

APRIL 2019

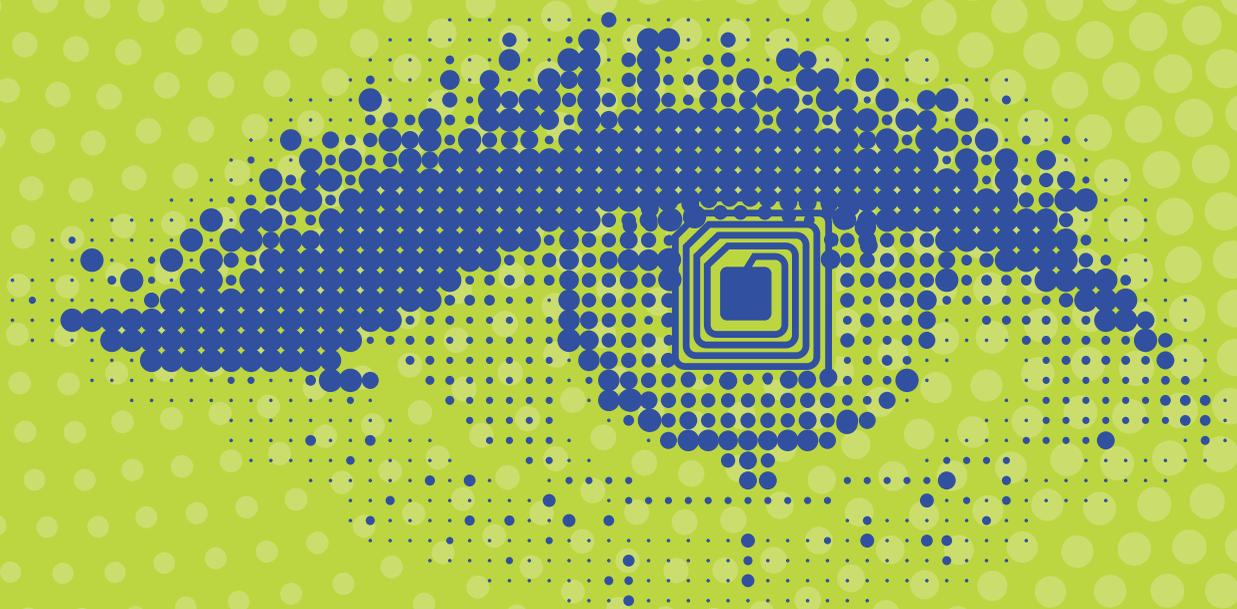
SPECIAL REPORT

ALASKA
THE LAST
FRONTIER

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THE MAGAZINE FOR DEMAND-DRIVEN LOGISTICS



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Info SNACKS

BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION



Brexit, Stage Left

Brexit is far more difficult to prepare for than Y2K:

- **81%** of businesses plan to review or update business processes and software due to Brexit.

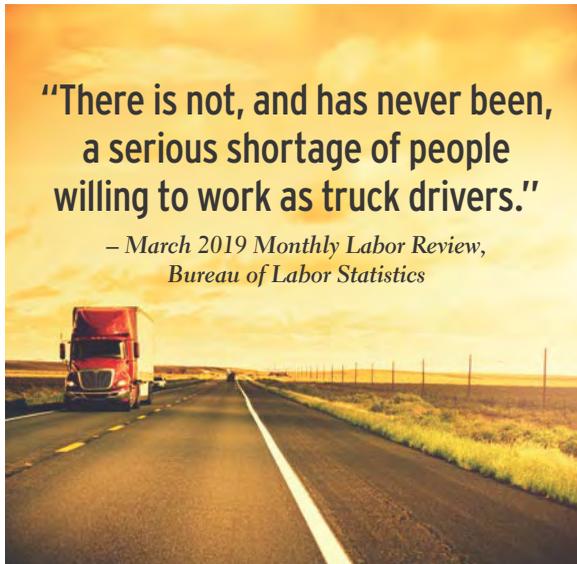
- **77%** of UK businesses believe Brexit will impact software systems and processes.

- **Two-thirds** of organizations are likely to hire staff (69%) and adopt automation (73%) to deal with the likely new processes Brexit will impose.

—Eggplant survey

“There is not, and has never been, a serious shortage of people willing to work as truck drivers.”

— March 2019 Monthly Labor Review, Bureau of Labor Statistics



15%

of consumer products listed on U.S. online ordering services are **out of stock** when it comes to fulfilling them, nearly double the rate of out of stocks in stores.

—Grocery Manufacturers Association

SPACE INVADER

For every \$1-billion increase in e-commerce sales, an estimated 1.25 million square feet of warehouse space is needed to keep up with demand. —CBRE



NEW YORK STATE OF FINE

UPS
\$33.8 million

FEDEX
\$14.9 million

Parking fines racked up in New York City in 2018, according to the New York City Department of Finance



When consumers are ready to buy a specific product, nearly three-quarters of them—74 percent—go straight to Amazon to do it.

—Feedvisor study

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ALASKA: THE LAST FRONTIER

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CAN YOU SEE ME NOW?

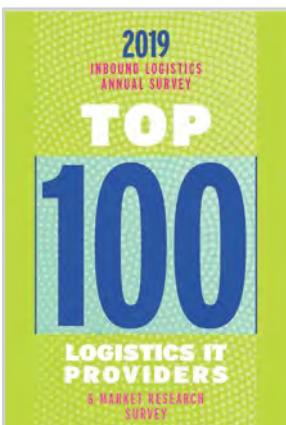
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TOP 100 LOGISTICS IT PROVIDERS

& MARKET RESEARCH SURVEY

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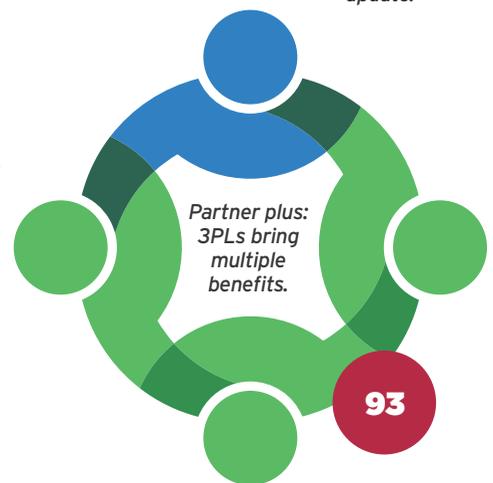
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To help shippers meet technology needs and manage customer relationships, 3PLs come armed with innovative solutions and expertise.

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WEB_CITE CITY

A comprehensive collection of the leading transportation, logistics, and technology sites for streamlined supply chain solutions.

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BUILDING THE NEXT-GEN WAREHOUSE THROUGH DATA COLLECTION AND AI

As supply chains transition from cost center to competitive differentiator, warehouses have to optimize and gain efficiencies by improving data collection

and leveraging artificial intelligence. Here's how to complete the transformation. bit.ly/nextgenwarehouse



E-COMMERCE ON THE LINE: SOLVING THE USPS DILEMMA

As its largest division—first-class mail—declines, the United States Postal Service faces a rocky future. Will privatizing save the USPS or will it end up hurting e-commerce delivery? Does

the best solution involve a hybrid approach?
bit.ly/savingtheUSPS



THE SECRET TO COMBATING THE HIDDEN COSTS OF DETENTION TIME

Detention time—defined as longer than a two-hour wait at the dock—has plagued the trucking sector for years, with serious consequences for both

shippers and drivers. Don't wait for the solution; here's one now. bit.ly/detentioncosts

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CHECKING IN



by Keith Biondo | **Publisher**



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Singularity: Shape-Shifting Self-Aware Supply Chains?

Defining the terms in that headline requires a detour to an imaginary future:

Singularity—The idea that there will be a point certain when Artificial Intelligence (AI) abruptly triggers “runaway technological change” without any human input.

Shape-shifting—A being able to transform its form, shape, and especially abilities, to perform tasks outside of its capabilities or to face a new challenge.

Self-aware—When a machine begins to think for itself without programming, cognition. In sci-fi terms, it “comes alive.”

Recent AI advances indicate that self-aware, or cognitive supply chains, may be closer than we think. Managing those supply chains will require not only a good grasp of best practices, but also these skills:

Persuasiveness. Great supply chain managers motivate the team to change, stay agile, perform to customer expectations, nurture vendors, and schmooze customers. Could a shape-shifting self-aware AI supply chain do that? Maybe. An AI system with a voice recently came close to beating a world-class debater in a competition. The machine listened, gathered facts, made a case, and met the human’s points with strong rebuttals. The machine lost the debate, for now.

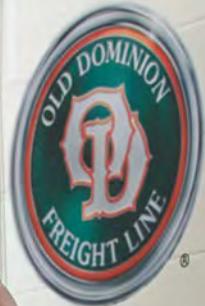
Improv. SC managers need to improvise quickly every day to deal with innumerable variables. Here’s a new development. An AI-driven computer won at chess without pre-programmed gambits from past masters. AI had only the rules of the game and it improvised strategy and moves on the fly.

Even more complex than chess is the Chinese game “Go.” AI player AlphaGoZero became a Go master in just three days by playing 4.9 million games against itself and learning from bad moves. “In a short time, AlphaGoZero understood all the Go knowledge that humans have accumulated over thousands of years,” says Google researcher David Silver. Just tell AI the business rules, er, the rules of the game, and get out of the way.

Learn from mistakes. We call that experience and it looks like AI has it too.

Continuous education. Instead of programming in the real world, a robot dog called ANYmal quickly learns tricks by working out new actions in the virtual world. Because the virtual training regimen was sped up 1,000 times, results were achieved quickly and inexpensively and can be taught to thousands of ANYmals at one time. Just like supply chain courseware, right?

Did I say imaginary? At what point will all these pieces fit together and AI will wake up and do your job? The next 10 years? A far-off AI nightmare? No one can or will stop “progress.” More likely is that as supply chains become more self-aware or cognitive, and the world truly becomes your warehouse, so too will we evolve. Convergent evolution between humans and AI is one way. ■



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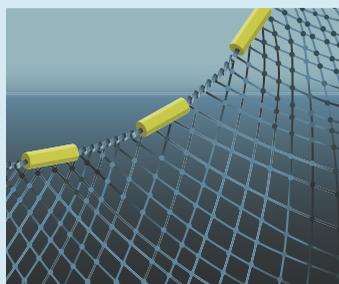
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*Source: 2018 Mastio & Co. National LTL Carrier Report

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What's the first thing you would do to address the supply chain talent gap?



Cast a wider net. Recruit graduates with non-traditional degrees. Work with vocational schools to create two-year-degree supply chain programs. Perhaps even create near-shore supply chain centers of expertise.

Andrew Kirkwood
Chief Executive Officer
BluJay Solutions

Empower people from within.

Whether it's hiring an internal training leader or partnering with an outside provider, investing in the right skills training is critical.

Ben Green
Director of Human Resources and
Corporate Services
LeanCor Supply Chain Group

Change the buzz around supply chain to make it sexier and more inviting to potential talent. Make sure they understand it's a key determinant of enterprise success.

Guy Bloch
CEO, Bringg

focused on big data and machine learning draws talented people with different skill sets.

Dan Curtis
President
BNSF Logistics

Revise the curriculum at trade schools and universities to match what industry is asking for in recruiting actions. Doing this will enable schools to better meet the needs of industry with qualified candidates.

Joe Walden
Lecturer
Supply Chain Management
The University of Kansas

Dispel misconceptions about jobs in supply chain and logistics. No other industry is able to provide such a vast array of opportunities at every level.

Robin Siekerman
Vice President, Marketing and
Customer Solutions
The Shippers Group

Develop a relationship with the supply chain/logistics program at your local community college to draw talent with tactical planning and implementation skills.

Rex Beck
Professor
Business Logistics Management
Norco College

Invest in a robust recruiting effort to attract young talent from universities and develop supply chain internship programs to build a network of talent. Creating interesting jobs such as ones

Increase awareness of supply chain career opportunities among people of all profiles and backgrounds—particularly younger generations and women.

Abe Eshkenazi, CSCP, CPA, CAE
CEO, ASCM

Have a great answer to a good question?

Be sure to participate next month. We want to know:

What's one supply chain/logistics myth or misconception you'd like to debunk?

We'll publish some answers. Tell us at editorial@inboundlogistics.com or tweet us [#ILMagazine](https://twitter.com/ILMagazine) [#ILgoodquestion](https://twitter.com/ILgoodquestion)

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DIALOG

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DROP US A LINE:

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Quick TIP

Expect more surcharge announcements in 2019 from FedEx and UPS. Monitor your invoices carefully and regularly as these surcharges are typically posted on each provider's website with only a short lead time.

— John Haber

CEO & Founder, Spend Management Experts on FedEx's increased fuel surcharges on ground and express domestic service



Re. Should the United States Postal Service be privatized? Why or why not?

bit.ly/USPSnextmove

Yes. Europe has privatized most of its postal service. We just need to guarantee rural and poorer areas will continue to be serviced. A privatized system will drive out inefficiency and reflect the true cost of the service. Most certainly Saturday delivery would be eliminated except for an additional fee.

— Rob Hopper

CEO, Atlantic Logistics

Re. Disrupting the Future of Grocery Retailing

bit.ly/groceryretail

Author Brittain Ladd is 100% correct: Picking from stores is not efficient.

One way to solve the last mile is a fixed-schedule bus line. You manage expectations and deliver operationally and consistently. You establish a route and build density. Your customers know their groceries will be delivered at specific times.

The grocery retailer that wins the war will create a hybrid model of both stores: curbside and home delivery. The goal is to create penetration with existing customers. Make them more loyal to your brand and pick up market share by delivering convenience and consistency.

— Jim Barnes

jbarnes@envistacorp.com



Re. Collapsing High Container Costs

bit.ly/collapsible_questions

This article tackles the global shipping sector's \$30-billion problem—empty containers—and suggests a novel solution: collapsible containers. One reader asks the author:

- What kind of costs would collapsible containers create related to extra labor building and breaking them down at the port or ramp?
- How would this impact time spent at the port for ships and trucks?

NICHOLAS New costs may be incurred as part of realizing an overall savings. For example, rolling out a new, automated assembly line takes time and money, but the savings and accountability it can generate over the long term make it appealing for the industry.

An evolution on the standard to collapsible containers offers a reduction in traffic across the wider shipping and logistics network and a decrease in the overall burden on infrastructure.

When we consider the industry's focus on environmental impact and profitability, the collapsible container offers an opportunity as part of a wider approach to decrease costs and CO2 emissions by reducing ship, truck, and rail movements, as well as minimizing handling as part of the management and repositioning of empties.

— Nicholas Press

Managing Director and CEO, CEC Systems

Editor's Note

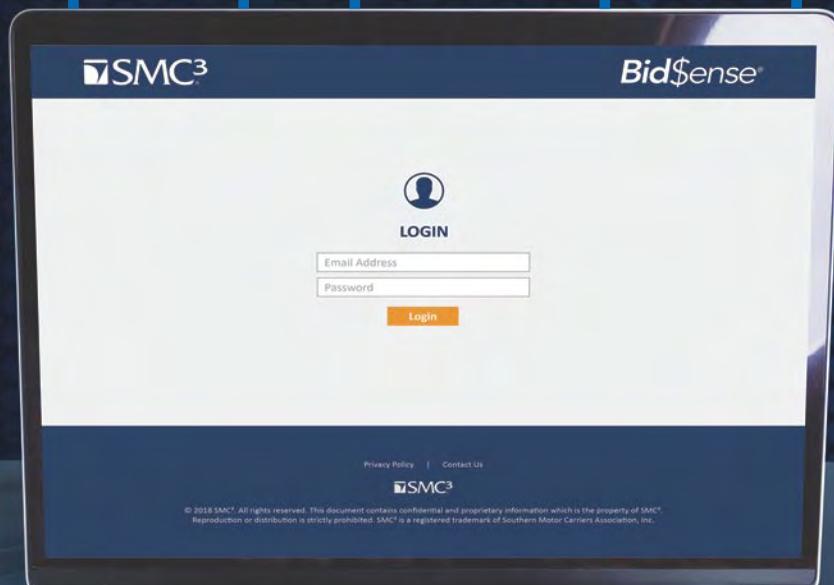
In March 2019, *10 Tips: Optimizing a 3PL Partnership* should have been attributed to Perry Belcastro, Senior Vice President-Operations, Saddle Creek Logistics Services.

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10 TIPS

Securing Truckload Capacity

2019 promises continued growth and above-average truckload demand. While there are no shortcuts to fixing the capacity gap, shippers can take steps to ensure their freight moves on time.

1 CREATE A CORE CARRIER PROGRAM.

Establish relationships with large providers who can help you with a run-up in demand and regional carriers who have a compelling value proposition in the markets they serve.

2 SCHEDULE QUARTERLY TOUCH POINTS.

Ask carriers to be intentional with their objectives. Agree on measurable service benchmarks and meet quarterly to discuss performance and strategy.

3 BUILD LONG-TERM RELATIONSHIPS THAT TRANSCEND MARKET CYCLES.

Carriers want to create stable, long-term relationships with shippers, so establish yourself as a good business to work with.

4 BE INTENTIONAL WITH BID OBJECTIVES.

If you plan to bid your network, be direct about your intent. If you want to improve your cost to serve, ask carriers to help identify opportunities to decrease inefficiencies.

5 KEEP BIDDING ROUNDS TO A MINIMUM.

Establish a streamlined bidding process that allows for more upfront understanding of your needs and the carriers' capabilities. Holding multiple bidding rounds, especially when there are no consequences associated with each round, enables carriers to hold back their best rates until later in the bid. This is time-consuming and inefficient for both shipper and carrier.

10 TAP YOUR THIRD-PARTY PROVIDER'S RANGE OF SERVICES.

Warehousing, fulfillment, transportation, value-added services, technology—the more you can obtain from a single provider, the more seamless, scalable, and cost-effective your supply chain will be. Centralizing the logistics function helps to ensure that you provide consistent service and offers better predictability and reliable deliveries. If getting closer to your customer is a priority, consider leveraging your provider's facility network.

6 ESTABLISH NETWORK CONSISTENCY.

Carriers value consistency. If you're happy with the overall relationship, provide incumbents with an opportunity to keep that freight.

7 USE MULTIPLE MODES TO MAXIMIZE CAPACITY.

Different transportation modes provide solutions to different needs. Consider how those modes can work together to create a successful shipping model. For instance, intermodal is best for hauls of longer than 450 miles that have transit time flexibility, while dedicated is best for service-sensitive lanes in high-density markets, DC-to-store, and first-mile/final-mile deliveries.

8 BE A SHIPPER OF CHOICE.

With the implementation of electronic logging devices, all carriers have access to data about your shipping processes. Freight characteristics, velocity, and utilization matter. Carriers will price in your network's inefficiencies, so identify them and work to improve them.

9 FOCUS ON THE DRIVER.

Keep drivers productive and satisfied. Provide driver amenities such as restrooms, break areas, and parking to make your locations more desirable. When a driver is on the clock, so is everyone in the supply chain. Making this a positive experience is a priority.



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STEEL



3 QUICK QUESTIONS

Transporting steel requires specialized expertise. To get the lowdown, *IL* spoke to Ben Goldberg, president of JIT Warehousing and Logistics, a Savannah, Georgia-based logistics services provider.

1 What are the different types of steel shipments?

Steel imports move via break bulk, and exports or domestic shipments are transported by rail. Both imports and exports move in containers.

2 What are the best practices for securing various types of steel?

The best practices depend on the type of steel and its final use. As an overview, though, you can secure steel shipments with chains and binders, ratchet straps, blocking and bracing, coil racks, load lock bars, and straps.

3 What specialized equipment is needed?

Most steel shipments are transported via flatbed trucks. In these cases, use coil racks, chains, and binders to secure the cargo, and use tarps to cover and protect it. Softer products require edge protectors and ratchet straps. Van loading requires load lock bars, wooden floor bracing, and straps for security.

AUTO INDUSTRY STEELS THE SHOW

As the automobile industry moves to keep up with shifting consumer expectations, safety regulations, and Corporate Average Fuel Economy standards, certain types of steel use are expected to grow considerably. They include:

- **Advanced High-Strength Steel (AHSS)**, which allows automakers to give consumers the body strength they want in their cars and help the environment at the same time. Studies indicate that applying AHSS throughout vehicles nationwide could reduce greenhouse gas emissions from automobiles by 12%.
- **Cold-rolled steel**, which is used in exhaust, boss mounts, and door hinges, among other elements.
- **Cold-drawn steel**, which is pulled through dies at room temperature during the forming process, typically includes components involved with fuel injection or for exhaust systems. In some cases, cold-drawn steel is utilized in seats and one-way clutches.

—ThomasNet



The body of the 2019 Kia Forte is made up of 54% AHSS.



THE FUTURE AFTER STEELMAGGEDON

With U.S. steel capacity set to increase by 20 percent around 2022, the pending “steel glut” will push down prices for steel commodities. The result? A situation Bank of America Merrill Lynch has coined “Steelmagedon.”

As the industry tries to restart capacity that was shuttered during the 2008-2009 downturn, a second wave of additions and upgrades is predicted to hit as steel mills continue to expand.

Steelmagedon will likely impact the transportation industry in a major way. To understand what those

effects will be, it’s crucial to remember not all materials are created equal.

Producers need to be put into categories. One contains

“THE U.S. DOMESTIC STEEL INDUSTRY WILL LIKELY EMERGE WITH A SMALLER, MORE EFFICIENT FOOTPRINT.”

older, larger, integrated mills that are designed to maintain higher inventories of finished goods. The other contains newer, smaller, electric arc furnace mills, also known as “mini-mills.” These produce a narrower range of products and utilize more efficient technologies.

Though all mills will likely be impacted when excess capacity hits, experts say the U.S. steel industry will likely emerge with a smaller, more efficient footprint as mini-mills take over.

If this new capacity is successful, some steel producers will be forced to take potentially aged and inefficient capacity offline. This purge of capacity will ultimately drive a leaner, more streamlined steel industry.

Flatbed and specialized transportation shippers count on carriers to move their products effectively.

Many manufacturers have been through multiple pricing fluctuations. If businesses structure their supply chains to be efficient, regardless of pricing environments, they’ll feel less of an impact associated with the looming steel commodity swings.

— Andrew Houser

Vice President of Business Development, Daseke

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LEADERSHIP

Conversations with the Captains of Industry

On-Demand, One Package at a Time



*Victor Finnegan
President and CEO,
American Expediting*

From launching a taxi service in the 1980s to running American Expediting today, Victor Finnegan puts his entrepreneurial spirit and business expertise to work to provide any kind of service a customer needs.

by Merrill Douglas

Victor Finnegan entered the delivery business in the 1980s while running a small taxi service in Philadelphia. He sometimes used his cabs to deliver packages, but his drivers didn't like that kind of work. "Packages don't tip," he explains.

Soon, Finnegan replaced his Silver Top Taxi service with Silver Top Delivery, using a squad of bicycle messengers to handle the shipments. Silver Top evolved into American Expediting, a time-critical, on-demand transportation service that now operates throughout the United States. Finnegan talked with us about his industry and business, future plans, and leadership style.

***IL:* You earned an undergraduate business degree at the Wharton School, but where did you gain the practical knowledge it takes to become an entrepreneur?**

From the age of 14, when I started working, I was always interested in how businesses tick. I was a sponge for that kind of knowledge: What's the nature of the relationship between the customers and the business? It was common sense and learning by doing, making mistakes along the way and getting better at it. Business is about people—how you interact with customers, staff, and vendors.

***IL:* Was there an early experience that shaped you as a leader?**

In jobs I held prior to starting my own business, the people I reported to were not good managers, or good people. Their decisions were arbitrary and self-serving. They had no desire to motivate employees or treat people fairly. I promised myself that in my business, we would never allow employees to be harassed, put upon, or treated unfairly. We would make decisions that were not arbitrary, but objective.

***IL:* Has your business gone through any growing pains?**

In the late 1980s, American Expediting had three offices and I decided to open three more, in Princeton, New Jersey, Wilmington, Delaware, and New York City. I was thinking more with my ego than with my business mind, and things turned out badly.

For example, before opening the New York office, I had a manager on board who had worked for a competitor. But when I opened my doors, the manager failed to show up for work. He just decided he would continue to work for my competitor. The customers I had lined up didn't come on board either.

I realized I needed to think more carefully and be more vigilant in assessing who I dealt with. I ended up closing Wilmington and Princeton and selling the New York operation. Several years later, when I decided it was time to expand again, I benefitted from the lessons I had learned from some of my poor decisions.

IL: How has your business changed over the years?

When I started, this was largely a document delivery business. Our customers were typesetters, advertising agencies, law offices, and printers, including financial printers. With the advent of the fax machine, and then electronic communications, much of that business disappeared. At the same time, fax and email got people used to thinking, “I need this today.” So those technologies sparked a different kind of demand for courier services.

Today, much of what we do is related to life sciences, serving the needs of hospitals, long-term care facilities, and pharmaceutical companies. Also, while we no longer transport too many documents, we move heavier items—manufactured goods, finished products, work-in-progress. About half of what we do serves the needs of other logistics providers, with services for expedited, customer-specific, detail-oriented moves.

IL: What’s the difference between the service you provide and overnight service from package carriers?

We provide any kind of service a customer needs, whether it’s an immediate pickup with immediate delivery and no stops in between, or a pickup at a certain time with delivery to a specific individual—not to the mail room, the loading dock, or a receiving area. This is way too much detail for carriers that consolidate packages. We handle one package at a time.

IL: Has American Expediting handled any unusual deliveries?

One customer had us drive a giant football helmet to different stadiums as part of an NFL promotion. The helmet was big enough to put on a trailer; we used a truck to pull it around the country.

IL: What’s at the top of your agenda at American Expediting?

We want to continue to expand geographically. We currently have 40 of our own company locations, plus more than 300 delivery agents. This allows us to service the whole country, including Alaska and Hawaii. We’re also investing a lot of time and money in our quality programs. When things don’t go well, we

For Art’s Sake

Ask Victor Finnegan how he likes to spend his time outside of work and he hesitates over the answer. “I work a lot,” he explains. “I enjoy what I do, and I’ve invested a lot of time in this business over the years. I don’t spend time on a lot of other activities.”

But Finnegan has done volunteer work and was a runner for a long time. And he acknowledges one passion that doesn’t involve speeding shipments from origin to destination.

“I collect art,” Finnegan says. “It’s a diverse collection. I started out with art nouveau and moved to modern masters, then contemporary art. More recently, I’ve gotten into urban art. My office and home are filled with artwork.”

need to understand the root cause and figure out how to prevent that from happening again. We became ISO 9001 certified in 2018 and recertified in 2019.

IL: What are your most important characteristics as a leader?

I appreciate that employees are different from one another. My team and I need to identify what’s best for these employees. What are their skills? How can they be fulfilled in their jobs? How can we create more opportunities for them to grow in the company?

I am responsible to my employees. I have supplied health insurance from the time I hired my second employee. I started a profit-sharing plan in the 1990s, which has transitioned to a 401K, because I did not want a company where employees would spend 20 years or more of their lives with nothing to show for it.

IL: Describe the corporate culture at American Expediting.

We handle a lot of important items, especially in life sciences. We deal with people’s lives and we take that very seriously. We’re proud of running this business professionally and fairly. We value the customer, and our desire to serve the customer is paramount.

IL: Which aspect of your job is most fun?

It’s organized chaos. A lot of balls are in the air at any time, and it never gets boring. We handle thousands of packages every day, and there are a lot of moving parts. Things can go wrong, but when things go well, it’s always exciting. ■

READERPROFILE *as told to Karen Kroll*

Leading a Supply Chain With Dogged Determination



MATT CANTATORE is chief operating officer of Ollie, a national service that sells healthful, high-quality pet food direct to consumers.

RESPONSIBILITIES

Oversight of day-to-day operations, including sourcing, supply chain management, fulfillment, logistics, and customer service. Also an executive team member responsible for recruiting, goal-setting, and managing the P&L.

EXPERIENCE

Director of operations, Blue Apron; analyst, Morgan Stanley.

EDUCATION

Bond University, Australia, undergraduate degrees in business and law, 2008; Wharton Business School, MBA, 2014.

When I joined Ollie, I was a team of one and we shipped about 100 boxes every week from 1,000 square feet in the back of our co-packer's building. Today, we ship thousands of boxes every week and operate distribution centers in Pennsylvania, Nevada, and Oklahoma.

We've built a cold supply chain that's as responsive as the Amazon Prime network, and deliver across the continental United States within two days. The complexity of building a supply chain of that scale in such a short time has been both challenging and exciting.

Ollie sells human-grade pet food that also meets human-grade sanitation and food safety standards and requires refrigeration. Our customer base is centered around 10 metro areas where refrigerated space is costly and tough to

come by. Freezer space is even more so.

We compete against companies that don't have to deal with refrigeration, so our cost structure differs. I'm part of an incredibly strong team that has built a cold supply chain that also allows us to be profitable. Developing a profitable cold supply chain has been a challenge we're proud to have overcome.

To boost efficiency, we've leveraged our business model. As a direct-to-consumer business, we take a data-driven, customer-centric approach. We seek out feedback, listen to our customers, and ultimately deliver products we feel confident they want. For instance, we launched our Ollie snacks line in response to significant customer demand.

As this approach shows, our supply chain and marketing are tightly linked.

Matt Cantatore Answers the Big Questions

1 How would you describe your job to a 5-year-old?

We make delicious food that dogs love to eat and we're trying to put that food in every dog's bowl around the country.

2 What book has left a significant impression?

The Oz Principle: Getting Results Through Individual and Organizational Accountability. It shows how excuses count for little and results drive success.

3 What words do you try to live by?

This quote by George Bernard Shaw: "The reasonable man adapts himself to

the world; the unreasonable one persists in trying to adapt the world to himself. Therefore, all progress depends on the unreasonable man."

4 What kind of kid were you in high school?

I grew up in South Africa then moved to Australia, so I was the kid who was friends with everyone. One day at lunch I'd sit with one group of people, and the next day I'd sit with another group. That experience has permeated my professional career as well. I enjoy interacting with people across the organization.

For our supply chain to be as efficient as possible, we have to target the right customers and retain them.

Ollie works with a national carrier that's the backbone of our logistics operation. We also use regional carriers in major metro areas where they tend to have high service levels. We continually think about the future of our logistics operations. For instance, we're considering a more immediate kind of logistics network, such as a courier service, in some major metro areas.

Like many people coming out of business school, I was choosing between a corporate development role and an operations role. I've always had a huge interest in hands-on building, so operations felt like an area where I could both have a successful career and do something I was interested in.

At Blue Apron, I worked my way up to overseeing a fulfillment center with responsibility for about 2,500 people. I also helped build the proprietary optimization software and processes that

drove a lot of its operational success. It was an incredible experience.

Then I reconnected with one of the co-founders at Ollie just as they were looking for a head of operations. It felt like a great opportunity to take on a new challenge and even broader set of responsibilities.

In operations, I'm at the forefront of all the major decisions in the business. It has been an amazing journey. I'm very excited to keep going on that journey and to see where Ollie is going as well. ■

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The Customer

The Customer

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Service

Service

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NOTED

The Supply Chain in Brief

> UP THE CHAIN

Covetrus, a Dublin, Ohio-based global provider of animal health technology and services, appointed **Matthew Leonard** as executive vice president, president North America, and global supply chain officer. After more than two decades of service at Covetrus, Leonard now leads North American customer operations and manages the company's global manufacturer relationships.

> SHOVEL READY

To bring products closer to its customers, **Shell Lubricants** is opening a new distribution center in Pittsburgh, Pennsylvania. North American 3PL provider **Kenco Logistics** will manage the 455,000-square-foot facility.



m&a

NFI Industries, a supply chain solutions provider, bought **SCR Air Services**, an intermodal-focused brokerage company.

Alliant Energy Transportation, a subsidiary of Alliant Energy Corp. that provides freight services, purchased **Business Transportation Solutions** and **Hybrid Transit Systems**. Both companies are transportation brokers.

The Rhenus Group, a logistics service provider, acquired Canadian-based customized logistics solutions specialist **Rodair**.

Symbia Logistics, a warehousing, logistics, and e-commerce fulfillment company, purchased **iD Commerce + Logistics**, a third-party logistics and e-commerce fulfillment provider.

Canadian National Railway Company acquired Manitoba-based **TransX**, one of the oldest trucking companies in Canada.

> GREEN SEEDS

CMA CGM, the **GoodShipping Program**, the **Port of Rotterdam**, and **IKEA Transport & Logistics Services** have joined forces to test and scale the use of sustainable marine bio-fuel oil. First used in a CMA CGM container vessel in March 2019, the bio-fuel oil is derived completely from forest residues and waste oil products.



> MILESTONES

Schneider's bulk division celebrates 50 years of specialty chemical and liquid freight transportation services. The trucking, intermodal, and logistics services provider entered the bulk shipping sector in 1969 with the acquisition of Kampo Transit.

NOTED

> SEALED DEALS

American Dairy Queen Corporation implemented supply chain visibility software provider **ArrowStream's** Quality Incident Management solution. This solution will help Dairy Queen increase the transparency of, and quickly resolve, quality issues with its suppliers and distributors.



Yunnan Baiyao Group, a Chinese pharmaceutical and health care company, selected **Manhattan Associates'** warehouse management system (WMS) to optimize its digital supply chain and the next phase of its growth strategy. Manhattan's WMS will help the manufacturer manage distribution while ensuring compliance with production and traceability regulations.

Organic frozen food brand **Ruby Rockets** and reverse logistics service company **Segue** are among the first to use **Omnichain's** SaaS-based blockchain supply chain management platform. Ruby Rockets is using the solution for a more transparent view of its dairy-free popsicle inventory across all channels, while Segue uses it to improve vendor visibility and insight into products in the reverse logistics pipeline.

> RECOGNITION

• Dollar General presented **Werner Enterprises**, a transportation and logistics provider, with three awards: **Dedicated Carrier Partner of the Year**, **Site of the Year**, and **Serving Others**. Werner earned the awards through excellent communication, flexibility, and commitment.



Mark Taylor of Dollar General presents award to Werner's Jim Waszak.

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TAKEAWAYS

Shaping the Future of the Global Supply Chain

5 INSIGHTS TO INDUSTRY 4.0

Nearly all middle market manufacturing executives are at least moderately familiar with Industry 4.0, according to BDO's *Middle Market Industry 4.0 Benchmarking Survey*. But while more than half (54%) have either developed or are in the process of developing an Industry 4.0 strategy, only 5% are currently implementing one. Another 25% plan to develop an Industry 4.0 strategy, but have yet to get started.

Additional findings:

1. Business model diversification tops Industry 4.0 goals.

Middle market manufacturers know that Industry 4.0 has the potential to transform their business. As they look beyond their immediate needs and toward tomorrow's digital future, most (71%) are prioritizing business model diversification above all else. This suggests a fundamental shift in customer demand that the traditional manufacturing toolset can't meet. Improving operational efficiencies and increasing market penetration tie as the second most-cited goals, at 67% each.

2. The biggest barrier to implementation is poor communication.

Successful Industry 4.0 adoption requires collaboration between functional areas of the business that have historically operated in silos, such as information technology and operations technology. Two in three executives view poor communication as the biggest barrier to successful Industry 4.0 implementation. Rounding out respondents' top five implementation barriers are interoperability with legacy technology (64%), lack of skills or insufficient training (63%), lack of leadership and vision (60%), and underinvestment (54%).

3. Industry outsiders pose the greatest threat.

Even without manufacturing roots, a technology upstart has the potential to disrupt manufacturing, whether through hyper-customization or transforming the economics of production. As a result, middle market manufacturers are most concerned (69%) that failure to adequately invest in Industry 4.0 will lead to encroachment from non-traditional competitors.

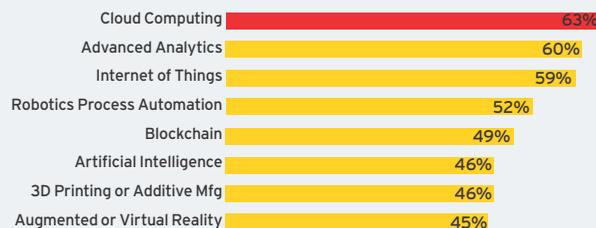
4. The digital thread is more theory than reality.

In an idealized Industry 4.0 world, supply chains become the digital thread—integrated value chains with end-to-end traceability and transparency, enabled by the constant, bi-directional flow of information. Most middle market manufacturers, however, aren't there yet. While just 7% of respondents say their data is totally siloed, pointing to increased information sharing internally, only 6% claim they have transparency across the entire value chain.

5. Industry 4.0 is creating jobs.

While 63% of middle market manufacturers plan to leverage third-party outsourcing solutions to support Industry 4.0 enablement, more than half (57%) plan to hire new talent. To close knowledge gaps within their existing talent pools, 60% are implementing training to upskill current employees.

WHAT ADVANCED TECHNOLOGIES ARE MANUFACTURERS USING NOW?



THE BEST OF BOPIS

Shoppers rank The Home Depot, Best Buy, Bed Bath & Beyond, Kohl's, and Target the highest in overall buy online, pickup in store (BOPIS) experience, finds an OrderDynamics, Bell and Howell, and IHL Group study.

The report is based on feedback from secret shoppers who rate their experience in the three phases of BOPIS: online purchase, notification, and in-store pickup.

Among the findings:

- **Platforms:** 61% of shoppers used a PC and 39% used a mobile device to make online purchases. Of shoppers using mobile devices, only 29% used a retailer's app.

- **Timeliness:** Shoppers notified within four hours were 19% more likely to use the service again, and 15% more likely to recommend the service to others.

- **Automation:** Retailers using automated pickup saw a 28% improvement in pickup time speed.

TAKEAWAYS

Japan Tests Self-Driving Delivery System

Robot maker e-Novia is testing a self-driving delivery system in Japan to service the areas hit by the 2011 Fukushima earthquake.

e-Novia made its first test delivery in the city of Minami Soma with Japan Post, choosing YAPE, the self-driving delivery system made in Italy, as the provider for the tests.

The first phase of testing alternates indoor and outdoor sessions in the public buildings constructed for those displaced by the Fukushima earthquake. This trial represents the starting point for a potential long-term collaboration with Drone Future Aviation and Japan Post. As a result of these new tests, YAPE will evolve some of its features, including its suspension suitable for any type of road surface, load capacity, and thermal insulation for food delivery.

YAPE plans to continue its evolution during 2019, with other project initiatives in the United States (tests in mass market retail outlets), in Europe (food delivery), and in Italy.

WHAT IS YAPE?

Designed and built in Italy, YAPE, an acronym for Your Autonomous Pony Express, is the first autonomous electric vehicle for urban delivery. Its characteristics make it particularly suited for moving in the tight, irregular spaces of Italian and European city centers, both on the pavement or in bike lanes. YAPE travels on two wheels with autonomous electric motors that minimize energy consumption, while maximizing agility and allowing it to rotate on the spot and overcome obstacles.



The YAPE ecosystem is founded on a control platform that lets users, via an app, summon the robot to their house, for example. Users place a package weighing up to about 66 pounds into the holder and input the recipient's details into the app. The address can also be determined automatically by the recipient's GPS position if they are registered on the platform.

A system of credentials in the sender's and recipient's smartphones certifies the pickup and delivery of the package. The credentials also ensure the package holder is opened only by people authorized by the platform, whose identity is verified by the robot.

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TAKEAWAYS

Electric Truck Market Powers Up: 1.5 Million by 2025

The global market for electric trucks is expected to climb to more than 1.5 million vehicles by 2025, according to a P&S Intelligence report.

Declining battery costs, lower maintenance costs, and government incentives and other regulations supporting the electric truck sector will fuel the growth, the report notes. Growth in freight transportation and an increase in demand for long-haul, heavy-duty trucks also play a role.

In the coming years, the market for long-range trucks is expected to grow faster than for low- and medium-range trucks, and the heavy-duty segment will climb more quickly than its light- and medium-duty counterparts.

The increasing demand for more fuel-efficient trucks primarily stems from the United States, Europe, and other developed economies. To meet these needs, manufacturers are investing in new technologies, particularly hydrogen fuel-cell systems.



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— W. Edwards Deming

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99% of supply chain leaders say advanced supply chain analytics will be critical or more important in 1-2 years.

82% of logistics IT providers say visibility is the biggest obstacle that their customers face.

70% of enterprises want business intelligence tools from their freight auditor.

Sources: Forbes, Analytics Will Revolutionize Supply Chains In 2018; Inbound Logistics, 2018 Top 100 Logistics IT Providers & Market Research Survey; American Shipper, 2016 Transportation Payment Benchmark Study.

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TAKEAWAYS

NEXTGEN FOR INDUSTRY AWARD WINNER

LEON SPENCER: OIL'S WELL THAT ENDS WELL

Leon Spencer III, Gulf of Mexico upstream logistics analyst for Deep Water Projects at Shell Oil Co., was recently recognized with a Thomas NextGen for Industry award.

Spencer's supply chain journey, albeit inspiring, was not always clear. In fact, he began his college education at Texas Southern University as a pharmaceutical major. However, it didn't take long for him to realize he was destined for something different. Eventually, Spencer settled on a biology and chemistry major, though he maintained a passion for business and leadership.

Once he graduated, Spencer was eager to start his career—he just didn't know how. As fate would have it, he wound up at a presentation at the University of Houston-Downtown about supply chain management, where he recognized his calling. "When I was listening to the presentation, the only thing I heard was opportunity, opportunity, opportunity," he says.

To get the ball rolling, he enrolled in the University of Houston-Downtown to earn his MBA. Although he knew such a radical career change would not be easy, he was determined not to fail. He made good on that promise. During his second collegiate go-around, he kept his GPA high, latched on to as many internships as he could, and built up his resume.

In 2017, his hard work paid off. Spencer landed his current position with Shell, handling a wide range of material and personnel movement tasks. Primarily, he "supports personnel movement operations out of the company's Galveston heliport to one of Shell's assets in the Gulf of Mexico.

"Day-to-day consists of stakeholder management, forecasting, planning, executing, and mitigating operational issues," Spencer adds.

Spencer notes that "every day is a challenge and something different." Because of this, many of his responsibilities depend on "quick, agile decision-making," he says.

Spencer cites his first major accomplishment at Shell as his biggest career accomplishment to date. During the first six months in the role, Spencer identified about \$600,000 worth of savings, and proved himself a savvy supply chain thinker. Since then, Spencer has produced more than \$16 million in savings.



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TAKEAWAYS

Planning for Unplanned Spend



2017 and 2018 saw an uptick in unplanned spending as companies struggled with new trucking regulations, brutal weather, and tariff changes.

Original equipment manufacturers (OEMs) have high expectations of suppliers, pushing them to comply with production requirements. But because life is unpredictable, suppliers may fall behind on component production. If suppliers don't meet their deadlines, and then market conditions present further delay, unplanned spending becomes a necessary evil to make the cut.

For most suppliers, merely getting by is as good as it gets. They have just-in-time inventory, holding a small amount of goods on site. But this approach is more than risky, particularly when transportation choices are limited, the weather is torrential, or the market is working against you. When any of these things happen, expediting materials is often the sole avenue of recourse, especially if avoiding missed-deadline fines is the only way to protect your bottom line.

Because the industry is so fickle, many suppliers simply aren't in a position to increase their budgets to accommodate "what-ifs." Some suppliers have blown through their entire annual logistics budget before they get out of the first quarter, simply from whatever conditions have caused them to have to expedite or operate from an unplanned spend perspective.

– Greg Scheevel

*Director of Global Development,
TOC Logistics*



dexFreight Offers Early Bird Special

U.S. shippers, carriers, brokers, and forwarders interested in receiving exclusive access to early release versions of the dexFreight decentralized, blockchain-based logistics platform, can participate in the company's Early Adopters Program.

The dexFreight platform provides supply chain stakeholders with an efficient solution

for transparent and secure transactions and collaborations. The Early Adopters Program will allow the company to utilize real-world logistical expertise to evaluate the platform's new and advanced features.

Participants will have free access to the platform's basic features for three months and to advanced features at no charge when they first become available, and then at a discounted rate. They will receive early notifications about new features before they are offered to all platform users.

Currently, the dexFreight platform offers TMS/FMS integration, load and capacity matching, safety data, rate negotiation, accessorial selection, product and development scheduling, shipment tracking, navigation and communication, and payments built on blockchain technology from the ground up. Development plans include adding escrow services, tokenized invoices, rate forecasting, on-demand warehousing, load chaining, fleet optimization, bid preparation, and risk prediction features, as well as third-party apps.

NEW FREIGHT TRAIN COULD BOOST CROSS-BORDER E-COMMERCE IN CHINA

China is taking new steps to improve cross-border e-commerce, adding a new route to its China-Europe freight train service. The freight's maiden voyage was from Zhengzhou to Liege in Belgium.

The service, the first of its kind to depart from the capital of central China's Henan Province, operates under customs surveillance code 9610. China's General Administration of Customs added the code in February 2014, allowing e-commerce retailers to deliver goods separately and declare all imported and exported goods collectively.

The new service was launched to help alleviate cargo traffic and logistics tracking delays.

TAKEAWAYS

TECHNOLOGY LIFTS GLOBAL FORKLIFT MARKET

The global forklift truck market is anticipated to grow at a CAGR of 6.4% during the forecasted period of 2017-2024, according to Research and Markets' latest report. Technological advancement to help improve forklifts where they are integrated with sensors and other components, growth in manufacturing industries and e-commerce, along with rising demand in the construction industry, are the key drivers of growth.

Geographically, Asia-Pacific dominates the global forklift truck market due to rising urbanization and industrialization. Moreover, Japan, India, and China are the major economies in Asia-Pacific that contribute to the adoption of forklift trucks. Additionally, China's fast-growing e-commerce sector drives the demand for forklift trucks.

Rising adoption of electric forklift trucks is expected to fuel the market growth in the future. Asia-Pacific is expected to be the fastest growing region during 2017 to 2024.

Some key market players include Toyota Industries Corporation, Kion Group AG, Crown Equipment Corporation, Clark Material Handling Co., UniCarriers Americas Corporation, Hyster-Yale Materials Handling, Mitsubishi Nichiyu Forklift Co., and Anhui Heli Co. These companies are using various strategies such as expansion, mergers and acquisitions, collaboration, partnerships, and product launches to gain and hold large market share.

CHINA TURNS ATTENTION TO LOGISTICS

China is thinking logistics. To prioritize market growth, improve productivity, and reduce costs, the country plans to build 30 high-tech logistics hubs by 2020. By 2025, China predicts these hubs will include 150 devoted logistics facilities, according to China's

National Development and Reform Commission (NDRC).

Within the 127 cities qualified for the project, China will build inland harbors, cargo ports, airports, service-oriented ports, commerce and trade-oriented ports, and inland border ports.

The primary goal of these logistics hubs is to integrate automation into new ports and smart warehouses, and incorporate unmanned vehicles, robots, and drones into parcel-delivery processes.

Other priorities include providing a solid foundation for e-commerce and enabling express air and high-speed rail logistics, cold-chain processes, and cross-border delivery.

Among the qualified cities:

- SHENZHEN
- BEIJING
- TIANJIN
- NANJING
- SHANGHAI
- GUANGZHOU
- ZHENZHOU
- FOSHAN XI'AN
- FUZHOU



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Freight agents rely on technology to maintain the daily operations of their businesses. But how are they using data gathered from technology to drive growth? There are many different technology-focused tools available—some are widely used in the transportation and logistics industry, some are unique to the company a freight agent operates under—but all compile different datasets. If that data isn't being utilized properly or is challenging to understand, freight agents could be doing a disservice to future customers and limiting their company's growth potential. This is especially true for independent agents who own their businesses.

Forecasting & Planning

Every freight agent could benefit from using a business analytics tool that provides detailed data specific to their company's trends and performance metrics, ultimately giving freight agents the support needed to provide their customers with the best service. This data should help freight agents position their resources, review trends, identify opportunities to mature existing accounts, manage staff, and set tangible goals for new business. Additionally, it should be presented visually to make it as digestible as possible. Having the technology to collect and present the right data in a manner in which it can be used quickly is key.

Quick, Accurate Quoting

The process of developing a shipping quote for a customer can be very tedious for some freight agents. Several third-party sources have to be checked to give the most accurate pricing, unless the

freight agent has access to a pricing tool that pulls all of that information into one place. The less time a freight agent spends gathering and compiling pricing data to provide an accurate quote, the quicker the agent can develop a solution for the customer and get the shipment in transit to its destination.

Manage Remotely

A busy freight agent should be able to access the company's business tools anywhere, anytime. If ever in a situation where a customer has an immediate or emergency request, a freight agent should not have to worry about how to provide the best solution at a moment's notice. No matter what technology freight agents consider investing in, or have access to through the transportation provider they work with, it should be as mobile as they are.

No matter what technology freight agents consider investing in, or have access to through the transportation provider they work with, it should be as mobile as they are.

More Time to Focus on Your Business

Technology is supposed to make life and business easier, especially in a competitive market like the logistics and transportation industry. The less time a freight agent spends navigating numerous tools and trying to decipher complicated datasets, the more time they can spend focusing on the growth of their business and the needs of their customers.

The data-driven tools a freight agent uses should be quick, efficient, and user-friendly, and, most importantly, serve the needs of their business and customers. Whether operating on their own or independently under an agent-based company like Landstar, freight agents should know what technologies are available to them and how to use data to support the growth of their business.



Overcoming Supply Chain Challenges With TMS Technology



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Navigating today's supply chain challenges requires timely, accurate, and holistic visibility into a company's transportation operations. But that doesn't mean access to more spreadsheets containing old data; instead, success relies on a shipper's ability to view the entire network in real time and easily access critical, actionable information. Fortunately, today's transportation management (TM) platforms provide organizations with greater visibility, intelligence, and control over their supply chains than ever before. So, how can TM technology positively impact your operations?

■ A 360-degree view of your entire transportation network.

These advanced systems provide shippers with a comprehensive, graphical view of all shipments, along with dynamic dashboards comprised of key performance indicators (KPIs), such as on-time arrivals/departures, carrier performance, and more. Additionally, pertinent information from the web, including weather and traffic alerts, can be integrated with shipment data to deliver a "control tower" view, providing shippers with singular, all-encompassing, real-time access to their supply chains at all times.

■ **Greater intelligence through customized reports and dashboards.** These analytics enable key personnel at every level and function of an organization to access critical information when they need it. Senior management is provided a holistic overview of operations, while those responsible for day-to-day operations can receive more detailed data on carrier performance, delivery times, and more—helping them better understand how and why there have been fluctuations in service or cost. Greater supply chain visibility and access to data allow companies to be more proactive in their

transportation planning, compare final shipping results with the initial goals, and better understand how to adjust plans moving forward in order to increase efficiency, reduce costs, and enhance customer service.

While access to data can be beneficial, compiling large amounts of data simply for data's sake doesn't eliminate waste or improve service. What makes this information truly valuable is when it becomes actionable. The ability to view shipments in real time, as well as incorporate alerts from the web, allows shippers to use predictive analytics to make better, more-informed decisions; this enables them to proactively take steps to maintain smooth operations and high service levels during an event.

For example, if a storm is forecasted to a certain region, or capacity is tightening due to holiday surcharges, shippers can determine ahead of time whether their shipments are going to be delayed. But identifying a delay before it occurs is only the first step. Control tower functionality available in today's TM platforms then allows shippers to quickly and easily get real-time information on all affected shipments and take action, such as rerouting a shipment, reassigning the shipment to another carrier, or continuing on as planned. Shippers can then recalculate the new ETA and provide detailed, accurate updates to key personnel within their own organizations, as well as to their customers.

Technology That Works for You

As the supply chain continues to become faster and more complex, shippers need tools that enable them to make strategic, data-driven decisions. Today's TM technology gives shippers a comprehensive, real-time view of their entire network, along with access to valuable network and market data, enabling them to better optimize performance, reduce costs, and successfully navigate compounding market challenges.

Shippers need tools that enable them to make strategic, data-driven decisions.



The Impact of Technology on Trucking



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Trucking companies and fleet managers must incorporate emergent tech and process innovations to stay relevant and retain their competitive edge.

Traditionally, business models, processes and operations in the transportation and logistics industry have been defined by infrastructure and trucks. However, tech innovations have had a tremendous impact on the industry. The enormous amount of data generated by sensors and tracking devices and the technology to leverage them are pushing the trucking and logistics business to transform for competitive advantage.

Since technology will determine the present and future of trucking, stakeholders in the transportation and logistics industry should stay up-to-speed with new technological developments, including:

Ability to Leverage Data

The software products and systems (e.g. transportation management, order management, asset and fleet management systems, etc.) that run day-to-day trucking operations generate and store a tremendous amount of data. While older proprietary systems had this data locked in, advancements in technology have made it possible to access this raw data. APIs, web services, advanced data mapping and data streaming from the back door enable real-time data access for further processing.

Analytics and Optimization

Given the dynamic nature of businesses and complex business rules, products that leverage a one-size-fits-all approach are unable to deliver an optimal solution. Cost is one of the largest barriers of entry to customized optimization solutions. Advancements in solver technology like Gurobi, Frontline and Google optimizer have placed the world's best optimization algorithms within reach. Running complex analytics to identify what to optimize and then optimizing operations in real-time are no longer subject to prohibitive license costs.

Machine Learning

Although a machine can be trained to handle many mundane tasks that humans do today, training the machine would require access to a tremendous amount of data. Fortunately, reams of data are now readily available and accessible. This unlocks enormous potential for trucking companies to automate tasks and auto-heal or prevent problems.

AI can be used to correlate data from multiple sources, such as shippers, drivers, consignees, routes, dwell time, idle time, etc.—almost in real-time. Machines can now deliver automated decision-making capabilities on driver allocation, truck breakdown and optimal fuel stops. Chatbots can improve customer service by analyzing data from your TMS and GPS.

Cloud Computing

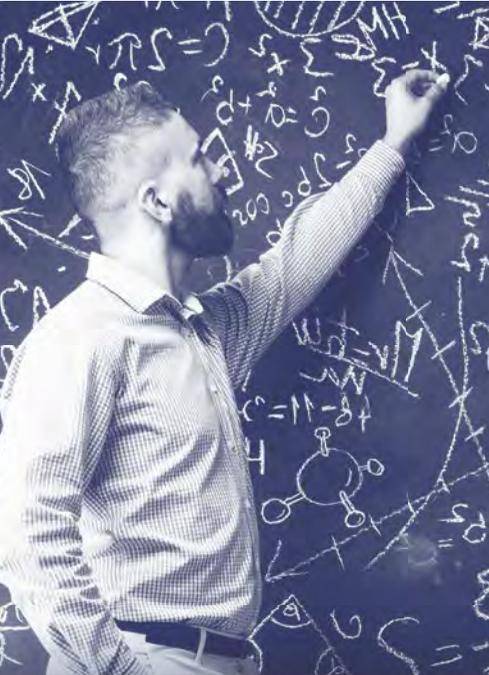
Availability of cutting-edge technology and access to infrastructure are some of the biggest barriers that small and mid-size companies face when embarking on complex technological initiatives. With the advent of cloud computing, all this has become both accessible and affordable. Leading cloud providers like AWS, Azure and GCP provide out-of-the-box machine learning capability and compelling analytics and visualization solutions. Moving to the cloud helps eliminate the cost of infrastructure and computing power.

Takeaways

- Always ensure you have access to your raw data while working with products and solutions on-prem or on the cloud. Not having access to your own data limits your capability to leverage these technologies.
- Don't shy away from a hybrid solution where you can plug and play or bolt-on best-of-breed solutions. You will never have a strategic technological advantage over your competitor if you both use the exact same product.
- Stop investing in upgrading old archaic legacy systems and relying on their product roadmaps. Take advantage of current fast-paced technological advancements.

The impact and benefits of emergent technologies can no longer be ignored. With technology driving the trucking industry into the future, trucking companies and fleet managers must incorporate emergent tech and process innovations to stay relevant and retain their competitive edge. Advanced technologies are no longer out of reach for any carriers striving to capture maximum profit from limited resources.

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[INSIGHT]

TRADE COMPLIANCE

by Rick Brumett

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Don't Gamble With Trade Compliance

Recent trends in tariffs, enforcement, and e-commerce shipping complicate the international trade landscape. To avoid significant fines, businesses must learn to dot every i and cross every t in the compliance process. Even existing allowances and privileges are being threatened, challenged, or taken away from shippers who violate trade regulations, creating an immediate threat to profitability.

Compliance has to be an ongoing process of assessment and evaluation. Companies should not assume that “no news is good news” or that even a clean history void of violations guarantees future compliance. Silence can breed false confidence. Instead, compliance requires due diligence.

THREE KEY ISSUES

Corporate executives need to focus on the top three issues of trade compliance as a best practice. First, know the tariffs that Customs and Border Protection (CBP) is imposing on goods imported into the United States and how to stay aligned with the ever-changing Harmonized Tariff Schedule (HTS) structure. This involves using an import management process as a financial control.

Second, focus on free trade agreements and plan for the potential of duty-free status disappearing from sourced goods. Executives need

contingency strategies to overcome the loss of or change to trade agreements such as GSP or USMCA. Elimination of a free trade agreement can add additional costs such as an ad valorem duty rate for each country across the product's supply chain.

Finally, companies must re-examine their profiles and compliance practices, including record keeping, and make sure they are operating correctly. Informed compliance is more than a best practice; it is the law. For decentralized organizations with multiple locations, compliance is difficult to prove without documented processes and ongoing training.

Many importers and exporters seek independent evaluation of compliance programs. Independent Validation and Verification (IV&V) requires a knowledgeable partner that helps identify high-risk areas within a program. IV&V includes an assessment that can uncover

loopholes, gaps, and inconsistencies that could lead to fines or other punitive damages and introduces a plan to close the gaps.

International shippers cannot afford to gamble on compliance. In response to the complex trade environment, some organizations have created compliance departments managed by C-suite officers ultimately responsible for mitigating risk emerging in this key operational area. Others are looking to augment their operations with the expertise of an enterprise logistics provider that maintains a working knowledge of the dynamic international trade environment.

GOOD ACTOR AWARD

CBP recognizes companies that undergo an independent and voluntary IV&V assessment as a “good actor” within the spirit of proactive compliance management. CBP may view a company operating in a vacuum without education from outside sources as being on the wrong side of the Reasonable Care standard.

A business enterprise that ignores the financial risks emerging in international trade compliance jeopardizes its ability to grow and serve new markets, create satisfaction for customers, and, ultimately, protect its profitable performance. ■

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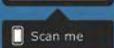
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[INSIGHT]

VIEWPOINT

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Soy to the World

The longer the trade tensions between the United States and other countries persist, the more the U.S. agricultural industry needs to rally around containerized soybean shipping to overseas markets.

Soybeans, America's top agricultural export, were introduced into the trade battle with China, the world's second-largest economy. The country has been the largest buyer of American soybeans, previously purchasing approximately 30 million metric tons per year, or about 60 percent of U.S. soybean exports. So it's imperative that the United States find new international customers for its soybeans.

The volatility in the world food market has affected all partners in the supply chain—from growers and shippers to intermodal providers and ocean carriers. To make up for lost demand and find new homes for soybeans, the agricultural industry needs to develop and operate diverse and efficient transportation and logistics operations.

THE BULK OF THE PROBLEM

Bulk shipping remains dominant in the world grain export market. But unlike Chinese buyers, few other international buyers of soybeans desire a full bulk shipload or the entire contents of one hold. More and more

overseas buyers also are demanding crops that can be traced to specific growing regions.

The container shipping system is tailor-made to address concerns over quality, traceability, and shipment size. Plus, containers are in plentiful supply and huge numbers of them are returning empty to Asia and other regions.

CONTAINERS GAIN FAVOR

Specialty grain shippers already favor containers because the boxes can be loaded, sealed for identity preservation, and transported throughout the system by truck, rail, and ocean carrier to the final destination—all in the same container.

Container shipments currently make up only 5 to 7 percent of total soybean exports, but there is potential for explosive growth as experience illustrates that investments in the intermodal container system pay dividends.

For example, the grain industry near Chicago, America's largest intermodal hub, has converted several small grain

facilities from bulk to container to take advantage of the proximity to an available supply of empty containers that need to be repositioned back to Asia.

Soybeans loaded into containers in Illinois reached a new high of 66 million bushels in the year before China disrupted the market by imposing tariffs on U.S. soybeans. An average of 52 million bushels had been shipped in containers in Illinois over the previous decade, according to a report prepared by Informa Business Intelligence for the Illinois Soybean Association checkoff program.

Transloading soybeans from bulk railcars or trucks to containers has also become a viable option for shippers. Transloading can take advantage of economies of scale when moving soybeans from the Midwest to ports with available empty containers.

ON THE RECORD

American farmers grew a record 4.54 billion bushels of soybeans in 2018, including 698.7 million bushels in Illinois, the largest soybean-producing state in the nation. The record harvest underscores the need to take advantage of the long-term benefits of market diversification and expanded customer base that come with container shipping. ■



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[INSIGHT]

SMARTMOVES

by Amy Wren

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Tackling the Talent Gap From the Inside Out

To address the logistics talent gap, we need to put far more emphasis—and money—on sourcing future leaders from inside our companies.

Let's look first at why we have hiring challenges and a growing talent gap.

For hourly associates, historically low unemployment in the United States means less competition for more jobs. Also, the existing workforce is aging out.

For salaried positions, you need talented people who thrive in a fast-paced, sometimes pressure-filled environment. When recruiting for corporate logistics roles, it's not that easy to find people who combine good logistics operating skills with qualities such as leadership, analytical skills, and creative thinking.

Historically, the reflex reaction to filling a key role has been to recruit outside talent. But the assumption that an outside candidate is smarter or better in some way is a mirage.

External hires are 61 percent more likely to be fired from the new position than internal hires and, for the first two years on the job, receive significantly lower marks on performance reviews, according to a Wharton School of Business study.

While more companies are promoting their commitment to training and developing internal talent, for many it's just lip service.

A survey by Futurestep, now part of Korn Ferry, finds that 87 percent of employers agree on the importance of an internal mobility program, but only 33 percent say they actually have such a program.

Another survey by HR compliance firm BLR finds that 92 percent of employers agree that identifying high performers is important, but only 44 percent say they have a program to identify and develop these key assets.

We need to invest in our most promising talent and prioritize hiring from within for every salaried position.

What's the upside of that investment?

It improves retention. Managers who don't see a clear growth path will look elsewhere.

It lowers costs. You'll spend at least 20 percent of a new hire's yearly salary to find and train that person.

It creates a fortuitous cycle. Retention and morale improve

throughout the organization as associates see colleagues acquiring new skills and advancing within the company. They begin to recognize that, as the company grows, their responsibilities and earnings can grow, too.

Do all associates seek higher levels of responsibility? Frankly, no. Some like what they do and aren't anxious for change. Others don't want the pressure of more responsibility. But we must be constantly on the lookout for associates who want to grow and have the talent to succeed in more demanding roles.

An internal talent pipeline opportunity exists in all organizations. If you're not paying attention, these "leaders in waiting" may decide to create their own opportunity outside your company—perhaps at a competitor.

In today's candidate-driven hiring environment, growing companies need both a strong external recruiting capability and a robust program to identify and train high potentials for more demanding roles. Sadly, in corporate logistics, talent development has been more talk than action. To solve our talent shortage, we need to prepare our company's future leaders. They're closer than we think. ■



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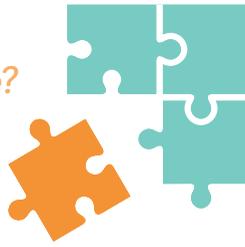
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THE CHALLENGE

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This retailer manages thousands of locations within its network and realized that a long-term adjustment in purchasing strategies was too large of an undertaking to gain any instant benefit.

Needing immediate results, this retailer engaged Hub Group

to develop an optimized solution that maximized the limited capacity in markets throughout its supply chain.

THE SOLUTION

Seeking a collaborative provider offering scalable, data-driven solutions, the retailer engaged Hub Group to deploy its advanced optimization and analytics technology to uncover an optimized solution.

Hub Group's team went to work analyzing historical data and leveraging proprietary technology, implementing an

efficient mix of less-than-truckload and partial truckload shipments that would maximize capacity in constrained markets.

These processes provided the lowest-cost solution based on a dynamic set of shipping rules and variables including lead time, requested delivery, and shipment size.

The result was notable transit improvements and maximized savings, leading the retailer to quickly expand this solution to five of their most important markets.



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ALASKA

The Last Frontier

In this extraordinary state, the logistics challenges are substantial but so are the solutions. Up to the challenge: logistics service providers who overcome the obstacles and pave the way for thriving supply chains.

In the language of the indigenous Aleuts, Alyeska roughly translates into “the great land.” And great it certainly is—in size and scope, if not number of people. Alaska’s relatively sparse population, fewer than 750,000, stands in contrast to the huge area it covers, some 663,000 square miles.

Those miles are marked by treacherous terrain and daunting logistical obstacles. Yet Alaska’s location—equidistant to Asia and Europe—places its largest city, Anchorage, slightly longer than nine hours by air from more than 95% of the world’s industrial population. In a geographical and logistical sense, then, Alaska is indeed at the top of the world.

Recovering from a three-year recession, business is once again on the upswing in Alaska and more economic expansion is projected over the next year. With the emergence of consumer economies and the surge in worldwide e-commerce, Alaska’s strategic location positions the state for growing importance in the logistics marketplace.

Successfully tapping into this growth depends on the perseverance, innovation, efficiency, and resources of logistics providers whose experience has withstood the test of time and travel in this most extraordinary state.



Alaska Railroad transports consumer goods and heavy freight from three strategic ports up the rail belt to and from Fairbanks with transload connections to Prudhoe Bay. The carrier notably provides rail service in support of U.S. defense projects.

Alaska conjures up visions of ice, snow, vast remote areas, and mountain vistas of world-class grandeur. Nicknamed “The Last Frontier,” the state provides rewards to those willing to take it on.

Oil industry exploration and production, military deployment and construction, and future projects have revitalized an otherwise declining mature market. Oil was discovered in the North Slope of Alaska in 1968, and while Prudhoe Bay production has matured and declined since its peak in 1988, technological improvements and recent new field discoveries by a number of companies have turned things around.

MAKING TRACKS

“There are a number of bright spots on the horizon,” says Dale Wade, vice president, marketing and customer service, Alaska Railroad. “In addition to operating a wonderful passenger service, the Alaska Railroad is the only railroad in Alaska providing rail freight service moving consumer goods and heavy freight from three strategic ports up the

rail belt to and from Fairbanks with transload connections to Prudhoe Bay.”

As Alaska is predominantly an inbound logistics market, the railroad helps hold down the cost of living in the state.

Alaska Railroad is a connecting carrier to Class I railroads. Consequently, fully loaded rail cars can begin their journey in the lower 48 states and Mexico and travel to the railroad’s port operation in Seattle. There, rail cars of pipe, mining equipment, and chemicals seamlessly move onto a rail barge and onward to Alaska, avoiding transload costs. Upon arrival, the rail cars are rolled off the barge for continued movement to their final destination within the state.

The railroad is a significant factor in U.S. defense operations. The U.S. military conducted operations from the numerous bases within Alaska, as it does today, well before statehood. The expansion of Eielson Air Force Base outside of Fairbanks to accommodate the bed-down of F-35 aircraft, radar upgrades at Clear Air Force Station, and the addition of missile silos at Fort Greely

all boost national defense, and likewise provide a jolt to the Alaskan economy and transportation industry.

The Alaska Railroad provides rail service in support of these projects. In addition, the railroad has played a vital role in supporting the readiness of military forces by transporting U.S. Army equipment between Fort Wainwright and the Port of Alaska during deployments and redeployments in support of contingencies and training exercises.

MINE ALL MINE

Alaska remains an abundant source of minerals. A potential silver lining for the Alaska mining industry is the Ambler Mining District, which is rich in copper, zinc, lead, gold, silver, and cobalt deposits. Plans are currently underway for the potential construction of a 200-mile road to connect the Ambler Mining District to the Dalton Highway. This road would allow trucks to haul minerals to Fairbanks, where they can be loaded onto rail cars for movement to one of the many ports the Alaska Railroad services.

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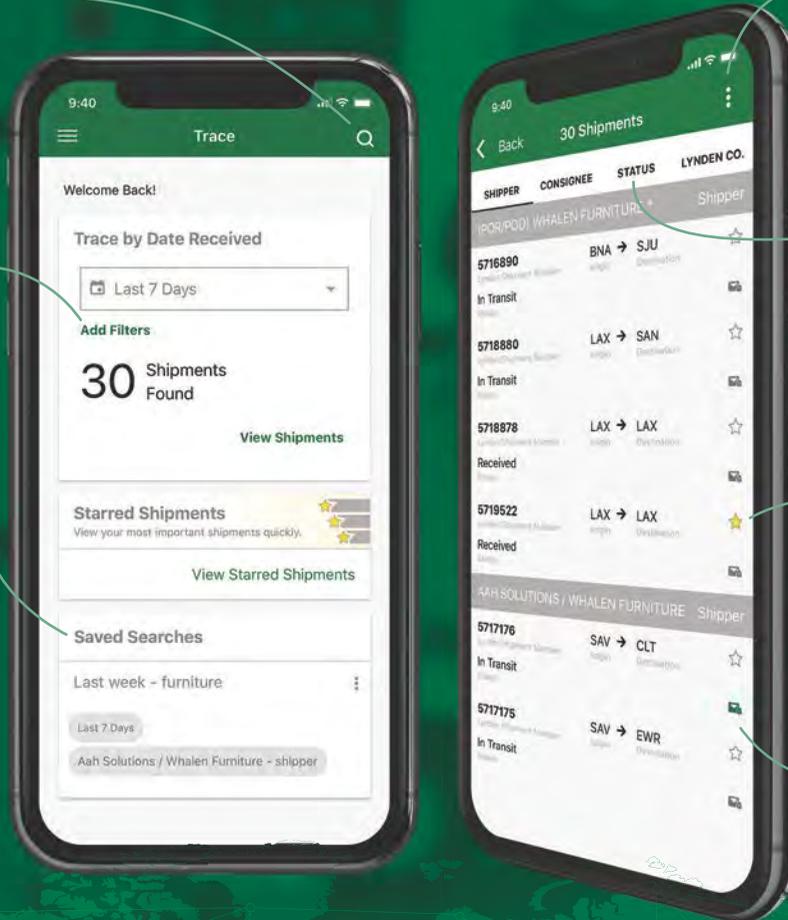
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Based in Anchorage, Carlile Transportation Systems supports exploration, production, and building projects throughout Alaska and across North America.

From the perspective of Carlile Transportation Systems, you might say that when it comes to Alaska, everything is looking up. “Alaska transportation behaves like an island,” says Larry Felix, Carlile’s vice president of sales. “If a product is in Alaska, chances are it came from the lower 48 states. It may have originated in Asia or elsewhere, but at some point it hit the lower 48.”

As a trucking and logistics company doing business in Alaska for nearly four decades, Carlile understands the state’s opportunities and challenges. Based in Anchorage, the company operates six terminals in Alaska as well as facilities in Tacoma, Washington; Houston, Texas; and Edmonton, Alberta, Canada.

MULTITUDE OF SERVICES

Carlile’s logistics experts support exploration, production, and building projects throughout Alaska and across North America. The company’s truck cabs, cargo and flatbed trailers, and fuel tankers are familiar sights traveling along the Dalton Highway and other Alaska thoroughfares to and from Deadhorse (Prudhoe Bay), Fairbanks, Kenai, Kodiak, and Seward.

“Within the state we provide bulk and heavy-haul movements, along with less-than-truckload (LTL) and truckload transportation,” Felix says.

“Offering a multitude of services means we can handle pretty much

anything,” he adds, noting the company’s foundation in transporting freight and supplies related to the oil exploration industry has driven a special focus on safety.

“We have to be safe in order to do business with the oil and gas community,” Felix says. As a result, safe transportation is a company hallmark.

“Carlile employees continually train for all kinds of safety scenarios and are empowered with Stop Work Authority,” Felix says. “This means that if any member of the Carlile team—regardless of their position—observes what they believe to be unsafe behavior or activities, they have the power to stop all activities so our safety team can assess the situation.”

Carlile trucks are equipped with PeopleNet technology, which provides up-to-date tracking and tracing. “Satellite tracking has allowed us to give shippers immediate status updates on their shipments,” Felix says. The technology was installed on all transportation equipment within the past 18 months.

Founded in 1980 by brothers Harry and John McDonald, the company was purchased by Seattle-based Saltchuk in 2013. Saltchuk is a diversified family of companies providing transportation and distribution services in North America and the Caribbean.

Within that land- and seascape, Carlile covers the distance with over-the-water consolidation service from the lower

48 to all points in Alaska, and over-the-road service from Tacoma to Anchorage and Fairbanks. “In the past few years, the company has expanded its service in the state and improved the overall transportation network,” Felix says.

“For us, stability has come by providing consistent on-time service and improved efficiency,” he adds. “Customers have come to understand that we also offer expedited Arctic Express, the fastest over-the-road service from Tacoma to the state of Alaska.”

Felix calls Carlile an “Alaska-facing” company. “We understand the state,” he explains, “because we are always looking in its direction.”

MULTIPLE MODES

Because most of Alaska is not connected by the road system, multimodal logistics solutions are often required. “Naturally with a huge coastline, a large portion of Alaska’s supply chain is marine,” explains Alex McKallor, executive vice president and COO of Lynden Inc. “However, a vast majority of the state does not have deepwater ports or the freight suitable for ships. The only exceptions are Anchorage, Kodiak, and Dutch Harbor. The rest of the state is supplied by barges and landing craft that call on smaller communities via the coast and river systems.”

As with all challenges, logistics professionals have found ways to overcome them. “Lynden’s business development has been driven by customers’ need to get beyond the road to reach its customers,” McKallor says.

Lynden is a family of transportation companies with the combined capabilities of truckload and LTL transportation, scheduled and charter barges, intermodal bulk chemical hauls, scheduled and chartered air freighters, domestic and international forwarding and customs services, sanitary bulk commodities hauling, and multimodal logistics. “Our family of companies delivers a total freight transportation package,” McKallor says.

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Lynden companies offer truckload and less-than-truckload transportation, barges, intermodal bulk chemical hauls, air freighters, customs services, and multimodal logistics.

Lynden's marine operation, Alaska Marine Lines, serves the state's coastal communities from Southeast Alaska to the Arctic. To complement this capability, Lynden's air operations use the commercial version of the C-130 aircraft, which is designed to connect even the most hard-to-reach communities when ice or speed requirements call for a different approach.

Lynden also uses other means to deliver freight, such as hovercraft and sleds designed to handle the most challenging situations. "And, of course, we provide trucking services covering the road network throughout the state," McKallor adds.

OVERCOMING THE OBSTACLES

It's all about finding a way from here to there, regardless of obstacles. "By necessity, Alaska has become a proving ground for innovative transportation solutions," McKallor says. "Connecting road to marine to air is an everyday job for us. Because of that expertise, we are often asked to look at other logistics challenges in Alaska and around the world."

In addition to Alaska, Lynden helps customers get the job done in daunting areas such as Western Canada and Russia. "We have built a reputation of superior service to diverse industries including energy, seafood, mining, construction, retail, and manufacturing," McKallor says.

Alaska's large untapped natural resources and ever-increasing expectations of shippers will continue to drive the need for innovation. But Lynden is well-positioned to meet the demand.

"From pioneering the first over-the-road service to Alaska in 1954 to delivering mail and other essentials to remote bush communities via hovercraft today, Lynden's network of service centers covers the state," McKallor says. "We earned our reputation the hard way—by moving all kinds of freight over some of the most rugged, remote terrain imaginable."

Utilizing truck, ship, barge, ferry, or aircraft service in any combination, Lynden balances speed and cost when shipping to and from different locations.

"We can also reach the unreachable," McKallor says. "No landing strip? Our Hercules aircraft can land on gravel or ice. No harbor? Our shallow draft barges are equipped with ramps to allow us to access any shore. No road? Our hovercraft can glide through any terrain to deliver people, equipment, or customer shipments. We don't believe in one-size-fits-all solutions."

MARINE SOLUTIONS

Every challenge presents an opportunity, as the adage goes. Alex Hofeling, vice president and general manager for TOTE Maritime Alaska's

office and operations, believes the adage is especially true in the case of the Port of Alaska, one of the state's primary logistics assets.

"The biggest long-term challenge facing logistics in Alaska is the Port of Alaska," says Hofeling, who oversees TOTE's Anchorage and Fairbanks offices. TOTE is a leading owner/operator of domestic shipping in the United States and specializes in moving cargo between North America and both Puerto Rico and Alaska.

"The Port of Alaska is instrumental to the quality of life for Alaskans and needs significant upgrades for long-term viability," Hofeling says. "TOTE Maritime Alaska will be a positive voice in this conversation."

HISTORY OF SERVICE

It is a voice with a long history in Alaska and at the port. "TOTE Maritime Alaska has been serving the state since 1975 and continues to reinvest to deliver the best customer experience possible," Hofeling says. TOTE's initial 1975 berthing at the Port of Alaska (then the Port of Anchorage) represented the largest ship to arrive at the port.

"At the time, Alaska was home to tens of thousands of workers looking for high-paying jobs building the Trans-Alaska Pipeline System," Hofeling says. "Our roll-on/roll-off vessels were designed to carry just about any freight people would need in Alaska, whether it was oversized heavy equipment or trailer loads of household goods, retail merchandise, groceries, oil field equipment, or construction materials."

TOTE has maintained its commitment to Alaska for more than four decades. "Our latest investment in the conversion to liquefied natural gas (LNG) demonstrates that commitment," Hofeling says. "And we have invested in our eSolutions products to improve the web portal, equipment tracking, and telematics for our customers."

By converting its fleet to natural gas, the company is supporting significant benefits to local air quality as well as



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LOGISTICS



Matson offers comprehensive ocean transportation services, supporting the economies of Alaska, Hawaii, Guam, Micronesia, and South Pacific islands. It operates direct, twice-weekly service from Tacoma to Anchorage and Kodiak, and weekly service to Dutch Harbor.

access to reliable sources of LNG for Pacific Northwest ports, and is helping lead the way to the proliferation of natural gas as a transportation fuel.

“A state with such unique challenges—such as the Gulf of Alaska, lack of a road system, remote geography, and extreme weather—requires equally unique transportation solutions,” Hofeling explains. “Alaskan transportation providers create these solutions by leveraging technology, expertise, and investment to ensure Alaskans have the goods they need to maintain their lifestyles.”

In 2003, TOTE built two Orca-class cargo ships, the *M.V. Midnight Sun* and the *M.V. North Star*. These ships were specially built for Alaska and provide state-of-the-art protection from the elements. “The Gulf of Alaska can be the most challenging waters in the world, and our ships were built to make the voyage safely and quickly,” Hofeling says. “We’re able to carry cargo from

Tacoma to Anchorage in 66 hours—the fastest transit time in the trade. Because all our cargo can be driven off the ship, we also have the fastest port turn-time in the industry.

“Our terminals in Tacoma and Anchorage have been upgraded with automated logistics systems that have reduced our customers’ turn-times to less than 20 minutes—making them some of the fastest terminals on the West Coast,” he adds. “In 2018, we completed a project to add telematics technology to our entire reefer fleet, adding extra visibility for sensitive cargo from port to port. When you’re working to get Alaskans the freshest produce, dairy, and meat, this is a great complement to our best-in-class, on-time service to the state.”

KNOWING THE TERRITORY

Experience is an important plus when navigating the inherent challenges of logistics in Alaska. “Alaska’s sometimes extreme weather and susceptibility

to north Pacific storm systems pose challenges we don’t see in other trades,” says Bal Dreyfus, vice president, Alaska, Matson Inc. “Despite the difficulty, we are able to deliver goods to Alaska with a high degree of reliability because our employees hold deep institutional knowledge.”

Headquartered in Honolulu, Matson has been a leader in Pacific shipping since 1882. With multiple subsidiaries, the company’s transportation network offers comprehensive ocean services, providing a vital lifeline to the economies of Alaska, Hawaii, Guam, Micronesia, and islands in the South Pacific.

Matson’s Alaska operations are built on the experience of predecessor companies that have served Alaska communities for more than 50 years. “This team knows what Alaska businesses need and how to maintain and use our vessels, terminals, and equipment to provide the highest levels of service,” Dreyfus adds.

Matson operates direct, twice-weekly



ALASKA'S TRUCKING COMPANY





Span Alaska, headquartered in Auburn, Washington, transports more than 400 million pounds of freight annually to Alaska, Hawaii, and Puerto Rico.

service from Tacoma to Anchorage and Kodiak, and weekly service to Dutch Harbor, using containerships built for Alaska service.

“We specialize in carrying the wide range of commodities needed to support economies that rely on ocean transportation to continually replenish inventories and supplies,” Dreyfus says. “We offer truck, rail, and barge connections throughout Central Alaska, Kodiak, and the Aleutian Chain, as well as the lower 48, with a full range of equipment—dry and refrigerated containers, open top containers, car carriers, flat racks, and insulated containers—with efficient terminal operations dedicated to Alaska service.”

After acquiring the Alaska assets of Horizon Lines in 2015 in a transaction valued at \$469 million, Matson invested

tens of millions more into upgrading the infrastructure of its business with ships, terminals, and new equipment.

“This investment included replacing a crane at our Kodiak terminal and installing emissions-cleaning systems on all our Alaska ships to comply with new IMO fuel emission standards in advance of rules taking effect January 1, 2020,” Dreyfus says. He also cites the purchase of 2,450 new dry and insulated containers for the Alaska trade, new Kenworth tractors at Matson’s Anchorage terminal, and a variety of facility improvements at its Anchorage, Kodiak, and Dutch Harbor terminals.

“We also recently upgraded the gate at our Anchorage terminal, installing new technology that has simplified and shortened transaction times for our customers,” he adds.

Such investments serve as testimony to Matson’s strong belief in the growing importance of Alaska’s place in the ever-changing logistics marketplace.

“Matson invested in its Alaska service at a time when the state’s economy was in decline, due to falling oil prices,” Dreyfus says. “We did so because we are confident stronger years are ahead. Alaska is strategically important to our national defense and the energy sector, both of which are likely to continue bolstering the state’s economy into the future. Matson invests for the long term, and we are excited about the future in Alaska.”

LOGISTICAL LINKS

The art of logistics in Alaska is complicated compared to the lower 48. The point is underlined by Tom Souply, president of Span Alaska Transportation, which provides freight transportation services to and from the state. The company offers inbound transportation into its Auburn Service Center and also arranges transportation through its relationships with ocean and trucking carriers.

“The road system in Alaska is small at 5,000 miles of paved roads versus the 663,000 square miles of land,” Souply says. “Compare this to Texas, which is smaller at 269,000 square miles but its road system—79,000 paved miles—is the largest in the United States.

“Reaching 100% of residents in Alaska takes a creative supply chain of land, water, and air,” he adds. “Knowing the right way to move a shipment takes experience and a team that has been trained to execute these unique challenges.”

Along with its subsidiaries, Span Alaska, which itself is a subsidiary of Matson Logistics, ships more than 400 million pounds of freight annually to Alaska, Hawaii, and Puerto Rico. Span Alaska is headquartered in Auburn, Washington, where it operates out of a 93-door terminal on 15 acres. Span Alaska operates all its terminals in Anchorage, Fairbanks, Kenai, Kodiak, and Wasilla and owns more than 700

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Alaska Airlines transports perishable and time-sensitive products year-round. In 2018, the company boosted its capacity in Alaska by 20%.

pieces of rolling equipment. In addition to its vast volume of shipments from the lower 48 to Southcentral Alaska (the portion of the state consisting of the shorelines and uplands of the central Gulf of Alaska), the company also offers overnight service from Anchorage to Fairbanks and the Kenai Peninsula, and provides LTL service via barge from Seattle to Southeast Alaska.

Close to 90% of commerce comes into the state via ocean vessels that exit Tacoma twice weekly. “Both Matson and TOTE follow the same schedules, bringing a total of four vessels, which depart Wednesday and Friday, to the Port of Alaska in Anchorage weekly,” explains Curt Dorn, Span Alaska’s director of sales and marketing.

A TREACHEROUS TREK

The vessels travel approximately 1,500 miles through the Gulf of Alaska, navigating some of the most dangerous and challenging waters with rough weather and extreme tidal changes that can rise as high as 50 feet. Alaska residents depend on these vessel arrivals to replenish medical, grocery, retail, and other supplies. The record of on-time arrivals is impressive, as it must be.

“Just 24 hours late can result in stock-outs for grocery stores, retailers, construction sites, and medical supplies,”

Dorn says. There is limited warehousing in Alaska and the ships provide the lifeline to the state from lower-48 distribution centers and shippers.

“Other options for moving commerce into Alaska include barge, over-the-road via the Alcan Highway, and air,” says Souply. “Barge has a cost advantage for some users but the transit time is 15 days versus four days for ship. Air freight can vary from same day to deferred, but may be limited by schedules, hazardous material considerations, and availability of cargo plane capacity.” The cost of over-the-road will usually be three times higher than ship, he adds.

Span Alaska works to customize its logistics solutions. “Our customers expect us to protect their interests from the time they book their shipment until we deliver it, along with providing an accurate invoice,” Souply says. “We use metrics on many processes to measure our reliability. Our senior leadership and managers catalog and measure performance metrics each week, and review them in meetings the following week.”

The company is prepared for growth and plans to build a new Anchorage Service Center later in 2019. “This 88-door facility will provide the resources to meet our customers’ needs and expectations,” Souply says. “We will reduce our handling and processing

time, and significantly increase service levels to the entire state of Alaska.”

The view of Alaska from the lower 48 is one thing; the view from above is quite another. “We have more than 86 years of experience flying in Alaska,” says Jason Berry, managing director, cargo, Alaska Airlines. “We keep Alaska connected logistically with a modern air fleet and Required Navigation Performance technology—which allows an aircraft to fly a specific path between two 3D-defined points in space—that helps us reliably get into airports across the state with difficult terrain and weather conditions.”

Headquartered in SeaTac, Washington, just outside Seattle, Alaska Airlines connects with large international and integrated carriers to carry e-commerce goods and other critical supplies, such as medicine and perishables, into and around the state. Given Alaska’s rural nature, e-commerce is an asset because it provides new and faster access to certain goods.

SEAFOOD LOVERS’ DELIGHT

Alaskans return the favor in the form of “fresh catches” prized across the globe.

“The state exports a large volume of seafood, but a lot of it starts in small fishing communities scattered throughout the state,” Berry explains. “We understand how processors work and the value of same- and next-day fresh products. Over the years, the processors have improved their operations and we’ve adapted to meet their needs. Fresh seafood products we carry out of rural Alaska end up on dinner tables across the country and around the world.”

Berry says the view of Alaska from the air is encouraging. “Overall, we have seen very positive trends across our network in the continental U.S. market and the state of Alaska, as well as increased traffic through our global interline partners,” he says. “The growth of global trade and e-commerce has created major modal shifts. Customer expectations are changing, and, as a result, air cargo is now a more viable

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piece of the supply chain for more commodities than in the past. From where we sit, and knowing the markets we serve, we see a resurgence in the need for transportation by air.”

Alaska Airlines transports perishable and time-sensitive products year-round. “We support 19 communities across the state, often by flying in critical and perishable products, such as groceries and pharmaceuticals,” Berry says.

“On the return, we fly more than 17 million pounds of fresh Alaska seafood to Anchorage and Seattle, then across our network and to our interline partners to dinner tables across the world,” he adds. “Seafood has become less predictable in Alaska in recent years, but with the flexibility of our new freighter fleet, we’re still poised to capture as much of that market as we can.”

Alaska Airlines invested in its fleet in 2018 by taking delivery of three new 737-700 freighter aircraft to support the Alaska market, replacing five 737-400 Combi aircraft. “The new aircraft boosted our capacity in Alaska by 20% and have allowed us to become the state’s largest scheduled cargo carrier,” Berry says.

“The increase in capacity also has helped with southbound flows of seafood out of the state and with increased shipping demand for perishables and e-commerce goods to the state,” he notes.

Separating the cargo fleet from the passenger fleet also enhances flexibility as the planes are not tied to passenger schedules.

RUNWAYS TO THE WORLD

For more than 50 years, Ted Stevens Anchorage International Airport has been an integral factor in the logistics assets of Anchorage and the entire state. It is the world’s fifth-busiest airport by cargo traffic, following only Hong Kong, Memphis, Shanghai, and Incheon, South Korea.

“Our principal logistics advantage is our location between the two largest markets in the world,” says Airport Manager Jim Szczesniak. “From a ‘great circle’ perspective, we are in the sweet spot. That makes our operations more efficient, saving fuel for anyone moving cargo between Asia and North America.”

The airport is named for Alaska’s late U.S. Senator Ted Stevens, who sponsored legislation that enabled the airport to serve as both a hub and a spoke for transshipments, allowing for cargo to be swapped without undue delay on the journey between the two economies.

The airport itself is designed for efficient cargo transloading, Szczesniak adds, citing the close positioning of the runway system and parking.

In addition, the airport’s sweet spot in the “great circle” has led to yet another strategic advantage in the global logistics

marketplace: “We see a lot of growth using Anchorage to connect Latin America and Asia,” Szczesniak says. “The perishables market between those two regions is exploding. Airlines can pair fresh Latin American fruit with fresh, wild-caught Alaskan salmon or king crab and send a balanced meal to Asia.”

The airport is working to meet the needs resulting from continued cargo growth. “We’re looking to create additional infrastructure,” Szczesniak says. A new cargo building with easy access to aircraft parking is being developed, followed by an e-commerce facility. With neighbors such as UPS, FedEx, DHL, and the U.S. Postal Service, the e-commerce facility will be perfectly located.

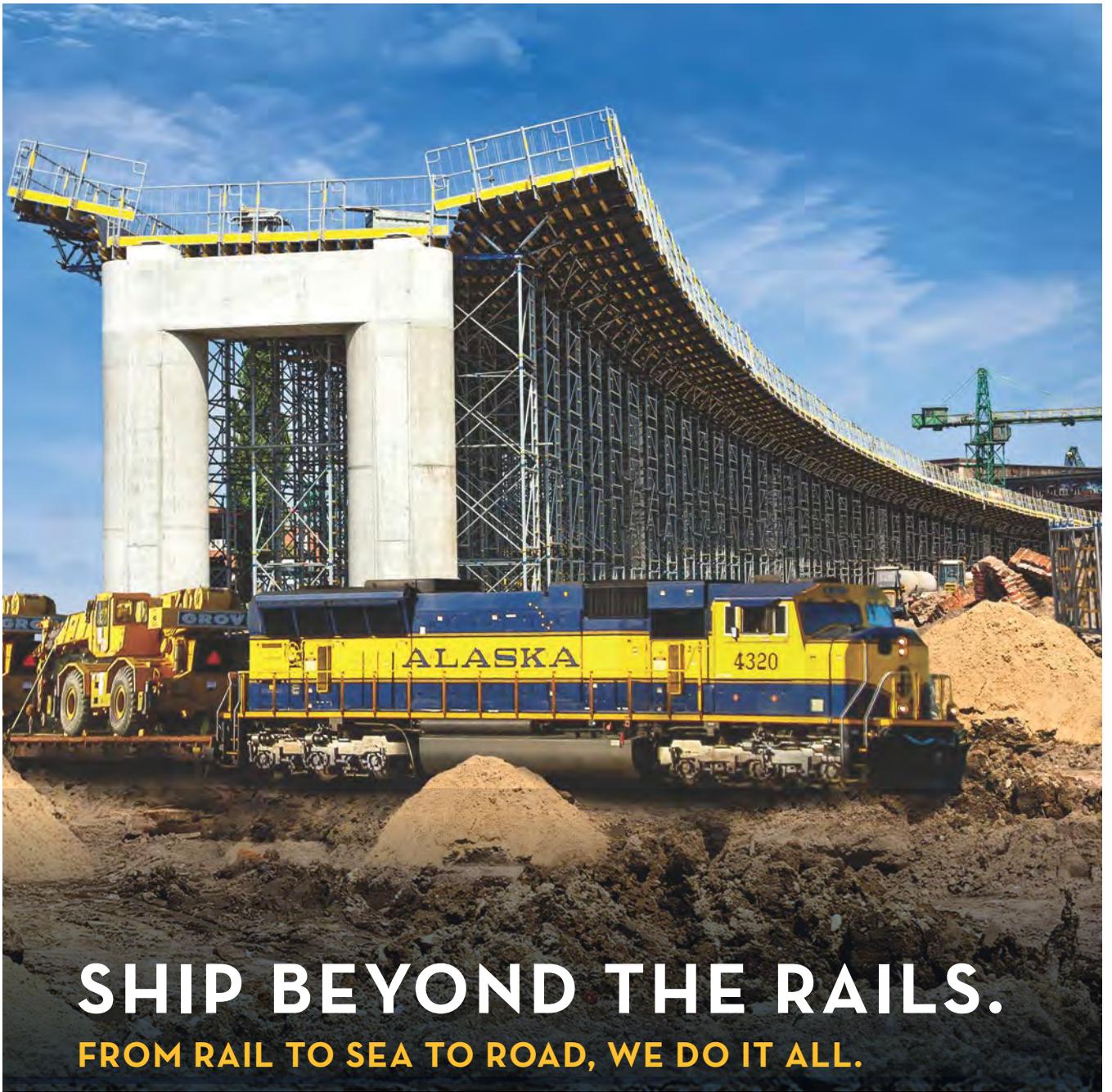
To those who find the idea of logistics in Alaska too daunting, Szczesniak points to the Anchorage airport’s operations for reassurance. “The proof is in the pudding,” he says, adding that the airport secured new air cargo airlines in 2018. “We wouldn’t be here if we were not successful serving a diverse base of cargo customers.”

As evidence, “In a typical day we have more than 100 Boeing 747 operations,” Szczesniak says. “We have 20 flights between Anchorage and O’Hare, Anchorage and Shanghai, and Anchorage and Hong Kong.”

With a geographic location placing it at less than 9.5 hours from 90% of the industrial world, the airport has unlimited potential to move more goods and services to be used in the global marketplace.

The airport is the world’s largest and busiest floatplane base and is responsible for nearly 16,000 airport and community jobs, earning \$1 billion. That’s one in 10 jobs in Anchorage. And like the planes flying in and out of the airport, those numbers will continue to soar. Anchorage is also envisioned as a future connecting point for air traffic to the Russian Far East.

Despite all challenges—by air, water, rail, and road—the art of logistics in The Last Frontier is flying high. ■



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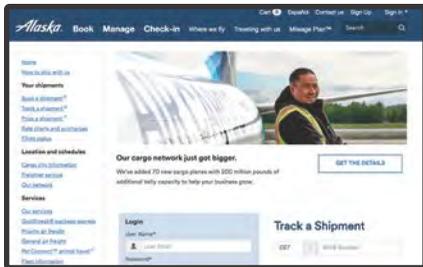
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Carlile Transportation Systems is a full-service transportation company, providing superior service, safety, and efficiency in the Alaska market. It takes teamwork and commitment to meet transportation demands in the Last Frontier. Distance and weather challenges, a limited road system, and dynamic industry activity demand innovation and flexibility to succeed in moving valuable cargo. Transportation is our only business and our recognized leadership makes us a preferred operator for our multimodal partners in air, land, and sea shipments.

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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.



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.



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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.

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There's a reason 80% of all air cargo traffic between Asia and North America passes through Ted Stevens Anchorage International Airport (ANC). It's our location. ANC is about nine hours or less from 90% of the industrialized world, so a stop here means planes can carry more cargo and less fuel. ANC also offers unique freight transfer rights, which open all kinds of possibilities. And ANC hasn't had a weather closure in over half a century. In short, ANC means more cargo, more reliability, more options, and more revenue.



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TOTE Maritime Alaska delivers the supplies for life in the Last Frontier with twice-weekly sailings between Tacoma, Washington, and Anchorage, Alaska. Our Orca vessels — custom built for Alaska — provide safe, reliable service with efficient roll-on/roll-off (RO/RO) loading and unloading. With our network of sister companies and experienced partners, we are committed to solving the toughest transportation and logistics challenges.

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Examination Distance 10 Feet

**NEW TECHNOLOGIES INCLUDING
BLOCKCHAIN AND IoT, AS WELL AS
ADVANCES IN EXISTING TOOLS
SUCH AS RFID, ARE HELPING
COMPANIES GAIN GREATER
SUPPLY CHAIN VISIBILITY.**

BY KAREN KROLL



Richline Group, a manufacturer and marketer of fine jewelry, launched an initiative to gain visibility into its supply chain in 2006. The company manually assembled and entered information that it had generated internally and gathered from vendors and business partners showing how its metals and gemstones traveled from mines to retail stores.

“That process was costly, manual, and not timely,” says Mark Hanna, chief marketing officer for Richline. Still, the jewelry maker continued to manually map about 600 items until 2012, when the cost and unwieldiness of the process finally prompted it to stop.

Fast forward to 2017, when Richline partnered with IBM on TrustChain Jewelry, a blockchain initiative to track and authenticate diamonds, precious metals, and jewelry at all stages of the global supply chain. In 2018, Richline completed a TrustChain proof of concept with a handful of SKUs.

“All eight supply chain partners saw each movement through the chain,” Hanna says. An outside firm verified the integrity of the process. Based on the success it has seen to date, Richline plans to steadily expand its blockchain initiative to other products and retailers.

Like Richline, many companies are taking steps to gain greater supply chain visibility. It’s an area that demands attention. A paltry 6% of respondents to Geodis’ 2017 *Supply Chain Worldwide Survey* said they had full visibility to their supply chains, even though they also ranked supply chain visibility as a top three priority.

Supply chain visibility has advanced over the past 10 to 20 years. Many carriers now provide shipment visibility, often through portals or notification systems, as items leave one location and enter another. “Products are scanned both in and out,” says Josh

“MOST SHIPPERS WANT A MULTI-MODAL VIEW OF THE JOURNEY THEIR GOODS TAKE FROM ORIGIN TO FINAL CUSTOMER DESTINATION.”

—MONICA TRUELSCH, DIRECTOR OF PRODUCT MANAGEMENT, INFOR GT NEXUS

Nelson, principal in Hackett Group’s transformative supply chain practice.

The challenge? Visibility often remains limited when products are in transit. While many carriers capture GPS information showing their trucks’ locations, some do not make this information available, often out of a concern that the data is not complete or up to date. “That’s when shippers start their phone calls,” Nelson says.

Better visibility has ranked at the top of

supply chain and logistics professionals’ “most wanted” lists for 20 years. “What has changed is the granularity and how widely companies want to make visibility available,” says Monica Truelsch, director of product management with business software provider Infor GT Nexus.

Many companies are looking for a single, aggregated source of visibility, perhaps through a control tower that allows them to look across their networks of companies, carriers, and trading partners. “Most shippers want a multi-modal view of the journey their goods take from origin to final customer destination,” Truelsch says.

Greater supply chain visibility provides more certainty when organizations must match supply to demand. That can improve buying decisions as well as labor and transportation planning. It also can reduce the need for safety stock.

The growing dominance of

BLOCKCHAIN AND ITS TIE TO DIAMONDS

Most diamonds travel far distances before they become part of wedding rings or other jewelry. They often start in South Africa, Botswana, Angola, Russia, Canada, or Australia, home to major diamond mines. Once mined, they pass through multiple entities—refiners, regulators, shipping companies, wholesalers, designers, and insurers. It’s typically difficult to share information across all these parties, which hampers efforts to trace any particular diamond to its source and ensure it’s not fraudulent and that it is ethically sourced.

In 2000, the UN General Assembly adopted the Kimberley Process Certification Scheme, which imposes requirements on its members, including countries and industry organizations, to certify diamond shipments as conflict-free. Among other steps, members had to pass

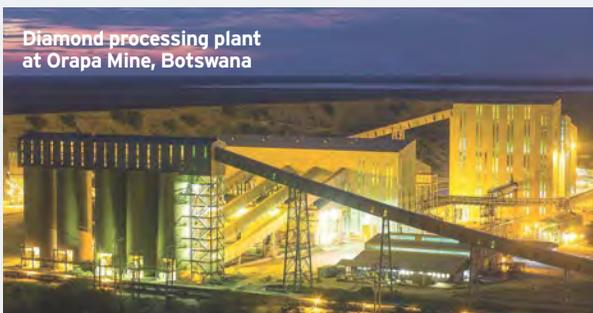
national legislation, as well as export, import, and internal controls, and commit to transparency and the exchange of statistical data. Members could trade only with other participants who met these requirements.

At times, however, the program failed to achieve its goals. One reason was a lack of checks to guarantee enforcement.

Blockchain, or distributed ledger technology, can aid in the quest for greater transparency. It can connect the links in the jewelry supply chain, including miners, refiners, wholesalers, and others, on a single digital platform.

Moreover, it provides one immutable and continuously updated record of transactions that’s shared to all network participants. Transactions within the jewelry supply chain become “blocks” representing unique information. Once they’re verified, they become part of a permanent digital record. The information can’t be altered or erased without alerting everyone who has access to it.

The TrustChain Initiative, for instance, will track and authenticate diamonds, precious metals, and jewelry at all stages of the supply chain, and establish transparency and accountability for all transactions.



Diamond processing plant at Orapa Mine, Botswana

e-commerce also prompts many organizations to strive for more visibility into their supply chains. “Visibility is ‘table stakes’ now,” notes Stephen Bullard, vice president, product development and deployment with supply chain consultancy Tompkins Inc.

WHERE TO BEGIN

Some steps are common to most supply chain visibility initiatives. A starting point is clarifying the use case for visibility; that is, how can better visibility improve supply chain operations and add value to the company?

Say a retailer is facing a run on T-shirts at some of its stores. If the company has visibility into the supply chain, it can determine whether to expedite another shipment of shirts from Latin America or divert a shipment already in transit, eliminating the need to expedite. The retailer uses real-time supply chain visibility to satisfy customers and rein in costs, providing value to the business.

Technology comes into play with most visibility initiatives. Advances in both older and emerging solutions provide supply chain professionals with a growing range of options.

A case in point is RFID. While companies have used the technology since the late 1990s, its price has dropped from about 25 cents to several cents per chip. “RFID has finally reached the point where companies can put it on every package without a huge cost,” Nelson says. That makes it a viable solution even for many lower-margin industries.

While GPS technology also isn’t new, it is becoming more user-friendly. Previously, when Billy Duty, global head of supply chain with specialty chemical company Altana, and his colleagues needed to check the location of their ocean freight, they’d have to look up data on each carrier’s ship and find which tied to their shipment data.

“The data is now integrated to the carriers’ web portals, making it more accessible and real-time,” Duty says. “Now you don’t have to be a logistics professional to look up the information.”



Solutions such as inVia’s Robotics Management System update inventory data to ensure all products are accurately accounted for, which facilitates visibility.

Altana also uses the Internet of Things (IoT) to enhance supply chain visibility. By placing temperature indicators on the drums used to transport its products, Duty and his colleagues know if the temperature dropped below a certain level, making the product unusable. While such instances are rare, they do occur.

Without this information, a customer might use the compromised substance, potentially ruining the product it was making. “That gets expensive,” Duty says. In addition, should an unauthorized in-transit temperature change occur,

Altana can use data from the indicator to file a claim with the carrier.

IoT devices also can help supply chain professionals better track inventory and supplies. For example, one vendor to the automotive industry had trouble tracking the 4 to 5 million reusable containers it uses to move parts throughout its manufacturing plants and within its suppliers’ facilities. At any time, 20 to 30 percent of containers would be within its network of suppliers and its own facilities, but in unknown locations.

Because the totes were misplaced, the company or its suppliers would sometimes need to use specialty packaging. Those packages cost several hundred dollars each, for a total annual expense that ran into the millions. “This is a hard cost,” says Vidya Subramanian, vice president of products with Roambee, an asset-monitoring solutions provider. “The data IoT sensors provide gives direct, bottom-line savings.”

ROBOTICS PLAY A ROLE

More than 10,700 robots were shipped to companies across North America in the first quarter of 2018, up 22% from the same period one year earlier, according to the Robotic Industries Association.

Robots can play a role in enhancing supply chain visibility. When humans use paper and pen or even spreadsheets to track their actions within a warehouse, they’re likely to introduce errors that can hinder visibility and also are difficult to trace. With robots, software tracks every movement.

In addition, artificial intelligence algorithms enable robots to calculate a probability matrix of the location of misplaced items. Robots also can photograph “pick and place” actions, allowing companies to identify issues before they become problems and defend against damage claims.

As Richline’s experience shows, blockchain is another tool that can enhance supply chain visibility. “Blockchain provides an immutable shared record of transactions,” says Chris

READERS SET SIGHTS ON VISIBILITY

In a recent poll, *Inbound Logistics* asked readers, “What’s the first thing you would do to improve supply chain visibility?” Here are a few answers.

“**First, define what you mean by visibility** for your company and customers. Then identify the top business-impacting blind spots. Visibility without actionable insights will not go far, so focus on solutions that provide simple suggestions and let you take action, and not just show status and issues.”

–*Sharad Mathur, Senior Vice President of Research and Development, Blume Global*

“**Streamlining the movement of goods and funds** in a digital network helps provide end-to-end visibility. This enables shippers to improve supply chain performance, including on-time delivery, customer service, and increased velocity, while significantly reducing costs and lead times and freeing up working capital.”

–*Rod Johnson, Executive Vice President of Supply Chain, Infor*

“**The first step toward increased visibility is collecting, managing, and interpreting data effectively.** Historically, supply chain data has been fragmented across multiple systems and business groups, but advancements in technological platforms now provide shippers a new level of connectivity across networks, enabling visibility to a multitude of data points. Developing a collaborative environment and a central system to share information across supply chain partners enables shippers to identify meaningful patterns and trends to help drive efficient decision making, identify areas needing improvement, and proactively manage exceptions before they occur.”

–*Annette Luyten, Senior Vice President, Operations, Ascent Global Logistics*

“**Identify the pain points** within the supply chain. Are departments working in silos? Is there a lack of transparency with suppliers? Visibility helps improve collaboration across the supply chain. By improving visibility and collaboration, supply chains become more efficient and agile.”

–*Brian Broadhurst, Vice President of Transportation Solutions, Spend Management Experts*

“**Improving visibility starts with evaluating data gaps** and determining if current processes are sufficient to meet operational goals. Then, implementing next-gen processes and technology and partnering with industry leaders can improve speed to value and minimize risk.”

–*Steve Barber, Vice President, IT Customer Solutions, Transplace*



Roambee offers real-time, multi-sensor supply chain monitoring solutions that provide visibility to inventory in warehouses and in transit.

Hayes with IBM’s Watson supply chain B2B product solutions. This improves supply chain visibility by ensuring one single version of the truth. Even in supply chains with automated transactions, the complex relationships between participants can result in multiple versions of the truth, which can lead to disruption and boost costs.

One potential obstacle to blockchain is that all supply chain partners have to provide information, often through online platforms. If a company isn’t on the same platform as other partners, it will be difficult to interact. As the platforms standardize, however, sharing information will get easier. “There will be a tipping point,” Nelson notes.

While the opportunities blockchain affords are real, many organizations likely will struggle in the short term to derive economic value from it. Within 10 years, however, they will benefit from the improved visibility blockchain offers.

FORGING CONNECTIONS

One key to robust supply chain visibility is solid electronic connections to an organization’s business partners. Electronic data interchange (EDI), while one option, has several shortcomings: EDI transactions are processed in batches, rather than in real time, and the format allows an exchange of only limited amounts of information.

EDI can also be costly. As a result,

many companies reserve EDI for their most significant business partners.

Almost every company today, however, uses email. Elemica, which features a digital supply network of companies and their suppliers, customers, and logistics providers, offers a solution that enables “transactional emails” that provide visibility to the underlying transaction.

The email is not simply an image, but contains the logic of, for instance, the prices and number of units indicated on a purchase order. The emails are automatically integrated within the buyer’s ERP system. Because they’re not compiling information from static emails, companies have greater visibility to their transactions.

A growing number of companies are offering solutions that connect supply chain members through application programming interfaces (APIs). APIs refer to software intermediaries that allow two applications to talk to each other in real time and with two-way communication.

For instance, through these systems, the information on a bill of lading can be digitally transmitted to an organization’s data systems, reducing the risk of

“COMPANIES CAN ONLY REALIZE AGILITY IF THEY HAVE VISIBILITY. YOU CAN’T DODGE AN APPROACHING TRAIN IF YOU DON’T SEE IT FIRST.”

**– GARY BARRACO,
DIRECTOR, GLOBAL
PRODUCT MARKETING,
AMBER ROAD**

mismatched account numbers and other mistakes. Or, if a truck is running late, a manager can alert the dock supervisor, who can then adjust schedules.

“The end game is not just asking, ‘what’s the best technology?’ but also asking, ‘what will provide the data needed to improve operations?’” says Jason Kerner, vice president, solutions engineering with project44, which offers an end-to-end API solution.

THE GIGO PRINCIPLE

Once data is captured, it likely will need to be cleaned. Most information systems differ at least slightly; for instance, units of measure may be inconsistent. The GIGO principle (garbage in, garbage out) applies within

supply chains just as it does in other functions. Mistakes in one area can become exaggerated as they travel along a supply chain.

As companies collect more data from across the supply chain, the volume can quickly become overwhelming. In most cases, it makes sense to focus on exceptions, which can help limit costs stemming from, for instance, lost or delayed shipments.

True supply chain visibility begins with product concept and extends to payment receipt. It also requires company-wide transparency. “Visibility disrupts the information silos that are historically inherent in the supply chain,” says Gary Barraco, director, global product marketing with Amber Road, a trade management software provider.

Moreover, visibility is key to agility, or the ability to react quickly to obstacles. Agility enables organizations to lower their risks, respond effectively to changing demand, and reduce costs.

“Companies can only realize agility if they have visibility,” Barraco says. “You can’t dodge an approaching train if you don’t see it first.” ■



Tompkins Robotics’ t-Sort system employs free-moving, independent robots throughout the warehouse. Robotic automation such as this can improve logistics efficiency and transform supply chain visibility.

2019

**INBOUND LOGISTICS
ANNUAL SURVEY**

TOP

100

**LOGISTICS IT
PROVIDERS**

**& MARKET RESEARCH
SURVEY**

BY MERRILL DOUGLAS

WHAT'S HOT IN LOGISTICS IT? WHICH INNOVATIONS ARE TAKING HOLD?

Advances in information technology continue to reshape supply chains. E-commerce is one obvious example. As online technology creates new shopping channels, it forces companies to think differently about how they sell products, fulfill orders, and handle returns.

Not only does information technology continually alter what supply chain organizations do, but new IT solutions also keep emerging to improve the way companies perform those functions.

This evolution will continue. Take the advent of collaborative robots. By 2023, more than 30% of people employed in warehouse operations will do their work with help from mobile robots that move about the floor independently, according to Gartner. Also by 2023, at least half of large global companies will use artificial intelligence (AI), advanced analytics, and the Internet of Things (IoT) in supply chain activities.

For shippers who want to understand where logistics technology is headed so they can prepare for the most important innovations, the first step is to map what the landscape looks like today. That's not easy, especially for supply

chain professionals busy with day-to-day operations. That's where *Inbound Logistics'* annual survey of logistics technology providers comes in. We gather data on logistics IT trends, so when it's time to start planning your next logistics IT implementation, you'll have a full picture of what's available and how other shippers are investing.

Along with the results of our survey, be sure to check out the annual *IL*

responded to our survey. In 2019, 93% say that their solutions serve the transportation industry, including logistics providers, warehouse operators, carriers, and companies that facilitate international trade (see *Figure 1*). That response is even stronger than last year, when 87% of IT companies reported that transportation providers use their solutions.

Logistics IT firms also design solutions with shippers in mind. A strong 82% of respondents say they sell solutions to manufacturers (down from 86% last year), 79% to retailers (up slightly from 78% last year), 76% to wholesalers (down from 81% last year), and 68% to e-commerce companies (down from 70% last year).

For the past several years, when we've asked logistics IT vendors which transportation challenges are top of mind for customers in those groups, two categories have risen above the others: cost reduction and visibility.

Cost reduction has nearly always taken the top slot. That's no surprise. After all, every successful effort to reduce costs helps to boost a company's bottom line. The exception was in 2018, when cost reduction fell to the number-two position, one point behind visibility.

This year, cost reduction is back on top, cited by 85% of respondents (see



Top 100 Logistics IT Providers list (see page 72). This detailed guide to market-leading logistics IT developers and their solutions is an invaluable resource for your next foray into the IT marketplace.

WHO'S BUYING AND WHY?

Transportation service providers make up a major market for nearly all the IT solutions developers who

FIG

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THE CLOUD FLIES HIGH

Not many years ago, vendors who offered cloud-based solutions had to take great pains to explain what the cloud was and why customers should consider using it. They needed to convince customers that cloud computing—or software as a service (SaaS) or hosted services—offers flexibility and cost advantages. They also had to overcome customers’ fears that a move to the cloud would limit their control over their activities and data or would pose security risks.

In recent years, though, the world has embraced cloud computing. Worldwide revenues for SaaS solutions totaled \$58.8 billion in 2017 and are expected to reach \$85.1 billion in 2019, reports Gartner.

Like their counterparts in many other sectors, logistics technology firms continue the move toward cloud-based solutions. In 2019, 55% of technology

FIG

2

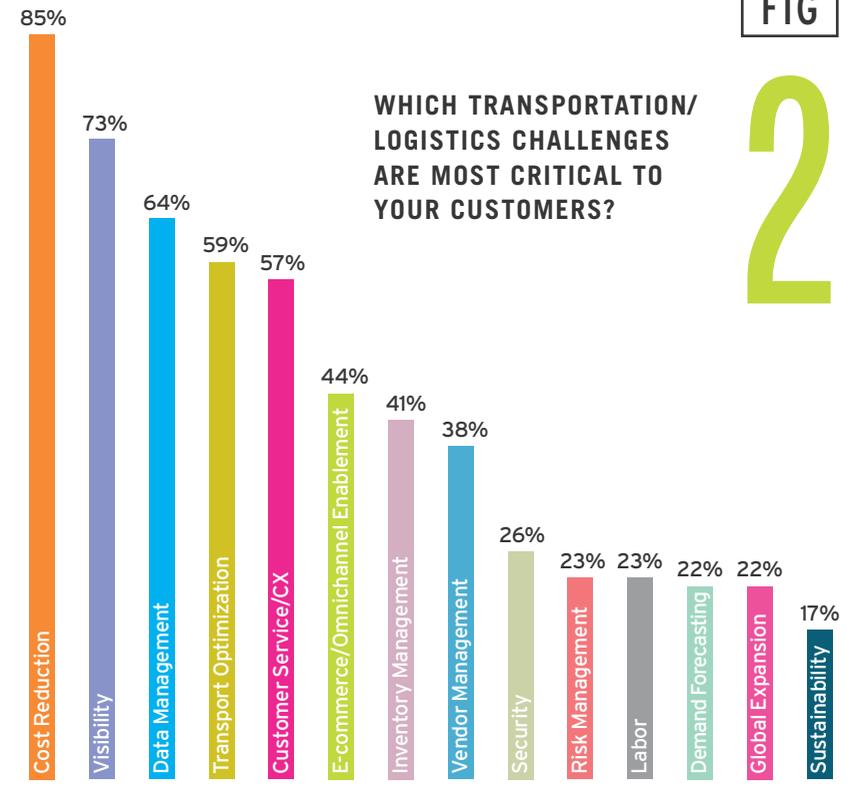


Figure 2), up from 81% in 2018. Seventy-three percent of vendors name visibility as a critical concern for customers in 2019, a nine-point drop from 2018.

Only three other issues emerge this year as critical customer concerns for more than half of vendors. Sixty-four percent of respondents cite data management, 59% mention transport optimization (a big jump, compared with 25% in 2018), and 57% name customer service or customer experience. When you consider the close links between visibility and transport optimization, it makes sense that optimization rises high on the list.

As in 2018, vendors are least likely to mention sustainability as a critical challenge for their customers. Have logistics organizations not yet focused on that issue in large numbers? Or do they manage sustainability concerns without significant help from logistics IT solutions?

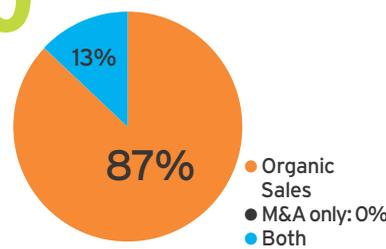
One thing that remains absolutely clear about logistics IT vendors is that

they continue to focus on expanding sales. Last year, 88% of vendors said that their growth in the past year was due to organic sales. Nearly the same proportion of respondents, 87%, gives that answer this year (see Figure 3). No respondents to the 2019 survey report growth in the past year solely through mergers and acquisitions. Thirteen percent saw growth over the past year due to a combination of both factors.

FIG

3

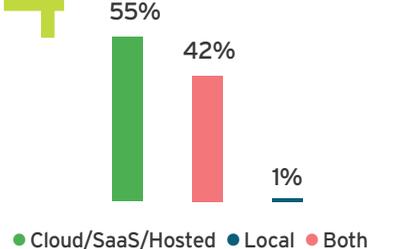
GROWTH IN THE PAST YEAR WAS DUE TO...



FIG

4

HOW DO YOU DELIVER YOUR SOLUTIONS?



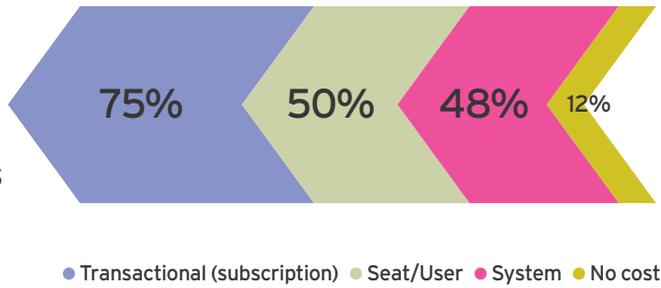
vendors tell us that they provide cloud-based, SaaS, or hosted solutions (see Figure 4), a slight increase from last year’s 52%. Forty-two percent of vendors let customers choose between cloud-based or local implementation, a figure slightly lower than last year’s 46%. Only 1% of respondents—compared with 2% last year—say they deliver their solutions only for local implementation.

As one IT vendor comments in the survey: “Supply chains are rapidly adopting new technology to solve complex business issues, requiring

FIG

5

HOW DO USERS PAY FOR TECHNOLOGY SOLUTIONS?



● Transactional (subscription) ● Seat/User ● System ● No cost

companies to harness the power of the cloud. Companies want supply chain planning solutions that are self-sufficient and respond automatically to quickly changing business dynamics. That’s why we have invested in cloud and leverage the machine learning capabilities of the Microsoft Azure platform to empower clients to thrive amid change and complexity.”

As a pay-as-you-go business model, cloud computing is naturally amenable to subscription arrangements. Three-quarters of respondents say users pay for their technology by the transaction or by subscription (see Figure 5). Vendors offer other options as well. Half have customers who pay by the seat or user (down 10% from last year), while nearly as many—48%—sell an entire system at a flat rate. Some lucky customers also receive technology services from the 12% of vendors who say they offer their solutions at no cost to the user.

WHAT’S ON OFFER

Vendors who responded to our survey offer a broad variety of technology solutions for strategic activities and execution, both for logistics and supply chain. Among the logistics solutions, vendors are most likely to offer products that help customers move product as efficiently and cost-effectively as possible (see Figure 6). The top solutions in 2019 address optimization (offered by 72% of vendors), transportation management (61%), routing and scheduling (60%), and load planning (50%). Those

categories took the top spots in 2018 as well.

The logistics solutions that our respondents are least likely to offer include radio frequency identification systems (19%) and labor management systems (21%). Yard management systems (YMS) have seen a significant increase, however. In 2018, only 9% of technology vendors reported that they offered a YMS solution; this year 23% offer one.

One other kind of logistics solution also saw a significant jump. In 2018, 33%

of vendors said they offered solutions for reverse logistics. In 2019, that number is 46%. The ongoing rise of e-commerce is spurring greater demand for software to manage returns when online shoppers find that the product they loved onscreen doesn’t quite fit the need after it’s delivered. Items purchased online are three times more likely to be returned than items purchased in a brick-and-mortar store, according to a report by the Office of Inspector General, U.S. Postal Services.

“Returns are a growing challenge and opportunity for retailers and brands,” one respondent comments. “More companies are looking for a holistic returns optimization solution to handle all of their returned and excess inventory.”

Our survey shows some significant changes among supply chain solution offerings. In 2018, 57% of vendors reported that they offered systems for supplier or vendor management. In 2019, that number is 10 points lower, at 47%

FIG

6

LOGISTICS SOLUTIONS OFFERED



(see Figure 7). Systems for modeling, forecasting, or predictive analytics saw an even bigger drop, from 41% in 2018 to 23% this time around.

In 2019, the supply chain solutions a vendor is most likely to provide are for supplier/vendor management (47%), supply chain control tower (41%), or demand management (25%). Distribution resource planning and materials resources planning (1% each) fall to the bottom of the list, as they did in 2018.



WHAT'S DRIVING LOGISTICS IT DEMAND?

As part of our annual survey, *Inbound Logistics* asks participants to share their views on the biggest sources of demand for logistics IT. Here are a few responses.

 **E-commerce.** “3PLs continue to evolve to high-volume fulfillment houses servicing the e-commerce space. This is especially true in the ‘nutraceutical’ space, involving high-volume picks. Also, the Amazon effect is reaching down to regional 3PLs.”

 **Omnichannel retail.** “There is a major gap in the omnichannel retail market. In the United States, only 27.5% of retailers (with fewer than 10 store locations) offer BOPIS (buy online, pick up in store) services. Yet IHL Group reports that 46% of shoppers used in-store pickup over the 2018 holiday buying season. Retailers that invest in solid order management technology will see increased sales and foot traffic because of consumers’ desire for convenient click-and-collect options. The next few years will see a race to implement systems to close this gap between market demand and retail supply. We also see more non-traditional retailing businesses requesting order management systems as more 3PLs start to offer this service to retail clients.”

 **Blockchain.** “The cutting edge of logistics technology is via the blockchain, where shipping data can be transparent and secure along the entire chain.”

 **Warehouse management systems.** “The need for a WMS to bring efficiencies to the warehouse is critical for both 3PLs and distribution companies, not only to reduce errors, but also to increase labor productivity. The ‘floor’ technology needs to understand the

workforce is turning over rapidly and the solutions technology companies deliver need to be more intuitive. Distributors and manufacturers continue to search for best-of-breed WMS solutions to match ERP solutions.”

 **Freight bidding.** “Shippers are looking to automate freight bidding activity and benchmark against contracted rates.”

 **Positioning technologies.** “There’s a need for indoor positioning using real-time location systems (RTLS), which enables use cases for digital twin, eKanban, safety, and other areas, mainly in automotive, warehousing, and heavy industry.”

 **Integration.** “We see a need to integrate our cargo planning software with customers’ ERP or similar systems at a bigger scale, to be deployed across more locations, especially via cloud-based services.”

 **Business intelligence.** “Corporations continue to seek business intelligence solutions that help create a competitive advantage through reduced costs, increased efficiency, and better decision-making capabilities. This includes the continued automation and convergence of transportation management, accounting, and accounts payable systems. Accounting departments require accurate accrual and allocation of transportation expenses. Supply chain/logistics departments seek greater visibility and timely access to their data to manage and control processes.”

 **Increased automation.** “We see demand around automation and labor reduction to improve efficiencies. There’s also demand for applications that shippers can use to schedule arrivals and departures themselves within the confines of availability.”

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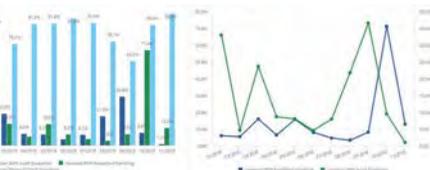


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360data
920-707-3601
360data.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Wholesale, Services/Government, Transportation
Logistics Solutions: TMS
Additional Solutions: EDI Integration

3Gtms
203-567-4610
3Gtms.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Transportation Management
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Routing & Scheduling, TMS
Additional Solutions: EDI, Order Management

3PL Central
310-341-3251
3plcentral.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
Logistics Solutions: Inventory Management, Optimization, WMS, Wireless/Mobile
Additional Solutions: EDI, Order Management, Process Improvement, API Integration

A3 Freight Payment
901-759-2969
a3freightpayment.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Rate & Bid
Additional Solutions: EDI, Process Improvement

Acelynk
469-270-0614
acelynk.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Services/Government, Transportation
SC Solutions: GTM, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Optimization, TMS, WMS
Additional Solutions: EDI, Process Improvement

KEY

CRM/CX: Customer Relationship Management
DRP: Distribution Resource Planning
ERP: Enterprise Resource Planning
GTM: Global Trade Management
MRP: Manufacturing Resource Planning
PLM: Product Lifecycle Management
TMS: Transportation Management System
WMS: Warehouse Management System
YMS: Yard Management System

Find more. Search here:
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Use the Logistics IT Decision Support Tool – SEARCH on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

Acuitive Solutions
704-321-4992
acuitivesolutions.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Transportation
SC Solutions: Logistics Management
Logistics Solutions: Auditing/Claims/Freight Payment, Rate & Bid, Routing & Scheduling
Additional Solutions: Container/Chassis Management

Advent Intermodal Solutions
908-795-3200
adventintermodal.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: Transportation
SC Solutions: Demand Management, DRP, Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management, Full Container Lifecycle Visibility & Executional Control
Logistics Solutions: Labor Management, Optimization, RFID, Wireless/Mobile, YMS
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Capacity Solutions, Container/Chassis Management, EDI, Process Improvement, API Data Connections, TMS, Dispatch Systems

Agistix
650-362-2000
agistix.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, Wireless/Mobile
Additional Solutions: Machine Learning, Big Data Management, Capacity Solutions, EDI, Order Management, Process Improvement, Strategic Sourcing

Amber Road
201-935-8588
amberroad.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: GTM, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Security, Compliance, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Optimization, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS
Additional Solutions: IoT/IIoT, Machine Learning, Big Data Management, Container/Chassis Management, EDI, Order Management, Process Improvement, Strategic Sourcing, Global Trade Management

AR Traffic Consultants
212-736-8565
artraffic.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System
Industries Served: Manufacturing, Wholesale, Services/Government
Logistics Solutions: Optimization, Rate & Bid, TMS
Additional Solutions: EDI

ASC Software
937-429-1428
ascsoftware.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: System, Seat/User
Industries Served: E-Commerce, Manufacturing, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, Demand Management, DRP, ERP, MRP, Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management, Advanced EDI, B2B Direct
Logistics Solutions: Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Reverse Logistics, RFID, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: IoT/IIoT, Capacity Solutions, Robotics/Automation, Container/Chassis Management, EDI, Order Management, Process Improvement

2019 TOP 100

LOGISTICS IT PROVIDERS

Use the **Logistics IT Decision Support Tool – SEARCH** on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

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Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: GTM, Supply Chain Control Tower
Logistics Solutions: Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: EDI

Bringg
+972-3-505-6397
bringg.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Retail, Transportation
Logistics Solutions: Inventory Management, Optimization, Reverse Logistics, Routing & Scheduling, TMS, WMS, Delivery Orchestration
Additional Solutions: Machine Learning, Order Management, Process Improvement

C3 Solutions
514-315-3139
c3solutions.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Yard Management, Dock Scheduling Systems
Logistics Solutions: Routing & Scheduling, Dock Capacity Planning
Additional Solutions: IoT/IIoT

Cadre Technologies
866-252-2373
cadretech.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Demand Management, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Labor Management, Reverse Logistics, RFID, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: EDI, Order Management

CargoSmart
408-325-7600
cargosmart.ai

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, GTM, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS, Wireless/Mobile
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, EDI

Cass Information Systems
314-506-5500
cassinfo.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
Logistics Solutions: Auditing/Claims/Freight Payment, Rate & Bid
Additional Solutions: EDI, Process Improvement

Cheetah Software
805-373-7111
cheetah.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: DRP, Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Logistics Operations Optimization
Logistics Solutions: Load Planning, Optimization, Reverse Logistics, Routing & Scheduling, TMS, Wireless/Mobile, Order Management
Additional Solutions: Machine Learning, Capacity Solutions, EDI, Process Improvement, Strategic Sourcing

Use the Logistics IT Decision Support Tool – SEARCH on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

Chetu
954-342-5676
chetu.com

Platform: Cloud/SaaS/Hosted, Local System
Pricing: System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, ERP, MRP, Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Security, Supplier/Vendor Management
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Optimization, Routing & Scheduling
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Order Management

Clear Destination
514-933-8686
cleardestination.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
Logistics Solutions: Inventory Management, Load Planning, Optimization, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile
Additional Solutions: Blockchain, IoT/IIoT, Big Data Management, Capacity Solutions, EDI, Order Management, Process Improvement

ClearTrack
877-377-4400
cleartrack.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: GTM, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Rate & Bid, YMS, Global Order Visibility
Additional Solutions: Blockchain, Machine Learning, Big Data Management, EDI, Order Management, Process Improvement

Cloud Logistics
561-800-1212
gocloudlogistics.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Retail, Wholesale, Transportation
SC Solutions: TMS

Command Alkon
205-879-3282
commandalkon.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: Services/Government, Transportation
SC Solutions: CRM/CX, Demand Management, GTM, MRP, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Labor Management, Optimization, Procurement, Rate & Bid, RFID, Routing & Scheduling, TMS, Wireless/Mobile, YMS
Additional Solutions: IoT/IIoT, Big Data Management, Order Management

CT Logistics
216-267-2000
ctllogistics.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: Blockchain, IoT/IIoT, Big Data Management, EDI, Process Improvement, Strategic Sourcing

KEY

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TMS: Transportation Management System
WMS: Warehouse Management System
YMS: Yard Mgmt System

Find more. Search here:
bit.ly/IT-DST

2019 TOP 100

LOGISTICS IT PROVIDERS

Use the **Logistics IT Decision Support Tool – SEARCH** on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

CTSI-Global
888-836-5135
ctsi-global.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Supplier/Vendor Management
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization, Routing & Scheduling, TMS
Additional Solutions: Blockchain, EDI, Order Management, Process Improvement

**Cypress Inland
(YardView)**
303-781-3430
yardview.com

Platform: Cloud/SaaS/Hosted
Pricing: System
Industries Served: Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Security, Supplier/Vendor Management, Yard Management
Logistics Solutions: Inventory Management, Load Planning, Optimization, RFID, Routing & Scheduling, Wireless/Mobile, YMS
Additional Solutions: Container/Chassis Management, EDI, Order Management, Process Improvement

Data2Logistics
609-577-3756
data2logistics.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Procurement, Rate & Bid
Additional Solutions: Big Data Management

Datex
727-571-4159
datexcorp.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
Logistics Solutions: Inventory Management, Labor Management, Load Planning, Procurement, Reverse Logistics, RFID, Routing & Scheduling, WMS, Wireless/Mobile, YMS
Additional Solutions: EDI, Order Management

Demand Management
800-886-3737
demandsolutions.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, Seat/User
Industries Served: Manufacturing, Retail, Wholesale, Services/Government
SC Solutions: Demand Management, DRP, MRP, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Optimization, Procurement
Additional Solutions: Machine Learning, Big Data Management, Allocation

Deposco
770-597-4864
deposco.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Management, DRP, Supplier/Vendor Management
Logistics Solutions: Inventory Management, Rate & Bid, Reverse Logistics, WMS, Distributed Order Management
Additional Solutions: Strategic Sourcing

Descartes
519-746-8110
descartes.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: GTM, Security, Global Trade Content
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS, Dock Appt. Scheduling
Additional Solutions: Big Data Management, Capacity Solutions, EDI, Order Management, Strategic Sourcing

Use the Logistics IT Decision Support Tool – SEARCH on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

Elemica
484-253-4674
elemica.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Transportation
SC Solutions: Demand Management, GTM, Modeling/Forecasting/Predictive Analytics, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS, Wireless/Mobile
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Capacity Solutions, EDI, Order Management, Process Improvement, Strategic Sourcing

enVista
317-208-9100
envistacorp.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, Demand Management, DRP, ERP, GTM, MRP, Product Lifecycle Management, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Routing & Scheduling
Additional Solutions: EDI, Order Management, Strategic Sourcing

Epicor
800-999-1809
epicor.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Wholesale
SC Solutions: CRM, Demand Management, DRP, ERP, Modeling, PLM, Sales & Operations Planning, Security, Supplier/Vendor Management
Logistics Solutions: Inventory Management, Labor Management, Optimization, Procurement, Rate/Bid Management, Routing & Scheduling, WMS, Wireless/Mobile
Additional Solutions: Category Management, EDI, Mobile Order Management, Strategic Sourcing

Fortigo
512-372-8884
fortigo.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization, TMS, Wireless/Mobile
Additional Solutions: EDI

Foxtire Software
864-630-3238
foxtiresoftware.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management
Logistics Solutions: Inventory Management, Labor Management, WMS, YMS
Additional Solutions: EDI

Freight Management
714-397-3262
freightmgmt.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: Manufacturing, Retail, Wholesale, Transportation
SC Solutions: CRM/CX, Demand Management, ERP, Modeling/Forecasting/Predictive Analytics, Security, Supplier/Vendor Management
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS
Additional Solutions: Big Data Management, EDI, Order Management, Process Improvement, Strategic Sourcing

KEY

CRM/CX: Customer Relationship Management
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YMS: Yard Mgmt System

Find more. Search here:
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LOGISTICS IT PROVIDERS

Use the **Logistics IT Decision Support Tool** – **SEARCH** on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

Freightgate
714-799-2833
freightgate.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: Manufacturing, Retail, Wholesale, Transportation
SC Solutions: GTM, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: EDI

GlobalTranz
866-275-1407
globaltranz.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, Demand Management, DRP, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower, Supply Chain Network Design
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile
Additional Solutions: Machine Learning, Big Data Management, Capacity Solutions, EDI, Order Management, Process Improvement, Strategic Sourcing

GTG Technology Group
281-826-5750
gtgtechnologygroup.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: Transportation
SC Solutions: Sales & Operations Planning, Security, Supplier/Vendor Management
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS, Wireless/Mobile, YMS
Additional Solutions: Container/Chassis Management, EDI, Order Management, Process Improvement

HighJump
800-328-3271
highjump.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supply Chain Management
Logistics Solutions: Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: Order Management, Process Improvement, Strategic Sourcing

Highway 905
908-874-4867
highway905.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Wholesale, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Procurement, Reverse Logistics, RFID, Routing & Scheduling, TMS, WMS, Wireless/Mobile
Additional Solutions: Big Data Management, EDI, Order Management, Process Improvement

Info-X
646-915-0333
infoxusa.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: Transportation
SC Solutions: CRM/CX, ERP, GTM, Modeling/Forecasting/Predictive Analytics, Complete Ocean, Air & Ground Transportation Management Systems, Back Office Documentation Systems, Auditing Systems, Accounting Systems, Tracking Systems, Exception Management, Supply Chain Management
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: Big Data Management, Robotics/Automation, EDI, Order Management, Process Improvement, Compliance Solutions, Data Feed Services for Global Ocean Scheduling (with INTTRA)

Use the Logistics IT Decision Support Tool – SEARCH on any of these data points to match your requirements to the Top 100: bit.ly/IT-DST

Infor
866-244-5479
infor.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Mgmt, DRP, ERP, GTM, MRP, Modeling/Forecasting/Predictive Analytics, PLM, Sales & Operations Planning, Security, Supplier/Vendor Mgmt, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Rating & Bidding, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Capacity, EDI, Order Management, Process Improvement, Strategic Sourcing

Integration Point
704-576-3678
integrationpoint.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: GTM, Modeling/Forecasting/Predictive Analytics, Security
Logistics Solutions: Optimization
Additional Solutions: Blockchain, Strategic Sourcing

Intelligent Audit
201-880-1110
intelligentaudit.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization
Additional Solutions: Blockchain, Machine Learning, Process Improvement

IntelliTrans
800-551-8851
intellitrans.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Wholesale, Services/Government, Transportation
SC Solutions: Demand Management, Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Supplier/Vendor Management, Supply Chain Control Tower, TMS
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Procurement, Rate & Bid, RFID, TMS, WMS, Wireless/Mobile, YMS, Shipment Visibility
Additional Solutions: IoT/IIoT, Machine Learning, Big Data Management, Capacity, EDI, Order Management, Process Improvement, Strategic Sourcing

Interlink Technologies
800-655-5465
thinkinterlink.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Demand Management, Product Lifecycle Management, Sales & Operations Planning
Logistics Solutions: Inventory Management, Labor Management, Load Planning, Optimization, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: Robotics/Automation, EDI, Order Management, Process Improvement

KEY

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YMS: Yard Mgmt System

Find more. Search here:
bit.ly/IT-DST

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LOGISTICS IT PROVIDERS

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JDA Software
800-479-7382
jda.com

Platform: Cloud/SaaS/Hosted
Pricing: Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Management, DRP, ERP, MRP, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: IoT/IIoT, Machine Learning, Big Data Management, Capacity, Robotics/Automation, Order Management, Strategic Sourcing

Kuebix
800-220-8610
kuebix.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Transportation Management System
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS, YMS
Additional Solutions: Capacity, Container/Chassis Management, EDI, Process Improvement

LLamasoft
617-426-2222
llamasoft.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Management, Modeling/Forecasting/Predictive Analytics, Supply Chain Planning & Design
Logistics Solutions: Optimization, Reverse Logistics, Routing & Scheduling
Additional Solutions: Capacity, Process Improvement

LOG-NET
732-758-6800
log-net.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, Demand Management, DRP, ERP, GTM, MRP, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, RFID, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: Machine Learning, Big Data Management, Capacity, Container/Chassis Management, EDI, Order Management, Process Improvement, Strategic Sourcing

Logility
800-762-5207
logility.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Demand Management, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Optimization
Additional Solutions: Machine Learning, Big Data Management

LogiNext Solutions
510-894-6225
loginextsolutions.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Transportation
SC Solutions: Demand Management, ERP, Modeling/Forecasting/Predictive Analytics, Supply Chain Control Tower, Delivery Route Planning Optimization
Logistics Solutions: Load Planning, Optimization, Routing & Scheduling, TMS
Additional Solutions: IoT/IIoT, Machine Learning, Capacity, Order Management

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Logistical Labs
312-999-9762
logisticallabs.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Transportation
SC Solutions: Sales & Operations Planning, Supplier/Vendor Management
Logistics Solutions: Optimization, Procurement, Rate & Bid, Routing & Scheduling
Additional Solutions: Big Data Management, Capacity Solutions, Process Improvement, Strategic Sourcing

LogistiView
919-800-0018
logistiview.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
Logistics Solutions: Labor Management, Optimization, Wireless/Mobile, Digital Workforce Platform
Additional Solutions: Process Improvement, Workforce Augmented Reality

Made4net
201-645-4345
made4net.us

Platform: Cloud/SaaS/Hosted, Local
Pricing: Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: WMS
Logistics Solutions: Inventory Management, Labor Management, Routing & Scheduling, TMS, YMS

MagicLogic
206-274-6248
magiclogic.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Sales & Operations Planning
Logistics Solutions: Load Planning, Optimization
Additional Solutions: Robotics/Automation

Manhattan Associates
877-596-9208
manh.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Supplier/Vendor Management
Logistics Solutions: Inventory Management, Labor Management, Optimization, Procurement, Reverse Logistics, RFID, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: Machine Learning, Capacity, Robotics/Automation, Order Management, Process Improvement

McLeod Software
205-823-5100
mcleodsoftware.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Seat/User
Industries Served: Transportation
SC Solutions: CRM/CX, ERP, Modeling/Forecasting/Predictive Analytics
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: Blockchain, Machine Learning, Big Data Management, Container/Chassis Management, EDI, Order Management, Strategic Sourcing

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MercuryGate
919-469-8057
mercurygate.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Supply Chain Control Tower, Transportation Management
Logistics Solutions: Load Planning, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS

MP Objects
646-520-0841
mp-objects.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Supply Chain Control Tower, Supplier Collaboration, VMI
Logistics Solutions: Inventory Management, Reverse Logistics, TMS, Spare Parts Logistics
Additional Solutions: Order Management

Navigate
651-379-5030
navigate.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: Manufacturing, Retail, Services/Government, Transportation
SC Solutions: ERP, GTM, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS
Additional Solutions: Machine Learning, Big Data Management, Capacity, Container/Chassis Management, EDI, Order Management, Process Improvement

NetSuite
877-638-7848
netsuite.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: CRM, Supply Chain Control Tower, Supply Chain Management
Logistics Solutions: TMS, Warehousing, Fulfillment, Procurement
Additional Solutions: Order Management

NGC Software
800-690-0642
ngcsoftware.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Seat/User
Industries Served: Manufacturing, Retail, Wholesale
SC Solutions: Demand Management, ERP, MRP, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Optimization, Procurement
Additional Solutions: Machine Learning, Big Data Management, Capacity, EDI, Order Management, Process Improvement, Strategic Sourcing

Nulogx
905-486-1162
nulogx.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale
SC Solutions: Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, Wireless/Mobile
Additional Solutions: EDI

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nVision Global
770-474-4122
nvisionglobal.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Mgmt, SC Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: Blockchain, IoT/IIoT, EDI, Order Management, Strategic Sourcing

Optoro
908-578-8303
optoro.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Retail
SC Solutions: Returns Optimization Platform
Logistics Solutions: Reverse Logistics
Additional Solutions: Machine Learning

Optricity
919-237-4846
optricity.com

Platform: Local
Pricing: Seat/User
Industries Served: E-Commerce, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Slotting Optimization, Profiling
Logistics Solutions: Optimization
Additional Solutions: Process Improvement, Integration

Oracle
650-506-7000
oracle.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM, Demand Management, DRP, ERP, GTM, MRP, Modeling, PLM, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Rate Bid Management, Reverse Logistics RFID, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS
Additional Solutions: Category Mgmt, Container/Chassis Mgmt, EDI, Mobile Order Mgmt, Strategic Sourcing

OrderDynamics
866-559-8123
orderdynamics.com

Platform: Cloud/SaaS/Hosted
Pricing: System
Industries Served: E-Commerce, Retail, Transportation
SC Solutions: Distributed Order Management
Logistics Solutions: Inventory Management, Optimization, Reverse Logistics, Routing & Scheduling
Additional Solutions: Order Management

Paragon Software
972-731-4308
paragonrouting.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: System
Industries Served: E-Commerce, Mfg, Retail, Wholesale, Transportation
SC Solutions: GTM, Route Planning & Execution
Logistics Solutions: Optimization, Routing & Scheduling, TMS
Additional Solutions: Proof of Delivery Software

PINC Solutions
510-474-7500
pinc.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
Logistics Solutions: Inventory Management, RFID, YMS
Additional Solutions: IoT/IIoT, Machine Learning, Robotics/Automation, Container/Chassis Management

KEY

CRM/CX: Customer Relationship Management
DRP: Distribution Resource Planning
ERP: Enterprise Resource Planning
GTM: Global Trade Mgmt
MRP: Manufacturing Resource Planning
PLM: Product Lifecycle Mgmt
TMS: Transportation Management System
WMS: Warehouse Management System
YMS: Yard Mgmt System

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2019 TOP 100

LOGISTICS IT PROVIDERS

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Princeton TMX
260-341-5017
princetontmx.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Retail, Wholesale, Transportation
SC Solutions: CRM/CX, Demand Management, DRP, Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Load Planning, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS, Wireless/Mobile, YMS, Tender & Execution Management, Dock Management, Real-Time Track & ETA, Load Building
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Capacity, EDI, Order Management, Process Improvement, Strategic Sourcing

project44
312-376-8883
project44.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Security, Supply Chain Control Tower, Visibility
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, Visibility
Additional Solutions: Big Data Management

QuestaWeb
908-233-2300
questaweb.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Transportation
SC Solutions: GTM, Security, Supply Chain Control Tower
Logistics Solutions: Global Trade Management
Additional Solutions: Order Management, Process Improvement, Strategic Sourcing

Quintiq
610-964-8111
quintiq.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Services/Government, Transportation
SC Solutions: Sales & Operations Planning
Logistics Solutions: Inventory Management, Load Planning, Optimization, Reverse Logistics, Routing & Scheduling
Additional Solutions: Order Management

RateLinx
262-565-6150
ratelinx.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: Blockchain, Big Data Management, EDI, Process Improvement, Strategic Sourcing

SaaS Transportation
901-832-2401
saastransportation.com

Platform: Cloud/SaaS/Hosted
Pricing: System, Seat/User
Industries Served: Manufacturing, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: EDI, Order Management, Process Improvement

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SAP
800-872-1727
sap.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Sales & Operations Planning, Demand & Supply Planning
Logistics Solutions: PLM, Visibility
Additional Solutions: AI, Predictive Analytics, Strategic Sourcing

ShippersEdge TMS
888-237-2465
shippersedgetms.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Wholesale, Services/Government, Transportation
SC Solutions: Supplier/Vendor Management
Logistics Solutions: Dock Scheduler, Supplier Portal, Custom Apps, Load Planning, Optimization, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, Wireless/Mobile
Additional Solutions: Big Data Management, Process Improvement, Custom Applications

SMC³
800-845-8090
smc3.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics
Logistics Solutions: Load Planning, Optimization, Procurement, Rate & Bid, Routing & Scheduling

Softeon
703-793-0005
softeon.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Management, Modeling/Forecasting/Predictive Analytics
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Reverse Logistics, RFID, Routing & Scheduling, TMS, WMS, Wireless/Mobile, YMS, Warehouse Execution System
Additional Solutions: IoT/IIoT, Machine Learning, Robotics/Automation, EDI, Order Management

Sphere
732-357-8006
www.spheremi.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System
Industries Served: Retail, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, SC Control Tower, Optimization and Analytics
Logistics Solutions: Optimization, Routing & Scheduling, Wireless/Mobile
Additional Solutions: Machine Learning, Big Data Management, Process Improvement

SphereWMS
818-678-2601
spherewms.com

Platform: Cloud/SaaS/Hosted
Pricing: System
Industries Served: E-Com, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Supplier/Vendor Management
Logistics Solutions: Inventory Management, Reverse Logistics, RFID, WMS, Wireless/Mobile
Additional Solutions: EDI, Order Mgmt, Process Improvement

SPS Commerce
866-245-8100
spscommerce.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Com, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Supplier/Vendor Management
Additional Solutions: EDI

KEY

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Supply Vision
847-388-0065
supply-vision.com

Platform: Cloud/SaaS/Hosted
Pricing: Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: ERP, Supply Chain Control Tower
Logistics Solutions: Inventory Management, Load Planning, Optimization, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS, WMS, Wireless/Mobile
Additional Solutions: EDI, Order Management, Process Improvement

SwanLeap
855-737-3444
swanleap.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, System
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, Modeling/Forecasting/Predictive Analytics, Product Lifecycle Management, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Management, Labor Management, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logistics, RFID, Routing & Scheduling, TMS
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Capacity Solutions, Container/Chassis Management, Order Management, Process Improvement, Consulting and Contract Negotiating

Symphony RetailAI
972-370-5810
symphonyretailai.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: Retail, Wholesale
SC Solutions: Demand Management, Modeling/Forecasting/Predictive Analytics, Supplier/Vendor Management
Logistics Solutions: Inventory Management, WMS
Additional Solutions: Machine Learning, Order Management

Synergy (SnapFulfil)
720-372-1250
snapfulfil.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
Logistics Solutions: Inventory Management, WMS

Tecsys
800-922-8649
tecsys.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Management, ERP, Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Supplier/Vendor Management, Supply Chain Control Tower, DOM
Logistics Solutions: Inventory Management, Optimization, Procurement, Reverse Logistics, RFID, TMS, WMS, Wireless/Mobile
Additional Solutions: Big Data Management, Robotics/Automation, EDI, Order Management, Process Improvement, Strategic Sourcing

Tive
617-631-8483
tive.co

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Security, Supplier/Vendor Management, Supply Chain Control Tower, Supply Chain Visibility
Additional Solutions: IoT/IIoT

Transporeon
267-281-1555
transporeon.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Retail, Wholesale, Transportation
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS, YMS
Additional Solutions: Capacity, Process Improvement, Strategic Sourcing

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TransportGistics
631-567-4100
transportgistics.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: CRM/CX, GTM, Supplier/Vendor Management, Supply Chain Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization, Procurement, Rate & Bid, Reverse Logistics, Routing & Scheduling, TMS
Additional Solutions: Big Data Management, EDI, Process Improvement, Strategic Sourcing

Trax
724-554-9555
traxtech.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government
SC Solutions: Spend Management, Transportation Spend Intelligence
Logistics Solutions: Auditing/Claims/Freight Payment, Optimization, Spend Management
Additional Solutions: EDI, Strategic Sourcing

Trimble
866-914-5299
mobility.trimble.com

Platform: Cloud/SaaS/Hosted, Local
Pricing: Transactional, System, Seat/User
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Demand Mgmt, ERP, Modeling/Forecasting/Predictive Analytics, Security, Supplier Mgmt
Logistics Solutions: Auditing/Claims/Freight Payment, Inventory Mgmt, Labor Mgmt, Load Planning, Optimization, Procurement, Rate & Bid, Reverse Logs, Routing & Scheduling, TMS, Mobile
Additional Solutions: Blockchain, IoT/IIoT, Machine Learning, Big Data Management, Capacity Solutions, EDI, Order Management, Process Improvement

U.S. Bank
866-274-5898
freight.usbank.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: Manufacturing, Retail, Wholesale, Services/Government, Transportation
SC Solutions: Modeling/Forecasting/Predictive Analytics, Security, Supplier/Vendor Management, Freight Benchmarking, Contract Negotiation, Trade Finance
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Rate & Bid, Routing & Scheduling
Additional Solutions: IoT/IIoT, Big Data Management, Capacity, Robotics/Automation, EDI, Order Management, Process Improvement, Strategic Sourcing

UltraShipTMS
800-731-7512
ultrashiptms.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale
SC Solutions: TMS, YMS, Freight Settlement
Logistics Solutions: Load Planning, Optimization, Routing & Scheduling
Additional Solutions: Capacity, EDI, Process Improvement

uRoute
313-600-5308
uroute.net

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Com, Mfg, Retail, Wholesale, Svs/Govt, Transportation
SC Solutions: Demand Mgmt, ERP, Modeling/Forecasting/Predictive Analytics, Sales & Operations Planning, Supplier/Vendor Management, SC Control Tower
Logistics Solutions: Auditing/Claims/Freight Payment, Load Planning, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS, Wireless/Mobile
Additional Solutions: EDI, Order Management, Process Improvement

WIN (Web Integrated Network)
203-470-9455
gowithwin.com

Platform: Cloud/SaaS/Hosted
Pricing: Transactional
Industries Served: E-Commerce, Manufacturing, Retail, Wholesale, Transportation
SC Solutions: Supply Chain Control Tower
Logistics Solutions: Load Planning, Optimization, Procurement, Rate & Bid, Routing & Scheduling, TMS
Additional Solutions: IoT/IIoT, Capacity, Process Improvement, Strategic Sourcing

KEY

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MRP: Manufacturing Resource Planning
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TMS: Transportation Management System
WMS: Warehouse Management System
YMS: Yard Mgmt System

Find more. Search here:
bit.ly/IT-DST

THOUGHT LEADERS

How to Leverage a 3PL's Expertise with Packaged Applications



Graham Page

Director - Integrated Solutions
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www.ruan.com
866-782-6669 ext. 1

Knowing how to quickly set up and configure supply chain technology so the solutions work for individual customers is the key to getting the most flexible and powerful performance from industry-leading package applications.

Q: *Can you describe Ruan's technology platform mix?*

A: Ruan's approach to business-enabling technology is primarily packaged software applications: transportation management systems, warehouse management systems, and network design. Our platform is based on Oracle Transportation Management for logistics management, TMW for dedicated fleet operations, and JDA for both WMS and network design solutions.

Importantly, we have leveraged our domain expertise to integrate these systems across our organization. However, there are also areas where we have built and run our own custom in-house applications when we do not find maturity in the marketplace around solutions that our customers need.

Q: *What sets Ruan's solution apart from other transportation providers?*

A: Expertise is a prime differentiator. Ruan has dedicated team members assigned to each customer. Our solutions teams are consistent from the onboarding process through continuous improvement projects. This knowledge about a customer's business and how their systems are set up, along with the expertise that our teams have on our applications, means that we are nimble with technology changes that address our customers' needs.

Adaptability is a top reason to lean on package applications as the backbone

of a platform where many system changes are enacted through system configuration by a business analyst rather than through IT-managed code development, which typically requires more time from idea to implementation.

Using adaptable applications doesn't force customers to fit into a single box, but rather creates a unique box for each customer. In end-to-end transportation processes, there are many similarities across customer operational tasks that take place in the middle, such as securing capacity, execution and tracking, and freight payment. But the ability to tailor solutions in the front of the process, such as how to capture orders and plan freight, and in the back of the process with customized billing formats and key performance indicators, is critical to meeting the customer's needs.

Q: *Should shippers consider hiring a transportation provider instead of purchasing technology to use on their own?*

A: The following areas typically drive the decision to partner rather than purchase technology:

- Harnessing the 3PL's expertise to configure the TMS system to meet evolving business requirements without expensive outside consulting guidance and limited in-house experience
- Avoiding cost and timeline overruns with in-house system implementation
- Integration and training with existing carrier network
- Managing the system upgrade process to keep current with evolving application functionality and support agreements
- Ability to focus on the core functions of the business while partnering with a provider with expertise in managing transportation and the associated technology

CRM System Brings Ease of Use and Multimodal Benefits

Q: *What obstacles do shippers typically face when working with outdated software systems?*

A: When customers are looking to ship something, cost and reliability aren't their only considerations. They also want the process to be simple and save them time. They want to avoid making phone calls, visiting multiple websites, and the risk of getting inaccurate information. When they have to work with older, outdated software to request a shipment, the entire process can be much more time-consuming and labor-intensive. They want an interface that's clean and easy to use, with fewer click-throughs and no toggling between pages or multiple websites.

Q: *Do you offer a solution that eliminates these problems?*

A: An integrated platform offers ease of use, with the shipper merely clicking a button to enter their shipment details and obtain a quote. They can feel confident that their quote will be accurate and their pricing locked in when they are ready to ship. This combines to save the customer time and money, and to help ensure their peace of mind.

The system we developed, DLS Worldwide's CRM System, provides customers with a simple interface in which shippers can find multimodal quoting, booking and reporting, shipment tracking, and invoice management with online payment options. It's simple, easy to navigate, and a one-stop shop for all logistics needs. Best of all, since this is our own proprietary software, we can make changes and enhancements on the fly. We consider feedback from our customers and strive to make this the best in the industry.

Shippers who've already signed on for this program like the ease of use, timely pickups and deliveries, competitive rates, and options provided. Overall they have seen a 12% freight reduction since implementation over a year ago. Our customers also like the personalized support that their customers receive from our staff.

DLS Worldwide optimizes your distribution and controls your costs through our spectrum of integrated services, unique sources of capacity, and global, technology-based delivery network.

Rely on DLS Worldwide for:

- Domestic LTL & Truckload
- International Air, LCL and FCL
- Expedited Air or Ground with Same Day, Next Day or Two Day Options
- White glove solutions including install & unpack, liftgate delivery, and more



Thomas Griffin

President
DLS Worldwide
Thomas.K.Griffin@rrd.com
www.dls-ww.com
877-744-3818

What to Look for in Real-Time Track & Trace



Shannon Vaillancourt

President
RateLinx
shannon.vaillancourt@ratelinx.com
www.ratelinx.com
262-565-6150

Q: *What are the benefits of track & trace visibility?*

A: Track & trace ultimately helps companies provide better customer service. When used to track inbound freight, it allows companies to plan their receiving efforts more efficiently. When applied to outbound freight, it provides a way for the customer to have instant access to the status of their shipment, preventing long calls to customer service to find out where their order is and when it will arrive.

Track & trace data allows for the shipping process to move smoothly and expectedly and provides opportunities for remedies when things don't go smoothly.

Q: *How should my track & trace system improve my logistics?*

A: There are many ways to provide improved logistics management, but what companies need is a system that provides end-to-end track & trace that makes the data actionable. Some solutions only show you the status of the order once it leaves the shipping dock. Tracking data should show you when a truck is broken down, but there is no magic button to get the shipment moving again.

More advanced systems integrate the data from the vendor (for inbound freight) to the end consumer (for outbound freight). The data allows a shipper to diagnose the cause of their late shipments and develop sustainable strategies to fix it.

Q: *What is the biggest hazard when implementing a visibility platform?*

A: Many systems have great visualizations but lack the data quality required to improve logistics measurably. The problem usually occurs when incoming data streams need cleansing and normalization. Disparate sources provide different data quality. Your provider should be able to handle multiple data streams and types, cleansing it to create a platform that is both accurate and actionable.

Q: *What should I ask my track & trace provider?*

A: When evaluating a track & trace supplier, I would ask one question: "How will you help me create strategies that will provide me with a competitive advantage?" If they can't answer and show you how their system is going to make the data actionable, find a different provider.

Q: *What should my track & trace platform provide?*

A: The right track & trace solution should provide the following three things: First, actionable data that allows you to dig deeper into how you're performing and diagnose the issues. Second, strategy development data to identify where to begin and what actions to take to solve these issues. And third, a deployment strategy that allows you to expand beyond where you are today, creating competitive advantage and long-term value.

Integrating Multiple Data Sources in a TMS

Q: *What are some of the data management challenges to expect in a transportation management system (TMS)?*

A: The most important thing is to decide what data you want/need, which trading partner has it, and how you will obtain it in a format that will be required for standardization of reporting and data mining.

Typically, for a TMS to obtain pertinent data elements, it requires integrating with numerous trading partners including carriers, PO management systems, customers' ERP systems, WMS, visibility platforms, loadboards, accounting systems, insurance providers, other TMS/brokers, and more. Data from these sources can be delivered in a variety of methods and formats.

The development of a database schema and an entity relationship model to define and enumerate logical relationships between the data entities is needed. Normalizing the data to the lowest common denominator and working your way up will allow you to effectively integrate disparate data sources.

Q: *How do you address the issue of dealing with different data sources?*

A: Data integration in the purest sense is about carefully and methodically blending data from different sources, making it more comprehensive and therefore more useful and valuable than it was before.

To be successful, you need to be flexible in the method and formats of the delivery and receipt of data. Exchanging information from only one method or format limits your trading partners and

can limit the amount of data available in the data warehouse.

Your data sharing technology needs to consider:

- The types of data and the size of the data sets that are shared
- The data processing services and tools that are required to maintain or use the data
- The technical capabilities and skills of data users and data providers
- The types and levels of data and access security that are required
- The software and hardware required by network users
- The level of effort and cost to develop and operate the exchange network

The answers to questions such as these address the overall feasibility of the data exchange network from a cost-effectiveness and likelihood of success perspective.

Q: *What advice do you have for managing the integration?*

A: Be flexible. Don't be too rigid with your methods of communication or formats. Play to your trading partners' strengths by utilizing the method they use that best meets your requirements.

For instance, the current trend in sharing carrier data is using APIs; however it is still important to be able to utilize other traditional methods such as EDI and flat file exchanges for quoting, tendering, tracking, and invoice data since some carriers still utilize EDI vs API. Without EDI or some other form of data exchange, you would be excluding data from those carriers, leaving an unacceptable void of data. As methods and formats of data exchange continue to evolve, a strategy that can accommodate a variety of means to manage the multitude of sources is prudent.



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844-722-7763

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|: Rater :|

|: RouteGistics :|

|: RoutingGuides :|

631.567.4100 | www.TransportGistics.com

IT Gap? 3PLs CLOSE THE LOOP



To help shippers meet technology needs and manage customer relationships, 3PLs come armed with solutions and expertise.

Just a decade or so ago, most shippers partnered with third-party logistics (3PL) providers largely as a labor play. Rather than shippers handling warehousing and logistics functions in-house, they outsourced them to 3PLs.

That has shifted. Today, many shippers turn to 3PLs to provide the technology solutions and expertise they need to manage increasingly complicated customer relationships.

More than four in five shippers responding to the 2018 *Third-Party Logistics* study by Penn State and Penske Logistics said 3PLs help them improve customer service.

Because 3PLs can spread their investments across multiple clients, they're often better able to invest in newer solutions, and then become experts in the technologies' configuration, implementation, and application. Shippers gain access to solutions they may not be able to afford on their own and can leverage their 3PLs' investments, often shifting what would be a capital expenditure to an operating expense.

The technology systems 3PLs offer fall roughly into two groups, says Stephen Bullard, vice president of product development and deployment with Tompkins Inc.

The first group includes software, such as warehouse management systems (WMS), to track products within a facility. On top of this, 3PLs might layer distributed order management systems (DOM) to manage the flow of products from multiple facilities to customers, or order management systems (OMS) that can aggregate orders from different marketplaces, such as Amazon and eBay.

Some 3PLs are introducing more sophisticated solutions that, for instance, look at historical buying patterns as well as promotions and seasonality to better forecast future inventory requirements.

The second category of technology comprises materials handling tools. This can include established technologies such as RFID, as well as newer solutions, including robotics. Indeed, some 3PLs are introducing robotics in order to

alleviate labor shortages.

To be sure, these technology investments can be substantial, even for 3PLs. Those costs drove a wave of consolidation in the 3PL industry starting in about 2014, says Yemisi Bolumole, Ph.D., associate professor of supply chain management at Michigan State University. Many of the transactions produced "end-to-end players," able to offer shippers a wide range of logistics services, Bolumole says.

A PARTNER FOR YOUR PARTNER

To improve their own systems, transportation companies, namely carriers but also 3PLs, turn to global business improvement providers such as DDC FPO.

DDC FPO's "primary goal is to free up its clients' time and capital so they can run their businesses more efficiently, and help their customers improve their operations," says Chad Crotty, vice president of sales and marketing with the Evergreen, Colorado-based firm. DDC FPO accomplishes this by streamlining, standardizing, and in some cases, automating its clients' business processes using offshore and tech-enabled resources.

DDC FPO must stay ahead of technology changes to remain relevant, says Luna Boyd, vice president of client solutions. DDC FPO invests heavily in development and has teams dedicated to continuously building solutions that will increase carrier and 3PL productivity, while reducing their costs. "They can pass these benefits on to their shippers," Boyd adds.

Transportation is saturated with software solutions, and many providers have touted their products as "out-of-the-box" for automating back-office functions, including billing. However, they often fail to deliver on the promise of automation due largely to the thousands of templates the industry uses daily.

In contrast, DDC FPO has been able to draw on its 30 years of expertise in data capture, as well as its more than 14 years of experience in freight billing to develop

CARRIERS AND 3PLs DISCOVER BENEFITS

When DDC FPO partners with carriers and 3PLs, it's with the goal of supporting their long-term success by adding value and helping them save money. That begins with in-depth discovery. "From the start, we ask many questions to make sure we understand our customer's pain points and goals," says Chad Crotty, vice president of sales and marketing. Most clients realize positive results within a few weeks.

This is key, as many transportation and logistics companies operate on slim margins, and their employees often are stretched thin. "We take ownership and accountability of their non-core functions, freeing up their time and internal resources," Crotty says.

Carriers and 3PLs that can focus on customer satisfaction report several benefits:

They retain clients. DDC FPO's billing and rate auditing services boost accuracy, meaning fewer phone calls to shippers to chase down errors. This saves time and money; for instance, one client cut billing costs by 40%. It

also improves relationships with shippers, boosting client retention.

They enhance their reputation. Many back-office functions interface with clients. A quality experience can enhance the company's image.

They can act with agility. The labor elasticity and tech-enabled solutions provided by DDC FPO enable carriers and 3PLs to effectively handle market fluctuations.

They can accelerate receivables. DDC FPO helps clients efficiently and accurately process and audit freight bills, so they can collect more quickly.

As a global business process improvement provider that processes 30% of all LTL bills in North America alone, DDC FPO has a wide variety of capabilities for the transportation ecosystem. "Whether you're looking for back-office operations like general data capture, analytics, and IT, or for external processes like customer lifecycle engagement and digital marketing services, we have solutions to fit your needs," Crotty notes.

solutions that live up to their promise.

One example is DDC Intelligence, which “leverages machine-learning software to eliminate manual data entry by automatically extracting and validating data,” Boyd says. Because of its human-like capability to read and understand context, it becomes smarter and more accurate with each document. The result? It can automate up to 80% of the data capture process, dramatically reducing labor expenses, while increasing throughput.

INNOVATION MOTIVATION

Today, many 3PLs are innovating with several goals in mind. They want to boost their own efficiency, lower operating costs, and produce fewer errors—all of which can benefit their customers. Many also want to build their image as high-tech and innovative, Bolumole says. This helps in attracting both customers and employees.

Similarly, when assessing 3PLs’ technology offerings, many shippers also have several goals in mind. They need solutions that enhance their customers’ experience by providing tools such as order transparency that many customers expect. Most shippers also are interested in tools that can provide efficiencies through, for instance, route or labor optimization capabilities.

Even as more shippers turn to 3PLs, some concerns remain. Any time two organizations connect systems and share data, the question of information security arises. To address this, shippers can ask how the data between the companies will flow and how the systems will be secured. For additional security, most relationships also include non-disclosure agreements.

Some shippers worry about a 3PL sitting between them and their customers, and potentially diverting the relationship. A good 3PL can actually improve the shipper-customer relationship, says C. John Langley, Ph.D., and professor of supply chain and information systems at Penn State University. They do this by introducing technology, such as track and trace, that most customers want and that shippers

may not be able to offer on their own.

Until recently, many integrations between 3PLs and shippers were expensive and time-consuming. However, a growing number of 3PLs now use integration layers and platforms that streamline the integration process.

KEYS TO SUCCESS

Several steps can help ensure a successful shipper-3PL partnership. A starting point is determining the level of automation your firm needs. If most shipments are “pallet in and pallet out” it probably doesn’t make sense to pay for technology geared to smaller, individual orders. Conversely, if you move tens of thousands of stock-keeping units (SKUs) several dozen times per year, you’ll likely benefit from state-of-the-art materials handling equipment. “You need technology that adds value to your supply chain,” Bullard notes.

Even as many integrations between shippers and 3PLs become increasingly “plug and play,” both sides should budget a reasonable amount of time. Most organizations need at least six months to move their systems and information,

make the connections, and test the flow of data. “If you rush, you face problems,” says Marc Wulfraat, founder and president with MWPVL International, a supply chain consulting firm.

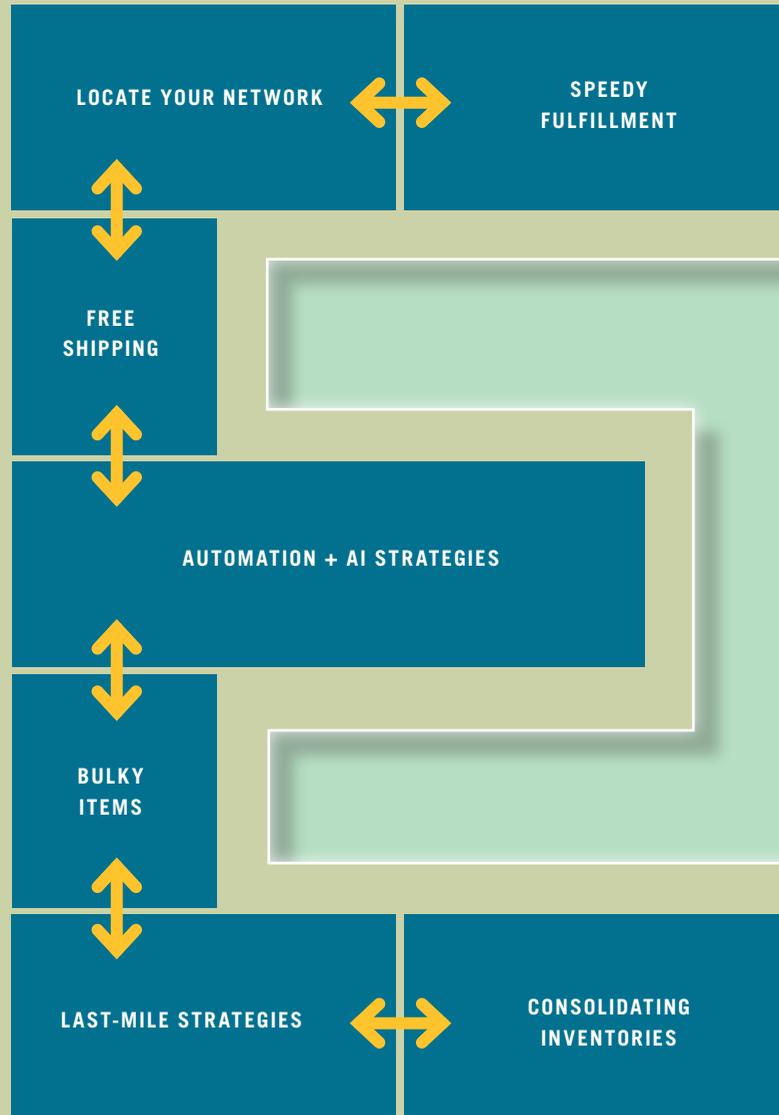
As with most substantial projects that require several organizations to work together, ongoing and open communication is key. This typically should include frequent updates on the tactical aspects of the project, regular status checks on operations at the management level, and annual strategic conversations at the executive level. Regular dialog helps align everyone’s expectations.

Shippers also can take an active role in their 3PL relationships. Rather than wait for updates, “push them to partner, collaborate, and innovate,” says Joe Vernon, supply chain analytics practice leader with CapGemini.

As the number of sales channels continues to grow, along with customer expectations, the relationships between shippers, 3PLs, and their partners likely will become increasingly strategic, Vernon says. “Companies are looking for answers that 3PLs can provide.” ■

The advertisement features a dark blue background with a network of white dots and lines. On the left, there is a vertical strip showing a blurred image of a warehouse or industrial setting. The text is white and blue. At the top, it says 'DDC INTELLIGENCE'. Below that, it says 'Up to 80%' in large font, followed by 'less manual entry, 80% more room to grow.' in a smaller font. At the bottom, it says 'Put AI to work in your back office. Learn more at ddcfpo.com.' and '303.674.0681 | info@ddcfpo.com'. There are also social media icons for LinkedIn, Facebook, and Twitter, and a logo for DDC FPO Solutions.

CHOOSE YOUR OWN



VENTURE

With e-commerce fulfillment as their endgame, retailers are making their move. From stepping up automation to strategically setting up DCs and integrating inventories, here's how retailers chart a path to e-tail success.

A few years ago, Manhattan condo dwellers ordering a large dining room table from a trendy furniture store in Redondo Beach, California, would have to figure out cross-country shipping on their own.

Fortunately, that furniture retailer is now a member of Design Collective, an online consortium of brick-and-mortar furniture stores that has cracked the code to help small retailers ship large items. Design Collective recently engaged with uShip, a digital logistics marketplace for large item transport, to connect with regional white-glove carriers. Furniture stores can build shipping costs into their online prices and secure dedicated delivery service via uShip's curated pool of trucking companies.

"For each store to do this individually would be almost impossible," says Lynsey Humphrey, founder of Design Collective. "Mom-and-pop stores are great at receiving inbound shipments and making local deliveries. Making a delivery from California to New York is where they struggle."

by Gary Wollenhaupt

Transforming the supply chain to embrace e-commerce allows small furniture stores to compete with online giants such as Wayfair and One Kings Lane.

"We're transforming an old-school industry, the equivalent of taking the horse and buggy into the automobile age," Humphrey says.

Small furniture stores are among the companies of all sizes revamping their supply chains in response to the e-commerce juggernaut. Overall, U.S. B2B e-commerce sales are expected to top \$1 trillion in 2018 and account for 17% of total B2B sales by 2023, according to Forrester Research.

"E-commerce is increasing the speed of business in practically every subsector of the economy," says Jeff Burkett, director of investment bank Harris Williams' Transportation & Logistics Group. "While certainly dynamic, even fickle in the past, consumer preferences are changing more rapidly in today's economy, creating greater competitive advantages in the marketplace for companies that can adapt with equal pace and fluidity."

E-VENTURE



DURING THE 2018 HOLIDAY SEASON,

88% of shoppers valued free shipping more than fast shipping.

ACCORDING TO A DELOITTE SURVEY

FREE SHIPPING FRENZY

Thanks to Amazon's Prime shipping offerings, consumers have fallen

in love with free shipping despite paying a premium membership fee for the privilege. Expectations for fast and free shipping are spilling over into the B2B realm as well.

If they're paying for fast shipping, consumers expect delivery within two days. For free shipping, a window of three to seven days is acceptable. Experts predict by 2023, one-day delivery will be the norm.

"As companies continue to build out their supply chains, delivery windows will more than likely get shorter, not longer," explains Curt Bimschleger, managing director, Deloitte Consulting. "Successful retailers are building out their supply chains in anticipation of shorter windows. They are moving inventory closer to consumers to make sure they can compete cost-effectively."

REWORKING THE NETWORK

How are companies gearing up to meet fast shipping demands without breaking the budget?

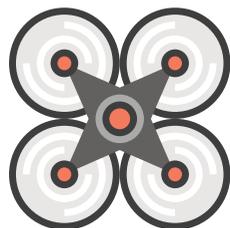
One common strategy moves inventory closer to customers. However, many companies are dealing with legacy warehouse networks built around a regional hub setup.

"While there's still some need to have regional distribution, with freight costs going up and customer service expectations increasing, companies will locate more facilities closer to customers," says Rich Thompson, international director and leader of JLL's Supply Chain and Logistics Solutions practice.

Some companies are transitioning high-value

inventories to smaller fulfillment centers closer to urban areas, supported by the larger hubs located in areas with less-expensive real estate.

Best Buy has focused on delivery speed and now offers same-day delivery on thousands of items in 40 metro areas and next-day delivery in 60 metro areas. The company has invested in DC capacity and moved locations closer to customers for large products such as TVs and appliances.



FINDING FULFILLMENT

As shippers transform their operations to support e-commerce, they must be aware of the differences between running a fulfillment center versus a regional distribution center.

"A pick-and-pack operation requires about three times more space and people than a pallet-in, pallet-out warehouse," says Rich Thompson of JLL.

To speed responsiveness, Kohl's opened its sixth e-commerce center and fulfills 40% of e-commerce orders from stores. Kohl's has also encouraged consumers to rely on the buy online pick up in store (BOPIS) shipping option—the least expensive form of order fulfillment.

Another option for retailers with a granular view of store inventory is to fulfill orders from the store's back room rather than a separate shipping facility. Cosmetics retailer Ulta is converting a distribution center near Chicago into the company's

first fast fulfillment center.

Kohl's uses its stores as part of its online fulfillment process to reduce shipping time, as about 80% of the U.S. population lives within 15 miles of a store. Kohl's began shrinking its store footprint from 80,000 square feet to 35,000 square feet per store, reducing operating costs and inventory spend. The stores stock the most popular items locally and rely on BOPIS for less-popular products.

Inventory turns are faster

Some retailers are turning empty or low-performing locations into "DARK STORES"

WHICH OPERATE AS FULFILLMENT CENTERS.

since Kohl's focused on slashing product lead times, such as cutting the time for women's fashion from 16 weeks to eight weeks. Overall, the retailer has cut gross inventory by 2% per store and 3% in overall units by offering customers fewer, but more relevant choices.

AND LAST MILES TO GO

Closing the last-mile gap can be a major challenge as shippers balance traditional distribution models with parcel deliveries.

"The demand is still there for the larger warehouses, but a second phase includes the smaller last-mile facilities," says Matt Powers, executive vice president, retail/e-commerce distribution practice at JLL. "The demand isn't limited to the major metro areas, either."

Wayfair has decided to handle last-mile deliveries in-house, operating 27 delivery facilities in North America that cover 66% of its U.S. large parcel home deliveries. Overall, Wayfair operates 11 million square feet of logistics space.



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ONE INVENTORY TO RULE THEM ALL

When companies first responded to the e-commerce onslaught, they bolted on new channels to existing operations, leading to duplicate inventory and data management efforts. Now, the goal is to connect the silos for an omnichannel view of inventory and fulfillment. If the product is out of stock at the nearest store, an omnichannel view can tell the customer where the closest store is or if the product can be shipped for in-store pickup.

The retailer's supply chain can incorporate business rules based on shipping costs, so it may offer free shipping for store pickup or charge for fast fulfillment from the warehouse.

"The key is having the technology that provides the decision points to service the customer within the time frame they want," says Deloitte's Bimschleger. "Most of the time, it's cheaper to fulfill from the

warehouse. DC labor is less expensive than store labor and inventory accuracy levels are much greater."

The difficulty increases when an online customer buys multiple items. If a customer orders three items, and all three are available at the nearest store, the retailer can offer free in-store pickup. But if

AN OMNICHANNEL VIEW provides a high degree of confidence in both product availability and shipping options.

not all the items are in the store, then a distributed order management system can make the best decision for fulfillment cost and the customer's desire for fast shipping. If some products are available from a DC or a distant store, the system can choose the optimal scenario.

"It's about having the decision-making capability in place to make the right calls that address inventory, costs, and time," Bimschleger says.

LARGE ITEMS, SMALL PROBLEMS

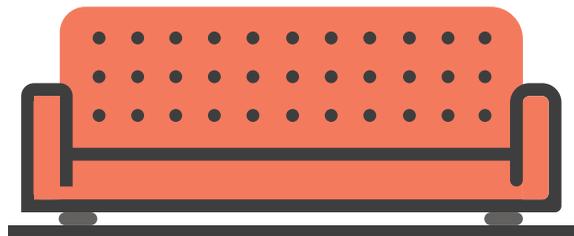
The growth of e-commerce services offered by Design Collective and other home goods retailers reflects increasing consumer interest in ordering large and bulky items online with timely, damage-free delivery.

"At this point, we're all comfortable buying shoes, toothpaste, and other items that show up on our doorstep in a box," says Mike Williams, CEO of uShip. "But we also know that 37% of consumers will buy large and bulky items online in 2019." Using an API, uShip offers real-time price quotes on a retailer's site, similar to how Amazon displays shipping rates. Having shipping information included at checkout simplifies the process and helps convert online shoppers into buyers.

Design Collective is trying to create another paradigm shift by breaking consumers of the return habit. Reverse logistics are costly, especially for large, bulky items such as furniture. White-glove service that prevents damage is one factor in reducing returns, along with retailers highlighting the connection to the mom-and-pop furniture store owner who is heavily invested in inventory.

"We try to get our consumers to wrap their mind around the fact they're purchasing from a real person who has poured their blood, sweat, tears, and heart into a furniture store," says Design Collective's Humphrey. "Our customers aren't as return-oriented because they understand the story."

For Wayfair, returns run about 5% of sales, and the company opened a liquidation store in Kentucky to sell returns rather than turn them over to a liquidator.



AUTOMATION STEPS IN

Automation and artificial intelligence can help drive efficiencies to offset the rising cost of free shipping.

Supermarket chain Kroger has invested in robotics grocer Ocado Group to grow its online fulfillment operations. Ocado is building a network of automated warehouses for Kroger as it gears up to face the threat of Amazon

AN OCADO WAREHOUSE USES ROBOTS TO PICK AND PACK GROCERIES

and can pull together a 50-ITEM ORDER in less than 5 MINUTES

opening urban grocery stores in addition to its Whole Foods stores.

At Walmart's new 1.25-million-square-foot fashion distribution center

in Bentonville, Arkansas, automation will help speed product to 1,000 stores in 15 states. High-tech helpers include a high-velocity apparel sorter that boosts order filling speed and accuracy, and a next-generation shoe sorter that takes up 15% less space than a previous version. In the past three years, Walmart has grown apparel sales by more

than 7.5% while reducing inventory by 21%, says Steve Bratspies, executive vice president and chief merchant.

Even as the use of robotics grows, there will still be a need for human handling.

"A goods-to-person system where the robot brings the bin to the worker who then picks what they need is efficient," says Deloitte's Curt Bimschleger. ■

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The Leader of the Pack

THE CUSTOMER

Randa Accessories, founded in 1910, is one of the world's largest accessories companies, spanning 11 countries with 50 brands.

THE PROVIDERS

Cybra Corp. specializes in RFID technology, real-time tracking systems, and barcode forms and labeling software solutions.

VSS Consulting, a business technology solutions and services provider, helps companies focus on strategic growth initiatives and reduce total cost of IT ownership.

by Jennifer Baljko

To meet e-commerce demand for quick deliveries, accessories company Randa finds a solution that enables it to pick, pack, and ship orders in less than two hours.

Randa Accessories grew up in a wholesale world, where it typically took two or three days to do large pack-outs of orders for retail customers. E-commerce and its impact on the retail sector and end-customer expectations has turned that model around, and made the New York City-based company re-examine its fulfillment strategy.

Moving to an Autobag packaging system and leveraging the features of a barcode labeling software have helped the accessories company migrate some orders to same-day, small-parcel shipping and reduce significant amounts of packaging waste by using biodegradable bags.

THE BARE ACCESSORIES

Randa is a global licensee, manufacturer, and distributor of belts, wallets, neckwear, luggage, casual bags, backpacks, jewelry, briefcases, slippers, hats, gloves, and other leather goods. Its customer portfolio includes more than 50 of the world's most recognizable brands, including Hanes, Tommy Hilfiger, Levi's, Guess, Dockers, Nine West, and Timberland.

Randa's manufacturing base stretches across China, Guatemala, India, Italy, Mexico, and South Africa, and its North

American fulfillment activities run out of two distributions centers in Reno, Nevada, and near New Orleans. The company carries about 125,000 active SKUs; roughly 32,000 are for top-tier customers.

The majority of its orders—about 500,000 per year—are still wholesale. But e-commerce order fulfillment and small-parcel shipments are growing. E-commerce-related fulfillment accounted for about 20,000 orders during autumn 2018, when the company rolled out additional automation for its Autobag system and began using Cybra's labeling solution.

"We tend to be a just-in-time business," says Timothy D. Walter, Randa's senior vice president and chief information officer. "We don't want to keep too much inventory on the floor. We want to make sure our turns are quick, and that we meet customer requirements as fast as we can."

"For us, it's about going straight from picking to a quick pack out the door," he adds.

A NATURAL PROGRESSION

The move to smaller parcel, same-day shipments is a natural progression as both Randa and its customers look for greater flexibility, responsiveness, and supply chain

CASEBOOK STUDY

Help Me Randa

CHALLENGE

Randa Accessories wanted to continue to develop a quick, responsive supply chain to meet the changing needs of its retail customers. It looked for ways to improve its pick, pack, and ship processes.

SOLUTION

The company worked with VSS Consulting to plan and deploy several fulfillment-focused technology and operational improvements, including implementing Automated Packaging Systems' Autobag, Cybra's MarkMagic barcode-labeling software helps Randa get more from the Autobag technology and develop a platform for future innovation.

RESULTS

- Moved large pack-out order fulfillment from two to three days to same-day pick, pack, and ship for more frequent orders with small-parcel requirements.
- Saved customers roughly 28 cents per order.
- Cut time-in-motion to 18 to 32 seconds per order, a 60- to 65-percent improvement in packing process speed.
- Reduced paper and shipping material waste by replacing boxes with biodegradable bags.
- Improved selection of appropriate packaging and compliance labeling.

NEXT STEPS

Randa began using the Autobag and Cybra solutions with its belt product line, and then rolled them out to its wallet line. It is expanding the solution to its slipper products and other lines of business, and considering using additional MarkMagic features.



Randa's improved Autobag system and labeling capabilities have boosted packing process speeds by 60 to 65 percent.

velocity. “We see the change from orders that needed large pack-outs and could take two to three days to fulfill,” Walter says. “Now, we are doing what every other company is doing: If an order comes in by 2 p.m., we ship the same day. We have gotten down to a few hours of pick, pack, and ship. But we also see that overnight delivery is growing, and many customers want their product the next day, so we have to be able to adapt to that as well.”

Randa has an advantage when it comes to fulfilling orders quickly. Unlike its competitors who get an order and then rework generic products to meet customers' tagging and labeling requirements—steps that may delay shipment—Randa tags, trims, and adds the customer-specific characteristics before the product arrives at the warehouse. This value-added service takes time on the back end, but it ensures that Randa has enough customer-specific products on the shelf ready to go when an order comes in.

To improve cycle times, Randa built on one of its existing partnerships and invested in new technology to advance its fulfillment process.

“Cycle time is a critical element for Randa, but it couldn't move small-parcel, same-day shipments fast enough with the existing process and technology,” says Bob Cerbara, vice president of business consulting services at VSS Consulting, a Freehold, New Jersey-based supply chain business and technology advisory and implementation services company. “Randa asked us to collaborate and contribute our experiences in improving the process.”

PERFECT PARTNERS

VSS initially teamed up with Randa in 2014 and 2015 to bring together and rationalize two operations at the Reno facility. That partnership opened the door to other supply chain and IT projects. So, near the end of 2017, when Randa wanted to improve its direct-to-consumer and wholesale operations with a bigger focus on the pack-out function, the company again turned to VSS.

“VSS was already helping with some luggage order processing, and we saw that they were the best people to look at our pick, pack, and ship process,” says Walter.



Timberland and Tommy Hilfiger are among the 50 brands in Randa Accessories' portfolio. As a result of enhancements to the pick, pack, and ship workflow, products move much quicker through the distribution cycle.

VSS set out to automate the manual parts of Randa's existing Autobag technology, integrate it with Randa's ERP from Apparel Business Systems, and set up a platform for future innovation. The trend away from large pack-outs to small parcels played a role in shaping the implementation.

"Randa is primarily a wholesaler, so large pack-outs were common," says Cerbara. "Retailers used to place large orders but are moving to placing smaller orders more frequently. Every company is looking to get products through the distribution cycle as fast as possible. Randa had to evolve to meet that change and to stay highly responsive to their customers' needs.

"We could have converted the old processes from the wholesale business for small-parcel shipping, but that would have been inefficient," he notes. "Instead we analyzed the whole process, envisioned

what would be efficient, and found the technology to build the system."

One piece VSS tackled involved rewriting Randa's entire workstation operations and doing a time-in-motion study to calculate the pick, pack, and ship workflow. As VSS went through that process, it became evident that labeling, an important facet of Randa's business, had to be encapsulated within the project scope.

However, Randa's WMS lacked the flexibility to quickly edit and update customers' compliance labels. VSS sought out Yonkers, New York-based Cybra Corp. to fill in those capabilities.

Cybra's MarkMagic barcode labels, RFID tags, electronic forms, and report-writing software allow users to create and edit labels without writing code. But before Randa could tap into that level of functionality, the MarkMagic team had to convert Randa's more than 100 Zebra ZPL language labels into MarkMagic formats.

"Normally, a label conversion process of this magnitude would be a challenge," says Chuck Roskow, Cybra's vice president of operations. "But with the MarkMagic proprietary Print Stream Importer (PSI), the label conversion process was a breeze, taking less than 30 seconds per format."

It took about two months to complete the label format conversion and have retailers validate the labels.

Cybra's PSI also enabled the conversion of other pieces of difficult-to-maintain legacy Zebra code to the Datamax language the Autobagger requires. Cybra's solution also helped Randa change its labeling formats depending on the data in the print job, and do reverse printing without additional programming when shipping to certain customers—features that smoothed out Randa's overall pack-out process.

BAGGING THE SAVINGS

In November 2018, with the Cybra solution in place, Randa began editing and printing shipping information directly on biodegradable plastic shipping bags using the Autobag baggers.

Randa achieved a time-in-motion savings of 18 to 32 seconds per order, which translates to a financial savings for customers of roughly 28 cents per order.

The company has already seen significant gains. One is a time-in-motion savings of 18 to 32 seconds per order—a 60- to 65-percent improvement in packing process speed—which translates to a financial savings for customers of roughly 28 cents per order. The company, which can now handle a greater number of same-day small-parcel shipments and will expand on this capability, also reduced paper and shipping material waste by replacing boxes with biodegradable bags.

FEATURE PRESENTATIONS

Randa is considering tapping into Cybra's latest software features, such as MarkMagic's ability to generate information in a PDF format that can be printed at offshore facilities in Asia. The company may also benefit from the Internet of Things-based RFID tracking capabilities in Cybra's Edgenuity solution.

"We are adding new features all the time," says Roskow. "One feature that may help Randa is real-time RFID tracking with all the Internet of Things devices that are coming into the marketplace. We may soon see RFID encoding in labels, tags, and other assets in the warehouse."

Randa started using the solutions with its belt products then brought them to its wallet line. It's currently rolling out the technology to footwear/slippers products and plans to expand through other lines of business. The company's ERP provider, Apparel Business Systems, is also standardizing on the MarkMagic platform, which will drive greater efficiencies and automation across Randa's various systems.

Randa plans to update its WMS with Cybra's capabilities as well, a move that will create more consistent labeling, form-filling, invoicing, and documentation throughout its product lines and divisions.

"Our customers are moving quickly with new lines of business and new approaches so we have to be as nimble as possible," says Walter. "We want to be able to ship quickly, and that is why we are moving ahead with these solutions." ■

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In response to today's online-buying, smartphone-wielding consumer who expects a seamless, faster purchasing journey, Zebra Technologies Corporation's *Future of Fulfillment* vision study reveals that 78% of logistics companies expect to provide same-day delivery by 2023 and 40% anticipate delivery within a two-hour window by 2028. Download the study for more details on how manufacturers, transportation and logistics firms, and retailers are preparing to meet the growing needs of the on-demand economy.

The Logistics Transport Evolution: The Road Ahead

DHL

Now more than ever, ground transportation is a strategic component of business success as seen by respondents to a DHL Supply Chain worldwide survey. Three-quarters of companies surveyed indicate that investing in improving ground transportation will positively impact their sales, and they are willing to pay for and partner with 3PLs for value-added services that can show a measurable ROI.

podcast



Bobby Holland



Bob Costello

Looking at Your Business In the Face of Decelerating Growth Rates

GUESTS: Bobby Holland, U.S. Bank and Bob Costello, American Trucking Associations

To make informed decisions, companies need to align business intelligence with macro insights. To that end, *Inbound Logistics* sits down with Bobby Holland of U.S. Bank and Bob Costello from the American Trucking Associations to look at the direction and velocity of the industry as reflected in the U.S. Bank Freight Payment Index. Tune in to hear the latest talk about trends, tariffs, capacity, and inventory and cost management.



INBRIEF

New Services and Solutions

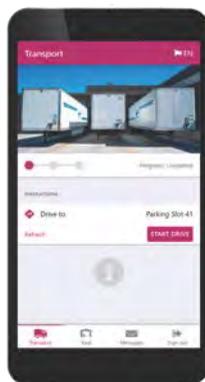
> TECHNOLOGY

• **CargoSphere**, the neutral rate network for container shipping, is now integrated with CargoWise One, **WiseTech Global's** flagship product, which enables logistics service providers to manage operations on one database across multiple users, functions, and countries. The integration gives CargoWise One users access to CargoSphere's rate management functions, allowing them to provide shippers with pricing and shipping data more quickly.



> Carriers can increase driver efficiency with the OverDryve 8 Pro, part of **Rand McNally's** OverDryve OS Connected Vehicle platform, offering navigation, onboard SiriusXM radio, voice assistance, a built-in dash cam, and hands-free calling and texting. The dashboard device is also e-log ready and features truck-specific routing with truck points of interest, advanced lane guidance, toll costs, warnings, and fuel logs.

> Yard management software **inconsoYMS** offers increased functionalities in its latest release. Upgrades to **inconso's** software include extended control and dashboard functions, app features, and expansion modules for the smart yard, including a modernized graphical dashboard to improve yard process tracking.



• **ProShip** multi-carrier shipping software now enables shippers to improve global freight visibility, enhance operational control, and reduce shipping expenses through **enVista's** myShipINFO platform. A new partnership between the software companies adds enVista's myShipINFO features to ProShip, which provides shipping spend visibility, enabling shippers to make data-driven decisions.

• Spend management company **JAGGAER** is prototyping an artificial intelligence-based algorithm to predict the probability that goods and materials in direct procurement will be delivered on time. The JAGGAER OTD Predictor provides immediate information about the likelihood of supplier delivery delays, enabling supply chain managers to mitigate production disruptions.

> The Deliverator, a three-wheel, 100% electric delivery vehicle, is now available for preorder. Designed to reduce last-mile delivery costs for small businesses and in development at **Arcimoto**'s manufacturing plant in Eugene, Oregon, the Deliverator has a top speed of 75 mph, a 350-pound carrying capacity, and more than 20 cubic feet of cargo space.



- The new HyWEAR hybrid barcode and RFID wearable combines optical and radio data collection technologies to make materials handling processes more efficient. This mobile device from **Feig Electronics** reads 1D and 2D barcodes, RAIN RFID transponders, or both barcode and RFID, leaving workers' hands unencumbered to pick up and move items.

- **project44**, a visibility platform for shippers and third-party logistics providers, added an ocean visibility feature

that includes live vessel tracking of all containerized ships around the globe. Users gain access to shipment details including container location, ETA, and status.

- **Kuebix**, a transportation management system provider, introduced FleetMAX, a program designed to fill private fleet empty backhauls. Leveraging the company's relationship with **Estes Truckload Management**, FleetMAX removes administrative barriers, making it easier for shippers and brokers to access a network of fleet capacity through Estes.

- **3PL UTXL** launched Haul Street, a cloud-based software company featuring its VuTrans in-transit shipment visibility tools. By boosting

shipment visibility, the new company aims to reduce inefficiencies and waste, including empty miles.

> TRANSPORTATION

- The **CMA CGM Group** enhanced its Europe/ Indian Ocean and Australia offering by upgrading its fleet, expanding coverage to 19 ports, and improving northbound transit times. The upgraded service, which connects North Europe and the Mediterranean to the Indian Ocean islands and Australia on the southbound leg and Australia to Southeast Asia and Europe on the northbound leg, will launch in September 2019 and operate in partnership with **MSC**.

- Shippers in the Midwest can now tap a reliable air cargo service to Australia with the launch of Direct Express–Australia, a time-definite, scheduled service from Chicago to Sydney. **DB Schenker** offers the direct 777-300 freighter service to Sydney every Monday departing from Chicago.

- **OOCL** enhanced its Japan/Hong Kong/ Southeast Asia service (KTX6) by adding a call in Nagoya, Japan, and increasing frequency. Transit time is nine days from Shekou, China, to Tokyo.

- **AirBridgeCargo Airlines** added Dhaka to its network, offering shippers twice-weekly frequency to the capital of Bangladesh. The flight

IN BRIEF

> **Lufthansa Cargo** is boosting service offerings in summer 2019 by deploying two new Boeing 777Fs and increasing frequencies on routes to and from Asia. The upgrade adds two new flights per week to the freighter connection from Frankfurt to Tokyo Narita. Seoul Incheon will also be connected on the outbound leg from Frankfurt.



RALF KOPETZKY/LUFTHANSA CARGO

operates in conjunction with AirBridgeCargo's Shanghai service and provides shippers with a wider choice of international connections than its Moscow cargo hub.

> PRODUCTS

- Forklift users considering alternative energy sources to lower operational costs might consider materials

handling company **Crown Equipment's** new integrated lithium-ion energy storage system for forklifts. Crown has made the V-Force lithium-ion system available for its entire product line.

- **Honeywell's** new full touchscreen handheld computer is designed to boost employee efficiency for small to mid-sized businesses by increasing productivity in retail and

delivery applications. The ScanPal EDA51 handheld computer features a 5-inch display while the integrated scanner processes barcode information, even if the code is damaged.

- **Big Ass Fans' Pivot 2.0** fan brings air movement to hard-to-reach areas of the warehouse with its versatile mounting options, 73 airflow positions, and speed

controls. The fan operates quietly and can circulate cooling air as far away as 120 feet thanks to its 6-foot diameter and direct-drive motor.

- The QC Series Mobile Powered Workstation from **Newcastle Systems** reduces worker motion, product transportation, and touches on the manufacturing or warehouse floor. In addition to quality testing, employees can use the workstation to print and scan labels, track assets, and control software platforms such as ERP and WMS.

> These high-performance, fully powered pallet trucks from **Presto ECOA** are designed for warehouses, loading docks, manufacturing and assembly work cells, and retail stores. PowerStak Stackers come in multiple configurations, including fork-over for use with open-bottom pallets, straddle for use with any style pallet including closed bottom, and counterbalanced for loading and unloading trucks.



> SERVICES

- **Iowa State University's** online supply chain management program provides industry professionals with the foundational concepts and technical skills they need to manage global operations. The graduate certificate is designed for working professionals and students seeking a supply chain position.

- **DHL Express** enhanced its Medical Express (WMX) service between Mexico and the United States. The WMX service, which reduces transit times for urgent temperature-sensitive shipments from primary cities by one additional day, now expands into 17 new origin cities in Mexico.

- Shippers gain access to faster financing with a working capital solution from **Arviem**, a provider of IoT-enabled cargo tracking services. Arviem's new offering finances goods in transit, providing

traceability and verifying their movements for regulatory purposes and risk mitigation.

- **Easyship's** retail and e-tail customers gain improved access to cross-border e-commerce solutions in Europe, North America, Asia Pacific, and Australia through a new global partnership with **SEKO Logistics**. Users can book deliveries directly through SEKO on the Easyship platform, which provides tax and duty calculations, rate comparisons, customs documentation, and a shipping management dashboard.

> **Steel King Industries'** SK2000 closed tube roll-form rack systems provide the framework for multi-level pick module/distribution centers. Featuring a fully welded tubular upright, SK2000 racks offer greater impact resistance than open-back-style uprights.



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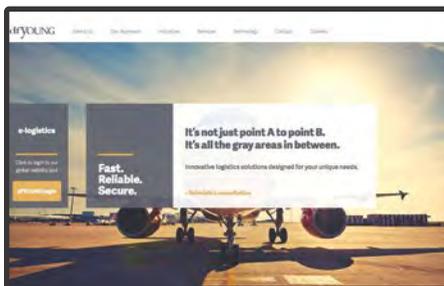


APPROVED FREIGHT FORWARDERS www.approvedforwarders.com

Since 1991, Approved has been dedicated to the unique shipping needs of the Hawaii and Guam trades, and provides freight forwarding throughout the mainland U.S. Approved accommodates all types of commodities and all sizes of freight. Its highly trained logistics experts use advanced technology to tailor shipping solutions that fit your specific requirements. Approved works hard to ensure that your shipment arrives on time and intact, and keeps you updated every step of the way. To learn more about Approved's freight and logistics solutions, sailing schedules, and competitive rates, visit the website.

ATLANTA BONDED WAREHOUSE www.atlantabonded.com

Atlanta Bonded Warehouse (ABW) has been providing public and contract food-grade, temperature controlled distribution services for 70 years. ABW is a leader in providing integrated asset-based logistics solutions for the food, pharmaceutical, household durables, and CPG industries. Our goal is total customer satisfaction through continuous innovation in technology and in best practices by focusing on teamwork, integrity, and accountability, all in a safe working environment.



DF YOUNG www.dfyoung.com

DF Young has more than 100 years of experience providing international businesses with a full range of transportation and logistics solutions. DF Young's customized, person-to-person services are proven to meet today's challenging logistics requirements. DF Young paves the way for international shipments clear across continents, using the most sophisticated air, sea, and land transportation services available. Each move is backed by state-of-the-art technology and internet access that spans the globe.

DISTRIBUTION TECHNOLOGY www.distributiontechnology.com

For more than 30 years, Distribution Technology has built a tradition of logistics service excellence and reliability that meets and exceeds the needs of our customers. Through a combination of contract and public warehousing services, flexible freight management, sophisticated software technology, reverse logistics expertise, value-added packaging, and a dedicated organization, we provide you with a winning logistics supply chain partner. Consider us for your local, East Coast, or national coverage.



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3PL



DSC LOGISTICS www.dsclogistics.com

With experience, knowledge, and IT — as well as supply chain capabilities that are adaptable, versatile, and focused on changing customer needs — DSC Logistics helps companies reach their business goals. DSC provides supply chain analysis and design, strategic solutions-based consulting, systems integration, process improvement, and management of logistics operations such as warehousing, transportation, packaging, and fulfillment. In today's business environment, filled with rapid and unpredictable change, DSC manages change and information in the supply chain by using a strategy called sense-and-respond and by being ready for anything!

ELM GLOBAL LOGISTICS www.elmlogistics.com

ELM Global Logistics is a rail-served third-party logistics provider of warehouse and distribution services with locations in New York and Pennsylvania operating from one million square feet. The range of services includes pick/pack, cross-docking, repackaging, kitting, assembly, reverse logistics, and web access to inventory. All ELM facilities are supported with world-class supply chain management software solutions, which enable clients to readily engage in the e-commerce and business collaboration initiatives required today.



GLOBALTRANZ www.globaltranz.com

GlobalTranz is a technology-driven logistics company specializing in multimodal shipping, project logistics, and managed transportation solutions. Our mission is to help shippers and carriers succeed by providing full-service transportation and logistics solutions. Our innovative, proprietary technology and industry expertise work hand-in-hand to solve your unique supply chain needs. If you're looking for a logistics partner that delivers results through unparalleled relationships and technology, visit globaltranz.com today.

HANOVER LOGISTICS www.hanoverlogistics.com

Hanover Logistics is an asset-based logistics services company providing customers superior supply chain management solutions in a variety of third-party logistics (3PL) disciplines, including warehousing, distribution, fulfillment, and transportation services. Hanover Logistics is equipped to expertly handle various types of logistics services, including: freight brokerage, food/grocery storage and distribution, intermodal/cross-dock services, warehousing solutions for a variety of products (AIB certified, food grade), and general transportation management including truckload, LTL, and container hauling services.



IN THIS SECTION:
3PL



INTERSTATE LOGISTICS www.moveinterstate.com/logistics

Interstate Logistics provides end-to-end logistics and supply chain solutions for businesses across the globe. With 6.5+ million square feet of warehousing and distribution facilities, Interstate's infrastructure supports the management, transportation, and handling of more than \$1 billion of equipment and goods. Our seamless, customized solutions serve our 10,000+ clients through our unique asset management, warehousing, and distribution programs.

KAG LOGISTICS www.kaglogistics.com

KAG Logistics provides transportation management, capacity solutions and logistics services across North America — all tailored to meet your unique needs. Operating 24/7/365, we use our vast carrier network, proven processes, and industry-leading technology and analytics to support your supply chain initiatives while driving value into your business. Serving the fuels, chemicals, specialty products, food and merchant gas industries, we deliver on-time, error-free results — guaranteed.



KANBAN LOGISTICS www.kanbanlogistics.com

Kanban Logistics is an ISO-certified 3PL with 7 distribution centers in Eastern North Carolina, minutes from I-95, that allow for 1-day distribution to 70% of the U.S. population. We offer competitive costs and flexible agreement options, and our 1 million square feet of warehouse space includes temperature-controlled, food-grade storage.

KENCO www.kencologistics.com

Adding value to your bottom line? That's the mission of Kenco. For more than 50 years, Kenco has guided some of the most demanding supply chains in the world. Kenco's convergence approach can help you streamline your supply chain and bring a greater return on assets and investments. Kenco invites you to visit this website so that you might get to know its services. Then, contact Kenco so that you might truly understand its unique strategic advantages.



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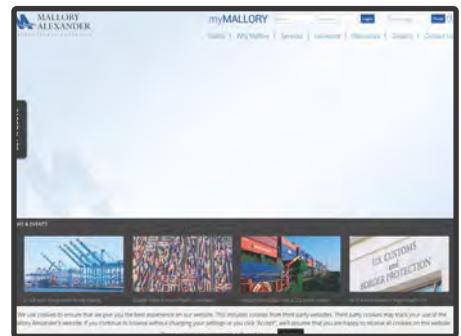


LANDSTAR www.landstar.com

Landstar's network of independent sales agents and transportation capacity providers offers greater flexibility and a local presence that has a global reach. The Landstar network is unmatched in the industry. With more than 1,100 independent agents, 9,000 leased owner operators, 14,000 trailers and 44,000 other available capacity providers, we have the flexibility and experience to find a solution to your transportation challenge.

MALLORY ALEXANDER INTERNATIONAL LOGISTICS www.mallorygroup.com

Mallory Alexander International Logistics is a leading third-party logistics (3PL) provider. As a specialist in global logistics and supply chain services, Mallory Alexander acts as a single source for all logistics and supply chain needs. Specifically, Mallory Alexander provides public and contract warehousing, freight forwarding (international, domestic, air, and ocean), customs brokerage, import/export services, intermodal trucking and transportation, logistics services, and consulting.



MD LOGISTICS www.mdlogistics.com

MD Logistics is a third-party logistics (3PL) company specializing in customized supply chain solutions. Our vertical markets include life sciences and pharmaceuticals, retail and consumer goods, as well as transportation services. In addition to cold chain storage and foreign trade zone warehousing, our services range from packaging, omni-channel fulfillment and distribution, to global supply chain solutions, freight forwarding and freight management.

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 air-conditioned & medical temperature-controlled space with licensed beverage & med/vet/pharma distribution, AIB Superior rating, and 5 rail facilities, all open to reciprocal switching. We also provide in-house local & regional trucking transportation and value-added services such as retail store displays, kitting, labeling and light assembly. Contact Metro Park to gain the competitive edge.



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NOLAN TRANSPORTATION GROUP (NTG) www.ntgfreight.com

NTG, a leading third-party logistics provider, has invested significantly in its network of over 40,000 independent trucking companies to provide its customers with the best service at the best price. The NTG team is made up of seasoned problem solvers that are committed to servicing customers 24/7. NTG provides truckload, expedited, LTL, drayage, and intermodal services across the United States, Canada, and Mexico.

ODYSSEY LOGISTICS & TECHNOLOGY www.odysseylogistics.com

Odyssey Logistics & Technology Corporation (Odyssey) combines deep industry expertise with leading technology to provide multimodal logistics management services to the chemical industry and other process manufacturers. Odyssey enables clients to outsource any part of their logistics processes to achieve savings through reduced transportation and infrastructure costs, measurable customer service and process improvements, and improved data quality and management. Odyssey is a leader in intermodal with expertise in liquid food, chemicals, and metals transport.

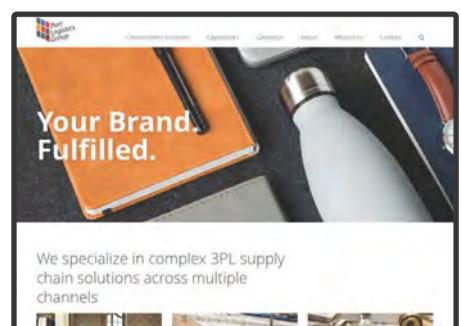


PENSKÉ LOGISTICS www.penskelogistics.com

Penske Logistics is an award-winning logistics services provider with operations in North America, South America, Europe, and Asia. Our products and services range from dedicated contract carriage and distribution center management to transportation management and fully customized solutions. No matter what your needs or industry, Penske Logistics engineers supply chain solutions that deliver business results like boosting productivity, improving service, and shrinking carbon footprints. Call us today at 1-800-529-6531 to learn more.

PORT LOGISTICS GROUP portlogisticsgroup.com

Port Logistics Group is the nation's leading provider of omni-channel logistics services, including value-added warehousing and distribution, transloading and crossdocking, e-commerce fulfillment, and national transportation. With 6.5 million square feet of warehouse space strategically located in and around major North American ports, Port Logistics Group provides the critical link between international transportation and the last-mile supply chain.



IN THIS SECTION:
3PL



R2 LOGISTICS www.r2logistics.com

Founded in 2007, R2 Logistics is a national provider of transportation services and logistics solutions. As a third-party logistics (3PL) company, we provide access to thousands of contracted transportation providers. With offices located across the United States, we are able to provide your company with any possible over-the-road shipping need nationwide, including Mexico and Canada. Backed by game-changing technology and our culture for Reliable Service and Relentless Passion, we've built a strong reputation as an industry leader.

RR DONNELLEY'S DLS WORLDWIDE dlsworldwide.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.

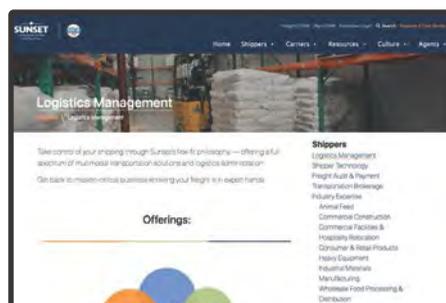


SEKO LOGISTICS www.sekologistics.com

SEKO prides itself on a commitment to customer service, whether it's a 2 a.m. pickup for a critical industrial part for a plant that is 4,000 miles away, or the cost savings achieved from proactive communication with your vendors overseas. SEKO offices have the knowledge and expertise to expedite or to consolidate, depending on your need. From Hong Kong to Amsterdam, SEKO knows how to serve its clients. As a non-asset-based third-party logistics provider, SEKO has the flexibility to meet your supply chain needs using a variety of modes and carriers.

SUNSET TRANSPORTATION www.sunsettrans.com

Sunset Transportation isn't just another 3PL. We are driven by the right-size fit for each business, using all levels of global and domestic supply chain resources and services. Our culture allows customers to feel like family, while offering advanced TMS solutions, reporting, and shipment reliability. Our approach is simple: through analysis of historical shipping data, we identify opportunities for optimization, service improvement, and technology enhancements. All this is done with five promises we make to every customer, every day: savings, visibility, data-driven decisions, continuous improvement, and relationships. Sunset is the right size 3PL for your growing business.



IN THIS SECTION:
3PL



SYFAN LOGISTICS www.syfanlogistics.com

Since 1984, Syfan has provided customers with a competitive advantage through superior transportation and logistics services. Syfan consistently strives to meet and exceed customer expectations of service through timely communication and quality information. Leveraging its rich experience and dedicated team, Syfan's commitment is to provide you with on-time pickup and delivery—every time.

TRANSGROUP GLOBAL LOGISTICS www.transgroup.com

www.transgroup.com provides comprehensive information about TransGroup Worldwide Logistics, including locations, services, and global transportation and logistics capabilities. Detailed information about TransGroup's web-based logistics management tools is also provided, as well as customer log-in access and links to resources useful to shippers. To learn about TransGroup Worldwide Logistics, visit www.transgroup.com, or contact TransGroup at 800-444-0294, or by e-mail at info@transgroup.com.



UTXL www.utxl.com

Whether you need a core transportation service provider or a resourceful backup relief valve, turn to UTXL. UTXL handles truckload and multiple stop shipments (consolidated LTL) between any points in North America, and can arrange service to or from any state with satellite and/or cellular equipped teams and single drivers for your van, reefer, flatbed, or oversized shipments. Shippers nationwide rely on UTXL for reliable service and economical prices; you can, too. Check out the website for all the details.

VERST LOGISTICS www.verstlogistics.com

Verst Logistics is a 3PL provider strategically based in Northern Kentucky/Cincinnati in America's manufacturing heartland, operating numerous ultra-efficient facilities with streamlined processes known for getting products to market faster, cost-effectively, and more efficiently than most national or regional 3PL providers, enabling us to help make our clients first with their customers.



IN THIS SECTION:

Associations - Barcode/RFID



WSI (WAREHOUSE SPECIALISTS, LLC) www.wsinc.com

Reliability is everything. At WSI, that has been our approach to integrated logistics and supply chain solutions for over 50 years. Our promise of Condition, Count & Time ensures accurate, timely, and sound performance—every time. Recognized as one of the top 3PL providers 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.

ASSOCIATIONS

MHI www.mhi.org

Material Handling Industry (MHI) is an international trade association that has represented the industry since 1945. MHI members include material handling equipment and systems manufacturers, integrators, third-party logistics providers, consultants, and publishers. The association also sponsors trade events such as ProMat and MODEX to showcase the products and services of its member companies and to educate industry professionals on the industrial productivity solutions provided through material handling logistics.



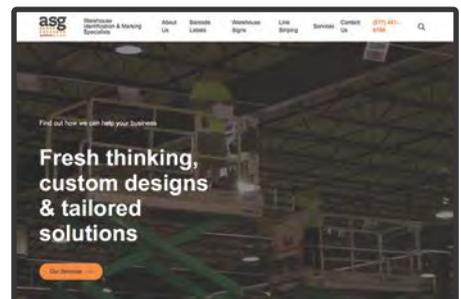
WAREHOUSING EDUCATION AND RESEARCH COUNCIL (WERC) www.werc.org

WERC is the only professional organization focused on warehouse management and its role in the supply chain. Through membership in WERC, seasoned practitioners and those new to the industry stay at the forefront of innovation, master best practices, and establish valuable professional relationships. WERC offers seminars, publications, online courses, an annual conference, and peer-to-peer knowledge exchange for distribution professionals.

BARCODE/RFID

ASG SERVICES www.asgservices.com

ASG Services is a warehouse identification and marking specialist. We manufacture custom warehouse labels and warehouse signs in Atlanta, Georgia, while providing fully managed installation services and warehouse striping solutions throughout the United States, controlled centrally from our head office.



IN THIS SECTION:

Barcode/RFID - Cartonization/Palletization Software



CDM SOFTWARE SOLUTIONS www.cdmsoft.com

CDM Web Freight is a true global web-based freight forwarding and NVOCC solution. Key benefits include CDM Shipment Flow where export shipment data — documents, compliance details, tracking — from an origin forwarder easily transfers to an import shipment of the destination forwarder. Other benefits — in multiple languages (English, Japanese, Simplified Chinese, Spanish, French and German) — include shipment compliance for US, Canada, EU, UK, Japan, Israel and South Africa; as well as air and ocean carrier integration. CDM Web Freight also includes cutting-edge technologies such as RFID, IoT, and Blockchain to further enhance the product offering.

BULK: LIQUID-DRY

AAA COOPER TRANSPORTATION www.aaacooper.com

AAA Cooper Transportation has been providing safe and efficient transportation solutions for more than 60 years. With 70 plus strategically located service centers, we give individual attention to your transportation needs. Services include Less-than-Truckload, Dedicated Contract Carriage, Managed Services, Port and International, and Fleet Maintenance. AAA Cooper Transportation is committed 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. Visit our website to learn more.



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.

CARTONIZATION/PALLETIZATION SOFTWARE

MAGICLOGIC OPTIMIZATION www.magiclogic.com

MagicLogic provides complete Load Planning solutions using advanced algorithms developed in-house. Our software is capable of handling the most complex requirements, including mixed-mode Load Planning, mixed case Palletization software for packstations and robots, and high-speed Cartonization. Industry-standard APIs ensure our software is adaptable and fast to integrate. Comprehensive loading and stacking rules are modeled with ease. Solutions are available on-premise or the cloud.



IN THIS SECTION:

Chemical Logistics - Consultants

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.

KAG LOGISTICS www.kaglogistics.com

KAG Logistics provides transportation management, capacity solutions and logistics services across North America — all tailored to meet your unique needs. Operating 24/7/365, we use our vast carrier network, proven processes, and industry-leading technology and analytics to support your supply chain initiatives while driving value into your business. Serving the fuels, chemicals, specialty products, food and merchant gas industries, we deliver on-time, error-free results — guaranteed.



COLD STORAGE



FROZEN FOOD EXPRESS www.ffeinc.com

Frozen Food Express strives to be the leader in the temperature-controlled LTL market. As an asset-based carrier we will leverage our core competencies in refrigerated transportation and storage that have been developed over 70 years to provide our customers with the highest levels of service which represent great value. We offer both frozen and cooler capacity in state-of-the-art dual temp trailers. In an industry where temperatures are most important we are proud to lead the way in technology that monitors and reports temperatures at every point along the cold chain. 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. Give us a call at 800-569-9200 to find out how we can be a great addition to your business. Visit our website at www.ffeinc.com for more information.

CONSULTANTS

LTD MANAGEMENT www.ltdmgmt.com

Supply Chain Management challenges are strategic. Performance vs. cost priority. Disruption. Transformation. End-to-end focus. About velocity—SCM, inventory, order delivery. Dynamic competition. LTD Management assists clients to improve their supply chains. We are a leading-edge supply chain and logistics consulting firm. Our consulting is based on real-world experience. We bring authority and domain expertise to clients. LTD's findings are actionable; that is very important for achieving results.



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Customs Brokerage - Distribution Center Management

CUSTOMS BROKERAGE



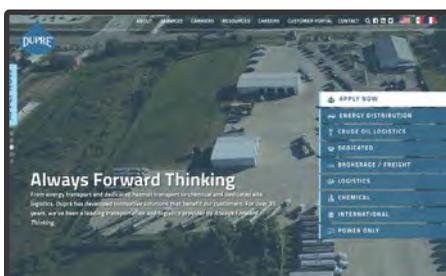
AIRSCHOTT, INC. www.airschott.com

AIRSCHOTT, Inc., founded in 1977, is involved in various aspects of international and domestic transportation. Our operating licenses and services include: Licensed Customs Broker (#7584), Air Freight Forwarder (CNS), Indirect Air Carrier (Consolidator), Duty Drawback Specialist, FMC Licensed OTI (#4399NF—Freight Forwarder and NVOCC), Insurance Broker (Marine & Bonds), Foreign Trade Zone Operator, and Trucker. We are C-TPAT certified and validated. We specialize in the handling of sensitive and “special needs” cargo, including time-sensitive shipments, perishables, hazmats, USML goods, oversized/overweight, and high-value merchandise.

DEDICATED CONTRACT CARRIAGE

AAA COOPER TRANSPORTATION www.aaacooper.com

AAA Cooper Transportation has been providing safe and efficient transportation solutions for more than 60 years. With 70 plus strategically located service centers, we give individual attention to your transportation needs. Services include Less-than-Truckload, Dedicated Contract Carriage, Managed Services, Port and International, and Fleet Maintenance. AAA Cooper Transportation is committed 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. Visit our website to learn more.



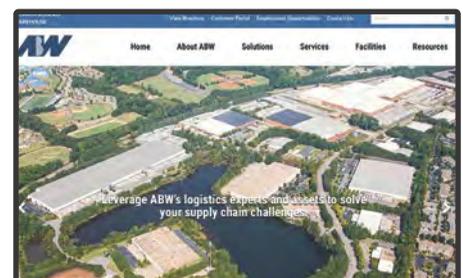
DUPRÉ LOGISTICS www.duprellogistics.com

With specific emphasis in the chemical, consumer products, and beverage industries, Dupré’s unique solutions provide expertise in dedicated fleets, transportation management/brokerage, materials handling, and reverse logistics. Dupré works to understand your business and measure how our system meets your expectations.

DISTRIBUTION CENTER MANAGEMENT

ATLANTA BONDED WAREHOUSE www.atlantabonded.com

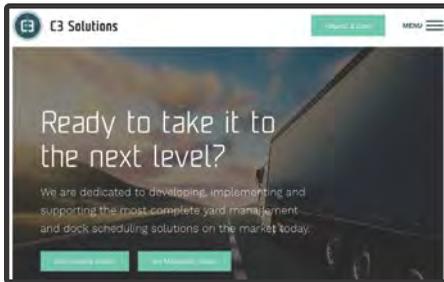
Atlanta Bonded Warehouse (ABW) has been providing public and contract food-grade, temperature controlled distribution services for 70 years. ABW is a leader in providing integrated asset-based logistics solutions for the food, pharmaceutical, household durables, and CPG industries. Our goal is total customer satisfaction through continuous innovation in technology and in best practices by focusing on teamwork, integrity, and accountability, all in a safe working environment.



IN THIS SECTION:

Dock Appointment Scheduling - Education

DOCK APPOINTMENT SCHEDULING



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.

E-COMMERCE

TRANSPORTATION INSIGHT www.transportationinsight.com

Transportation Insight is a multi-modal Enterprise Logistics Provider that partners with retailers, e-tailers, manufacturers and distributors to engineer supply chain cost mitigation strategies, increase speed to market and improve customer satisfaction. Through its Co-managed Logistics® approach, Transportation Insight offers carrier sourcing; freight invoice audit, repair and payment; TMS applications; Insight Parcel® platform (audit, repair, engineering, advanced analytics); and business intelligence to customize e-commerce solutions with domestic and international transportation, warehouse sourcing and secondary packaging optimization.



EDUCATION



ILLINOIS INSTITUTE OF TECHNOLOGY (ITT) www.appliedtech.iit.edu

Industrial Technology and Management (INTM) at Illinois Institute of Technology (IIT) offers Bachelor and Masters degrees, with specializations in Supply Chain Management, Industrial Facilities, Industrial Sustainability, and Manufacturing Technology. The Bachelor (BINTM) is a transfer degree, requiring an Associates degree or equivalent college credits in a technical field. The Master of Industrial Operations (MITO) prepares students for management positions in industrial companies. Evening and online courses allow flexibility for working adults.

**SCHAR SCHOOL OF POLICY AND GOVERNMENT,
GEORGE MASON UNIVERSITY** schar.gmu.edu

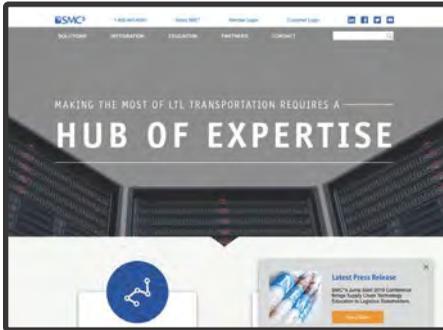
Unlike a traditional urban planning degree, the Master's in Transportation Policy, Operations, and Logistics at George Mason University's Schar School of Policy and Government explores the intersections of planning, policy, and practice within the fields of logistics, operations management, and transportation policy. As a student in the program, you will master the knowledge and skills needed to effectively and efficiently supply and operate transportation facilities and services. Courses are held in the evenings on Mason's Arlington, Virginia, campus, and students may take the program on a part-time or full-time basis.



IN THIS SECTION:

Education – Freight Claims Management

EDUCATION



SMC³ www.smc3.com

Shipping management software for companies of all sizes. Works with all carriers and modes. Use it to compare freight rates, select carriers, track shipments and audit freight bills. Provides end-to-end supply chain visibility. Use as a stand-alone application or integrate with your other software. Visit our website for more information.

EVENTS

TRANSPORTATION MARKETING & SALES ASSOCIATION
www.tmsatoday.org



The Transportation Marketing & Sales Association (TMSA) provides knowledge, connections, recognition and solutions to marketing, sales, and communications professionals in North American freight transportation and logistics. TMSA members from all market segments are involved, including motor carriers, 3PLs, railroads, air carriers, ocean lines, port authorities, OEMs, media, and suppliers.

FOOD LOGISTICS

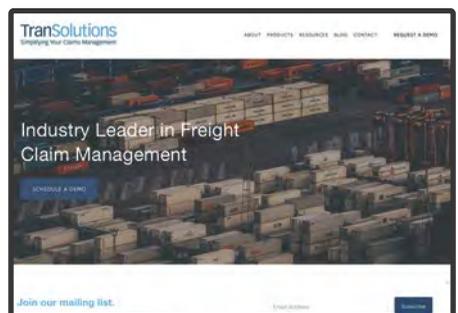


ATLANTA BONDED WAREHOUSE www.atlantabonded.com

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FREIGHT CLAIMS MANAGEMENT

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.

IN THIS SECTION:

Freight Forwarding - Freight Payment/Audit Services

FREIGHT FORWARDING

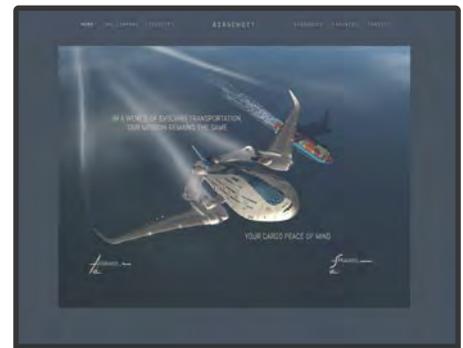


LYNDEN www.lynden.com

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.

SEASCHOTT www.seaschott.com

SEASCHOTT, the ocean freight forwarding division of AIRSCHOTT, Inc., is a freight forwarder, NVOCC, and customs broker offering domestic and global service from its base in Baltimore, Md. SEASCHOTT specializes in handling sensitive and “special needs” cargo, including time-sensitive shipments, projects, government cargoes, hazmats, oversized/overweight, and high-value merchandise. Let SEASCHOTT’s experienced staff provide the quality service you are looking for.



FREIGHT PAYMENT/AUDIT SERVICES

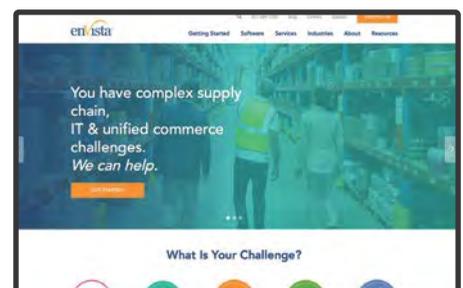


AR TRAFFIC CONSULTANTS www.artraffic.com

AR Traffic has been providing shippers with advanced transportation management software and third-party logistics services since 1964. All its products and services are designed to improve your efficiency, accuracy, record-keeping, control and auditability as well as to lower your freight costs. For a free study to show how you can cut costs, improve customer service, and streamline your business, visit the website today.

enVISTA CORPORATION www.envistacorp.com

enVista is a leading global transportation spend management solutions company with experts around the globe who help clients reduce cost and improve visibility throughout their worldwide operations. enVista’s audit and payment service utilizes myShipINFO®, our proprietary, transportation cost management platform, which includes unit of measure, currency conversions, multi-lingual translations, and VAT calculations to ensure carrier compliance for global shippers and 3PLs.



IN THIS SECTION: Freight Payment/Audit Services



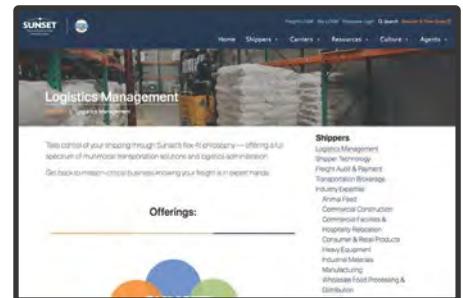
SaaS TRANSPORTATION, INC. www.saastransportation.com

SaaS Transportation, Inc. is a provider of cloud-based TMS solutions to third-party logistics companies, freight payment companies, shippers and carriers. The TMS solution is unique in that it uses APIs, which allows for easy integration with numerous trading partners with minimal set up time. Rates and carrier communications can also be managed using traditional techniques such as SMC contract management and EDI services. SaaS API services also include automation of truckload and LTL spot quotes. These integrated solutions automate freight management from carrier selection, shipment execution and visibility to final delivery enabling full transparency. It also provides shipment exception alerts that can be used to proactively resolve issues in addition to identifying rate and shipment discrepancies.

SUNSET TRANSPORTATION www.sunsettrans.com

Sunset Transportation isn't just another 3PL. We are driven by the right-size fit for each business, using all levels of global and domestic supply chain resources and services. Our culture allows customers to feel like family, while offering advanced TMS solutions, reporting, and shipment reliability.

Our approach is simple: through analysis of historical shipping data, we identify opportunities for optimization, service improvement, and technology enhancements. All this is done with five promises we make to every customer, every day: savings, visibility, data-driven decisions, continuous improvement, and relationships. Sunset is the right size 3PL for your growing business.



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.

TRANS INTERNATIONAL www.ticominc.com

Trans International provides FAIR—Freight Audit & Information Reporting—services. We provide our clients completely customized transportation management solutions—leading-edge, best practices-driven freight bill processing, client rules-based audit, and six levels of safe, secure carrier funding options. We are a WBENC-certified Women's Business Enterprise, serving clients ranging in size from Fortune 100 to mid-markets. Contact Trans International for freight audit, freight pay, logistics consulting, business intelligence analytics, scalable and affordable TMS, and exceptions management. Call 262-253-3500, ext 0 or visit www.ticominc.com



IN THIS SECTION:

Freight Payment/Audit Services - Fulfillment



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.

TRAX www.traxtech.com

Trax is a global leader in Transportation Spend Management solutions. Combining industry leading cloud based applications with expert services, we are transforming traditional freight and parcel audit to help customers better manage and control their global transportation costs and drive enterprise wide efficiency. With a global footprint spanning North America, Latin America, Asia and Europe, we deliver data based visibility and insights, higher savings and better control of transportation spend for shippers of all sizes. Visit us at www.traxtech.com.



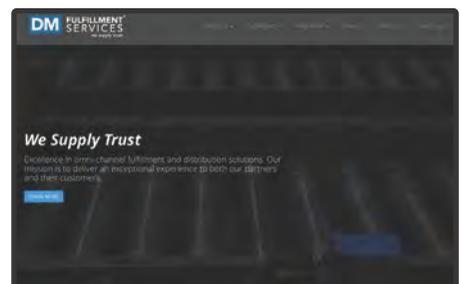
U.S. BANK FREIGHT PAYMENT www.usbpayment.com

U.S. Bank Freight Payment improves control and reduces costs for shippers and carriers with a global transportation payment network that automates invoice auditing, processing and payment; integrates trade finance; and provides powerful business intelligence. Visit usbpayment.com today to learn how we can strengthen your physical and financial supply chain.

FULFILLMENT

DM FULFILLMENT SERVICES www.dmfulfillment.com

DM Fulfillment provides best-in-class fulfillment and distribution solutions so that manufacturers, merchants and trading partners can seamlessly integrate with today's omni-channel, e-commerce world. Five strategically located, highly-automated fulfillment centers offer cost-effective shipping solutions and speed to customer and shelf. DM Fulfillment's mission is to deliver an exceptional customer experience with every order. Visit www.dmfulfillment.com to learn more.



IN THIS SECTION:

Fulfillment - Global Logistics



TAYLORED SERVICES www.tayloredservices.com

Taylored “Fulfillment” Services is a fully integrated 3rd Party Logistics provider with expertise in retail fulfillment and direct-to-consumer distribution services. With strategically located bi-coastal facilities and best-in-class systems and technology, Taylored is well suited to support your most complicated distribution challenges. We provide a full range of logistics services including: transportation, transload, cross-dock, case distribution, unit fulfillment, e-Commerce and value-added distribution solutions (repacking, ticketing, display assembly, inserts and labeling, returns). Our high-volume unit sorters can support large demand customers. Visit www.tayloredservices.com or contact sales@tpservices.com

GLOBAL LOGISTICS

ALLIANCE SHIPPERS, INC. www.alliance.com

Delivering The Perfect Shipment® from pick up to destination. 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 logistic solutions tailored to your company’s exact needs, contact Alliance Shippers Inc.

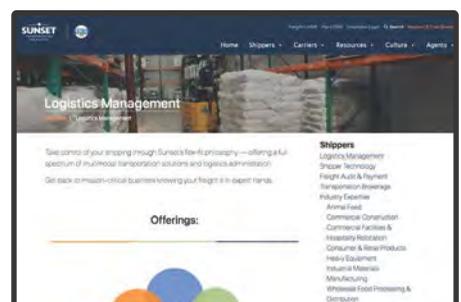


MAGIC LOGISTICS, A DIVISION OF MAGIC TRANSPORT, INC. www.magictransport.com

Magic Logistics is a company with global reach that has been leading the logistics industry for more than 30 years, offering full solutions, highly competitive processes, day-definite and excellent intermodal freight transportation, warehousing and supply chain management services. We manage ocean and air cargo from any point in the world, through 6 terminals in PR and the USA and a solid network of more than 400 agents in 93 countries. We offer more alternatives worldwide than other cargo companies, servicing the USA, Caribbean, Asia and Europe.

SUNSET TRANSPORTATION www.sunsettrans.com

Sunset Transportation isn’t just another 3PL. We are driven by the right-size fit for each business, using all levels of global and domestic supply chain resources and services. Our culture allows customers to feel like family, while offering advanced TMS solutions, reporting, and shipment reliability. Our approach is simple: through analysis of historical shipping data, we identify opportunities for optimization, service improvement, and technology enhancements. All this is done with five promises we make to every customer, every day: savings, visibility, data-driven decisions, continuous improvement, and relationships. Sunset is the right size 3PL for your growing business.



IN THIS SECTION:
Global Logistics - Intermodal



PHARR BRIDGE www.pharrbridge.com

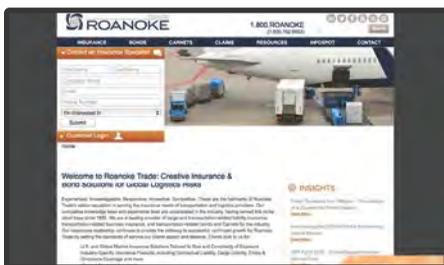
The Pharr-Reynosa International Bridge serves as one of the most important ports of entry for the U.S.-Mexico border. It handles both commercial and passenger-operated vehicles and crosses about 175,000 vehicles monthly. The Pharr International Bridge is also the only commercial bridge crossing in Hidalgo County, and is the number two bridge in the country for crossing of fruits and vegetables. The Pharr International Bridge connects US Hwy. 281/ I-69W to the City of Reynosa, Tamaulipas, the fastest growing city in Mexico.

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.



INSURANCE



ROANOKE TRADE www.roanoketrade.com

Roanoke Trade, a division of Roanoke Insurance Group and part of Munich Re Specialty Group Ltd., operates as a specialty insurance broker focused on surety and insurance solutions for transportation intermediaries, 3PLs, customs brokers and companies with supply chains, and is a leading provider of customs bonds, marine cargo insurance and ATA Carnets for the industry.

INTERMODAL

HUB GROUP www.hubgroup.com

Hub's extensive service network — built over many years — enables it to provide innovative transportation solutions that are versatile, flexible, and designed to deliver maximum efficiency. With this advantage, Hub Group is able to collaborate with customers daily to help them meet their transportation challenges. With intermodal, highway, and logistics transportation offerings, the Hub Network is your single source—coast to coast, border to border. Visit the website to learn what Hub can do for you.



IN THIS SECTION:

Liquid-Dry Bulk - Logistics IT

LIQUID-DRY BULK



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.

LOGISTICS IT

BLUJAY SOLUTIONS www.blujaysolutions.com

When you partner with BluJay, you gain the advantage of the largest global trade network, a cloud-powered portfolio of application services, hands-free customs, real-time data analytics, and the visibility and velocity to adapt quickly. BluJay's proven, advanced technologies scale with your business. Equally important, its customer-centric team has the transportation expertise and passionate commitment to help you soar.



CARGOSMART LIMITED www.cargosmart.ai

CargoSmart empowers companies to digitally transform their global supply chains. Leveraging technologies including artificial intelligence, Internet of Things, blockchain, and a deep understanding of ocean shipping, CargoSmart provides innovative solutions for transportation and logistics teams to collaborate, increase visibility, and gain insights to optimize supply chain planning and operations. Founded in 2000 and headquartered in Hong Kong, CargoSmart has helped over 160,000 professionals increase delivery reliability, lower transportation costs, and streamline operations.

CASS INFORMATION SYSTEMS www.cassinfo.com

Cass is the nation's oldest and largest provider of freight bill payment, audit, and rating services. We offer a wide array of services for processing and paying freight bills, as well as our industry-leading Internet reporting service, CassPort. In business since 1906, and providing freight payment services since 1956, Cass continues to offer stability, security, and expertise in the freight audit, payment, and information market.



IN THIS SECTION:

Logistics IT

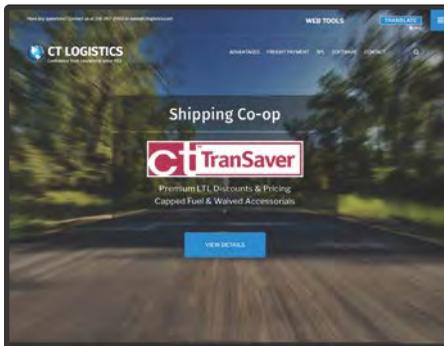


CDM SOFTWARE SOLUTIONS www.cdmsoft.com

CDM Web Freight is a true global web-based freight forwarding and NVOCC solution. Key benefits include CDM Shipment Flow where export shipment data — documents, compliance details, tracking - from an origin forwarder easily transfers to an import shipment of the destination forwarder. Other benefits — in multiple languages (English, Japanese, Simplified Chinese, Spanish, French and German) — include shipment compliance for US, Canada, EU, UK, Japan, Israel and South Africa; as well as air and ocean carrier integration. CDM Web Freight also includes cutting-edge technologies such as RFID, IoT, and Blockchain to further enhance the product offering.

CLEARTRACK INFORMATION NETWORK www.cleartrack.com

The Clarity GTM software-as-a-service platform offers cloud-delivered applications and professional services configured-to-fit each organization's requirements. This allows you to manage the complexities of today's global trading networks through a unified, cloud-delivered collaboration network offering managed data services, business intelligence reporting, and advanced analytics to protect brands, control costs, reduce risks, and maintain trust.



CT LOGISTICS www.ctlogistics.com

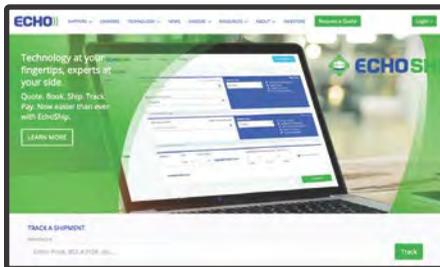
Since 1923, organizations have leveraged CT Logistics to provide global freight audit & payment and transportation management solutions. Partner with CT to design and implement customized supply chain and rate management solutions. CT's Business Intelligence platform provides global spend visibility and data analysis using SOCII and ISO 9001:2008 certified processes. Services also include: Shipment Execution, Bid Management, Shipment Planning and Execution Software, and Professional Services for consulting and advising.

CTSI-GLOBAL www.ctsi-global.com

For more than 50 years, CTSI-Global has been a valuable resource to companies by providing the technology and industry expertise to help them manage all aspects of their supply chain — physical, informational, and financial — through freight audit and payment, transportation management systems (TMS), information management tools, and global consulting. The end results are improved shipping efficiencies, greater control, and significant ongoing savings. CTSI-Global is your link to supply chain solutions.



IN THIS SECTION: Logistics IT



ECHO GLOBAL LOGISTICS www.echo.com

Echo Global Logistics, Inc. (Nasdaq: ECHO) is a provider of technology-enabled transportation and supply chain management services. Echo maintains a proprietary, web-based technology platform that compiles and analyzes data from its network of more than 30,000 transportation providers to serve its clients' needs. Offering freight brokerage and managed transportation services across all major modes, Echo works to simplify the critical tasks involved in transportation management.

FORTIGO www.fortigo.com

Fortigo's team of experts specializes in logistics optimization and enterprise web-based software. For companies seeking to reduce costs, improve customer satisfaction, and increase profitability, Fortigo automates, optimizes, and audits logistics decisions. Fortigo plugs into established supply chain applications and provides rapid return on investment by optimizing and deploying closed-loop logistics processes, minimizing ship-to-order times and streamlining collaboration with logistics providers.

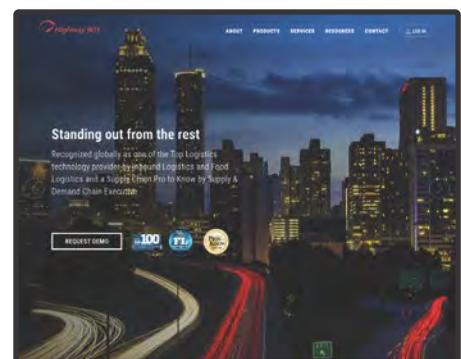


FREIGHTGATE www.freightgate.com

Freightgate is the leader in logistics and supply chain cloud computing, offering importers, exporters, and logistics providers innovation with bottom-line sustainability to help manage best practices and cost control in your supply chain. The adaptive Freightgate Universe encompasses ISO9001:2008-certified end-to-end Transportation Spend Management solutions with procurement, optimization, carbon initiatives, dynamic multi-leg routing, capacity management, booking, visibility, metrics, compliance, audit, and payment. Enable real-time collaboration between global vendors, logistics providers, and your offices.

HIGHWAY 905 www.highway905.com

Highway 905 is a cloud-based supply chain execution solution provider focused on "personalization" and faster time to market. We enable you to: ensure cost reductions and maintain an error-free warehouse; deliver differentiated customer experiences with the power of real-time visibility and actionable insights; simplify your last mile; and reduce paperwork hassles with automated freight payments and digitized document processing. If you are looking for a solution that adapts to your business, and not the other way around, call us at 908-874-4867 or visit: www.highway905.com



IN THIS SECTION:
Logistics IT

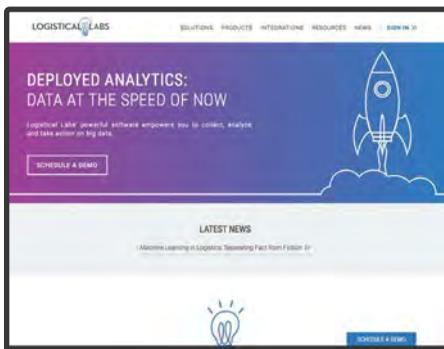


INFO-X www.infoxusa.com

Since 2001, Info-X has been a premier provider of logistics management software and back-office support services for global transportation companies in the ocean, air and ground sectors. Info-X specializes in outsourced back-office services and is a quality-driven, professional, and experienced outsourcing partner. Leveraging its extensive industry knowledge of logistics, and understanding of the complexities involved, it helps companies improve efficiencies, get 99.9-percent accuracies, and experience cost reductions of up to 40 percent.

LABELMASTER www.labelmaster.com

When you ship dangerous goods with Labelmaster, you get the best of three worlds: Best-in-class software, consulting services, and an assortment of products to keep you compliant, safe, and efficient when shipping dangerous goods. Whether you ship a few packages a day, or manage a global supply chain, choose the team of globally recognized experts who deliver the best hazmat shipping solutions in the world. Trust Labelmaster.

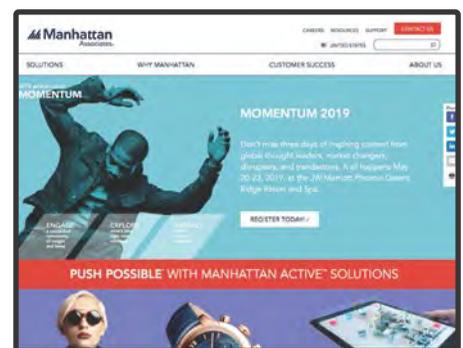


LOGISTICAL LABS www.logisticallabs.com

Logistical Labs builds software for collecting, analyzing, and deploying supply chain data. With their suite of analytics products, users can make better informed decisions through data-driven insights and social collaboration. Product capabilities include cost benchmarking, mode and route optimization, RFP hosting and management, and more. Open API access allows users to easily integrate products into their existing business applications for improved process efficiency.

MANHATTAN ASSOCIATES www.manh.com

For more than 20 years, Manhattan Associates has provided global supply chain excellence to organizations that consider supply chain software, processes, and technology strategic to market leadership. The company's platform-based supply chain software portfolios — Manhattan SCOPE®, Manhattan SCALE™ and Manhattan Carrier™ — are designed to deliver both business agility and total cost of ownership advantages and are used by 1,200 companies globally.



IN THIS SECTION: Logistics IT



nVISION GLOBAL TECHNOLOGY SOLUTIONS www.nvisionglobal.com

nVision Global is an industry leader in providing configurable logistics services and solutions for customers around the world, enabling them to optimize their supply chain and gain access to critical data. We offer a full suite of logistics services and solutions that allow for end to end shipment and supply chain management and visibility. Our solutions include a global, multi-modal TMS application, international freight audit and payment, loss & damage/overcharge/service failure claims management, as well as industry leading logistics analysis solutions. We process and pay freight invoices from more than 190 countries, in more than 40 currencies.

RATELINX www.ratelinx.com

For 15 years, RateLinx has developed and implemented the only logistics management software that standardizes freight invoice, track and trace, shipment, and order/item data. This creates unparalleled visibility and Integrated Shipping IntelligenceSM to solve your freight management problems. RateLinx deploys the modules you need to integrate with any ERP/WMS. Leveraging big data to provide predictive analytics, the multi-carrier, multi-modal, multi-location software monitors performance by product line, sales channel or entity.

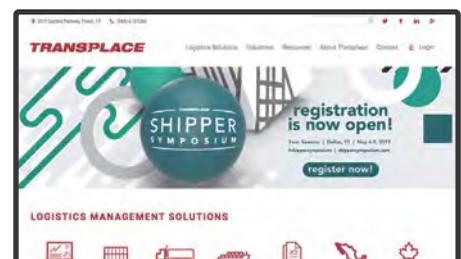


SPHERE MANAGEMENT www.spheremi.com

Sphere has been providing supply chain solutions to retailers, manufacturers, logistics and distribution, transportation and 3PLs since 2002. Its customers realize outstanding benefits using Sphere's configurable supply chain solutions driven by a measurable ROI with payback typically measured in weeks or months. The company was built with a focus on delivering solutions that align to clients. This philosophy and approach has led Sphere to deliver solutions that bolt on to existing systems and elevate operations.

TRANSPPLACE www.transplace.com

Transplace is the leading provider of transportation management services and logistics technology, helping manufacturers, retailers and distributors optimize supply chain operations and increase financial performance. Offering a complete suite of transportation management, strategic capacity, and cross-border & global trade services, Transplace's customizable logistics solutions and best-in-class technology give businesses greater control of their transportation operations and enhanced visibility of shipments and overall supply chain performance.



IN THIS SECTION:

Logistics IT - Materials Handling

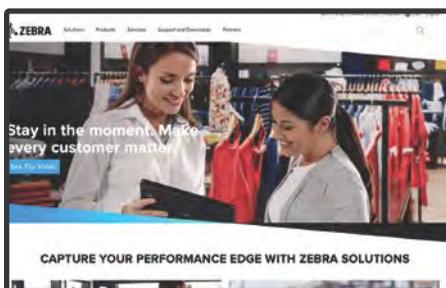


TRANSPORTGISTICS www.transportgistics.com

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.

YARD MANAGEMENT SOLUTIONS www.yardmanagementsoftware.com

Eagle Eye by Yard Management Solutions is your ultimate partner as it works 24/7 to increase efficiencies, streamline operations and reduce costs. Real-time visibility and instant analytics on all assets, shipments and workforce activities deliver the moment-to-moment pulse on your operation. Powerful functions lighten your workload and do the heavy lifting for you and our alert system will notify your team of problems before they arise. Our cloud-based software is easy to learn, simple to use and will keep your team informed, on track and in motion. Call 800-766-6197.



ZEBRA TECHNOLOGIES www.zebra.com

When it comes to creating a real-time warehouse, only Zebra Technologies brings you true end-to-end solutions. Zebra products help your company wrangle increasing complexities by automating processes and simplifying operations. Zebra services help you get and keep your mobile warehouse solution up and running at peak performance and free your IT staff to focus on business objectives.

MATERIALS HANDLING

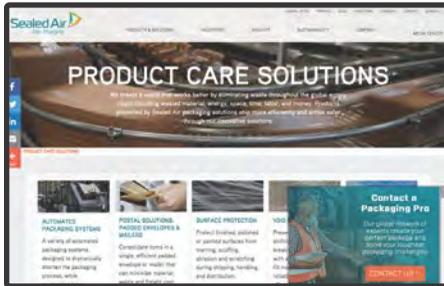
AKRO-MILS www.akro-mils.com

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.



IN THIS SECTION:

Moisture & Temperature Control - Ocean



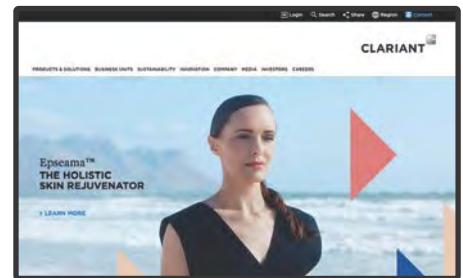
SEALED AIR www.sealedairprotects.com

Sealed Air is a leading global provider and manufacturer of a wide range of packaging and performance-based materials and equipment systems that serve food, medical, and an array of industrial and consumer applications. For more than half a century, Sealed Air employees around the globe have applied deep understanding of customers' businesses to deliver innovative packaging solutions. Operating in 51 countries, Sealed Air's widely recognized and respected brands include Bubble Wrap® cushioning, Fill-Air® Inflatable Packaging, Jiffy® protective mailers, and Instapak® foam-in-place systems.

MOISTURE & TEMPERATURE CONTROL

CLARIANT CARGO & DEVICE PROTECTION www.clariant.com

Container Dri® II cargo desiccants protect containerized exports during storage and transport. Container Dri® II absorbs up to 3 times of its weight in moisture inside a container, trapping it as a thick no spill gel. By trapping the moisture, Container Dri® II helps prevent the conditions that cause "container rain," also known as cargo sweat inside the shipping container, thus preventing the conditions that cause corrosion, mold, and mildew.



MULTI-MODAL



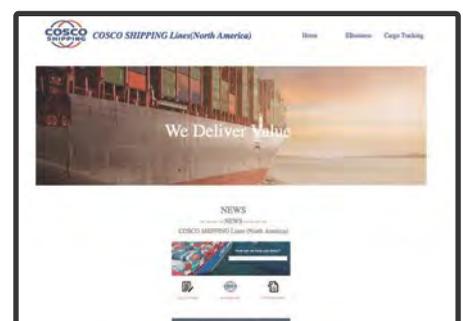
LYNDEN www.lynden.com

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.

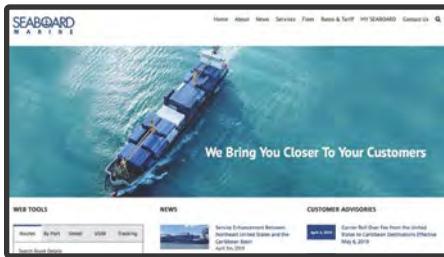
OCEAN

COSCO SHIPPING LINES (NORTH AMERICA) INC. www.cosco-usa.com

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



IN THIS SECTION:
Ocean - Ports



SEABOARD MARINE www.seaboardmarine.com

Seaboard Marine is an ocean transportation company that provides direct, regular service between North America, the Caribbean Basin, Central and South America. With a fleet of over twenty-five vessels serving nearly forty ports, Seaboard Marine is a trade leader in the Western Hemisphere.

OIL/GAS/ENERGY LOGISTICS

DUPRÉ LOGISTICS www.duprelogistics.com

With specific emphasis in the chemical, consumer products, and beverage industries, Dupré's unique solutions provide expertise in dedicated fleets, transportation management/brokerage, materials handling, and reverse logistics. Dupré works to understand your business and measure how our system meets your expectations.



PORTS



NORTHWEST SEAPORT ALLIANCE www.nwseaportalliance.com

The Northwest Seaport Alliance brings together two of the nation's premier harbors to form a single, integrated gateway. Located in the Pacific Northwest, we offer shorter Asia transits and are the first and last ports of call for many transpacific services. Our combined terminals, carriers and ports of call provide flexibility to suit unique supply chain needs. And our commitment to provide cost-effective, innovative shipping solutions is unparalleled.

PORT OF LONG BEACH www.polb.com

The Port of Long Beach is one of the world's busiest seaports, a leading gateway for trade between the United States and Asia. During the next 10 to 15 years, the Port of Long Beach plans to create at least four container terminals of more than 300 acres each, and to build at least one other large terminal. The new terminals will have dockside rail facilities, which allow cargo to be transferred directly between ships and trains. Such transfers speed deliveries between Long Beach and markets nationwide. For more information on the advantages and services offered by the Port of Long Beach, visit www.polb.com.



IN THIS SECTION:

Project Logistics - Real Estate

PROJECT LOGISTICS



INTERSTATE LOGISTICS www.moveinterstate.com/logistics

Interstate Logistics provides end-to-end logistics and supply chain solutions for businesses across the globe. With 6.5+ million square feet of warehousing and distribution facilities, Interstate's infrastructure supports the management, transportation and handling of more than \$1 billion of equipment and goods. Our seamless, customized solutions serve our 10,000+ clients through our unique asset management, warehousing, and distribution programs.

LYNDEN www.lynden.com

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RAPID RESPONSE LOGISTICS



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REAL ESTATE

MERICLE COMMERCIAL REAL ESTATE SERVICE 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.



IN THIS SECTION:

Retail Logistics - Signage and Markings

RETAIL LOGISTICS



AAA COOPER TRANSPORTATION www.aacooper.com

AAA Cooper Transportation has been providing safe and efficient transportation solutions for more than 60 years. With 70 plus strategically located service centers, we give individual attention to your transportation needs. Services include Less-than-Truckload, Dedicated Contract Carriage, Managed Services, Port and International, and Fleet Maintenance. AAA Cooper Transportation is committed 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. Visit our website to learn more.

SHIPPING SOFTWARE

MAGICLOGIC OPTIMIZATION www.magiclogic.com

MagicLogic provides complete Load Planning solutions using advanced algorithms developed in-house. Our software is capable of handling the most complex requirements, including mixed-mode Load Planning, mixed case Palletization software for packstations and robots, and high-speed Cartonization. Industry-standard APIs ensure our software is adaptable and fast to integrate. Comprehensive loading and stacking rules are modeled with ease. Solutions are available on-premise or the cloud.



RATELINX www.ratelinx.com

For 15 years, RateLinx has developed and implemented the only logistics management software that standardizes freight invoice, track and trace, shipment, and order/item data. This creates unparalleled visibility and Integrated Shipping IntelligenceSM to solve your freight management problems. RateLinx deploys the modules you need to integrate with any ERP/WMS. Leveraging big data to provide predictive analytics, the multi-carrier, multi-modal, multi-location software monitors performance by product line, sales channel or entity.

SIGNAGE AND MARKINGS

ASG SERVICES www.asgservices.com

ASG Services is a warehouse identification and marking specialist. We manufacture custom warehouse labels and warehouse signs in Atlanta, Georgia, while providing fully managed installation services and warehouse striping solutions throughout the United States, controlled centrally from our head office.



IN THIS SECTION:

Site Selection - Sourcing/Negotiations

SITE SELECTION



ELECTRICITIES OF NORTH CAROLINA www.electricities.com

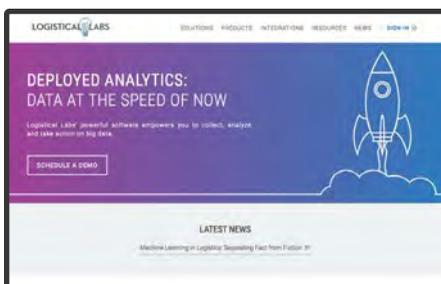
This membership organization includes public power communities in North Carolina, South Carolina and Virginia. Electricities also provides management services to the state's two municipal power agencies — North Carolina Municipal Power Agency Number 1 and North Carolina Eastern Municipal Power Agency. Electricities serves the needs of public power communities through collective strength, wisdom, and action — while promoting more success for its citizens. For more information, contact Brenda Daniels at (800) 768-7697, ext. 6363.

GEORGIA CENTER OF INNOVATION FOR LOGISTICS logistics.georgiainnovation.org

The Center of Innovation for Logistics is the leading statewide resource for fueling logistics industry growth and global competitiveness. The Center works to address the needs and opportunities of companies of any size involved in logistics and freight transportation — both providers and heavy consumers of logistics services. The Center provides industry knowledge and technical expertise, and connections to state resources in research and innovation. And it joins together an extensive cross-sector industry network.



SOURCING/NEGOTIATIONS



LOGISTICAL LABS www.logisticallabs.com

Logistical Labs builds software for collecting, analyzing, and deploying supply chain data. With their suite of analytics products, users can make better informed decisions through data-driven insights and social collaboration. Product capabilities include cost benchmarking, mode and route optimization, RFP hosting and management, and more. Open API access allows users to easily integrate products into their existing business applications for improved process efficiency.

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IN THIS SECTION:

Supply Chain Mgmt/Optimization - Sustainability

SUPPLY CHAIN MGMT/OPTIMIZATION

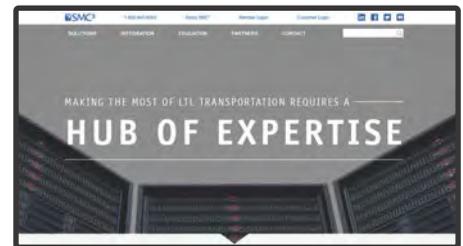


INTERSTATE LOGISTICS www.moveinterstate.com

Interstate Logistics provides end-to-end logistics and supply chain solutions for businesses across the globe. With 6.5+ million square feet of warehousing and distribution facilities, Interstate’s infrastructure supports the management, transportation and handling of more than \$1 billion of equipment and goods. Our seamless, customized solutions serve our 10,000+ clients through our unique asset management, warehousing, and distribution programs.

SMC³ www.smc3.com

Shipping management software for companies of all sizes. Works with all carriers and modes. Use it to compare freight rates, select carriers, track shipments and audit freight bills. Provides end-to-end supply chain visibility. Use as a stand-alone application or integrate with your other software. Visit our website for more information.



SUPPLY CHAIN VISIBILITY



CDM SOFTWARE SOLUTIONS www.cdmsoft.com

CDM Web Freight is a true global web-based freight forwarding and NVOCC solution. Key benefits include CDM Shipment Flow where export shipment data — documents, compliance details, tracking – from an origin forwarder easily transfers to an import shipment of the destination forwarder. Other benefits — in multiple languages (English, Japanese, Simplified Chinese, Spanish, French and German) — include shipment compliance for US, Canada, EU, UK, Japan, Israel and South Africa; as well as air and ocean carrier integration. CDM Web Freight also includes cutting-edge technologies such RFID, IoT and Blockchain to further enhance the product offering.

SUSTAINABILITY

EPA SMARTWAY www.epa.gov/smartway

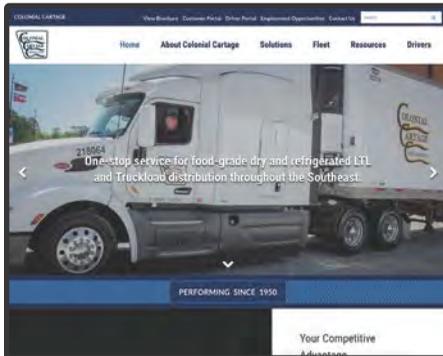
In 2004, EPA launched SmartWaySM — an innovative brand that represents environmentally cleaner, more fuel-efficient transportation options. In its simplest form, the SmartWay brand identifies products and services that reduce transportation-related emissions. The impact of the brand, however, is much greater as the SmartWay brand signifies a partnership among government, business, and consumers to protect the environment, reduce fuel consumption, and improve air quality. All EPA SmartWay transportation programs result in significant, measurable air quality and/or greenhouse gas improvements while maintaining or improving current levels of other emissions and/or pollutants. Find out what you can do to save fuel, money, and the environment with SmartWay.



IN THIS SECTION:

Temperature-Controlled Shipping - TMS

TEMPERATURE-CONTROLLED SHIPPING



COLONIAL CARTAGE CORPORATION www.colonialcartage.com

Colonial Cartage Corporation, the in-house carrier for Atlanta Bonded Warehouse, is a full-service asset-based carrier providing food-grade, dry and refrigerated TL, LTL, and pool distribution services for over 64 years. Colonial provides weekly scheduled temperature-controlled LTL delivery to all points in the Southeast, Midwest, Southwest, and Great Plains, as well as truckload and plant support services throughout its service area from its Atlanta terminal. Colonial's services include cross dock, consolidated order selection (bulk picking), and inbound consolidation to outbound cross-dock.

TMS

AR TRAFFIC CONSULTANTS www.artraffic.com

AR Traffic has been providing shippers with advanced transportation management software and third-party logistics services since 1964. All its products and services are designed to improve your efficiency, accuracy, record-keeping, control and auditability as well as to lower your freight costs. For a free study to show how you can cut costs, improve customer service, and streamline your business, visit the website today.



ARCLINE (2000) INC. www.arcline2000.com

Arcline (2000) Inc. develops Dispatch Management Software for freight brokers and trucking companies with small to medium sized fleets. Manage all aspects of your transportation business with our industry and time tested software since 1991. Some Arcmodules include: US and Canadian Customs integrations to both ACE & ACI Manifest, Mobile Driver App, Customer load tracking Apps, Internet shipment tracking, email notifications, and even your company's own private loadboard. Free 30 day trials available. Contact us today at 1-800-263-7349.

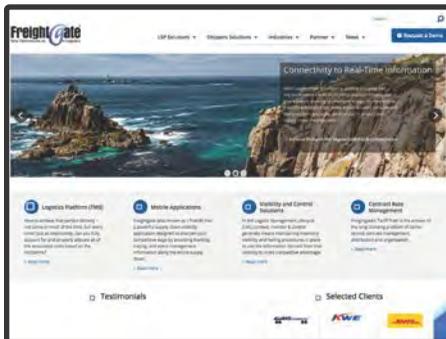
CT LOGISTICS www.ctlogistics.com

Since 1923, organizations have leveraged CT Logistics to provide global freight audit & payment and transportation management solutions. Partner with CT to design and implement customized supply chain and rate management solutions. CT's Business Intelligence platform provides global spend visibility and data analysis using SOCII and ISO 9001:2008 certified processes. Services also include: Shipment Execution, Bid Management, Shipment Planning and Execution Software, and Professional Services for consulting and advising.



IN THIS SECTION:

TMS

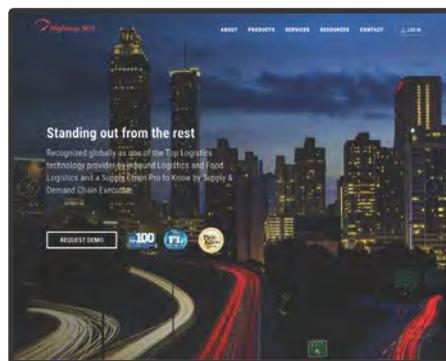


FREIGHTGATE www.freightgate.com

Freightgate is the leader in logistics and supply chain cloud computing, offering importers, exporters, and logistics providers innovation with bottom-line sustainability to help manage best practices and cost control in your supply chain. The adaptive Freightgate Universe encompasses ISO9001:2008-certified end-to-end Transportation Spend Management solutions with procurement, optimization, carbon initiatives, dynamic multi-leg routing, capacity management, booking, visibility, metrics, compliance, audit, and payment. Enable real-time collaboration between global vendors, logistics providers, and your offices.

HIGHWAY 905 www.highway905.com

Highway 905 is a cloud-based supply chain execution solution provider focused on “personalization” and faster time to market. We enable you to: ensure cost reductions and maintain an error-free warehouse; deliver differentiated customer experiences with the power of real-time visibility and actionable insights; simplify your last mile; and reduce paperwork hassles with automated freight payments and digitized document processing. If you are looking for a solution that adapts to your business, and not the other way around, call us at 908-874-4867 or visit: www.highway905.com



RATELINX www.ratelinx.com

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RUAN www.ruan.com

With Ruan, you can take advantage of door-to-door shipping solutions without the hassles and overhead associated with owning and operating your own fleet of trucks. We have more than 5,200 employees operating, servicing and coordinating some 3,400 power units and 5,600 trailers out of more than 100 locations throughout the continental United States. But you get more than just drivers and equipment — we become an extension of your team, advocating for your bottom line. Find out why the right partner can drive costs out of your supply chain — call 866-RUAN-NOW or visit our website — ruan.com.



IN THIS SECTION: TMS- Transportation

TMS

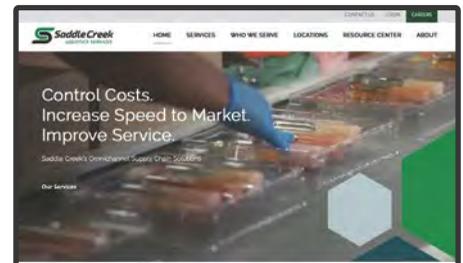


SaaS TRANSPORTATION, INC. www.saastransportation.com

SaaS Transportation, Inc. is a provider of cloud-based TMS solutions to third-party logistics companies, freight payment companies, shippers and carriers. The TMS solution is unique in that it uses APIs, which allows for easy integration with numerous trading partners with minimal set up time. Rates and carrier communications can also be managed using traditional techniques such as SMC contract management and EDI services. SaaS API services also include automation of truckload and LTL spot quotes. These integrated solutions automate freight management from carrier selection, shipment execution and visibility to final delivery enabling full transparency. It also provides shipment exception alerts that can be used to proactively resolve issues in addition to identifying rate and shipment discrepancies.

SADDLE CREEK LOGISTICS SERVICES www.sclogistics.com

Saddle Creek is an omnichannel supply chain solutions company providing a variety of integrated logistics services, including omnichannel fulfillment, warehousing and transportation. Our custom solutions leverage advanced operational methods and sophisticated technologies to help retailers, manufacturers and ecommerce companies get products where they need to be quickly, cost-effectively and seamlessly. For more information, visit www.sclogistics.com.



TRANSPORTATION



AAA COOPER TRANSPORTATION www.aaacooper.com

AAA Cooper Transportation has been providing safe and efficient transportation solutions for more than 60 years. With 70 plus strategically located service centers, we give individual attention to your transportation needs. Services include Less-than-Truckload, Dedicated Contract Carriage, Managed Services, Port and International, and Fleet Maintenance. AAA Cooper Transportation is committed 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. Visit our website to learn more.

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IN THIS SECTION:

Transportation - Transportation Mgmt/Freight Mgmt



DHL MANAGED TRANSPORT dhl.com/managed-transportation

DHL Supply Chain is the Americas leader in contract logistics and part of Deutsche Post DHL Group. We provide customer-focused solutions to the automotive, chemical, consumer, industrial, life sciences, retail, and technology industries. Solving problems. Pushing boundaries. Creating solutions. It's what we've been doing for 30 years — and what continues to make us different every day.

FROZEN FOOD EXPRESS www.ffeinc.com

Frozen Food Express strives to be the leader in the temperature-controlled LTL market. As an asset-based carrier we will leverage our core competencies in refrigerated transportation and storage that have been developed over 70 years to provide our customers with the highest levels of service which represent great value. We offer both frozen and cooler capacity in state-of-the-art dual temp trailers. In an industry where temperatures are most important we are proud to lead the way in technology that monitors and reports temperatures at every point along the cold chain. 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. Give us a call at 800-569-9200 to find out how we can be a great addition to your business. Visit our website at www.ffeinc.com for more information.



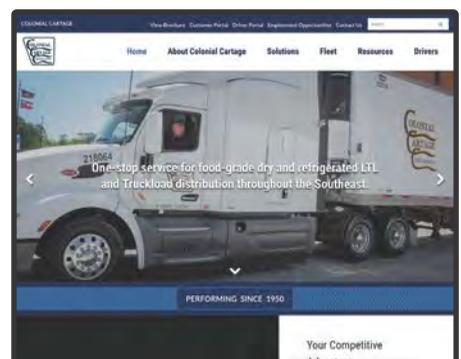
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TRANSPORTATION MGMT/FREIGHT MGMT

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IN THIS SECTION: Trucking



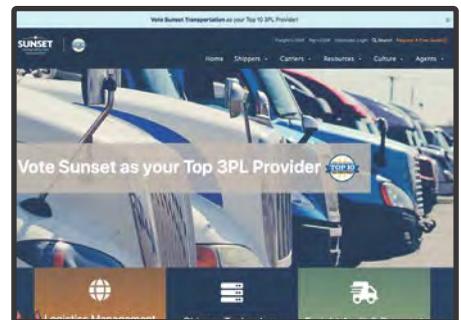
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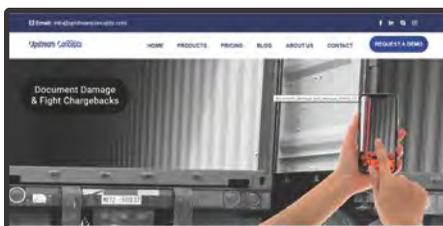
SUNSET TRANSPORTATION www.sunsettrans.com

Sunset Transportation isn't just another 3PL. We are driven by the right-size fit for each business, using all levels of global and domestic supply chain resources and services. Our culture allows customers to feel like family, while offering advanced TMS solutions, reporting, and shipment reliability.

Our approach is simple: through analysis of historical shipping data, we identify opportunities for optimization, service improvement, and technology enhancements. All this is done with five promises we make to every customer, every day: savings, visibility, data-driven decisions, continuous improvement, and relationships. Sunset is the right size 3PL for your growing business.



TRUCKING



DAMAGE DEFENDER www.damagedefender.com

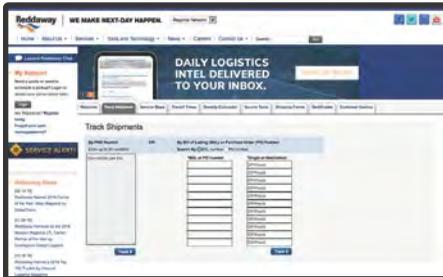
Asset condition documentation with high-resolution photo and video for claims management. Log and resolve incidents for any equipment. Timestamps and geo-tags validate inspection accuracy. Dispute damage claims with irrefutable proof of asset condition while in your custody. Compare images and share instantly. Customize forms and checklists and capture signatures. Take control of damage costs and defend your bottom line.

OLD DOMINION FREIGHT LINE www.odfl.com

Old Dominion Freight Line is a less-than-truckload carrier providing complete nationwide service within the continental United States. Through its four product groups, OD-Domestic, OD-Expedited, OD-Global, and OD-Technology, the company offers an array of innovative products and services to, from, and between North America, Central America, South America, and the Far East. The company also offers a broad range of expedited and logistical services in both domestic and global markets.



IN THIS SECTION:
Trucking - Trucking-LTL



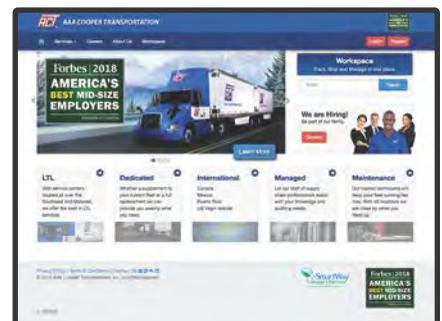
REDDAWAY REGIONAL www.reddawayregional.com

Reddaway provides reliable Next-Day Delivery throughout the Western United States and parts of Canada. Founded in 1919, Reddaway is celebrating its centennial this year. The industry leader operates 50 service centers, employs over 3,000 shipping professionals and boasts an impressive on-time delivery rate. Reddaway provides direct, regional delivery in 12 western states and one Canadian province, ships door-to-door to Hawaii, and ocean delivery to/from Alaska. With its reliable next-day shipping, a tradition of safety and a commitment to customer satisfaction, Reddaway Makes Next-Day Happen. Reddaway is a subsidiary of YRC Worldwide Inc. (NASDAQ: YRCW)

TRUCKING-LTL

AAA COOPER TRANSPORTATION www.aaacooper.com

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FROZEN FOOD EXPRESS www.ffeinc.com

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IN THIS SECTION:

Trucking LTL - Trucking-TL

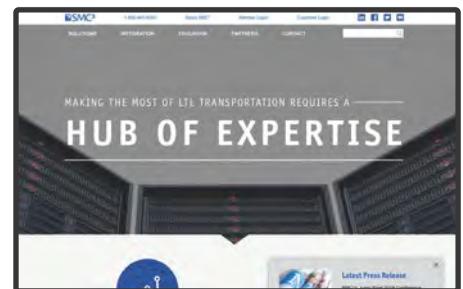


REDDAWAY REGIONAL www.reddawayregional.com

Reddaway provides reliable Next-Day Delivery throughout the Western United States and parts of Canada. Founded in 1919, Reddaway is celebrating its centennial this year. The industry leader operates 50 service centers, employs over 3,000 shipping professionals and boasts an impressive on-time delivery rate. Reddaway provides direct, regional delivery in 12 western states and one Canadian province, ships door-to-door to Hawaii, and ocean delivery to/from Alaska. With its reliable next-day shipping, a tradition of safety and a commitment to customer satisfaction, Reddaway Makes Next-Day Happen. Reddaway is a subsidiary of YRC Worldwide Inc. (NASDAQ: YRCW)

SMC³ www.smc3.com

Shipping management software for companies of all sizes. Works with all carriers and modes. Use it to compare freight rates, select carriers, track shipments and audit freight bills. Provides end-to-end supply chain visibility. Use as a stand-alone application or integrate with your other software. Visit our website for more information.



TRUCKING-TL

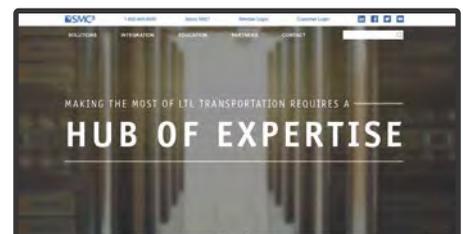


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IN THIS SECTION:

Vendor Compliance - Warehousing

VENDOR COMPLIANCE



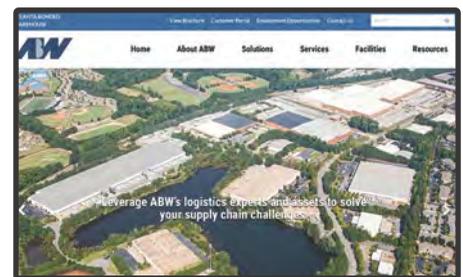
TRANSPORTGISTICS www.transportgistics.com

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

ATLANTA BONDED WAREHOUSE www.atlantabonded.com

Atlanta Bonded Warehouse (ABW) has been providing public and contract food-grade, temperature controlled distribution services for 70 years. ABW is a leader in providing integrated asset-based logistics solutions for the food, pharmaceutical, household durables, and CPG industries. Our goal is total customer satisfaction through continuous innovation in technology and in best practices by focusing on teamwork, integrity, and accountability, all in a safe working environment.



D+D DISTRIBUTION www.dd-dist.com

D&D is a full-service public warehousing and distribution services provider. We are located in York, PA placing us 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.

INTERSTATE LOGISTICS www.moveinterstate.com/logistics

Interstate Logistics provides end-to-end logistics and supply chain solutions for businesses across the globe. With 6.5+ million square feet of warehousing and distribution facilities, Interstate's infrastructure supports the management, transportation and handling of more than \$1 billion of equipment and goods. Our seamless, customized solutions serve our 10,000+ clients through our unique asset management, warehousing, and distribution programs.



IN THIS SECTION: Vendor Compliance

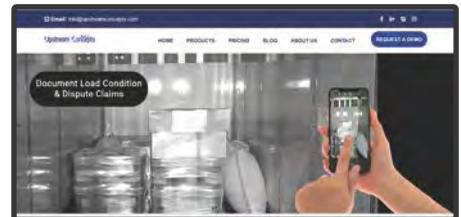


JIT WAREHOUSING AND LOGISTICS www.jitwhse.com

JIT Warehousing and Logistics specializes in the handling of steel products and palletized cargo. Our Savannah, Ga., warehouse facilities consist of more than 100,000 square feet of covered storage, and an additional five acres of outside storage. We are located only a half-mile from the GPA Ocean Terminal, and offer crane service and direct discharge from the Port of Savannah. With more than 21 years of import/export experience, we offer warehousing, trucking, shipside delivery, port pickup, container draying, stripping, stuffing, crossdock, and a double drop trailer for your over-dimensional freight.

LOAD VERIFY www.loadverify.com

Document freight claims and fight chargebacks with a simple app. Pictures give you indisputable proof of damages, contamination and loss. Document the condition of every load and make it easy to put together evidence for a freight claim. Prove you did your job right and fight chargebacks for shortages. Link with order numbers, carriers, trailers, etc – and share instantly.



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 air-conditioned & medical temperature-controlled space with licensed beverage & med/vet/pharma distribution, AIB Superior rating, and 5 rail facilities, all open to reciprocal switching. We also provide in-house local & regional trucking transportation and value-added services such as retail store displays, kitting, labeling and light assembly. Contact Metro Park to gain the competitive edge.

TAYLORED SERVICES www.taylorredservices.com

Taylorred "Fulfillment" Services is a fully integrated 3rd Party Logistics provider with expertise in retail fulfillment and direct to consumer distribution services. With strategically located bi-coastal facilities and best-in-class systems and technology, Taylorred is well suited to support your most complicated distribution challenges. We provide a full range of logistics services including: transportation, transload, cross-dock, case distribution, unit fulfillment, e-Commerce and value-added distribution solutions (repacking, ticketing, display assembly, inserts and labeling, returns). Our high volume unit sorters can support large demand customers. Visit www.taylorredservices.com or contact sales@tpservices.com



IN THIS SECTION:

WMS

WMS



CAMELOT 3PL SOFTWARE www.3plsoftware.com

A market leader since 1987, Camelot 3PL Software provides Warehouse Management Systems (3PL WMS) exclusively for third-party logistics warehouses to streamline their operations, eliminate costs and increase service levels. Offering cloud (SaaS) and on-premise solutions, Camelot's highly configurable solutions are ideal for small, medium and enterprise-level warehouses.

INTERLINK TECHNOLOGIES www.thinkinterlink.com

Discover the full potential of your warehouse with Warehouse-LINK® Warehouse Management Systems (WMS). Warehouse-LINK® utilizes barcode and mobile computing technology to support real-time distribution activities — Multi-Building/Company/Locations Management; Expiration, Lot/Batch/Serial Tracking, Raw Materials and Finished Goods; Characteristic Management (FIFO, ABC, UPCs); Location Management (cubic capacity, environmental, temporary, seasonal); Work Orders, Kitting, Cross Dock, Replenishment, QC, Wave Planning and Yard Management. Warehouse-LINK® integrates with business systems and material handling systems. Think Interlink for WMS expertise!



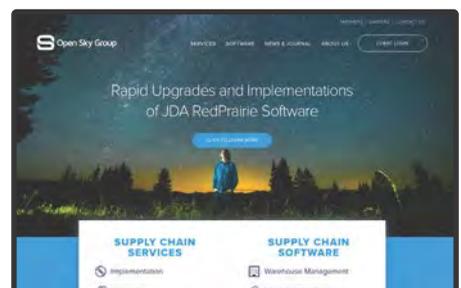
MADE4NET www.made4net.us

Made4net levels the playing field for mid-sized businesses that need real-time, robust warehouse management solutions. The company's Warehouse Management System — WarehouseExpert™ — optimizes inventory, as well as the resources and required material handling equipment. The WarehouseExpert WMS collects data on every transaction and movement in the warehouse, and uses this information to provide real-time visibility of your resources and equipment on a warehouse map, pallet locations, and performance and utilization metrics. To learn how Made4net can help you improve productivity, increase service levels, improve order fulfillment times, and reduce overall operation costs, visit www.made4net.us today.



OPEN SKY GROUP www.openskygroup.com

Open Sky Group specializes in rapid implementation and upgrades for Warehouse, Labor and Transportation Management solutions. Gold implementation partner and reseller of JDA WMS, Labor and TMS, Open Sky Group strives to be the best consulting partner on the planet for supply chain solutions. Contact Open Sky Group today to discover how we help clients save costs, reduce risk and shorten the timeline on software implementations and upgrades.



IN THIS SECTION: Workbenches - Yard Management

WORKBENCHES



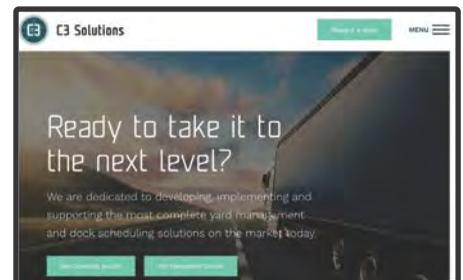
PRO-LINE www.1proline.com

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.

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

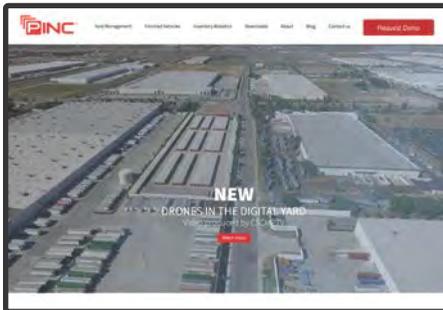
YardView is a Web-based yard management system that is easy to learn and simple to use for operations personnel. Managing yard inventories, movements, appointments, drivers, carriers, time-related events, and other yard activities can be difficult. YardView works for any size operation. YardView is experienced 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.

EXOTRAC www.exotrac.com

Dedicated to offering a high-quality product line of innovative yard management solutions, Exotrac is now offering YardTrac Lite. Based on Android, this newest advancement combines cutting-edge wireless technologies to bring real-time, current information on your PC and mobile phone. YardTrac Lite gives you freedom from clipboards and walkie-talkies, and provides automated yard activity data capture with enterprise-wide visibility.



IN THIS SECTION:
Yard Management



PINC SOLUTIONS www.pincolutions.com

Yard Hound® from PINC Solutions is the answer to your least-talked-about bottleneck in the logistics system: the yard. Increasing yard operations efficiency may be the next great opportunity to improve your logistical performance. With real-time visibility of all your yard activities accessible through a Web-based platform, managing yard operations becomes an integral part of your supply chain management practice. No longer is there a missing link between the warehouse and transportation logistics.

RACO INDUSTRIES

www.racoindustries.com/yard-management-systems.htm

RACO Industries' Yard Director™ Yard Management System is a Web-based mobile application designed to provide control, compliance, asset visibility, and efficiency for your trucking yard through real-time tracking and reporting on vehicle locations and contents. Through real-time tracking and reporting by mobile scanners via a Web-based application, your security, driver, and yard management staff can locate and track critical information about each vehicle that enters one of your facilities.



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.

YARD MANAGEMENT SOLUTIONS yardmanagementsoftware.com

Eagle Eye by Yard Management Solutions is your ultimate partner as it works 24/7 to increase efficiencies, streamline operations and reduce costs. Real-time visibility and instant analytics on all assets, shipments and workforce activities deliver the moment-to-moment pulse on your operation. Powerful functions lighten your workload and do the heavy lifting for you and our alert system will notify your team of problems before they arise. Our cloud-based software is easy to learn, simple to use and will keep your team informed, on track and in motion.



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Gartner

Gartner Supply Chain Executive Conference 2019

bit.ly/gartnerevent | Phoenix, AZ | MAY 13-16, 2019

AUDIENCE: Supply chain and logistics executives
FOCUS: Developing and deploying a digital logistics strategy; supply chain transformation; supporting the challenges of modern healthcare; maximizing value in manufacturing; delighting digital customers; fostering

improvement with 3PL warehouse/fulfillment providers

SEP 15-18, 2019 Anaheim, CA

Council of Supply Chain Management Professionals

CSCMP EDGE 2019: Supply Chain Conference & Exhibition

cscmpconference.org

AUDIENCE: Supply chain professionals
FOCUS: Female leaders in the logistics field; what young professionals need to know about the business; cutting-edge solutions; strategies to maximize and transform supply chains; global supply chain best practices; increasing visibility; integrated business planning

SEP 15-18, 2019 Long Beach, CA

Intermodal Association of North America

Intermodal Expo 2019

intermodalexpo.com

AUDIENCE: Intermodal freight stakeholders
FOCUS: Growth strategies for non-asset providers; moving from supporting the infrastructure to paying for it; what precision scheduled railroading means for dray carriers; shortlines in intermodal

SEP 16-18, 2019 Las Vegas, NV

Association for Supply Chain Management

ASCM 2019

bit.ly/ASCM2019

AUDIENCE: Supply chain professionals
FOCUS: Keeping up with changes in supply chain; best practices for sales and operations planning, inventory, and materials management; utilizing robotics, IoT, and virtual reality; staying on top of current trends; end-to-end education, from planning and procurement to delivery and return

SEMINARS & WORKSHOPS

JULY 16-17, 2019 Cambridge, MA

MIT Sloan Executive Education

Supply Chain Strategy and Management

bit.ly/MITsupplychainstrategy

AUDIENCE: Logistics and supply chain professionals
FOCUS: The next big trends in supply chain strategy; guidelines for strategic sourcing and make-buy decisions; how to integrate e-business into supply chain strategy and management

CONFERENCES

MAY 15-17, 2019 San Antonio, TX
North American Rail Shippers Association
NARS 2019 Annual Meeting
railshippers.com/events

AUDIENCE: Rail shippers
FOCUS: Issues facing the rail freight industry; initiating change relative to infrastructure needs, NAFTA modifications, technology, and the economic outlook; understanding the shortline perspective, the railcar outlook, and the regulatory landscape

JUNE 9-12, 2019 Amelia Island, FL
Transportation Marketing & Sales Association

Logistics Marketing & Sales Conference

bit.ly/TMSAconf

AUDIENCE: Supply chain stakeholders and sales executives
FOCUS: Making investments in digital systems; finding solutions to deliver outstanding customer experiences in transportation and logistics; formulating and executing multi-channel initiatives

JUNE 10-12, 2019 Chicago, IL
Global Cold Chain Alliance
Global Cold Chain Expo
globalcoldchainexpo.org

AUDIENCE: Perishables industry professionals
FOCUS: Streamlining the distribution of perishable products; improving facility operations; new products and technologies impacting the future of the perishables supply chain

JUNE 24-26, 2019 Colorado Springs, CO
SMC³

Connections 2019

smc3connections.com

AUDIENCE: Carrier, shipper, 3PL, and supply chain professionals
FOCUS: How to succeed in the supply chain arena; the evolution of reverse logistics; the impact of blockchain technology on the supply chain; current pain points and how to work around them; successfully navigating the current marketplace

JULY 15-16, 2019 Lake Geneva, WI
Midwest Association of Rail Shippers
2019 Summer Meeting
mwrailshippers.com

AUDIENCE: Rail shipping executives
FOCUS: Railroad operating practices; resolving transportation and freight car supply issues; innovations in transportation; legislative matters

AUG 18-20, 2019 Las Vegas, NV
Quartz Events

SCOPE Supply Chain Summit

bit.ly/scopesummit

AUDIENCE: Supply chain, operations, distribution, warehousing, procurement, and IT professionals
FOCUS: Increasing visibility; creating optimal workplace conditions; rising technologies; strategic sourcing; transportation management strategies to reduce costs; warehouse management and optimization

"Alexa, play the Inbound Logistics Podcast on Tunein."

EPISODE 16
Where should businesses direct their funds to keep their supply chain agile and responsive to the increasingly demanding pressures of a global economic market?

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\$2.4 Billion

PRODUCTS OFFERED

43.3%
WEDDING GOWNS

21.5%
BRIDESMAID DRESSES

17.2%
MOTHER OF THE BRIDE OR GROOM DRESSES

8.2%
GROOM + GROOMSMEN TUXEDOS + SUITS

8%
ACCESSORIES

1.8%
FLOWER GIRL DRESSES

To Have and to Hold

David's Bridal, which emerged from bankruptcy in January 2019, coupled its 300 stores and two DCs into one source of inventory to fulfill online orders.

- One DC holds items on hangers: bridesmaid/prom dresses. The other DC holds items that are vacuumed flat and packed—shoes, jewelry, and headpieces.

- Fulfilling about 20% of online orders, stores handle 10-15 e-commerce orders each day. Ship-from-store prevents David's Bridal from frequent in-store discounting.

SAY YES TO THE DRESS

\$1,509

National average cost for wedding gowns in 2017, up from \$1,211 in 2013

\$500

David's Bridal average dress cost

27.3%

David's Bridal market share

10%

e-commerce share of David's Bridal sales

Unveiling Strategies

5,799

businesses in the bridal stores market

EXTERNAL COMPETITION

mass market retailers such as J. Crew, department stores, online retailers, rental companies, and overseas companies

DIFFERENTIATE BY

- + investing in labor to provide superior in-store customer experience
- + lowering prices to remain competitive
- + offering premium and higher-priced gowns to attract niche markets

★ PHARR AHEAD OF THE REST ★



New Projects/Services Checklist:

- ✓ 2 Northbound Commercial Primary Lanes
- ✓ 2 Northbound Commercial Exit Lanes
- ✓ Gate to Gate/F.A.S.T. Lane
- ✓ Dock Expansion
- ✓ Cold Inspection Facility
- ✓ Regional Ag Training Center & Lab
- ✓ Ag Inspection Overtime Pay
- ✓ New State of the Art Toll System
- ✓ Bridge Building Renovation
- ✓ BridgeConnect Trade Sessions
- ✓ Unified Cargo Processing (UCP)
- ✓ New State of the Art Security Cameras System



Projects/Services Advantages:

- ★ Improved Safety and Security
- ★ Reduced Border Wait Times
- ★ Increased Capacity
- ★ Process Improvements
- ★ Streamlined Inspections
- ★ Improved Commercial Truck Throughput
- ★ Smart Technologies
- ★ Joint Inspections (U.S. & Mexico)
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