation, to our ACI, ACE and eManifest solutions, companies of all sizes—and in every industry, including manufacturers, retailers, wholesalers, distributors, importers and exporters, third-party logistics providers, carriers, and freight forwarders—have long relied on the breadth of eCustoms solutions to help them meet their global trade compliance needs.

QuestaWeb • www.questaweb.com

QuestaWeb is a premier provider of integrated, Web-based global trade management software. QuestaWeb's applications unify import, export, logistics, compliance, and financial processes under one roof. The applications include U.S. Customs, self-entry, foreign trade zone, landed costs, HTS, PO management, export licensing, drawback, reconciliation, denied party screening, product catalog, tracking, and international document repository. The centralized global database maintains up-to-date trade content and currencies. QuestaWeb can also be efficiently integrated to your ERP system if designated.



HIGH-VALUE/HIGH-RISK CARGO

**AFN • www.loadafn.com**

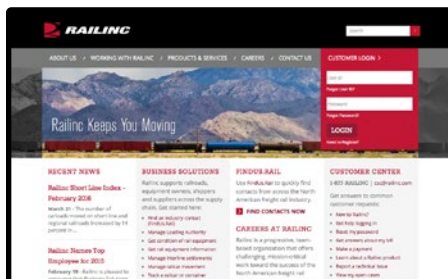
Since our founding in 2003, AFN has proudly partnered with leading manufacturers, retailers, and motor carriers across North America to develop and deploy innovative and award-winning logistics solutions. While AFN has grown by leaps and bounds, one thing has never changed: our commitment to and focus on the customers and carriers we serve. Our goal is to deliver breakthrough solutions that drive added value to your supply chain through exceptional service, leading technology, and best practices, resulting in cost reductions, efficiency gains, and risk management.

INTERMODAL

Alliance Shippers Inc. • www.alliance.com

With operating facilities in the United States, Canada, and Mexico, Alliance Shippers Inc. combines excellent customer care with state-of-the-art rail, highway, ocean, and air transportation solutions. Additional services include warehousing, distribution, customs clearance, equipment/driver leasing, and expedited transportation. For cost-effective logistics solutions tailored to your company's exact needs, contact Alliance Shippers Inc.





Railinc Corporation • www.railinc.com

Railinc Corporation is a leading provider of rail data, IT, and information services to the North American freight rail industry. Our Umler® and RailSight™ systems support critical rail processes from car movement to track and trace, and provide intelligence that helps railroads, rail equipment owners, their customers and business partners increase productivity and keep assets moving. Railinc is the largest single source for real-time, accurate, interline rail data and rail shipment status information.

LOGISTICS IT

3PL Central • www.3plcentral.com

Built exclusively for third-party logistics companies, 3PL Warehouse Manager™ is an easy-to-use, on-demand warehouse management system (WMS) that helps 3PLs run more efficiently, grow their business, and satisfy customers, all for less than \$500 per month per warehouse. 3PL Warehouse Manager™ is 100-percent Web-based and requires no investment in hardware, software, or IT resources. It includes features such as: EDI, global inventory visibility, order management, real-time reporting, billing management, bar-code scanning, and more. Sign up for a no-hassle, free trial today.



Aljex Software • www.aljex.com

Aljex has an innovative Web-based software for carriers, freight brokers, and intermodal specialists. If you see a demo of our software, you will want it. Why? You will see how Aljex can easily double the number of shipments you can handle. It's so easy to learn that we include unlimited training and support. With Aljex, there is no long, painful switchover. In 48 hours, we can have you trained, linked into the load boards, have your logo on your forms, your users set up, your carriers and customers imported, and ready to work.

Amber Road • www.amberroad.com

Amber Road's (NYSE: AMBR) mission is to improve the way companies manage their international supply chains and conduct global trade. As a leading provider of cloud-based global trade management (GTM) solutions, we automate and optimize the supply chain functions required to import and export goods: collaborating with foreign suppliers on design and quality assurance; executing import and export compliance checks; booking international carriers and tracking goods as they move around the world; and minimizing the associated duties through preferential trade agreements and foreign trade zones.



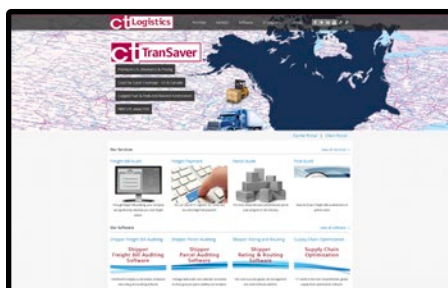


Andlor Logistics Systems • www.andlor.com

Andlor staff have been associated with the 3PL logistics industry for more than 30 years. The software is a fully integrated 3PL WMS. The Web-based front end provides access for the total supply chain. Users create orders and appointments, and access inventories/VMI, receipts, shipments, invoices, claims, EDI data, labor productivity, client messaging, electronic signatures for BOLs and scheduled reports. Andlor offers BacTracs for Reverse Logistics and a Yard Management System. Excellent functionality and support are the Andlor trademarks.

CargoSmart Limited • www.cargosmart.com

CargoSmart provides global shipment management software solutions that enable shippers, consignees, and logistics service providers to improve planning and on-time deliveries. Connected to over 30 ocean carriers, CargoSmart leverages big data sources and a cloud-based platform to offer sailing schedules, visibility, documentation, contract management, compliance, and benchmarking solutions. Launched in 2000, CargoSmart helps transportation and logistics professionals increase delivery reliability, lower transportation costs, and streamline operations. Visit CargoSmart's website to learn more.

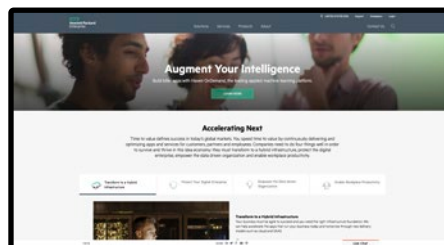


CT Logistics • www.ctlogistics.com

CT Logistics can help you save money, no matter your company's size. For small and medium-sized shippers, CT Logistics offers its TranSaver shipper cooperative buying program. Larger shippers can simplify their freight spending with CT Logistics' exclusive FreightRater freight bill rating and processing system. And businesses of all sizes can benefit from AuditPay freight payment services. Add to these offerings a wealth of online collaboration and reporting tools, and it's easy to see why shippers have trusted CT Logistics with their freight payment needs for more than 86 years.

Hewlett Packard Enterprise • www.hpe.com

Hewlett Packard Enterprise is in the acceleration business. It helps customers use technology to slash the time it takes to turn ideas into value. In turn, they transform industries, markets, and lives. Some customers run traditional IT environments. Most are transitioning to a secure, cloud-enabled, mobile-friendly infrastructure. Wherever they are in that journey, Hewlett Packard Enterprise provides the technology and solutions to help them succeed.





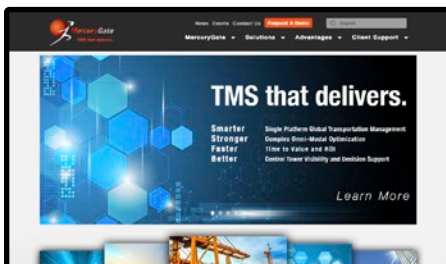
LeanLogistics • www.leanlogistics.com

LeanLogistics meets the needs of major shippers of goods with its far-reaching, true Software-as-a-Service (SaaS) technology—On-Demand TMS®. Customers reduce their transportation cost and increase efficiency with a typical payback of less than one year. Dozens of companies have selected On-Demand TMS® to address challenges such as obtaining carrier coverage, managing ever-changing networks, controlling inbound freight, creating continuous-move opportunities, and settling freight bills quickly and accurately.

MagicLogic Optimization • www.magiclogic.com

MagicLogic's Cube-IQ software represents the state-of-the-art in load planning software. It is built around the best loading engine on the market and will give you optimal volume/weight utilization. Cube-IQ comes with its own database, data import/export, 3D load diagrams, and reporting.

MagicLogic also offers the Cube-IQ BlackBox for integration into other software and websites. All versions have built-in modes of operation for container, truck, rail car, and ULD loading, palletization, and cartonization.

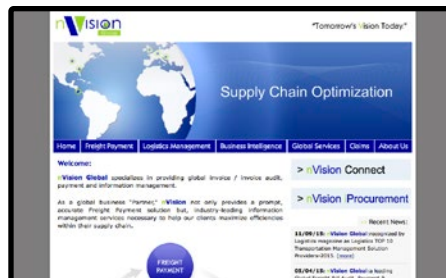


MercuryGate • www.mercurygate.com

MercuryGate delivers a multi-modal TMS solution that allows shippers, freight brokers, and third-party logistics providers to plan, execute, track, and settle freight movements. Customers use a single SaaS or self-hosted application to realize savings through consolidated loads, optimized carrier selection, and process improvements. For more information, visit www.mercurygate.com.

nVision Global • www.nvisionglobal.com

nVision Global is a leading international freight audit, payment, and logistics management solutions provider. With locations in North America, Europe, and Asia, our staff is fluent in more than 25 languages, and processes and pays freight invoices from more than 190 countries worldwide. Over the years, our customers have come to rely on our prompt, accurate Sarbanes-Oxley-compliant freight payment services, as well as our leading-edge information management analytical tools including global mapping, graphing, benchmarking, modeling, and network optimization analysis to help them manage their overall supply chain costs.



IN THIS SECTION:

Logistics IT

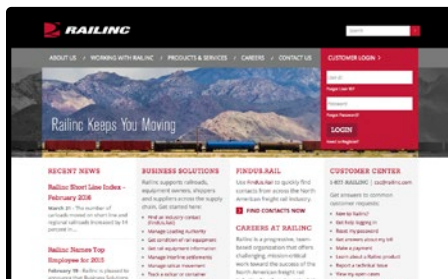


Open Sky Group • www.openskygroup.com

Open Sky Group is dedicated to being the best consulting partner on the planet for implementing supply chain software solutions. We specialize in services for JDA Warehouse Management (formerly RedPrairie WMS). Contact us today to reach new heights of supply chain efficiency with your WMS.

Paradox Software Consulting • www.paradoxsci.com

Paradox Software Consulting offers software tools and consulting services for planning and executing logistics and supply chain management functions to companies of any size. Using our tools, carriers, shippers, 3PLs, and brokers have experienced an improved bottom line and significant return on their investment. For over 18 years, our products have kept up with industry demands in the areas of vehicle routing and scheduling, continuous move planning, fleet sizing, lane matching, and resource scheduling, as well as network design and fulfillment planning for supply chains. Call 855-472-7236, visit www.paradoxsci.com, or email info@paradoxsci.com for more information.



Railinc Corporation • www.railinc.com

Railinc Corporation is a leading provider of rail data, IT, and information services to the North American freight rail industry. Our Umler® and RailSight™ systems support critical rail processes from car movement to track and trace, and provide intelligence that helps railroads, rail equipment owners, their customers and business partners increase productivity and keep assets moving. Railinc is the largest single source for real-time, accurate, interline rail data and rail shipment status information.

RateLinx • www.ratelinx.com

RateLinx provides transportation management solutions, TMS technology, and freight payment and auditing for companies for all modes, as well as providing cutting-edge Vendor Compliance technology and methodologies for companies with vendor compliance programs and the vendors that utilize them. RateLinx manages and/or services freight in the billions of dollars for thousands of shippers both domestically and internationally, and is recognized as a leading manufacturer of integrated logistics software for small parcel, LTL, truckload, ocean, air, and expedited shipping. For more information, visit our website or contact us at sales@ratelinx.com.



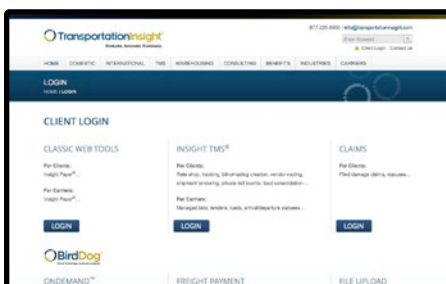


RR Donnelley • www.rrd.com

Experience the benefits that only come from working with a major, global shipper that is also a top-ranked 3PL. We offer multiple transportation modes, an established multi-carrier network, volume-leveraged rates and service levels, along with technology-enabled systems and processes. Visit our website and contact us today to see why customers have relied on us for nearly 150 years.

Suntek Systems • www.suntekscm.com

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



Transportation Insight • www.t-insight.com

Delivering total supply chain visibility, Transportation Insight's blended technology solution includes Insight TMS®, our cloud-based transportation management system, proprietary freight bill audit and payment program, and Insight Fusion®, our mobile interactive business intelligence solution that can fuse data from many sources to provide proactive problem solving for the supply chain and the enterprise. As a global lead logistics provider, our end-to-end supply chain solutions include Tier One North American truckload, LTL and parcel logistics solutions, international freight forwarding and warehousing services. We provide carrier sourcing, supply chain-related cost reduction, financial settlement, business insight and LEAN consulting. Contact us at info@transportationinsight.com or 877-226-9950.

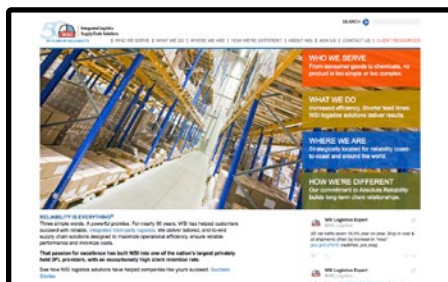
Transwide • www.transwide.com/en-nafta

Transwide TMS is a modular, on-demand (SaaS) collaboration platform that enables partners in a logistics network to increase transportation performance through optimized planning, execution, visibility, and cost management. With 500+ customers (100,000+ users), 20,000+ in 80 countries across four continents, the Transwide solution suite enables shippers to source, plan, execute, settle, and analyze their transportation with maximum cost efficiency.



IN THIS SECTION:

Logistics IT - Multi-Modal



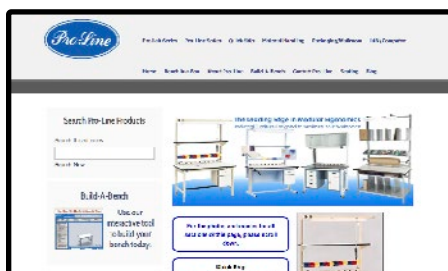
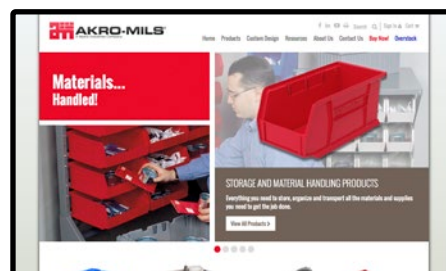
WSI (Warehouse Specialists, Inc.) • www.wsinc.com

Reliability is everything. At WSI, that has been our approach to integrated logistics and supply chain solutions for more than 40 years. Our promise of Condition, Count & Time ensures accurate, timely, and sound performance—every time. Recognized as one of the top 3PL companies in North America, WSI delivers custom solutions for warehousing/distribution, fulfillment, transportation, import/export, information technology, and customer support services. Depend on WSI for increased efficiency, reduced costs, and absolute reliability.

MATERIALS HANDLING

Akro-Mils • www.akro-mils.com

Akro-Mils is a leading manufacturer of plastic and metal storage, organization, transport and material handling products designed to improve inventory control and productivity in any setting—including industrial, medical, commercial, and consumer. As the industry leader, Akro-Mils strives to continually provide customers with innovative, quality products; unsurpassed customer service; and the fastest, most reliable shipping in the industry.



Pro-Line • www.1proline.com

Pro-Line is a leader in modular ergonomic industrial workbenches and workstations. From basic four-leg stations to hand-crank or electric height-adjustable stations to top-of-the-line technical systems, we have it all. Retractable ball transfers, seating, packaging stations, and much more. Since 1979, Pro-Line has offered strength, ergonomic design and esthetics, all at an affordable price, many models in stock. Our vast array of in-stock optional accessories makes it easy for you to configure a workstation to fit your needs.

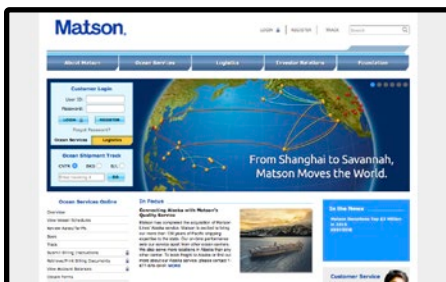
MULTI-MODAL

Lynden • www.lynden.com

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



OCEAN

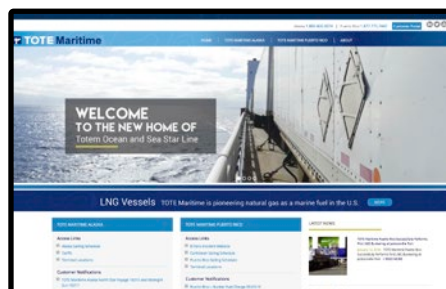


Matson • www.matson.com

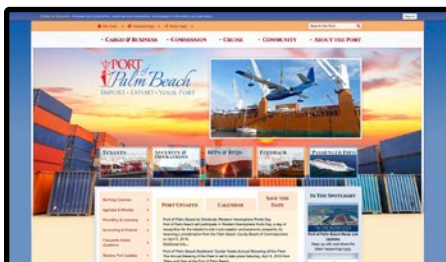
Matson is a leader in Pacific shipping and most noted for its long-standing service to Hawaii, Guam, and Micronesia. Matson's China-Long Beach Express offers premium, expedited service from Ningbo and Shanghai to Long Beach, including a guaranteed expedited service option to many U.S. destinations. Its subsidiary, Matson Integrated Logistics, is one of the nation's leading logistics providers, with expertise in all aspects of U.S. mainland transportation: truck, rail, and air.

Totem Ocean • www.totemocean.com

Totem Ocean is proud to be the leading oceangoing carrier for the Alaska trade, providing twice-weekly service between the ports of Tacoma and Anchorage. Totem Ocean understands the critical role its vessels and employees play in supplying Alaskans with the things they need for life in the Last Frontier. That's why everyone at Totem Ocean is committed to giving their all to provide safe, reliable service that stands above the rest.



PORTS



Port of Palm Beach • www.portofpalmbeach.com

The Port of Palm Beach is a 162-acre, full-service, diversified port, handling a full range of cargoes and moving \$4 billion worth of commodities, two million tons of diversified cargoes, and more than 340,000 passengers annually. The Port is committed to the highest levels of service and to fiscal and environmental responsibility while ensuring the utmost safety and security. For more information on the Port of Palm Beach, please visit www.portofpalmbeach.com.

PRINTING SOLUTIONS

SATO America • www.satoamerica.com

SATO is a pioneer in the Automatic Identification and Data Collection (AIDC) industry, and the inventor of the world's first electronic thermal transfer barcode printer. It revolutionized the barcoding industry by introducing the Data Collection System (DCS) & Labeling concept—a total barcode and labeling solution providing high-quality barcode printers, scanners/handheld terminals, label design software, and consumables. SATO is one of the first in the industry to introduce a complete, multi-protocol EPC-compliant, UHF RFID solution. Turn to SATO for all your barcode and RFID printing needs.



IN THIS SECTION:

Project Logistics - Rail

PROJECT LOGISTICS

**Lynden • www.lynden.com**

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RAIL

Alaska Railroad • www.alaskarailroad.com

If you have freight or equipment to transport to or from Alaska, or within Alaska, contact the Alaska Railroad first. We have the people, equipment, and experience to move difficult, heavy, large, and unusual dimensioned freight, as well as containerized and hazardous materials. With the Alaska Railroad's Rail-Marine Service, customers can load their goods onto a railcar in the Lower 48, and it will be seamlessly transferred to Alaska and railbelt communities via the Alaska Railroad's port in Seattle.

**IntelliTrans • www.intellitrans.com**

IntelliTrans, a TransCore company, is a technology-enabled Transportation Management Services company that focuses on reducing its customers' transportation spend, improving their proactive customer service, and automating their business processes. We do this through our world-class rail, TMS and freight management solutions with a unique focus on data quality and complete transparency.

Railinc Corporation • www.railinc.com

Railinc Corporation is a leading provider of rail data, IT, and information services to the North American freight rail industry. Our Umler® and RailSight™ systems support critical rail processes from car movement to track and trace, and provide intelligence that helps railroads, rail equipment owners, their customers and business partners increase productivity and keep assets moving. Railinc is the largest single source for real-time, accurate, interline rail data and rail shipment status information.



RAPID RESPONSE LOGISTICS



Lynden • www.lynden.com

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

REAL ESTATE

Mericle Commercial Real Estate Services • www.mericlereadytogo.com

Mericle Commercial Real Estate Services has developed more bulk industrial space and fully prepared sites than any other private developer along Pennsylvania's I-81 Corridor. Mericle has a wide variety of space available—all with ceiling clear heights in excess of 30 feet and all located immediately adjacent to an interstate. Mericle lists many 3PLs and 13 of the nation's top e-commerce fulfillment companies among its numerous tenants and clients. All of Mericle's available industrial properties can be reviewed at www.mericlereadytogo.com.



RECRUITING



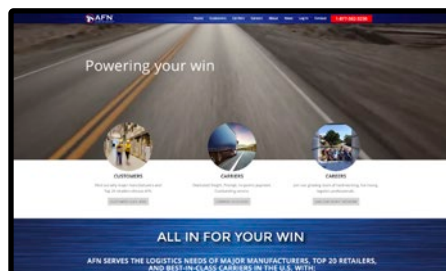
Franzetta & Associates, Inc. • www.franzetta.com

Franzetta & Associates, Inc. is an all-encompassing supply chain consulting firm. One of the services we provide for our clients is specialty focused recruiting. Through the years, our impressive list of clients includes Fortune Top 10s as well as mid-market and small firms. We know the business and understand your needs. We have access to many top-notch logisticians, and will be able to more than accommodate your requirements. We nurture close relationships with both our clients and recruits to ensure success for both. E-mail: resumes@franzetta.com or call (814) 466-9010.

RETAIL LOGISTICS

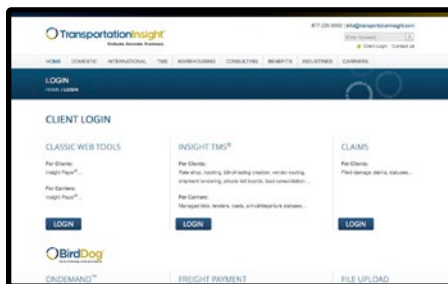
AFN • www.loadafn.com

Since our founding in 2003, AFN has proudly partnered with leading manufacturers, retailers, and motor carriers across North America to develop and deploy innovative and award-winning logistics solutions. While AFN has grown by leaps and bounds, one thing has never changed: our commitment to and focus on the customers and carriers we serve. Our goal is to deliver breakthrough solutions that drive added value to your supply chain through exceptional service, leading technology, and best practices, resulting in cost reductions, efficiency gains, and risk management.



IN THIS SECTION:

Retail Logistics - Sourcing/Negotiations



Transportation Insight • www.t-insight.com

From data-driven parcel program engineering to invoice auditing and advanced analytics, Transportation Insight customizes a multi-modal enterprise solution that includes a parcel shipping plan that is backed by proven methodologies, sophisticated modeling tools and a team of parcel experts. We leverage our tools, technology and expertise to design and implement a solution that will reduce costs and transit times, improve customer satisfaction, mitigate supply chain risk and support enterprise growth. We help to integrate your small package program with all other components of your supply chain to help you to gain competitive advantage. Contact us at info@transportationinsight.com or 877-226-9950.

SHIPPING SOFTWARE

RateLinx • www.ratelinx.com

RateLinx provides transportation management solutions, TMS technology, and freight payment and auditing for companies for all modes, as well as providing cutting-edge Vendor Compliance technology and methodologies for companies with vendor compliance programs and the vendors that utilize them. RateLinx manages and/or services freight in the billions of dollars for thousands of shippers both domestically and internationally, and is recognized as a leading manufacturer of integrated logistics software for small parcel, LTL, truckload, ocean, air, and expedited shipping. For more information, visit our website or contact us at sales@ratelinx.com.



SOURCING/NEGOTIATIONS



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Transwide • www.transwide.com/en-nafta

Transwide TMS is a modular, on-demand (SaaS) collaboration platform that enables partners in a logistics network to increase transportation performance through optimized planning, execution, visibility, and cost management. With 500+ customers (100,000+ users), 20,000+ in 80 countries across four continents, the Transwide solution suite enables shippers to source, plan, execute, settle, and analyze their transportation with maximum cost efficiency.



SUPPLY CHAIN MGMT/OPTIMIZATION



C3 Solutions • www.c3solutions.com

C3 Solutions is an information technology company specialized in yard management (YMS) and dock scheduling (DSS) systems. Since its founding in 2000, C3 has gained the confidence of clients around the world and across many industries including retail, grocery, distribution, manufacturing and parcel post. Headquartered in Montreal (QC), Canada and privately owned, C3 is dedicated to developing, implementing and supporting the most complete yard management and dock scheduling products on the market today. For more information on C3's products, schedule a free online demonstration.

CPC Consultants • www.cpc-consultants.net

CPC Consultants is a global transportation and operations management firm with over 75 years combined experience from the shipper perspective. Backed by a no-risk, performance based money-back guarantee, our approach is to optimize a program holistically, provide best practices and market insights, while achieving significant savings. CPC evaluates all modes of domestic and international transportation from a multitude of industries and assists medium-to Fortune 500-sized companies such as Toyota, Kawasaki and Epson.



Railinc Corporation • www.railinc.com

Railinc Corporation is a leading provider of rail data, IT, and information services to the North American freight rail industry. Our Umler® and RailSight™ systems support critical rail processes from car movement to track and trace, and provide intelligence that helps railroads, rail equipment owners, their customers and business partners increase productivity and keep assets moving. Railinc is the largest single source for real-time, accurate, interline rail data and rail shipment status information.

TEMPERATURE-CONTROLLED SHIPPING

Frozen Food Express • www.ffeinc.com

Frozen Food Express strives to be the leader in the temperature-controlled LTL market. We will leverage our core competencies in refrigerated transportation and storage that have been developed over 65 years to provide our customers with the highest levels of service which represent great value. Every member of the FFE team will work in a collaborative manner to exceed the expectations of our customers. We will always strive to deliver a great customer experience and perform with honesty, integrity, and a sense of urgency to deliver on what we promise. We have been very busy here at Frozen Food Express upgrading our technology and service centers in preparation for the Food Safety Modernization Act. Give us a call at 800-569-9200 to find out how we can be a great addition to your business. Don't forget to ask about our Guaranteed Service Offering. Visit our website at www.ffeinc.com.



IN THIS SECTION:

TMS

TMS



Aljex Software • www.aljex.com

Aljex has an innovative Web-based software for carriers, freight brokers, and intermodal specialists. If you see a demo of our software, you will want it. Why? You will see how Aljex can easily double the number of shipments you can handle. It's so easy to learn that we include unlimited training and support. With Aljex, there is no long, painful switchover. In 48 hours, we can have you trained, linked into the load boards, have your logo on your forms, your users set up, your carriers and customers imported, and ready to work.

CTSI-Global • www.ctsi-global.com

Since 1957, CTSI-Global has developed industry-leading supply chain management expertise and technology. Shippers and 3PLs manage their global supply chains through CTSI-Global's transportation management system, business intelligence solutions, freight audit and payment, and consulting services.

Partnering with one expert provider for all your logistics needs ensures seamless integration to eliminate redundant processes and costs while providing the visibility you need. CTSI-Global is your link to supply chain solutions.



IntelliTrans • www.intellitrans.com

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RateLinx • www.ratelinx.com

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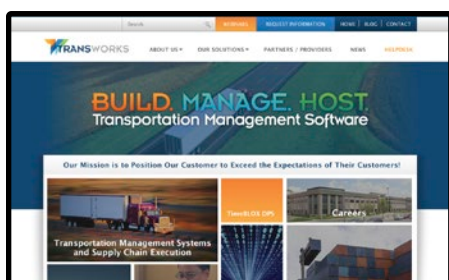


TransportGistics • www.transportgistics.com

TransportGistics is a global, multi-product and services company that provides market-leading, simple, incremental solutions for transportation management and logistics functions within the supply chain. Our Web-based solutions enable our customers to source, procure, and execute transportation services; enable collaboration; reduce costs; improve processes; identify hidden costs of transportation; improve vendor compliance routing guides; improve Supplier Relationship Management; monitor vendor performance; improve shipment visibility; generate automatic, status-driven alerts; and monitor carrier performance with respect to time in transit, service failure, and billing.

Transwide • www.transwide.com/en-nafta

Transwide TMS is a modular, on-demand (SaaS) collaboration platform that enables partners in a logistics network to increase transportation performance through optimized planning, execution, visibility, and cost management. With 500+ customers (100,000+ users), 20,000+ in 80 countries across four continents, the Transwide solution suite enables shippers to source, plan, execute, settle, and analyze their transportation with maximum cost efficiency.



TransWorks • www.trnswrks.com

TransWorks offers fully integrated TMS/Supply Chain Execution solutions that automate transportation processes and provide instant savings without capital investment. We accomplish this by leveraging the best technology, and seamlessly integrating it with our customers' ERP platform. TransWorks has consistently delivered the best TMS solutions, and enables our customers to communicate more effectively with their carriers and customers. *Inbound Logistics* Top 100 Logistics IT Provider since 2006.

TRANSPORTATION

Colonial Cartage Corporation • www.colonialcartage.com

Since 1954, Colonial Cartage Corporation (CCC), ABW's in-house carrier, has provided regular temperature-controlled LTL service to all points in the Southeast, Southwest, Midwest, and Great Plains states, managing over 400 million pounds annually in this 27-state delivery area. Colonial also provides dedicated transportation services, plant support, cross dock, and inbound consolidation to cross dock services as well. While an industry leader on safety, we still focus on exceptional service to satisfy the most demanding delivery requirements.



IN THIS SECTION:

Transportation - Transportation Mgmt/Freight Mgmt

**Lynden • www.lynden.com**

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

Performance Team • www.performanceteam.net

Performance Team is the only thing that should come between your products and your customers. For nearly 25 years, Performance Team has been offering its expertise to the retail and manufacturing industries with a broad range of supply chain services including: trucking, distribution, logistics, and fulfillment. Through 11 domestic hubs, over 5.1 million square feet of warehouse space, and a fleet of more than 400 trucks, Performance Team's skilled team of employees processes approximately \$100 billion in wholesale goods. See why Performance Team continuously earns a reputation as the premier trucking, consolidation, and distribution company in the United States; log on to www.performanceteam.net.

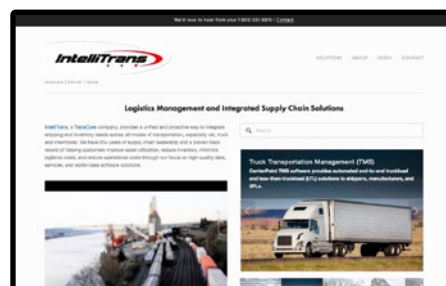
**Span Alaska • www.spanalaska.com**

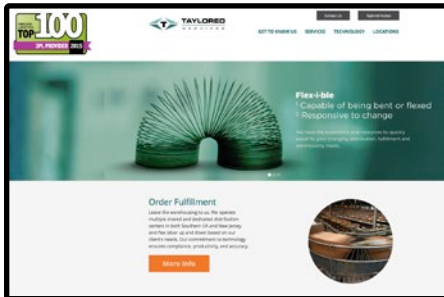
Span Alaska understands Alaska and has everything it takes to transport your shipments to, from, and around the state. Span Alaska moves more LTL freight than any other carrier to Alaska—for several good reasons. It has the equipment, the people, and the clout with ocean carriers necessary to transport your freight quickly and efficiently. These kinds of connections enable Span Alaska to give you the best value and to get things done that others simply cannot.

TRANSPORTATION MGMT/FREIGHT MGMT

IntelliTrans • www.intellitrans.com

IntelliTrans, a TransCore company, is a technology-enabled Transportation Management Services company that focuses on reducing its customers' transportation spend, improving their proactive customer service, and automating their business processes. We do this through our world-class rail, TMS and freight management solutions with a unique focus on data quality and complete transparency.





Taylored Services • www.tayloredservices.com

At Taylored Services, we look at your business as if we were a box moving through your supply chain. Our goal: to provide a comprehensive array of fulfillment services that best fit your business needs. Award-winning retail experts. Strategically located bi-coastal facilities. Expertise in wholesale and retail distribution. Best-in-class systems and technology. A full range of logistics services including: drayage management, transload, DC bypass, crossdock, case distribution, unit fulfillment (B2B, B2C, Digital), and value-added distribution solutions (repacking, reticketing, point of purchase, display assembly, inserts and labeling, returns). Visit www.tayloredservices.com or contact sales@tpservices.com

TranSolutions Inc. • www.transolutionsinc.com

TranSolutions Inc. is a leading supplier of freight claim management, logistics, claim recovery, loss and damage software, freight claim overcharge, loss prevention database, and Web-based applications. Our clients include Global 5000 companies in the specialty chemicals, pharmaceuticals, consumer packaged goods, and food and beverage industries. Since 1997, TranSolutions Inc. has helped companies decrease freight claim-generation cycle time and increase claim documentation organization, while reducing data input errors, accelerating carrier claim payment, increasing efficiency, improving quality, and directly influencing the freight claims management process.



Wagner Logistics • go.wagnerlogistics.com/home

Wagner Logistics offers dedicated warehousing, transportation management, packaging, and assembly operations across the United States with over 3 million square feet of warehousing space. We provide genuine customer service to our customers and our superior onboarding process will make your customers' transition seamless. We work tirelessly to find innovative solutions to reduce supply chain costs while increasing your speed-to-market with our latest award-winning technology.

TRUCKING-FLATBED

Lynden • www.lynden.com

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



IN THIS SECTION:

Trucking-Heavy Specialized - Trucking-LTL

TRUCKING-HEAVY SPECIALIZED

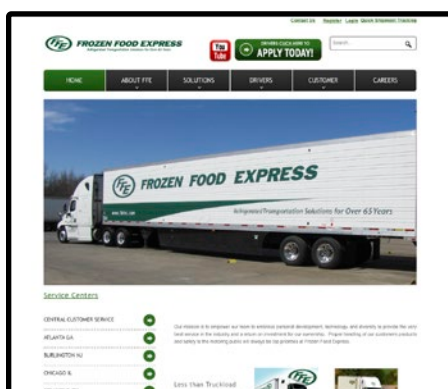
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TRUCKING-LTL

AAA Cooper Transportation • www.aaacooper.com

AAA Cooper Transportation has been delivering safe, efficient transportation for more than 60 years. With strategically located service centers, we are prepared to give individual attention to your shipping needs. AAA Cooper Transportation is dedicated to the long-term sustainability of the environment, and continues to implement processes that will make the world a better place to live for generations to come.

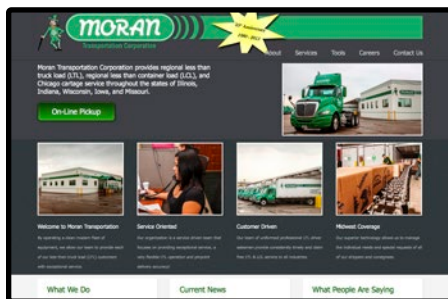
Frozen Food Express • www.ffeinc.com

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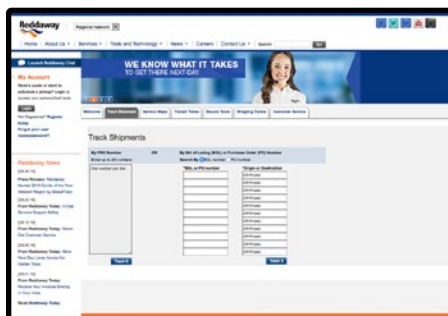


Moran Transportation • www.morantransportation.com

Moran Transportation is a growing regional LTL carrier within the Midwest providing next-day LTL delivery throughout our eight company terminals including value-added services such as liftgate, inside delivery, light residential, hazardous, and guaranteed next-day LTL delivery. In addition to very timely and accurate LTL services, we also provide custom distribution and consolidation programs for medium to large companies. We currently maintain exceptional on-time delivery percentages (99.4% on-time) and claims ratios that are the envy of the industry.

New England Motor Freight • www.nemf.com

New England Motor Freight (NEMF) is one of the privately-held Shevell Group of Companies. Its service area covers the northeastern and mid-Atlantic states from Maine to Virginia along with service to Ohio, the Chicago area and Puerto Rico. The largest fleet in the Northeast with over 8,000 trucks and trailers, NEMF provides a broad array of supply chain-related services. Through partnerships with leading carriers in other regions, NEMF provides service to the remaining U.S. states including Alaska and Canada. NEMF, with corporate offices in Elizabeth, N.J., is a family-owned, non-Teamster carrier that can commit to a long-term partnership with you. Visit our website for details.

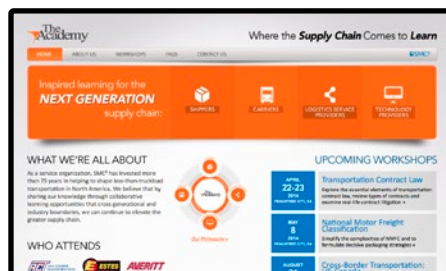


Reddaway • www.reddawayregional.com

Reddaway has provided western regional coverage since 1919, and has built a long-standing industry-leading tradition of next-day and two-day delivery service. With high on-time reliability and one of the lowest claim ratios in the West, Reddaway is a complete and formidable western service provider. Reddaway provides direct, regional delivery in 12 western states and one Canadian province, ships door-to-door to Hawaii, and provides ocean delivery to Alaska via twice-weekly sailings.

The Academy, SMC³ • www.smc3academy.com

The Academy was developed by SMC³ for you – the shippers, carriers and logistics providers that North America depends on for a reliable, efficient and affordable supply chain. You can depend on The Academy for learning opportunities that enhance your area of expertise. As a service organization, SMC³ has invested more than 75 years in shaping less-than-truckload transportation. We believe that by sharing our knowledge, we can continue to elevate the greater supply chain.



IN THIS SECTION:

Trucking-TL - Vendor Compliance

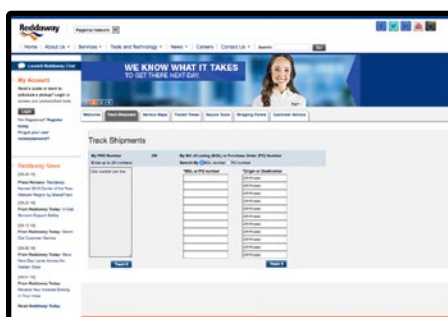
TRUCKING-TL

**Eastern Freight Ways • www.easternfreightways.com**

Eastern Freight Ways, a member of the Shevell Group, is the premium service truckload carrier in the U.S. Northeast and Mid-Atlantic. Our “on the ball” motto exemplifies our service record of excellent response time, guaranteed equipment availability and outstanding on-time performance. By combining third-generation successful transportation experience and state-of-the-art technology, Eastern Freight Ways can customize our trucking services to suit your needs, and become your proactive resource for the most stringent shipping challenges. Contact Eastern Freight Ways today for premium truckload service. Rest assured knowing your shipment will arrive on time, every time!

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

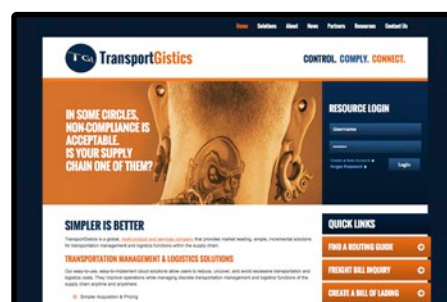
**Reddaway • www.reddawayregional.com**

Reddaway has provided western regional coverage since 1919, and has built a long-standing industry-leading tradition of next-day and two-day delivery service. With high on-time reliability and one of the lowest claim ratios in the West, Reddaway is a complete and formidable western service provider. Reddaway provides direct, regional delivery in 12 western states and one Canadian province, ships door-to-door to Hawaii, and provides ocean delivery to Alaska via twice-weekly sailings.

VENDOR COMPLIANCE

TransportGistics • www.transportgistics.com

TransportGistics is a global, multi-product and services company that provides market-leading, simple, incremental solutions for transportation management and logistics functions within the supply chain. Our Web-based solutions enable our customers to source, procure, and execute transportation services; enable collaboration; reduce costs; improve processes; identify hidden costs of transportation; improve vendor compliance routing guides; improve Supplier Relationship Management; monitor vendor performance; improve shipment visibility; generate automatic, status-driven alerts; and monitor carrier performance with respect to time in transit, service failure, and billing.



WAREHOUSING

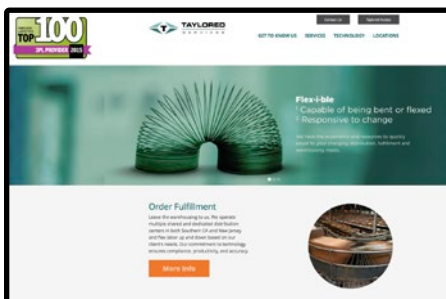


D&D Distribution Services • www.dd-dist.com

A full-service public warehousing and distribution services provider, D&D Distribution Services is centrally located in York, PA, near the mid-Atlantic region's major metropolitan areas and seaports. We serve customers around the globe, developing customized logistics and customer service solutions. We handle raw materials at the front end of the supply chain and finished goods at the back end. D&D develops flexible programs to accomplish customers' goals.

Metro Park Warehouses • www.mpwus.com

Metro Park Warehouses is a full-service 3PL offering 2 million square feet in Kansas City of modern food-grade warehousing space, including medical temperature-controlled space, ATF and national pharmaceutical licensed distribution, AIB Superior ratings, and 5 rail facilities, all open to reciprocal switching. Value-added services include end-to-end call center, shipping, and invoicing; retail display building; heat-tunnel packaging and shrink-wrapping; and a dedicated local and regional trucking fleet. Contact Metro Park to gain the competitive edge.



Taylored Services • www.tayloredservices.com

At Taylored Services, we look at your business as if we were a box moving through your supply chain. Our goal: to provide a comprehensive array of fulfillment services that best fit your business needs. Award-winning retail experts. Strategically located bi-coastal facilities. Expertise in wholesale and retail distribution. Best-in-class systems and technology. A full range of logistics services including: drayage management, transload, DC bypass, crossdock, case distribution, unit fulfillment (B2B, B2C, Digital), and value-added distribution solutions (repacking, reticketing, point of purchase, display assembly, inserts and labeling, returns). Visit www.tayloredservices.com or contact sales@tpservices.com

Wagner Logistics • go.wagnerlogistics.com/home

Wagner Logistics offers dedicated warehousing, transportation management, packaging, and assembly operations across the United States with over 3 million square feet of warehousing space. We provide genuine customer service to our customers and our superior onboarding process will make your customers' transition seamless. We work tirelessly to find innovative solutions to reduce supply chain costs while increasing your speed-to-market with our latest award-winning technology.



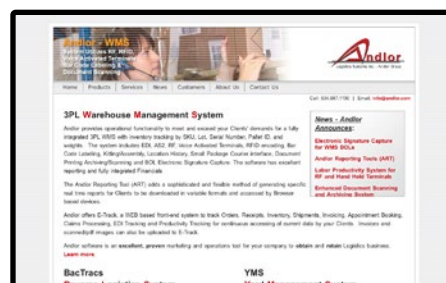


Aljex Software • www.aljex.com

Aljex has an innovative Web-based software for carriers, freight brokers, and intermodal specialists. If you see a demo of our software, you will want it. Why? You will see how Aljex can easily double the number of shipments you can handle. It's so easy to learn that we include unlimited training and support. With Aljex, there is no long, painful switchover. In 48 hours, we can have you trained, linked into the load boards, have your logo on your forms, your users set up, your carriers and customers imported, and ready to work.

Andlor Logistics Systems • www.andlor.com

Andlor staff have been associated with the 3PL logistics industry for more than 30 years. The software is a fully integrated 3PL WMS. The Web-based front end provides access for the total supply chain. Users create orders and appointments; access inventories/VMI, receipts, shipments, invoices, claims, EDI data, labor productivity, client messaging, electronic signatures for BOLs and scheduled reports. Andlor offers BacTracs for Reverse Logistics and a Yard Management System. Excellent functionality and support are the Andlor trademarks.



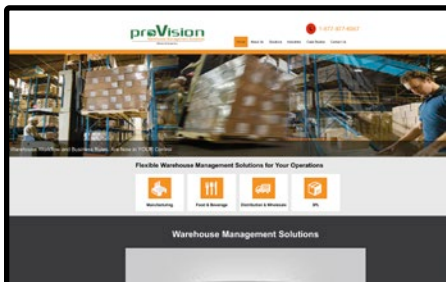
Camelot 3PL Software • www.3plsoftware.com

Camelot 3PL Software has provided innovative software solutions to the 3PL industry since 1987. Camelot offers a full suite of software solutions for multi-tenant inventory management, 3PL billing, mobile scanning technology, EDI, accounting and transportation management, all within a single package. With a customer-centric focus, we build lasting partnerships with each customer to help them achieve their goals of growth and profitability.

Interlink Technologies • www.thinkinterlink.com

Interlink provides Warehouse-LINK® Warehouse Management Solutions (WMS) for real-time visibility that promotes warehouse efficiency, improved space utilization and cost savings throughout the entire warehouse. Warehouse-LINK® is ideally suited for any size company, easily scalable to accommodate growth and supports lot/expiry/serial/date tracking, QC management, work order management, dynamic slotting, cycle counting, multiple warehouse locations and multiple receiving/putaway/picking methods. First-time WMS implementers appreciate our successful strategies and partnership commitment for worry-free projects.





proVision WMS • www.provisionwms.com

proVision WMS Warehouse Management Software, designed specifically for small to medium-sized companies, delivers real-time visibility into vital inventory and labor resources while coordinating order fulfillment, customer service, and cycle times—for single or multiple warehouses. Totally flexible and configurable to your business, proVision gives you the control over your specific warehouse workflow and business rules. Easily integrating with existing ERP/accounting software, proVision WMS delivers increased productivity and profitable warehouse operations for much less than other warehouse software.

YARD MANAGEMENT

C3 Solutions • www.c3solutions.com

C3 Solutions is an information technology company specialized in yard management (YMS) and dock scheduling (DSS) systems. Since its founding in 2000, C3 has gained the confidence of clients around the world and across many industries including retail, grocery, distribution, manufacturing and parcel post. Headquartered in Montreal (QC), Canada and privately owned, C3 is dedicated to developing, implementing and supporting the most complete yard management and dock scheduling products on the market today. For more information on C3's products, schedule a free online demonstration.

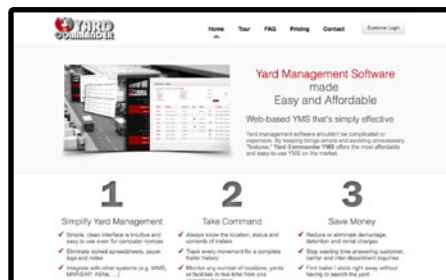


Cypress Inland (Yardview) • www.yardview.com

YardView is a Web-based yard management system that is easy to learn and simple to use for operations personnel. Managing yard inventories, movements, appointments, drivers, carriers, time-related events, and other yard activities can be difficult. YardView works for any size operation. YardView is experienced with helping operations become more effective. YardView gets everyone on the same page. The benefits of a software program to help manage these processes are proven and can be realized by your operation. Contact our experts to discuss how we can translate what you are doing now into a more efficient system. Call 303-781-3430.

Sentier Systems Inc. (Yard Commander) • www.yardcommander.com

Yard management software shouldn't be complicated or expensive. Yard Commander is a Web-based YMS that's simply effective. We've made the software fully functional while avoiding unnecessary "features." At the same time we've kept it intuitive and user friendly. Yard Commander offers the most affordable and easy-to-use YMS on the market.



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Sum of All Ports

\$3.75
TRILLION

U.S. trade with the
world in 2015

*according to a WorldCity analysis of
the latest U.S. Census Bureau data*

\$4.6
TRILLION

total economic value
of port activity in the
United States in 2014

*according to Martin Associates
of Lancaster, Pa.*

\$155
BILLION

planned expenditure in port
infrastructure projects by
U.S. port authorities and
their private-sector partners
over the next 5 years

*according to the 2016-2020 Port
Planned Infrastructure Investment
Survey by the American Association
of Port Authorities*

1.6
MILLION

direct, indirect, and induced
domestic jobs created
by expected \$155-billion
investment in port
infrastructure projects

*as shown by U.S. Bureau of
Economic Analysis formulas, says
economist John C. Martin, Ph.D.,
president of Martin Associates*

4.56
MILLION METRIC TONS

weight of grain—wheat,
corn, and soybeans—
moved through the
Port of Vancouver in 2015

\$171
BILLION

value of Chinese container
imports passing through
California's ports in 2015

20+
PERCENT

annual increase in Chinese
container imports to
ports in Texas, South
Carolina, and Georgia
between 2013 and 2015

753,265

cars crossing the
Port of Baltimore's piers
in 2015—more than any
other U.S. port for the
5th consecutive year



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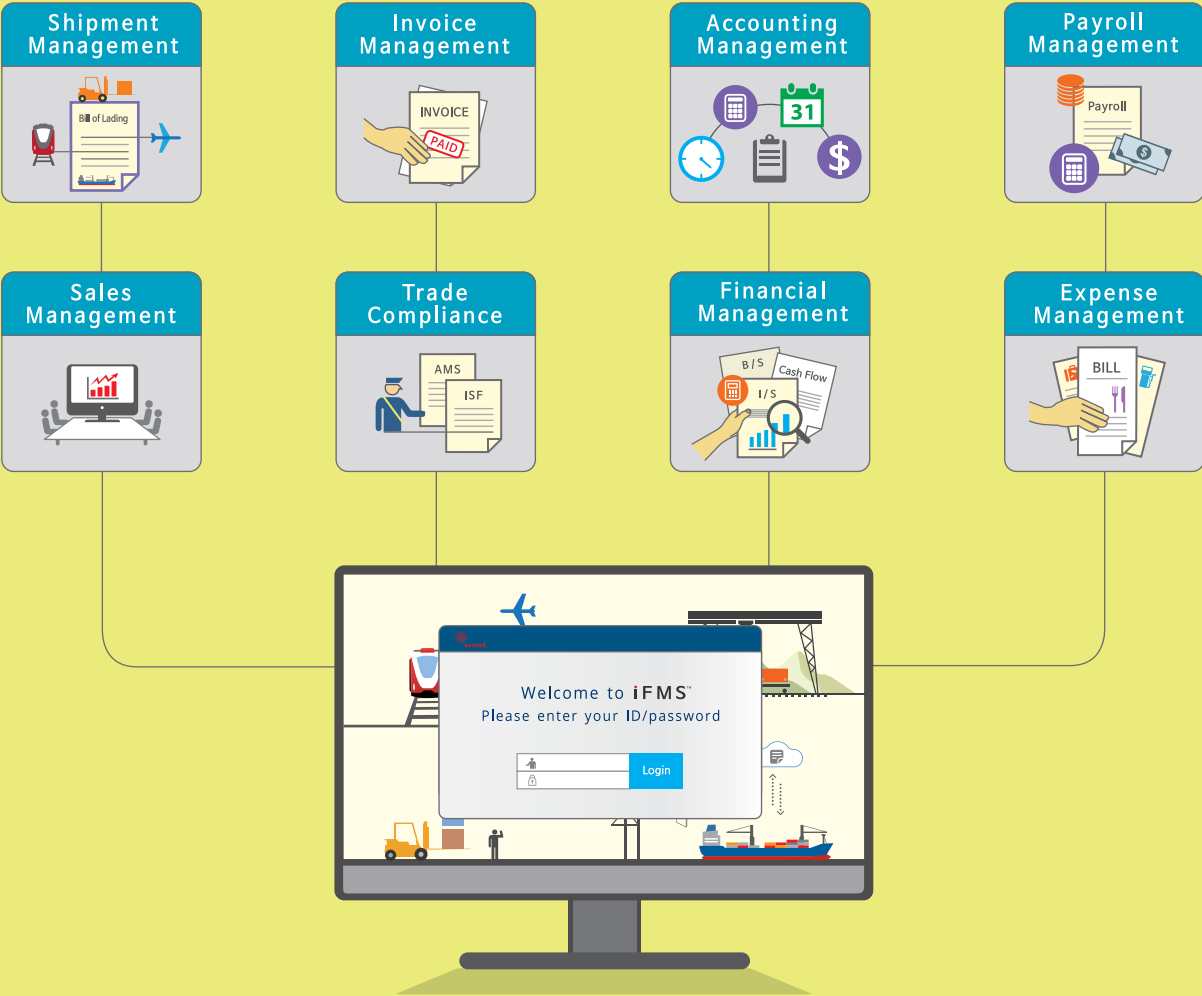
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