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37% would listen to the Chipmunks’ Christmas album on repeat if it would guarantee a 50% increase in their holiday sales.

– DHL Express survey of U.S. e-commerce businesses

23 parcels per person are shipped globally.

2,760 parcels are shipped every second.

—Pitney Bowes Parcel Shipping Index

Take This Job and LOVE IT

75% of respondents strongly agree and 23% agree that supply chain is a good career choice.

91% are either very satisfied or somewhat satisfied with their current employer.

79% describe their work as satisfying, 65% as exciting, and 61% as rewarding.

65% strongly agree or agree that it’s easy to advance in the field.

— 2019 Council of Supply Chain Management Professionals / Penske Logistics Young Professionals Survey of 100 supply chain professionals under 30
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bit.ly/airfreightstrategy

HOW TO KEEP YOUR SUPPLY CHAIN MOVING DURING TRUCKING CAPACITY SHIFTS

Many shippers can’t afford to roll the dice on the spot market in the long run. Find out how to handle market shifts in stride and secure capacity at competitive rates.

bit.ly/truckcapacitymoves

5 TIPS FOR EFFICIENT SUPPLY CHAIN MANAGEMENT

Ensuring the flow of goods and services is streamlined and provides value to the customer is one tall order. Here are five surefire ways to get your supply chain in gear.

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I n a few short years you won’t be employed. That’s right, if you work in the supply chain management field, and have a decade or so until you retire, it’s time to dust off your resume and consider other career paths. That’s according to commentary authors Allan Lyall, Pierre Mercier, and Stefan Gstettner in a 2018 Harvard Business Review article titled “The Death of Supply Chain Management” (bit.ly/SCM_death).

“The trend is clear: Technology is replacing people in supply chain management—and doing a better job,” the authors write. “It’s not hard to imagine a future in which automated processes, data governance, advanced analytics, sensors, robotics, artificial intelligence, and a continual learning loop will minimize the need for humans. But when planning, purchasing, manufacturing, order fulfillment, and logistics are largely automated, what’s left for supply chain professionals?”

That’s their prediction, codified here: “Within 5-10 years, the supply chain function may be obsolete, replaced by a smoothly running, self-regulating utility that optimally manages end-to-end workflows and requires very little human intervention.”

OK humans, stand aside! You buyin’ that? It reminds me of a Warren Bennis quote that was popular in the early 1990s: “The factory of the future will have only two employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment.”

The trouble with global generalizations is that they are part true and part not. It has been 30 years since I heard Bennis’ quote and that future is not yet here. While automation has cut workers by eliminating tasks in some operations, unrelated trends have actually increased the number of manufacturing jobs in the United States. Also cobotting, where machine and workers meld tasks to increase productivity, has not replaced humans. As the robot manufacturers say, the machines free up time for workers to perform other important and non-automatable tasks.

So will the supply chain function be obsolete in 5 to 10 years, as Harvard Business Review predicts? Nope, not gonna happen. A whole host of frictions will slow down that timeline, frictions that have nothing to do with the technology and the programming wizardry (in short supply now and given educational requirements not likely to increase in the future) needed to meet that prognosticated deadline. You may need a career change in 50 years, but for now your job is safe.

Have the reports of the death of supply chain management been greatly exaggerated? What’s your view? Let us know: editorial@inboundlogistics.com
THE HIGHLIGHT OF MY TIME AT MODEX IS SEEING THE ARRAY OF EXCITING NEW TECHNOLOGIES.

RANDY V. BRADLEY
Associate Professor of IS and Supply Chain Management at University of Tennessee

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GOOD QUESTION
Readers Weigh In

Popeyes chicken sandwich shortage: Supply chain fail or marketing savvy?

All marketing strategy in my humble opinion. Like a limited release of Jordan sneakers and then a re-release at a later date.

Milton O’Quinn III
National Operations Manager, RPM

It’s a great lesson—companies should do more data analytics to better understand how consumers respond to social media marketing and build up supply chain agility and flexibility to coordinate.

Rong Li
Assistant Professor, Supply Chain Management
Martin J. Whitman School of Management, Syracuse University

A little from column A, a little from column B. Creating that kind of buzz around a sandwich? Come on. That’s a win. Small bump in the road in the long run.

Kyle Morris
Inside Sales
Ward Transport and Logistics

If this were a marketing ploy, it ranks right up there with New Coke as a marketing failure. It looks more like a huge forecasting error.

Joe Walden
Lecturer, Supply Chain Management
The University of Kansas

Marketing 101: To generate demand, create the belief that a product is exclusive and limited. Offer limited quantities that sell out quickly to give the impression demand was overwhelming. Popeyes played consumers beautifully.

Brittain Ladd
Supply Chain Management Consultant

Epic fail, and supply chain gets the blame. But if this product launch went off without a logistical hitch, does anyone doubt marketing would get the love? Precise logistics is complex and crucial to the customer experience—and still taken for granted by most.

William Salter
CEO, Paragon Software Systems

Supply chain fail. Marketing and supply chain need to coordinate and plan together. If multiple channels aren’t working in concert, you’ll take one step forward and two steps back. Driving sales is critical, but without the execution you’re just damaging your brand.

Chris Kupillas
Regional Vice President
BlueGrace Logistics

Have a great answer to a good question?
Be sure to participate next month. We want to know:

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Quick Tip

The old adage “you get what you pay for” is true in transportation sourcing, especially when dealing with white-glove services. When your supply chain ends at your customer’s door, make sure you’re creating an advocate for your company with each shipment.

—Darren Dodson
Head of Operations and Logistics, ARTA

Re. I Was a Shipment at Disney
bit.ly/disneYTEchnology

I have been meaning to tell you how great the August Checking In column was. I learned much about the practical application of technology. Mind broadened. I’ve shared this with many.

Danny R. Schnautz
Clark Freight Lines

Re. Tariffs: Is It Time to Rethink What Goes Where?
bit.ly/rethinkSC

Supply chain leaders have taken a few paths to navigate tariffs including alternative sourcing, raising prices, buying ahead, and embracing a digitized supply chain.

Real-time analysis of integrated data spanning customers, partners, and suppliers will lead to outcomes that better match supply and demand while containing costs. Supply chain visibility is critical to stay ahead of sourcing and logistics challenges from tariffs.

Visibility empowers a company to anticipate potential logistics delays at ports from pre-tariff traffic, and make alternate arrangements. AI and machine learning can power optimization to minimize costs, maximize capacity, and increase agility—and anticipate potential tariff impacts while recommending potential solutions.

Steve Dowse
SVP, Product Management, Blume Global

In November 2019, I will turn 80. I am still working every day, moving both domestic and international shipments. But I have been reflecting a lot about my 53-year career in logistics.

A tracking number is the term today; we used to call them pro numbers. Why did we do that? What does pro stand for? Few know pro is short for progressive. It just means one number after another.

I have a listing of the top carriers in 1965. Only a couple are around today.

I have done a great deal of public speaking over the years. I have a lot of stories to tell. But meeting IL Editor Felecia Stratton and having the article published made a lot of difference in my life and career. Thank you.

Philip Williams

Re. Reader Profile
bit.ly/IL_ReaderProfile

You interviewed me back in the 1980s; I still have the magazine. My career spanned regulation, deregulation, the computer era, and the growing importance of managing transportation.

My first job out of college (1966) was with ALCOA. We were spending $1 million a month on freight (rail and truck).

—Danny Thompson
SVP, Market and Product Strategy, APEX Analytix, on mitigating supply chain risk

Don’t let bad actors compromise your supply chain. Recently, a Toyota parts supplier was defrauded of $37 million because a bad actor pretended to be a legitimate supplier and requested a bank account number change. Change controls failed and millions were lost. You can stop this type of fraud with automated bank account ownership validation. This confirms you’re paying your legitimate supplier and keeps your supply chain moving efficiently.

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Ensuring Supply Chain Visibility

In today’s increasingly omnichannel marketplace, good visibility is vital throughout the supply chain. Here’s how to maintain optimal visibility at 10 key touchpoints.

1. **Monitor Inbound Shipments.**

   The need for visibility begins in the earliest stages of the supply chain. Manufacturers must confirm the status of incoming raw materials while retailers and e-commerce companies need a clear view of their suppliers’ inventory.

2. **Establish an Enterprise-Wide View of Inventory.**

   The growth of omnichannel has intensified the need to distribute inventory across multiple locations—distribution centers, brick-and-mortar stores, vendors for drop shipments, and others. Having an enterprise-wide view of all fulfillment sources enables shippers to understand what they have available to ship and to promise, helping to optimize inventory and prevent stock-outs and overstocks.

3. **Provide Information for Customers.**

   Today’s shoppers extensively research their purchases online and expect up-to-date information. They want to know if the product they’re seeking is in stock in store and/or online and how many are remaining. If an item is on back order, they expect to know when it will be available. The ability to access this information impacts where consumers shop.

4. **Ensure Visibility Across Channels.**

   Consumers have high standards for a seamless experience across channels and devices. They want to research available product options on their phone, read reviews on a social network, place an order from their laptop, pick it up in their local store, and enjoy a consistent experience at every point in the journey.

5. **Manage Incoming Orders.**

   To give consumers the experience they expect, shippers must be able to view and process orders across multiple channels in real time.

6. **Optimize Order Routing.**

   Shippers must determine which fulfillment source is best to pull from for each order, and if it makes sense for individual line items to be shipped from different sources for optimal service. Intelligent order routing helps to optimize inventory and ensure delivery as quickly and cost-effectively as possible.

7. **Provide Order Status Details.**

   Today’s shoppers are looking for detailed information regarding order status and backorders, including when the desired item will be in stock.

8. **Track Deliveries in Real Time.**

   Customers expect up-to-the-minute information regarding the whereabouts of their orders. Shippers must monitor shipments and provide real-time tracking and delivery details.

9. **Offer Reporting and Analytics.**

   It is important for shippers to have visibility into operational data. This is particularly useful in terms of their parcel spend, including accessorial charges and shipping across time.

10. **Streamline the Returns Process for Customers.**

    Roughly 20-30% of all online purchases are returned. Shippers must monitor return shipments to speed returns processing, share details with consumers, and get salable products back in inventory.

Source: Steve Congro, Director, Omnichannel Fulfillment Technology, Saddle Creek Logistics Services
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As a result of recent trends in customer preferences, demand for printing and writing paper continues to drop. Over the past decade, production of printing and writing papers has declined by 6% annually.

Demand for newsprint has also continued to drop since the turn of the millennium—down almost 10% in 2017 from the previous year, and expectations are that this market will continue to evaporate. Most of the newsprint plants in the U.S. South and Pacific Northwest have been closed or converted to manufacture other products.

The news is not all negative, however. Certain products in the pulp and paper segment are growing. Production is not disappearing altogether due to the digital revolution, but demand is indeed shifting from some paper products to other new ones.

Cardboard is one such product. According to the American Forest & Paper Association, more than 95% of all products in the United States are shipped in cardboard boxes. This product is well positioned in the growing e-commerce market, as online orders arrive in high-grade cardboard boxes to prevent damage during shipping. Over the past several years, this segment has increased production by nearly 2% annually.

—John Greene, www.forest2market.com

FOLLOWING THE PAPER TRAIL

Whether paper companies are well positioned for further growth or still earning the right to grow, they can expect demand to increase for paper and board products over the next decade, according to McKinsey & Company. The graphic paper market will continue to face declining demand worldwide, and research has yet to find credible arguments for a specific floor for future demand.

But this decline should be balanced by the increase in demand for packaging—industrial as well as consumer—and tissue products. All in all, demand for fiber-based products is set to increase globally, with some segments growing faster than others (see chart above).

1 CHINA
2 UNITED STATES
3 JAPAN

The three largest paper-producing countries, accounting for more than half of the world’s total paper production

1 GERMANY
2 UNITED STATES

The leading paper importing and exporting countries

GET IT IN WRITING

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Building a Hub of Vision and Passion

Phil Yeager leads the family business with a clear mission: To deliver for team members and customers every single day.

*by Merrill Douglas*

Phil Yeager was just a kid when he first came to work at his family's business, transportation management company Hub Group. “I always joked with my dad that we might have breached some child labor laws,” he laughs.

As a teen interning at Hub Group during the summer, Yeager met every Thursday with his grandfather, company founder Phillip C. Yeager. “He would tell me what he was working on and ask my opinion,” Yeager recalls. “He also asked me what I was working on, to see where he could help.”

Those talks helped to shape Yeager’s own style of communications and leadership, skills that served him well when he joined Hub Group full time in 2011 as director of strategy and acquisitions. In 2019, Hub Group—based in Oak Brook, Illinois—named Yeager president and chief operating officer.

We spent some time with Yeager to find out more about his leadership strategies.

II. You worked in banking before you joined Hub Group full time. What made you decide to rejoin the family business?

My goal after earning my undergraduate degree was to go outside the business to learn skills that I thought could help us continue to evolve. I learned a ton in banking and in business school, but I always knew I wanted to make Hub Group my career. I’ve stayed mainly because we have a great group of people, great customers, and an amazing business. That makes it energizing and fun to come in every day. We’ve accomplished a lot, but I think there’s still a lot we can do to bring our customers even more value and an even better experience.

II. When you became president and COO, what priorities did you establish?

Our mission is to make sure we deliver for our customers and team members every day. To achieve those goals, we’ve homed in on three simple priorities: 1) achieve premier quality in our service, people, and safety; 2) drive profitable growth; and 3) maintain a competitive cost structure. We differentiate ourselves by maintaining a culture of continuous improvement, challenging ourselves every day to improve all three focus areas.
**IL: As a leader, what are your most important characteristics?**

A leader needs vision and passion. I have both. If you show your passion as a leader, people will follow you.

Here’s an example. We used to be a siloed organization. A customer who relied on us for intermodal services and dedicated trucking, for instance, would work with two different account managers. Over the past few years, we have transitioned to a new model, offering the customer one point of contact for all our services. This evolution required a change of mindset across multiple business units, teams, and silos. Breaking down the walls took time. You can’t achieve success without a vision for supporting customers better than anyone else can, or without passion for getting the team to deliver.

**IL: How do you handle recruiting and cultivating talent?**

It’s a competitive market across all areas. We’ve worked hard to build a great reputation as an employer. We invest significant time in making sure team members have a rewarding experience, with a career path and opportunities to grow. We invest in their skill development as well. Employees can apply for online certificate programs with the University of Denver or Cornell University, and we’ve done job-specific training outside the organization.

For drivers, we have great safety programs and technology. We make sure they have a good quality of life with pay at the high end of the market, and most of our drivers get home every night to see their families. We’ve invested in their management team to make sure our team members are growing, learning, and being challenged. Another key move came when we hired a chief human resources officer, Michele McDermott, who will help us continue to improve as an employer of choice.

**IL: How do you stay in touch with what your customers want and need?**

We do a lot of surveys, and we actively meet with our customers for regular business reviews. Plus, we’re adding new value by proactively bringing our customers solutions to help them save money or improve their service. A customer might not always be ready for one of the solutions we bring them, but we engage them in a deeper conversation. By trying to give them what maybe they don’t even know they want, we spark a lot of dialogue.

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**New Technology in the House**

Hub Group has invested a lot of capital in technology in recent years, with special emphasis on driver safety and greater efficiency. One innovation Phil Yeager finds particularly exciting is electric vehicle technology. “Given the short-haul nature of our drayage and dedicated businesses, electric is a great application,” he says. Hub Group has been working with manufacturer Freightliner to help develop and test electric trucks.

“The other area we’ve invested a great deal in is automation, with digital freight-matching capacity to take out redundancy and put artificial intelligence into our processes,” Yeager says.

Among other applications for this technology, Hub Group is honing its ability to give customers an estimated time of arrival for their freight. “We’ve put a lot into customer experience, and we’ve gotten to what we think is the highest industry standard for the visibility we provide,” he says.

**IL: Does working in a family business pose special leadership challenges?**

It actually creates some advantages. As a family, we set the tone for the company. We’ve done a good job in making decisions and investments that will position the company for long-term growth. Hub Group has been around for 48 years, with three generations of the family involved. Our goal is to continue into the fourth, fifth, and sixth generations.

**IL: What advice would you offer a young person who is embarking on a career in supply chain management?**

Don’t be afraid to voice your opinions about how your company could do better. If you’re willing to put your ideas out there, you’ll get opportunities to grow and be challenged.

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

I spend as much time as I can with my two-and-a-half-year-old daughter and amazing wife. Beyond that, we are very involved in the Ann & Robert H. Lurie Children’s Hospital of Chicago. For recreation, I love to golf and snow ski.
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[LLamasoft, a provider of enterprise supply chain design and decision-making solutions, acquired Opex Analytics, which offers artificial intelligence solutions to Fortune 500 companies.]

[Enterprise software provider Epicor acquired 1 EDI Source, which offers electronic data interchange solutions and business visibility software.]

[Manitoulin Global Forwarding continued its expansion into the United States by acquiring Demark Global Logistics, which provides logistics solutions for general commodities, textiles, and furniture.]

[Transportation equipment leasing solutions provider Milestone Equipment Holdings purchased a trailer leasing branch office in Jacksonville, Florida, from Fleet Trailer.]

[AutoGuide Mobile Robots, which manufactures modular autonomous mobile tuggers and forklifts for high-payload materials transport, was purchased by Teradyne, which provides industrial automation solutions.]

[Tosca, a provider of reusable packaging and supply chain solutions, acquired Polymer Logistics, which specializes in reusable transport packaging and retail merchandising systems.]

> GOOD WORKS

Transportation solutions provider Transervice Logistics launched a food drive, engaging its branches in a competition to gather the most donations. The campaign collected 2,085 pounds of food for Move for Hunger, a non-profit organization that collects non-perishable food items and delivers them to food banks across North America. The Transervice donation will be used to provide a total of 1,740 meals.
> GREEN SEEDS

**Gap** moved its mill sustainability efforts deeper into its supply chain by working with global suppliers to assess their environmental impacts. In addition, the retailer is collaborating with the broader apparel industry to develop sustainable supply chain practices.

> SEALED DEALS

- Specialty lighting retailer **Lamps Plus** rolled out **Manhattan Associates’** point of sale (POS) solution across its entire chain of lighting and home furnishing stores in Arizona, California, Colorado, Nevada, Oregon, Texas, and Washington. The POS solution integrates selling, engagement, and fulfillment to improve customer experiences through a single system of record for managing omnichannel transactions.

- **AAMP Global**, a manufacturer of mobile aftermarket technology for consumer and commercial vehicles, selected **Blue Ridge** to streamline its global inventory forecasting and planning operations. AAMP Global, which has more than 7,000 retail and commercial customers worldwide and more than 30,000 points of distribution, will utilize Blue Ridge technology to lower freight costs and anticipate supply chain disruptions.

- Foodservice distributor **Cheney Brothers** implemented the **Cooltrax Fresh inTransit** wireless temperature monitoring and management solution in its cold chain. The Cooltrax Fresh inTransit solution brings real-time visibility to its temperature-controlled products.

- **Comar**, a packaging and device supplier, chose **Transportation Insight** to centralize its transportation management operations, enabling collaboration and providing end-to-end visibility. With Transportation Insight’s enterprise logistics solutions, Comar seeks to optimize carrier relationships, improve efficiencies throughout its supply chain, and meet customer expectations and demand.

> RECOGNITION

- Professional driver Robert “RB” Wolford achieved a safety milestone: logging his **three-millionth consecutive mile** without a single accident while driving for **Holland**.

- The Raymond Corporation’s founder George Raymond Sr. was inducted into the 2019 **Supply Chain Hall of Fame** by the Council of Supply Chain Management Professionals. Transforming materials handling, Raymond Sr. secured patents for the double-faced wooden pallet and the hydraulic hand pallet truck. He helped develop the first electric, narrow-aisle lift truck.

- America’s Road Team Captain and **YRC Freight** professional truck driver Steve Fields received the **Mike Russell Trucking Image Award** from the American Trucking Associations for maintaining safety standards, mentoring other drivers, and serving as an ambassador to the motoring public. Fields has driven more than 3.3 million accident-free miles in more than 34 years—22 of those years with YRC Freight.

- **Atlantic Container Line (ACL)** was named a **Premier Partner for 2019** by American Honda Motor Co. ACL, which has served as American Honda’s transportation partner for more than 25 years, was recognized for providing quality, value, and customer service in support of the automobile company’s operations.

> UP THE CHAIN

Luxury fashion brand **Burberry** named **Jerome Le Bleis** as its new chief supply chain officer, effective January 2020. Le Bleis is currently executive vice president, group operations, at retailer Lacoste. In his new role, he will lead Burberry’s supply chain team from London.
China’s Trade Outlook Declines as Air Drags

Trade tensions between the United States and China have many repercussions, according to the DHL Global Trade Barometer, an early indicator of global trade developments calculated using artificial intelligence and big data analytics.

China’s September 2019 trade outlook registered a four-point decline from June to an index value of 45, according to the DHL data. Mainly driven by a significant eight-point fall in overall air trade, the bright spots of growth in air imports appear set to carry the fall in exports.

China’s air imports of basic raw materials, machinery parts, chemicals and products, and temperature- or climate-controlled goods will be the biggest near-term contributor to trade growth, although challenges faced by air exports will negate that growth, the data suggests. September 2019’s ocean trade outlook remains unchanged from June’s index value of 47.

“The increase in air imports of raw materials and machinery parts is in line with China’s recent plans to move from high-speed to high-quality growth, concentrating on the adoption of artificial intelligence, smart manufacturing, and renewable energy to establish country-wide infrastructure projects,” says Steve Huang, CEO, DHL Global Forwarding Greater China.

The data also suggests that world trade remains at a crossroads and will further lose momentum through November, albeit at a slower pace than the previous quarter. A drop in air trade alone triggers the current decline, while the global ocean trade outlook remains stable. All seven nations surveyed reveal indexes below 50 points except for Japan and the UK, where forecasts show positive growth momentum. In the Barometer methodology, an index value above 50 indicates positive growth, while values below 50 indicate contraction.

The trade conflict between China and the United States continues to simmer, resulting in an overall subdued trade mood. It is expected that U.S. trade will shrink further, remaining in negative territory with 45 points, despite having climbed one point since June.

Driven by an increase in e-commerce, global parcel volume grew from 74.4 billion shipments in 2017 to 87 billion last year. On average, 23 parcels per person were shipped globally, and 2,760 parcels were shipped every second, according to the Pitney Bowes Parcel Shipping Index.

Collectively, China, the United States, and Japan lead the global growth with the three countries representing 83% of the increase in global parcel volume in 2018. Despite unprecedented global trade uncertainty, the report forecasts this figure will more than double within the next six years and reach 200 billion parcels by 2025.

The index also finds:

- China’s parcel volume is four times that of the United States: China (50.5 billion), the United States (12.5 billion), and Japan (9.4 billion) represent the top countries for parcel shipping volume in 2018. China’s parcel shipments represent 59% of the total shipments in the index.
- United States tops shipping revenue: The United States ranks highest in parcel shipping revenue at $118.9 billion. China ($91.3 billion) and Japan ($30.1 billion) follow.
- Japanese residents receive the most packages but this has declined: Japan still tops per capita shipping with 74 parcels shipped per person in 2018, but this is down from 76 per person in 2017. Revenues generated by parcel shipments in Japan currently stand in the top three of all 13 markets studied as carriers negotiate more profitable rates.
Great Lakes Ports Stay on Course

U.S. Great Lakes ports are on pace to beat 2018 cargo volumes following a robust September handling road salt, cement, stone, petroleum, and wind energy components, and supporting the region’s construction activity and energy needs.

Overall, St. Lawrence Seaway tonnage for the season (March 22 to September 30) reached 24.8 million metric tons, down 6% from 2018. The figures reflect a combination of factors including the decrease in U.S. corn and soybean exports from earlier in the spring and delays in the Canadian Prairie harvest due to wet field conditions.

September 2019 was a busy month for the Port of Duluth-Superior, with overall tonnage pacing slightly ahead of last season and the five-season average. Grain made a strong move in September, posting its second-highest monthly tonnage total of the season and narrowly outpacing 2018. General cargo movement continued steady, with wind energy cargo arrivals from overseas via the Seaway tracking toward a record total. In addition, iron ore tonnage outpaced the September 2018 total by 3%, putting it almost 16% ahead of the five-year average.

Shipments of limestone and petroleum products continued to lead the way at the Port of Green Bay in September, bringing its year-to-date shipping total to more than 1.6 million tons through September—17% ahead of 2018.

Overall tonnage through Port Milwaukee was up 25% as the port’s handling of salt, cement, steel, and other specialty cargoes led the way this year.

The Toledo-Lucas County Port Authority reported a slight decrease in tonnage compared to the 2018 season. While coal, iron ore, and grain were down, general cargo, dry bulk, and petroleum numbers were up with robust aluminum shipments driving growth. The port also handled bulk sugar for the first time since 2015.

5 ACTIONS TO OPTIMIZE LOGISTICS COSTS

Logistics leaders face pressure from their stakeholders to optimize logistics costs while maintaining service and performance levels. Gartner Inc. identifies the following five actions to help you optimize costs from within your organization.

1. **Eliminate costly errors.** In logistics, errors occur regularly and often come at a cost. For example, shipments may be non-deliverable due to flawed data, or containers may collect demurrage at ports because import/export documentation isn’t complete. To avoid future errors and their associated costs, logistics leaders must identify the source of errors and continuously improve their shipping processes.

2. **Evaluate value-added services.** Most logistics providers perform some form of value-added service. These services can be as simple as product labeling or as complex as full product customization. Outsourcing certain tasks to the logistics provider is convenient, but logistics leaders should always evaluate whether the convenience is worth it. There might be a more cost-effective approach, such as completing the service in-house or through a supplier at an earlier point in the supply chain.

3. **Consolidate shipments.** Shipment consolidation can be a tremendous cost saver. Logistics leaders can align inbound and outbound transportation movements so all trucks and containers hold as much capacity as possible.

4. **Enhance internal collaboration.** In addition to external collaboration, internal cross-functional teams with other groups in the supply chain are a key factor for cost optimization. For example, logistics leaders should know about changes in demand planning, so they can adjust transportation, warehousing, and labor capacities in advance—and thus gain time to negotiate the best price.

5. **Educate decision makers.** The fifth action to reduce logistics costs internally is probably the most important. Leaders must educate decision makers about what their decisions mean for logistics and inform them about expenditures and trade-offs.
Supply Chain Conferences Complement Logistics Job Training and Education

The complex world of less-than-truckload transportation—pricing, routing, and everything in between—can seem overwhelming to new professionals just beginning their supply chain careers. Deciphering transportation regulatory changes and understanding the trickle-down impact of tariffs and other governmental decisions can likewise be out of reach to even the most seasoned LTL veteran.

Unfortunately, experience in the field isn’t easily gained. The optimal way to understand the intricacies of today’s supply chain environment is to participate in an educationally focused transportation conference. Events hosted by a reliable company with decades of industry expertise arm attendees with new supply chain ideas and transportation tools.

Q: Why isn’t on-the-job LTL training sufficient?

A: When learning on the job, new employees benefit from the experience of corporate leadership and other company veterans. That may be plenty when performing simple, everyday tasks, but to truly understand LTL and excel at your role as a carrier, 3PL, shipper, or technology provider representative, it’s truly best to seek out new sources of information.

Educational supply chain conferences provide attendees with focused panels and keynote speeches that are relevant not only to the work they do every day, but can also help further their supply chain careers. The networking opportunities are also invaluable, as these informal meetings are the best way to generate new contacts and maintain trusted business relationships.

Q: What should attendees look for when considering what supply chain conferences to attend?

A: Agenda, networking opportunities, and location are all extremely important factors when weighing how to spend valuable continuing education dollars. Look for conferences that encourage attendees to learn, collaborate, and explore new ways to make their businesses succeed. You can find this out by looking at a company’s track record for putting on events, or even asking around in the industry about the best conferences to attend.

The goal of the conference should be that every attendee returns to their respective companies refreshed, inspired, and ready to get down to business. Attendees should come back to work eager to make appropriate and informed decisions about supply chain challenges and opportunities based on the knowledge they’ve collected during the event. And remember, sometimes the greatest business opportunities arise during entertainment networking events or during scheduled mingling breaks throughout the conference day.

If location is the deciding factor on the event, pick a conference that’s near a major transportation hub. Atlanta, the transportation hub of the Southeast, has become one of the leading cities in technology infrastructure and is the best place to gather together and analyze the issues that will come to define the year ahead.

SMC³’s next event, Jump Start 2020, will be held at the Renaissance Atlanta Waverly in Atlanta from January 27-29. Learn more at smc3jumpstart.com.
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What’s Your—and Your Company’s—Degree Of Supply Chain Digital Consciousness?

The age of the digital supply chain is here. How do I know? Because 1,000-plus industry leaders across manufacturing and distribution supply chains told us so in the survey that informed MHI’s sixth Annual Industry Report, “Elevating Supply Chain Digital Consciousness.”

The report again explores the latest trends in current and planned investments in digital technologies like robotics and automation, predictive analytics, the Internet of Things (IoT), wearable and mobile devices, and driverless vehicles and drones.

Among the highlights of the survey: Confirmation (again) that digital technologies and innovations continue to fuel increasingly demanding customer expectations for better, faster, and more transparent service. Likewise, the report validates that companies who respond to those challenges by embracing a digital mindset will reap the benefits of a digital supply chain that is agile, fully automated, and self-learning.

Further, respondents reported their projected spending on digital technologies is up by 95%—after a trend of survey respondents reporting a decline in planned investments from 2015 to 2018. That uptick indicates that companies’ forecasted spend on supply chain innovations is at a critical inflection point.

And yet, even with investments on the upswing, not every company is moving along the digital path at the same pace. The 2019 MHI Annual Industry Report defines four stages of digital adoption.

At the outset, companies invest in the technologies that enable digital connectivity: Internet of Things (IoT), cloud computing and storage, sensors and automatic identification, and blockchain/distributed ledger technologies. These systems enable an organization to harvest pertinent information across the links of the supply chain.

The second stage is the adoption of technologies that allow the data to be acted upon more quickly and—in some cases—automatically. These investments include robotics and automation, wearable and mobile technology, autonomous vehicles and drones, and 3D printing systems.

Increased advancement in analytics is the hallmark of stage three, achieved by investments in predictive analytics and inventory/network optimization systems. With a degree of automation in place, analytics can not only be forward-looking but also prescriptive; that is, making recommendations for actions to take in response to what’s likely to happen.

Artificial intelligence (AI) is the apex of the digital adoption pyramid. With this capability, computers take the analytics from the previous stage, run millions of comparative calculations simultaneously, determine the best course of action, and then take it, instantaneously—without human intervention.

Human intelligence can be freed from its focus on mundane, routine activities to instead focus on true challenges and exceptions within a supply chain.

In conjunction with the report, MHI developed a self-assessment for benchmarking supply chain digital consciousness. Intended as a way to help companies better understand both their degree of awareness and their own progress in achieving a digital supply chain, the assessment, called the Supply Chain Digital Consciousness Index (DCI), and the report are available at mhi.org/dci.

The Supply Chain DCI quantifies an organization’s current level of supply chain digital consciousness, as well as measures progress made toward desired end-state. The intent is to help firms determine the current state of their digital consciousness, then identify and prioritize gaps in order to develop a comprehensive strategy for digital consciousness that meets their unique business goals.

As another step in improving your supply chain operations, I invite you to attend MODEX 2020. As the most comprehensive international manufacturing and supply chain expo held in the United States in 2020, MODEX’s 950 exhibitors will display the latest technologies and solutions that support digital supply chains across 325,000 square feet of show floor. You can also attend more than 150 educational conference sessions.
Designing Your Business To Meet Customer Expectations

Due to the rise of the “Amazon Effect” and growing customer demands, businesses are faced with the challenge of delivering goods directly to the doorstep of an end customer within days (or even hours). These new expectations have shaped the inner workings of the logistics industry, especially in terms of the level of customer service needed to stay competitive in today’s market.

To succeed in this increasingly demanding environment, shippers need actionable analytics, and those organizations that fail to provide these experiences to its customers and properly leverage data are often missing the big picture. That’s where the right 3PL can help. Below, are key insights into what it takes to meet the expectations of the modern customer, and what shippers should expect from their 3PLs to help them achieve the necessary efficiency and optimization required in their supply chain.

Destroy Your Silos and View Your Supply Chain Holistically

Today, customers have more ways of achieving convenience and expect retailers to constantly create better, more efficient and reliable convenience for them. This could include free and expedited shipping or having dependable inventory in a brick-and-mortar store. In order for organizations to achieve success in this marketplace, they must create efficiencies across their entire supply chain.

Transportation is just one component of a supply chain that must work in harmony with other parts in order to be effective. Companies must take a holistic approach to serving customers by eliminating silos and fully understanding their end-to-end supply chain today, especially in terms of customer service.

How the Right 3PL Can Help You Meet the Needs of Your End Customer

3PLs are in a unique position as shippers trust logistics providers to execute on their behalf and help fulfill their customers’ expectations. When looking to select a partner to work with, shippers should be taking into consideration questions such as:

• Does the logistics provider have a deep and intimate understanding of your business and your customer’s business?
• What is the 3PL doing to gain and build your trust?
• Does the provider truly understand your mission and purpose?
• Can the 3PL provide strategic insights such as both customer service strategies and cost-saving strategies?
• Do your company cultures align?

A logistics provider should be seen as an important extension of a shipper’s supply chain organization and should be truly integrated into their full business function.

Your 3PL Must Do More Than Execute, They Need to Provide You with Real Value

At a basic function, logistics providers must be able to execute on delivering shipments. However, businesses across every industry are looking for more than just execution. Shippers need actionable insights that go beyond just the raw data to help improve business operations and better serve customers. 3PL providers that are doing a great job of executing should have tremendous access to data and insights that can help shippers find and create value, as well as figure out where the waste is in a network, work to eliminate it, and help provide tremendous value for the end consumer.
Drilling Deeper Into Your Supply Chain

Data analytics is the science of examining raw data to help draw conclusions about information. When applied to the supply chain, it allows companies to drive insight, make better business decisions, and verify or disprove existing models or theories.

Data analytics breaks out into the following categories:

**Descriptive analytics.** In supply chain, descriptive analytics helps companies better understand historical demand patterns, how product flows through the supply chain, and when a shipment might be late.

**Diagnostic analytics.** Once supply chain problems occur, you need to analyze the source. Often this can involve analyzing data in the systems to see why a company was missing certain components or what went wrong that caused the problem.

**Predictive analytics.** In the supply chain, predictive analytics could be used to forecast future demand or the price of a product.

**Prescriptive analytics.** In the supply chain, you might use prescriptive analytics to determine the optimal number and location of distribution centers, set inventory levels, or schedule production.

**Cognitive analytics** (a potential subset of any of the above). This helps an organization answer complex questions in natural language in the way a person or team might respond to a question. It helps companies think through a complex problem or issue such as, “How might we improve or optimize x?”

As a result, supply chain analytics are also the foundation for applying cognitive technologies, such as artificial intelligence, to the supply chain process. Cognitive technologies understand, reason, learn, and interact like humans, but at enormous capacity and speed.

Using these categories of analytics can give you a leg up on the competition as traditional measures tend to be based on historical data and not focused on the future. They don’t relate to strategic, non-financial performance goals such as customer service and product quality or directly tie to operational effectiveness and efficiency.

Other useful applications for analytic techniques include:

**Evaluating disaster risk.** Supply chain disruptions can come in many forms. As a way to evaluate the risk to a supply chain, you can classify events that cause disruptions into two types: super events (disrupting all suppliers simultaneously) and unique events (disrupting only one supplier).

**Managing the Bullwhip Effect.** This phenomenon describes the tendency for larger order size fluctuations as orders are relayed up the supply chain (toward suppliers).

**Supplier selection analysis.** Suppliers are often evaluated on far more than simply the price offered.

**Transportation mode analysis.** A faster shipping method is usually more expensive, but saves pipeline inventory costs. This is the core trade-off in transportation mode analysis. Other important considerations could include on-time as opposed to fast delivery, coordinating shipments to maintain a schedule, and keeping a customer happy.

**Warehouse storage.** Placement decisions within huge warehouses with dozens of trucking docks and thousands of items can be complicated.

With the power of analytics, companies can fine-tune their supply chains in ways that weren’t possible in the past. If your supply chain management models are based only on past demand, supply, and business cycles, you could be missing opportunities to use analytics to achieve a competitive advantage.
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Mitigating risk is one of the most challenging aspects of managing shipping logistics. The good news: Help is available.

Drawing from a rapidly diversifying landscape of publicly available information, artificial intelligence (AI) and machine learning (ML) techniques can detect and monitor breaking events in real time, as they unfold. Real-time technology can help shippers keep abreast of high-impact incidents around the world and provide extra time and context to activate risk mitigation strategies.

**A CHANGING INDUSTRY**

While managing operations amid volatility in world events or natural phenomena is always a challenge, the growing imperative to deliver goods promptly and seamlessly, supported by 24/7 customer service, compounds the problem. Because supply and production schedules are critical, and even a small disruption can have a disastrous effect on transit times, costs, and customer satisfaction.

Companies have been systematically and incrementally chipping away at these risks. Decades ago shippers had to rely on unreliable phone lines and telex machines; the advent of email, however, improved messaging speed and reliability. But even today, there’s often a significant lag between the time an event occurs and when news of it reaches shippers.

Technology has also improved the way shippers handle goods so there is less wastage. Internet of Things (IoT)-equipped warehouses can predict spoilage and adjust ambient temperatures accordingly; blockchain and smart contracts facilitate transparent sourcing and decrease time to port for materials.

But when it comes to abrupt and severe disruptions, many shipping managers lack real-time data that can help them get ahead of catastrophic events. Access to on-the-moment information about flash points as they are unfolding enables logistics professionals to pull ahead of the pack, redraw shipping plans, and proactively mitigate risk, thereby minimizing lost revenue.

Tools that draw alerts from publicly available data sets—social media, blogs, and information sensors—can enable early detection of disruptive events. Whether a tsunami in Japan or wildfire in California, sudden disasters jolt supply chains. Because of the very nature of its immediacy, publicly available data can be a strong mirror of what’s happening in real time.

Given the volume of such available information, however, manually tracking breaking news can be as challenging as drinking water from a fire hose. That’s where AI-enabled tools come in, making it possible to distill hundreds of datasets, look for patterns, and quickly deliver relevant information on a high-impact event that is both timely and germane to one’s specific business interests.

**MOBILIZING IN A CRISIS**

While real-time alerts on supply chain disruptions can be powerful, they cannot function in a vacuum: They need the right workflows to facilitate seamless information sharing.

To foster such environments, shippers can eliminate silos by including relevant decision-makers from across the company in collaborative workflows; departments can then easily share information without hitting speed bumps. Moreover, companies need to institute alternate plans for shipping routes that can kick in when a relevant, real-time alert is received and before disaster strikes. Conducting periodic fire drills, where employees walk through solutions to what-if scenarios, can ensure the viability of such plans.

With an infrastructure in place to effectively receive, relay, and act on real-time information, shipping managers are best equipped to remain agile, mitigate risk, and sail smoothly over choppy waters as well as calm seas.
Few franchises in history succeed in winning three consecutive championships, but of those who do, history remembers them as one of the greatest of all time. Echo is proud to join this elite category of three-peat champions in being voted as this year’s 2019 Inbound Logistics #1 3PL.

Thank you for voting Echo your #1 3PL in the 2019 Inbound Logistics Top 10 3PL Excellence Awards.
Shining New Light On Dock Operations

The loading dock is a complicated place, with many people and a lot of equipment working together. With better visibility into dock activity, companies can bring significant improvements to their warehouse operations.

**Q:** What important challenges do warehouse operators face because they lack access to crucial real-time and historical data about what’s going on at their docks?

**A:** Sometimes employees bypass standard procedures, or they don’t use the equipment as expected. Such aberrations can reduce efficiency and increase the risk of damage or accident. Historically, managers haven’t had much visibility into activity at their loading docks. Without key performance indicators, they can’t identify problems and implement improvements.

**Q:** What solutions does Serco offer to help with those challenges?

**A:** The Serco Digital Master Control Panel records all activity at each loading dock and transmits that information over an independent network to the 4SIGHT Connect – Dock platform. That cloud-based platform collects and synthesizes this information, providing a real-time view of performance at each dock. Using the 4SIGHT Connect – Dock’s dashboard, users can monitor the items they consider most important—how long trucks are restrained, how long doors are opened, when someone interrupts the standard sequence of operations, or any other conditions. The system can also send alerts when certain conditions apply. Finally, 4SIGHT Connect – Dock can generate historical reports, showing how docks, equipment, and crews perform over time.

**Q:** How do warehouses benefit when managers gain visibility into, and control over, all their dock activities through a single platform?

**A:** When managers can monitor activity at all their docks through one source, with access via a browser on any device, they gain valuable insight into day-to-day operations. If a worker performs a task incorrectly, if a team takes too long to unload trailers, if a worker needs approval to override a restraint, the manager learns about those events right away and can take immediate action. In some cases—such as approval for an override—a manager or supervisor can use the dashboard to respond remotely, resolving issues from the other side of the warehouse, from another company location, or from home.

A company also gains strategic benefits when it assembles and analyzes information from all of its docks. 4SIGHT Connect – Dock provides business intelligence that has never been available before. Is the company using all of its loading docks equally? Do all the docks operate at the same level of efficiency? Do operators need more training? How many times, on average, can a dock door raise and lower before it needs maintenance? As technology shines a light on more aspects of warehouse performance, companies will discover new ways to save money and operate more effectively.
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SECRETS of EXPEDITED SHIPPING

HOW CARRIERS MOVE HIGH-PRIORITY LOADS EXTRA FAST WHILE HOLDING DOWN COSTS AND KEEPING SHIPPERS IN THE LOOP.

BY MERRILL DOUGLAS

IN OMNICHANNEL RETAIL, speed is practically a given. Whether next day or same day, consumers want things fast. In the broader supply chain world, though, some people call top speed—in the form of expedited shipping—a necessary evil.

“No supply chain professional comes to work hoping for four expedites that day,” says Mike Moss, chief operating officer at Ward Transport and Logistics Corp. in Altoona, Pennsylvania. Ward added expedited transportation to its portfolio in 2017.

“A lot of clients say that ‘expedited’ is almost a dirty word,” agrees Mike Said, president of Continental Expedited Services in Clarksville, Tennessee. “It’s always more expensive than standard transportation.”

But sometimes there’s no avoiding the need for turbocharged transportation. When a factory runs short on components, a patient awaits a donated organ, or a lack of materials threatens to idle construction workers, expedited shipping becomes well worth the added expense.

The important figure is not what it costs to deliver the freight, but what not making the delivery would cost. “While a $2,000 expedite sounds exorbitant, it’s pennies compared to shutting down a major manufacturer’s assembly line,” says Moss. “That can cost $100,000 an hour.”

The speedy shipping service that’s familiar to every consumer

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is the kind that delivers small packages overnight. Providers such as FedEx and UPS have perfected that service. But both transportation giants also offer other kinds of expedited shipping.

For example, FedEx provides time-critical ground and air shipping as part of its Custom Critical business. Companies use this service, for instance, to recover from supply chain disruptions by rush-shipping components or materials to production plants.

“We also do product releases, which means ensuring that product hits the market at the time the customer actually wants it to,” says Ramona Hood, vice president of operations, strategy, and planning at FedEx Custom Critical in Uniontown, Ohio.

UPS offers several expedited shipping operations beyond its package, freight, and traditional forwarding services. Its Supply Chain Solutions service parts logistics business holds inventory for customers in more than 1,000 forward stocking locations, so UPS can deliver the parts—machine components, surgical kits, and other items—within one, two, or four hours. This helps UPS customers meet their on-site repair and service commitments to their end customers.

WHATEVER IT TAKES

UPS Express Critical service picks up and delivers critical shipments from huge machinery to donated organs and tissues, via air or ground. “We can dispatch a courier, hand carry it on a flight, put it in the belly of a commercial airliner, or combine options with our air network when commercial routes are unavailable or not fast enough,” says David Quintilio, executive vice president for UPS Global Logistics and Distribution.

For customers in health care and life sciences, that can mean a life-sustaining “gift” is delivered while it is still viable, or a critical surgery is not rescheduled.

In addition to putting freight on equipment that can move it quickly, carriers also use a range of other strategies to provide fast service, well-tailored to shippers’ supply chain needs.

Some strategies focus on employees who work with shippers to choose the right solution for each load.

“In our training program, it usually takes between three and six months until an account manager even provides quotes to a client, just because there’s so much to learn,” says Continental Expedited Services’ Said. A well-trained account manager could help a shipper decide, for example, whether to send an entire expedited shipment by truck, or put five pallets on a plane and use a truck for the rest.

The bulk of Continental’s customers are manufacturers that need to move materials and components into their plants. The company uses 53-foot tractor-trailers, straight trucks, and vans, adding air cargo carriers and air charters when appropriate.

Ward Transport and Logistics also stresses training to make sure its employees recommend the right equipment for each load. The company keeps staff operating around the clock, every day of the year. “That is an absolute imperative,” says Moss.

When matching loads with equipment, Ward Transport’s expedited specialists consider not only when a customer needs a load delivered, but also specifications such as height, width, shape, and whether the freight includes hazardous materials.

WHILE A $2,000 EXPEDITE SOUNDS EXORBITANT, IT’S PENNIES COMPARED TO SHUTTING DOWN AN ASSEMBLY LINE.

“We procure that information on the front end so we can craft a solution not only to meet expectations, but also to protect the customer from a cost standpoint,” Moss says.

FedEx Custom Critical uses information technology to project its 24/7 staffing needs. “We utilize dynamic staffing tools to determine what our peak call volume or shipment volume will
**BACKUPS AND WORKAROUNDS**

When a long-haul truck has three days to deliver a load, it’s easy to recover from a 45-minute construction delay, or even a flat tire. Not so when a load needs to reach its destination tomorrow morning, or in just a few hours.

That’s why carriers always think ahead about calamities that might befall their expedited loads.

UPS Express Critical, for example, works with customers to predetermine exactly how critical each delivery is—considering the distinction, for instance, between an implantable medical device needed for surgery the next morning and a donated human organ that can “expire” in a few hours.

UPS also works with shippers to predict what might go wrong with a shipment, and establish contingency plans. “We have a standard operating procedure with our repeat clients to look at those interventions, so we don’t have to guess at what we need to do,” says David Quintilio, executive vice president for UPS Global Logistics and Distribution.

To help avoid weather-related slowdowns, Continental Expedited Services in Clarksville, Tennessee, keeps a satellite weather map displayed on a 70-inch screen for all the staff to see. In the winter, employees also look at websites maintained by various states’ departments of transportation. “Many provide real-time information on which interstates are closed and if they’ve been cleaned,” notes Mike Said, company president. Staffers use that information to route trucks away from areas where they might run into trouble.

be, and we utilize that information to ensure that we have the right number of team members staffed for the business at hand,” says Hooft. When volume surges unexpectedly, service representatives have technology available to let them work remotely.

**PARTNERS FOR CAPACITY**

For carriers working to meet tight delivery windows, however challenging the request, another key is to always have access to capacity. At Ward Transport, which operates its own assets mainly in the U.S. Mid-Atlantic, that means putting on its third-party logistics (3PL) hat to call upon relationships with transportation providers across the continent. “Ward has spent considerable time and effort aligning with strategic capacity partners so that we’re always in a position to say, ‘Yes,’” Moss says.

No matter whose assets it deploys, though, Ward Transport manages the entire shipment. “We own cradle-to-grave execution, including status updates,” Moss says.

Continental connects with capacity partners through the software system Sylectus, from Dallas-based Omnitracx. Sylectus includes a transportation management system (TMS) and an online load board. “If we don’t have capacity, we can broker it to another partner,” says Said.

ArcBest, in Fort Smith, Arkansas, uses both its own equipment and assets owned by partners. Its expedited shipping services consist of two offerings. The first is ground expedited transportation, provided by ArcBest’s Panther Premium Logistics fleet. “It includes cargo vans, sprinter vans, straight trucks, and tractor-trailers,” says Ed Wadel, executive vice president, asset-light expedited services and strategic capacity at ArcBest.

“Shippers using our ground expedite service get exclusive use of the truck.”

ArcBest’s other expedited offering, time-critical freight, uses assets belonging to the company’s less-than-truckload (LTL) ABF Freight fleet, plus a network of partners. “It gives customers access to an array of options for their time-sensitive freight, including day-specific, time-specific, and must-arrive-by,” Wadel says.

Along with partnership strategies, creative thinking also helps expedited carriers meet the need for speed in customers’ supply chains while controlling costs. One useful approach is to blend transportation modes. Say a Continental customer wants to charter a flight to move components from the United States to a factory in Canada. If the timing is right, Continental might arrange to terminate that flight in Detroit and then truck the load across the border. “That saves a few thousand dollars,” notes Said.

Partnerships and mode-blending can help a shipper and carrier overcome challenges, explains Steve McDonald, director of multimodal services at Averitt Express in Cookeville, Tennessee.

“For example, our expedited team recently provided a unique solution for a customer that was faced with a factory shutdown due to a broken part,” he says. Averitt retrieved a replacement part and delivered it to an airport, where it was met by a customer service agent who had already passed a security background check. The agent accompanied the part on the plane and then made the final delivery in person.

“The shipper was losing thousands of dollars per hour while the production line was down,” McDonald says. “We knew there was no margin for error.”

**HERE’S WHERE WE ARE**

Two other crucial elements of expedited shipping are visibility and communication.

Expedited carriers use GPS technology, either on onboard computers or in drivers’ cell phones, to monitor loads. This tracking data helps to both manage a shipment and keep the shipper informed about the load’s progress.

Averitt Express—which provides LTL, full truckload, and air expedited services—uses GPS data, displayed in a mapping system, to determine the most
efficient route for each shipment and make adjustments at a moment’s notice.

“Additionally, it provides real-time data that can notify our operations team if a driver has deviated from the planned route,” says McDonald.

At ArcBest, employees use a custom-built TMS to monitor expedited shipments. “We know where every truck is located at any time and have constant communication with the driver,” says Wadel.

The system receives real-time information from sources such as the company’s Panther app, onboard electronic logging devices (ELDs), and various partners. “We analyze this information and proactively alert our team so they can respond to potential issues before the customer is impacted,” he adds.

Customer service reps at Continental send their shippers hourly emails to keep them informed about the progress of their loads. Although not all clients check those messages throughout the night, when they get up in the morning they’re glad to find a string of updates assuring them their shipments are running smoothly, notes Said.

FedEx Custom Critical also communicates with shippers throughout the progress of an expedited load, using technology that supports notification via phone, email, or text message. “We proactively let the customer know when a shipment was picked up, if there’s any unexpected delay, and when the freight is delivered,” says Hood. Each Custom Critical vehicle is equipped with an onboard computer that transmits location information into the company’s shipment management system.

**MILESTONE TO MILESTONE**

UPS is rolling out a GPS-based system that will provide real-time tracking and heightened visibility of shipments for the service parts network and UPS Express Critical service. By integrating that technology with the IT systems of its carrier partners, UPS and its customers can monitor each shipment from milestone to milestone, watch for potential problems, and track deliveries.

“We monitor shipments proactively rather than reactively to make sure we’re hitting those milestones,” Quintilio says. “And we can do an intercept along the way if necessary.”

**THE REAL SECRET OF EXPEDITED SHIPPING IS THE COMMITMENT TO DO WHATEVER IT TAKES TO MEET SHIPPERS' DEADLINES.**

UPS Express Critical service even comes to the rescue when circumstances delay a shipment on the small package side. This might happen, for example, when weather grounds a plane that’s carrying perishable items packed in dry ice, due for delivery in the morning. “We’ll get the shipment and drive to an open airport for the next flight out, or put it on one of our planes,” Quintilio says.

As expedited carriers demonstrate over and over, the real secret of expedited shipping is the commitment to do whatever it takes to meet shippers’ deadlines. With strategies based on well-trained staff, robust partnerships, creative thinking, strong technology solutions, and constant communication, these carriers move mountains to move freight of any kind and size at whatever speed their customers require.
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The Challenges of Organic Food Logistics

From cold chain and cross contamination to scale, organic farmers are addressing challenges with technology and supply chain shifts.

By Karen Kroll

Most farmers, food distributors, and grocers have daunting challenges on their plates, including tight margins, unpredictable trade wars, and perishable products that require an impeccable cold chain and precise transportation schedules. Those who farm or work with organically grown produce, dairy, and meat can add a few more challenges to the menu: potential cross-contamination from conventionally grown foods and competition from criminals seeking the premiums organic foods typically enjoy, without actually doing the work required to claim their foods are organic.

In addition, many—although certainly not all—organic farmers run small businesses, making it difficult to achieve economies of scale in their transportation, cold chain, and distribution efforts.

Organic farmers, distributors, and grocers are tackling these challenges through technological advances and supply chain enhancements. These efforts are increasingly critical, given the rising demand for organic food. Consumption of organic food topped $47 billion in 2018, up almost 6%, reports the Organic Trade Association (OTA). That compares to an increase of 2.3% for total food sales. Organic foods, which are grown without the use of toxic and/or synthetic fertilizers, antibiotics, artificial preservatives, flavors, and colors, now account for 5.7% of all food sold in the United States, says the OTA.

Because organic foods don’t contain many of the preservatives found in conventionally grown foods, some are even more perishable. “Organic foods cannot have any breakages in the cold chain links,” says Patrick Penfield, a professor of supply chain management at Syracuse University.
COLD CHAIN TECH

Technology can help. A growing array of sensors that monitor temperature, as well as shipment location, transit time, and other metrics during transportation continue to drop in cost. “The costs are decreasing, putting this technology within reach for many shippers,” says Brian Nessel, vice president of operations with GlobalTranz, a third-party logistics provider based in Scottsdale, Arizona.

Organically Grown, a distributor of organic produce based in Eugene, Oregon, requires all its carriers to pre-cool their trailers before making pickups. Organically Grown also uses temperature loggers to continually track temperatures once its food is on a truck.

During deliveries, dock seals—large pads the trailer backs up to—form a seal between the building and truck, keeping pests and debris out while keeping the cold in. “There’s zero break in the cold chain,” says Anthony Seran, logistics coordinator for Organically Grown.

Organically Grown also is considering using permanently mounted thermometers within its trucks that will report temperature readings through the cellular network. “This takes GPS a step further,” Seran says. In addition, it would reduce the need to recycle the temperature sensors currently used.

Within temperature-controlled warehouses, energy and labor are the largest costs. “Many cold storage companies are investing in automation that enables more efficient labor usage,” says Corey Rosenbusch, president and chief executive officer with industry group Global Cold Chain Alliance.

One company is altering actual cold chain technology. Phononic uses semiconductor chips, rather than compressors, to remove heat from a cavity. “The end result is the same as a compressor,” says Abhiroop Dutta, director, product management, food and beverage, with the Durham, North Carolina-based company. However, Phononic’s chip-based technology eliminates the coils needed with conventional cooling systems, resulting in a smaller, lighter refrigeration unit.

Fighting Fraud

Organic farmers must face the small percentage of competitors who want to capture the price premiums organic foods typically enjoy without actually following organic growing regulations.

While much of the fraud originates outside the United States, domestic cases aren’t unheard of. For instance, in August 2019, Randy Constant, a Missouri farmer convicted of marketing non-organic soybeans and corn as organic—a case some called “Field of Schemes”—committed suicide several weeks before he was scheduled to begin his jail sentence.

Eric Jackson, founder and chair of Pipeline Foods, which offers supply chain solutions for farmers of organic products, says his organization invests time and resources to ensure its products are organic.

For example, Pipeline uses “mass balance analysis” to confirm each purchase is organic. Say a farm is growing 10 acres of organic corn, and each acre likely will produce about 150 bushels. If Pipeline commits to purchasing the output of those 10 acres, it should wind up with about 1,500 bushels. If a farmer offers another 1,000 bushels, Pipeline will “have to understand clearly how they were grown before committing to them,” Jackson says.

Pipeline’s farmers also are independently audited and Pipeline tests all incoming loads for GMOs. Agreements with all its growers allow Pipeline to test their soil at any time. “It’s expensive to do what we do,” Jackson notes.

The Organic Trade Association also has established a fraud prevention program for developing a robust supplier approval program, conducting internal audits, and understanding the length and complexity of the supply chain.

Co-mingling & Contamination

The careful handling required for many food items becomes even more important with organic food, which requires extra TLC. In part, that’s because the lack of preservatives can make it more perishable.

In addition, organic food producers need to watch for contamination and commingling. Contamination occurs when organic food comes into contact with prohibited substances, such as a pesticide. Commingling occurs when organic foods come into contact with non-organic products.

The USDA has identified practices that can reduce the risk of commingling and are approved for organic foods. One is buffer strips, or plots of land located along the edges of fields that can capture pesticides and pollens, perhaps from neighboring farms. In addition, clearly labeling organic ingredients or foods can help prevent accidental commingling.

While these practices help to maintain the integrity of the organic supply chain, they also add to its expense and complexity. That can be a challenge for organic growers, as their farms tend to be smaller than conventional farms.
The average organic farm comprises 285 acres, versus 444 acres for all farms, according to Modern Farmer. The generally smaller scale of many organic farms can make it harder for them to invest in technology. That can reverberate throughout a supply chain. For instance, HighJump, a supply chain management solutions provider, works with a wine distributor that has several clients who have yet to implement barcodes. “There is some automation but also manual processes to deal with,” says COO Joe Couto.

Some distributors offer services aimed at helping organic farmers gain economies of scale so they can operate more efficiently. Co-op Partners Warehouse (CPW), an organic wholesale distributor, provides transportation for goods from more than 30 local farms to about 400 customers.

For its services, CPW charges a handling fee, while also encouraging its farmer customers to maintain direct relationships with their customers, such as restaurants and stores. “They get higher prices selling directly to the retailer,” yet don’t have to manage logistics, says Rick Christianson, purchasing manager and produce buyer. While many in the industry were initially skeptical of CPW’s approach, “It’s unique and has worked well for us,” Christianson says.

Organic Valley, a cooperative of more than 3,000 farms based in La Farge, Wisconsin, established Organic Logistics (OL) to provide efficient transportation and storage of its own products, as well as products from other small producers. “Not many carriers specialize in smaller LTL shipments that can capitalize on the transit and routes they are already servicing,” says Milo Luppen, OL vice president.

Organic Logistics consolidates products from Organic Valley and other producers. It’s able to fill its trucks and warehouses while also providing systems and services, including inventory management, fulfillment, and shipping to “smaller companies who don’t have the resources to effectively utilize the chain of supply,” Luppen adds.

While not exclusive to organic farmers, food hubs can help small and mid-sized farmers broaden their distribution networks and customer bases. Food hubs “offer a combination of aggregation, distribution, and marketing services at an affordable price,” according to the USDA.

Some offer kitchen facilities, so farmers can create value-added products from the food items they grow. Other services can include transportation, warehousing, and cold storage, all of which can make it possible for small producers to access larger markets.

### Looking ahead

Some see blockchain as a potential solution to combat organic food fraud, as it can provide tamper-proof records showing how organic food items were handled. However, many believe it will be some time before it’s fully adopted. “It takes time for technology to make its way through the supply chain ecosystem,” says Derek Curtis, vice president of sales and retail execution, HighJump.

One challenge that many in the organic industry welcome is its increasing popularity. “Demand is exceeding supply,” says Anthony Seran of Organically Grown. As a result, he often needs to schedule pickups from the same producer several times each week.

This shift also highlights one benefit of working with numerous smaller growers: it increases the likelihood that Seran will be able to assemble both the quantity and variety Organically Grown customers have come to expect. “We get greater access to supply and variety,” he says.

The growing popularity of organic food also means more growers and distributors will need organic warehouse and cold chain facilities. “Organic will go from a differentiator to a market standard,” predicts Corey Rosenbusch of the Global Cold Chain Alliance.

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3PLs ADD VALUE
Through a continued focus on innovation, technology, and fostering strong client relationships, third-party logistics providers (3PLs) are thriving as they help clients move and store goods more efficiently and effectively. Indeed, the 3PL industry is the healthiest it has been in a long time, says Joe Couto, chief operating officer with HighJump, a provider of supply chain solutions.

Companies turn to 3PLs for several reasons. One is economies of scale. When 3PLs purchase technology and equipment, they’re able to amortize their investments over the many shippers with which they work. As a result, most can make investments that would be outside some shippers’ budgets. “For many small shippers, transportation can be an afterthought,” says Amit Saini, vice president of enterprise services with Noodle.ai, a provider of enterprise artificial intelligence solutions. That’s not the case with 3PLs.

Indeed, many 3PLs continually invest in warehouse, transportation, and labor management
systems. “Those are real-time execution systems to help plan labor and equipment and maximize space,” says Michael Wohlwend, managing principal with Alpine Supply Chain Solutions Consulting. “Slotting optimization is also popular to support a 3PL customer’s lifecycle.”

In addition, many 3PLs are looking for capabilities, such as the ability to pick and fill online orders and provide next-day service, that will enable them to help clients more effectively navigate a market increasingly ruled by e-commerce.

ADVANCED TECHNOLOGIES BRING EFFICIENCY GAINS

The current interest in warehouse robots that can bring goods to people will continue, says Jack Buffington, director of plant logistics with MillerCoors Brewing Company in Golden, Colorado. Fueling this trend is the move by many robot manufacturers to offer “robots as a service.” 3PLs can add to or subtract from their robot workforce as needed, and with a more modest investment than many previous automating systems required.

Along with automating previously manual tasks, robots will be able to provide analytics and data based on their constant observations of the workplace. For instance, a robot may be able to suggest a more efficient warehouse layout. “While robots’ primary value is productivity and automation, in the near future it will be to analyze data,” predicts Stefan Nusser, vice president of product with Fetch Robotics.

Artificial intelligence (AI), while still an emerging capability, will become increasingly critical to 3PLs. While most transportation management systems (TMS) operate by rules—if A, then B; if C, then D—the real world rarely does.

“AI systems, by definition, are probabilistic,” Saini says. They can incorporate external data, such as weather forecasts, and find opportunities to optimize all legs of a journey. AI will help 3PLs keep their assets moving and full, generating savings they can pass on to shippers.

Because 3PLs work with multiple shippers, they’re often able to identify opportunities for transportation network improvements that might not be readily apparent, Saini adds. Similarly, they may see patterns in an overall market that show, for instance, a shift in demand that an individual shipper might not be in a position to notice.

STREAMLINING E-COMMERCE

The growth of online ordering has enhanced the value 3PLs can provide. Customers’ increasing expectation of next- or same-day delivery adds to transportation complexity. Many 3PLs have gained experience in tight delivery deadlines and omni-channel distribution, and companies in other industries are leveraging that expertise.

“Companies are focusing on their core competencies and letting companies that specialize in logistics manage the distribution,” Wohlwend says.

For instance, by leveraging a 3PL, beer company MillerCoors doesn’t have to invest in trucks and other transportation assets. Instead it can allocate its budget to the areas where it’s an expert. Indeed, by working with 3PLs, shippers can access transportation and warehousing assets on a variable, rather than a fixed-cost, basis.

And because 3PLs often have space in a network of warehouses, they may be able to cut the time required to deliver goods to customers, says Jim Fleming, supply management program manager with the Institute for Supply Management.

Many 3PLs also have gained expertise in handling the myriad tax and regulatory responsibilities inherent in importing and exporting goods. Their knowledge of international shipping also can help shippers navigate sudden changes in trade agreements and tariffs.

STRENGTHENING SHIPPER-3PL RELATIONSHIPS

As the cost and complexity of technology integrations continue to decline, communication between shippers and 3PLs has become easier and less expensive.

The Transportation Intermediaries Association, a trade group for 3PLs, has formed a technology committee to work on the “neutralization” of technology, says Robert Voltmann, president and chief executive officer. That is, in an ideal world, a 3PL would be able to move information between carrier and shipper, no matter which system each is using.

Today’s 3PLs are increasingly interested in establishing partnerships with their clients. Many of the largest
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players can handle all parts of shippers’ supply chains across the globe, Couto says. Regional players are offering more value-add services, such as returns management or light assembly work, he adds.

**OFFERING RESPONSIVE CUSTOMER SERVICE**

Since its launch 20 years ago, Jarrett Logistics Systems has earned the trust of numerous clients, from Fortune 500 firms to small- and mid-sized companies. Together, its clients span nearly 500 locations in 43 states, all Canadian provinces, and locations across Mexico. Jarrett remains one of the largest privately held 3PLs in North America.

The keys to Jarrett’s growth and success? Its employees, as well as industry-leading technology. “We have great people who provide exceptional customer care,” says founder Mike Jarrett.

One sign of this: between 7 a.m. and 9 p.m., no calls go to voice mail. “If you call, you’re going to reach someone to speak to,” he adds. Similarly, the information and logistics employees in the JLS Routing Center are accessible around the clock, 365 days a year, with an average answer time of less than 8.5 seconds.

When recruiting, Jarrett looks for candidates who embody character, integrity, honesty, and a strong work ethic. “You can train someone to do a specific job, but you can’t train someone to be honest and hardworking,” Jarrett says.

When new employees learn the company’s processes, procedures, and technology platform, they also learn “the why.” “That is, why do you come to work every day?” Jarrett says. “There’s a sense of purpose, a passion in working here.”

With this foundation, employees understand both the business functions with which they’ll be working, as well as the way Jarrett cares for its customers. “Customers do business with us because they not only value the services we provide, but they also know us, like us, and trust us,” Jarrett says.

Through a “mass customization” approach, Jarrett tailors its services and technology—such as iShip, its proprietary and cutting-edge transportation management system—to best meet the needs of each customer.

For instance, Jarrett helped a large client in the rubber industry eliminate most of its safety stock. To achieve this, its systems provide complete visibility to all goods coming from suppliers, as well as their forecast arrival dates.

The result? “The company no longer needs large amounts of safety stock when scheduling production,” says Matt Angell, vice president, logistics operations.

Jarrett manages the returns logistics process for many of its consumer packaged goods clients, and helps them with OTIF—the on-time, in-full metric that many retailers use to score their suppliers. Jarrett can manage the delivery process with the precision and efficiency required to comply with OTIF, helping clients avoid costly penalties and fines.

**PROVIDING CUTTING-EDGE TECHNOLOGY**

As part of its commitment to remain at the forefront of technology, Jarrett is implementing new software with AI capabilities. An algorithm quickly analyzes customers’ shipping patterns to predict future behavior. By leveraging this information, they’re able to shift to lower-cost options. “We’re excited to be at the forefront of this technology,” Jarrett says.

Jarrett’s dedication to cutting-edge technology and exceptional customer care helps explain why the company has earned a spot on the Inc. 5000 Growth List 14 times—an accomplishment only five other businesses have under their belt.

**BUILDING A THRIVING BUSINESS FROM SOLID INDUSTRIAL ROOTS**

It’s safe to say few 3PLs trace their roots to a 19th-century paper company, and Sunset Transportation is proud of its industrial history. More than 100 years after John R. Williams and Melville C. Libby formed Williams Paper, a family-owned business still operating today, Jim Williams—John’s grandson—leveraged the company’s fleet of trucks to start a successful backhaul program. With that, he entered the logistics field, bringing a strong focus on high customer service and family-style values.

The program Jim created grew so quickly that in 1989, he left Williams Paper to open Sunset Transportation, now a thriving 3PL based in St. Louis, Missouri, with seven branch offices throughout the Midwest and southern United States, along with over 40 agent offices nationwide.

Jim serves as chief executive officer and his daughter, Lindsey Graves, now runs the company as chief operating officer. She has grown from the bottom
WOULD IT STILL WORK IF IT WEREN’T SAFE?

Just because you need it fast, does not mean you should sacrifice safety. With LFS you can have both.

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**3PLs ADD VALUE**

up, working through all departments for the past 15 years and was a finalist for the 2019 Distinguished Woman in Logistics Award, sponsored by the Women in Trucking Association, the Transportation Intermediaries Association, and Truckstop.com.

**DRIVING SHIPPER INNOVATION**

While Sunset traces its roots to the 1800s, it has always focused on driving shipper innovation, as shown in its LOGIK platform, scheduled for full release in late 2019. A proprietary, web-based portal, LOGIK offers shippers unprecedented visibility to both their domestic and international shipments, across all stages of the freight lifecycle, including shipment history, in-transit tracking and shipment status, and freight audit and payment analytics.

By providing on-demand visibility to all domestic and international modes, even before pickup, shippers can address non-compliance and overspend before they occur. Historically, shippers often had to wait several weeks after a shipment concluded before they could access post-shipment analysis and reporting.

“We wanted to get ahead of common issues by creating a dashboard that’s dynamic, actionable, and cutting-edge,” says Tracy Meetre, vice president of sales and marketing.

To meet its goal, Sunset partnered with Information Builders, which helps companies leverage data and analytics to drive digital transformation. Together the companies created a data warehouse and portal that merges data from multiple systems, enabling shippers to see their shipments in transit. “Customers can identify any shipment’s location on a responsive map and watch the shipment as it travels across the water,” Meetre says.

LOGIK also can sound an alert if, for instance, an employee is initiating a shipment with a non-preferred carrier, incurring additional costs. While the shipper may still choose to use the carrier, it’s an intentional decision. “We provide information that’s upfront and actionable,” Meetre says.

Moreover, Sunset can provide this state-of-the-art technology to customers that may have assumed such tools were outside their budgets. Because Sunset is smaller than some other 3PLs, its overhead also tends to be lower. Yet as shippers grow, Sunset’s technology and culture are nimble enough to scale alongside them.

Sunset employees want to “make the person who engages our services look like a superhero,” Meetre says. They do this by building strong partnerships and leveraging robust, accessible tools and analytics that help clients take an intelligent approach to managing their supply chains. Some of Sunset’s customers have been with the company for generations. “We invest in them and become extensions of their organizations,” she adds.

**PROVIDING DIFFERENTIATED VALUE**

Over the past decade, LFS, Inc. has “built a spirit of entrepreneurship, which now defines our culture, along with creativity, passion, commitment, attitude, and teamwork,” says Andres Lopera, chief executive officer and integrator with the Florida-based firm. “We engage shippers in the way, shape, and form they ask, and are committed to providing substantial, differentiated value to their supply chains.”

This approach has helped propel LFS from five to more than 200 teammates. Along the way, it has helped its partners improve their ground transportation processes and productivity in the United States, Mexico, and Canada, with Europe as a recent addition.

While LFS remains largely focused on transportation operations, it has also opened sister companies with different focuses. This includes SKHOLL, a cargo insurance broker underwritten by some of the biggest names in the industry.

LFS also offers a unique loyalty program, LFS Rewards, through which shippers accrue rebates and value-adds like insurance coverage and credits to offset their accessorials charges, all at no additional cost. What’s more, shippers don’t have to hit a spend tier to activate LFS Rewards.

**REAL-TIME PRICING FOR OTR TRANSPORTATION**

LFS has long offered shipper-specific, real-time pricing for all modes of over-the-road transportation. To accomplish this, LFS draws from its comprehensive database of full truckload (FTL) rates that can be searched, or fed via API, in live production.

LFS’ internal Quality Assurance (QA) team ensures adherence to both shippers’ and LFS’ processes and expectations. QA teammates maintain live visibility of all operations in progress.
Uncover the power of our LOGIK dashboards.

Gain complete visibility through Sunset’s new LOGIK dashboard suite.

LOGIK combines order data, live in-transit tracking, and shipping performance metrics to deliver actionable reporting so you can navigate the road ahead.

Use LOGIK to make your data work for you -- contact us today for a test drive!
3PLs ADD VALUE

As a result, they can quickly identify divergences and coordinate with the LFS operations teams to return an operation to proper functioning.

Recently, LFS went through a vendor compression process with an existing partner that had been working with 60-plus truck brokers. Not surprisingly, this approach bloated its transportation costs and degraded operational performance, with no consistency in dispatches or lane awards.

LFS is one of four 3PLs remaining with the company. Because of this consolidation, the shipper improved on-time performance by 7% and boosted billing accuracy and timeliness by 14%, among other benefits. “The consolidated vendor scope allows them to focus on process adherence and consistent performance against those processes across vendors,” Lopera says.

Technology continues to be LFS’ primary investment, with a focus on business intelligence and the graphic user interface of all its platforms. “As we add more functionality, we also add more simplicity, so users can find the data they’re seeking with as few movements as possible,” Lopera says.

Unlike some brokers that focus on the number of offices and head count, LFS prefers to strategically place sales personnel who work remotely and, when requested, ops personnel who act as in-house team extensions of its partners. Keeping costs in line is key, Lopera says, given the likelihood of continued margin constrictions and greater use of technology. At the same time, the services offered by 3PLs will, ideally, be more bespoke.

“LFS is well poised to crush performance expectations with customized service, innovative solutions, and a very attractive cost structure,” Lopera says.

DESIGNING SCALABLE SOLUTIONS THAT LEVERAGE TECHNOLOGY

Capacity LLC differentiates itself through its investments in engineering solutions that meet clients’ unique challenges. For example, when several of Capacity’s clients saw their daily order volumes jump from several thousand to 10 times that amount, Capacity went to work.

“We developed solutions to handle the day-to-day volume as well as the peak periods,” says Thom Campbell, chief strategy officer. Two of Capacity’s four founding partners bring backgrounds in civil engineering and have been designing warehouse solutions for decades, he adds.

Capacity operates fulfillment centers in New Jersey, California, England, and France, with a sales office in New York. It focuses on higher-value consumer products.

Simply addressing logistical challenges with “brute force and more people” rarely leads to an effective, sustainable solution, Campbell says. “You can’t flood a challenge with an infinite number of bodies.”

Instead, Capacity develops systems internally and also works with vendors to design solutions that leverage technology to minimize potential bottlenecks.

One example is its solution that can apply double-sided labels containing all the information needed to essentially act as a packing slip. Not only does this cut down on paper use, but it can shave 15 seconds off filling each order. Another solution automatically applies shipping labels and confirms ship method, then conveys the parcel to the correct carrier sort area in the facility.

At the same time, Capacity works with clients who use the packing slip to help distinguish their brands. “When they sell directly from their websites, the packing slip can become a way to differentiate themselves,” Campbell says.

Capacity has partnered with several firms that grew from modest beginnings to international brands. Capacity’s ability to handle complex IT integrations and craft scalable warehouse solutions contributed to their clients’ growth.

At the same time, Capacity builds tight communication channels with its clients, all of whom can call or text with any concern.

“The relationships that drive supply chain success are human to human,” Campbell says. “We are a huge believer in CRM, data-driven interactions between real human beings, with systems that capture data and facilitate continuous improvement for our clients, their customers, and us.”
We know that sending millions of consumer packaged goods, small and big, requires more than just filling boxes and attaching labels. It takes an advanced engineering platform and the people behind it, to ensure that every item is properly packaged, sorted and processed, with controlled inventory levels, intake speed and outbound product movement. On the front end, the added-value services that we offer and our high-touch approach to our business make for seamless and fluid fulfillment.
AIRFREIGHT FORWARDERS GUIDE

Need to move goods quickly? These airfreight partners offer speed and reliability with end-to-end solutions that ensure supply chain efficiency.

**A.N. Deringer**
888-612-6239 | www.anderinger.com

**SERVICES:** Compliance, courier, express, overnight services, customs brokerage, customs clearance, customs compliance consulting, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, multimodal transport solutions, online rates, online booking, online tracking, pharma/medical transport, revenue management/pricing optimization, supply chain solutions, transportation management, warehouse and bond operations

**AIT Worldwide Logistics**
800-669-4248 | www.aitworldwide.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**Agility Logistics**
714-617-6300 | www.agility.com

**SERVICES:** Charter, chemical logistics, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**AIRSCHOTT**
703-471-7444 | www.airschott.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), door-to-door delivery, duty drawback, freight consolidation, FTZs, general cargo, high-value cargo, large/oversized freight, multimodal transport solutions, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**Approved Freight Forwarders**
800-533-4826 | www.approvedforwarders.com

**SERVICES:** Charter, cold chain transport, compliance, consolidation, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**Apex Logistics**
866-456-5988 | www.apexglobe.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, specialty freight, supply chain solutions, transportation management
**Associated Global Systems**  
516-627-8910 | www.agsystems.com  
**SERVICES:** Charter, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, project management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**Bellair**  
206-241-7710 | www.bellair.com  
**SERVICES:** Contract logistics, courier, express, overnight services, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, next flight out, online rates, online booking, online tracking, pharma/medical transport, project management, specialty freight, supply chain solutions

**C.H. Robinson**  
800-323-7587 | www.chrobinson.com  
**SERVICES:** Charter, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, warehouse and bond operations

**CEVA Logistics**  
281-618-3100 | www.cevalogistics.com  
**SERVICES:** Charter, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, distribution management, door-to-door delivery, consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**BDP International**  
215-629-8900 | www.bdpinternational.com  
**SERVICES:** Charter, cold chain transport, compliance, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, project management, supply chain solutions, transportation management, warehouse and bond operations

**Bolloré Logistics**  
786-482-7551 | www.bollore-logistics.com  
**SERVICES:** Aircraft on Ground (AOG) services, charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**Cranes Worldwide Logistics**  
888-870-2726 | www.craneww.com  
**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**Dachser**  
678-302-9111 | www.dachser.com/us  
**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations
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**Damco**
305-546-9427 | www.damco.com

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**DSV**
817-424-5111 | www.us.dsv.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**EFL Expofreight**
800-519-3976 | www.expofreight.com

**SERVICES:** Charter, compliance, contract logistics, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, DC bypass, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, origin consolidation, perishables, pharma/medical transport, project management, purchase order management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**FedEx**
800-463-3339 | www.fedex.com

**SERVICES:** Charter, cold chain, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**DB Schenker**
800-225-5229 | www.dbschenkerusa.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management

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**DHL Supply Chain**
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**Expeditors International of Washington**
206-674-3400 | www.expeditors.com

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**Geodis**
617-561-5140 | www.geodis.com

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**Hellmann Worldwide Logistics**  
305-406-4500 | www.hellmann.com  
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**Kintetsu World Express**  
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**Landstar Transportation Logistics**  
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**Mach 1 Global Services**  
800-553-7774 | www.mach1global.com  
**SERVICES:** Charter, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, project management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

**ICAT Logistics**  
800-572-1324 | www.icatlogistics.com  
**SERVICES:** Charter, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**Lynden**  
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**Noatum Logistics**  
866-972-9272 | www.noatumlogistics.com/en  
**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations
**Nippon Express USA**  
212-758-6100 | www.nipponexpressusa.com  
SERVICES: Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**Pegasus Logistics Group**  
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SERVICES: Compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, project management, supply chain solutions, transportation management

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**Purolator International**  
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SERVICES: Charter, cold chain transport, compliance, courier, express, overnight services, dangerous goods (hazmat), door-to-door delivery, freight consolidation, general cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, pharma/medical transport, specialty freight, supply chain solutions

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**Scanwell Logistics**  
516-285-8100 | www.scanwell.com  
SERVICES: Charter, compliance, courier, express, overnight services, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, multimodal transport solutions, next flight out, perishables, supply chain solutions, transportation management, warehouse and bond operations

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**Sinotrans**  
+86-21-20550068 | sinotrans.com  
SERVICES: Shipping agency, dangerous goods, general cargo, high-value cargo, integrated logistics, large/oversized freight, next flight out, online rates, online booking, online tracking, perishables, pharma/medical

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**OIA Global**  
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**Pilot Freight Services**  
610-891-8100 | www.pilotdelivers.com  
SERVICES: Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, warehouse and bond operations

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**SEKO Logistics**  
630-919-4966 | www.sekologistics.com  
SERVICES: Charter, cold chain, compliance, courier, express, overnight services, crossborder e-commerce, customs brokerage, customs clearance, dangerous goods, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**Team Worldwide**  
800-527-1168 | www.teamww.com  
SERVICES: Charter, cold chain transport, compliance, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, specialty freight, supply chain solutions
**Toll Group**  
732-750-9000 | www.tollgroup.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, interline/SPA supporting, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**UPS**  
800-PICKUPS | www.ups.com

**SERVICES:** Charter, cold chain transport, compliance, contract logistics, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**US Express Freight Systems**  
301-683-9000 | www.shipuse.com

**SERVICES:** Courier, express, overnight services, customs brokerage, customs clearance, distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, next flight out, online rates, online booking, online tracking, pharma/medical transport, project management, specialty freight, trade show shipping specialization, transportation management, warehouse and bond operations

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**TransGroup Global Logistics**  
800-444-0294 | www.transgroup.com

**SERVICES:** Charter, cold chain transport, compliance, courier, express, overnight services, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, online rates, online booking, online tracking, perishables, pharma/medical transport, project management, revenue management/pricing optimization, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**Trinity Logistics**  
516-612-3381 | trinityworld.com

**SERVICES:** Charter, compliance, contract logistics, customs brokerage, customs clearance, dangerous goods (hazmat), door-to-door delivery, freight consolidation, general cargo, high-value cargo, integrated logistics, large/oversized freight, multimodal transport solutions, next flight out, perishables, pharma/medical transport, project management, specialty freight, supply chain solutions, transportation management, warehouse and bond operations

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**Vizion Logistics**  
516-341-0248 | www.vizonlogistics.com

**SERVICES:** Charter, cold chain transport, customs brokerage, customs clearance, dangerous goods (hazmat), distribution management, door-to-door delivery, freight consolidation, general cargo, high-value cargo, next flight out, perishables, supply chain solutions, transportation management

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How a Freight Audit and a TMS Can Drive Efficiency for Your Supply Chain

Could your company be spending millions on expedited air service and not know it?

It happened to one shipper who didn’t audit their freight payments for several years. It turns out one shipment went out air expedited, and somehow every customer order after that went out the same way. A lack of oversight cost the company tens of millions of dollars in unnecessary freight spend.

A transportation management system (TMS) with an integrated freight approval tool could stop these kinds of problems before they occur. The tool implements a decision tree for managers, with multiple levels of approval so that the decision can escalate to another level if a manager is not available for any reason. The tool can be set up to require approval over a specific dollar amount or for certain modes.

A freight approval tool adds management visibility to the front end of the process. An ongoing and thorough freight audit program can save a company millions on the backend. Industry experts estimate that, on average, companies pay 7% to 10% more in freight expenses than they should due to billing errors.

However, freight audit is about more than correcting errors. It will also empower your company with the data to identify weak spots and highlight paths to improve performance. The expedited shipping fiasco was spotted during a freight bill audit. Are there similar horror stories hiding in your billing data?

The freight audit piece should be part of a comprehensive TMS that incorporates a system of business rules and automates many route tasks. That way, managers can focus on managing exceptions and driving efficiencies rather than completing routine tasks. For example, tools like automated spot quoting and reverse auctions deliver a high level of productivity while ensuring the processes follow the established business rules such as carrier and routing selection. Tying the TMS into the ERP will ensure the purchase order information supports the shipment from managing quantities to shipment and delivery windows.

For freight bills created in the TMS, automated audit analyzes bills to ensure the BOL and proof of delivery match to approve automatic settlement. If there’s a discrepancy, the bills are flagged for resolution. Automation boosts efficiency and cuts costs with each transaction.

These tools are useful for managing inbound, outbound, and intracompany moves. Look for a tool that’s available for all modes that your organization uses—air, ocean, truckload, LTL, and parcel. Don’t segment your operations by mode.
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How to Build a Supply Chain Based on Speed to the Midwest

While companies look to technology for a competitive advantage in their supply chains, geography is an often-overlooked factor. A supply chain built on speed to the Midwest can boost efficiency and lower operating costs across a variety of industry sectors.

Midwest logistics hubs are typically within a day’s drive of more than half the U.S. population and one-third of Canadian residents, as well as about half the U.S. manufacturing capacity. Perhaps as important as proximity is the relatively uncongested highways and airports in the Midwest compared to traditional coastal hubs.

These two factors help create a supply chain based on speed to the Midwest. With the implementation of electronic logging devices for long-haul truck drivers, proximity to distribution centers and customers is vital as well. With the ELD mandate, what were once one-day deliveries have turned into two-day runs. Using a distribution hub closer to your network will reduce transit times.

Midwest logistics hubs can include airfreight, intermodal, and truck deliveries. Even better, a few Midwest airports offer freight-only services that allow shipments to bypass mixed-used airports dealing with record levels of passenger traffic. Also, a robust Foreign Trade Zone program can help shippers, from fast fashion to retail to e-commerce, reduce their customs expenses and speed up processing.

For example, shippers have found that air cargo routed through Rickenbacker International Airport, part of the Columbus Regional Airport Authority, can be offloaded and trucked to Chicago faster than the freight can be offloaded and tendered for pickup at Chicago O’Hare.

An ocean shipper moved its logistics hub to the Midwest from the Port of New York/New Jersey because it could land containers at the Virginia International Terminal and transfer them via rail to the Midwest within 28 hours, compared to a seven to 10-day move from the East Coast.

By bypassing congested urban terminals and moving logistics closer to the customer base, shippers can take days out of their supply chain and reduce landed costs. A supply chain built on speed to the Midwest can create a market differentiator in any business.
IF TIME DOESN’T MATTER, WHY DO THEY CALL IT A RUNWAY?

At most gateway airports, cargo spends a lot of time sitting around. Not at Rickenbacker International Airport. We believe runways are meant to be fast. So from the minute your cargo comes in, we’re off and running—unloading, reloading and sending it on to its next destination right from the tarmac. And because we’re strategically situated within a one-day truck drive to nearly half the U.S. and one third of Canada’s population, your goods get to market faster.

Learn more at RickenbackerAdvantage.com

Bryan Schreiber
Air Cargo Business Development
011-614-409-3621
BSchreiber@ColumbusAirports.com
How to Use Expedited Service For Painless Shipping to Mexico

As the second-largest economy in Latin America, Mexico has long been a destination for economic opportunity. For U.S. companies, cross-border regulations, varying border operating hours, and differing procedures for both import and export may complicate shipping and cause significant supply chain delays.

One way to manage the complexity is by using an expedited carrier. With expedited service, it is not only the speed of the service but also the level of communication that is provided that can simplify the process of moving goods in either direction. Expedited shipping isn’t just for emergencies anymore. Many companies use an expedite carrier simply to ensure precise delivery requirements are met, or premium communication is provided. Expedited shipping means less handling and greater oversight for each step of the shipment. Services are available in a range of truck sizes as well as air freight.

Crossing goods in and out of Mexico can be a confusing and sometimes frustrating ordeal, so it is essential to use experienced carriers that can manage the process in a timely fashion.

Utilizing carriers that voluntarily participate in the Customs Trade Partnership Against Terrorism (C-TPAT) program with U.S. Customs and Border Protection provides an advantage, as they are less likely to be examined at U.S. ports of entry.

Standard truck freight bound for Mexico typically involves multiple lengthy steps. Once all the correct documents are obtained, a freight forwarder works with a Mexican customs broker to prepare the shipment to cross the border. The forwarder inspects the load to ensure correct quantity and description, and completes customs documentation. Once this has been completed, and the consignee pays the duties in Mexico, the forwarder hires a local drayage company. The drayage company then moves the shipment over the border and through customs clearance. Once at the dray yard in Mexico, it is common that another carrier then completes the shipment. It is not uncommon for this process to take days, or even weeks, should any bit of information be missing, or an inexperienced carrier is not well versed in remedying these situations.

This process is much more streamlined when using an expedite carrier, as many of them will already have direct relationships with Mexican customs brokers and are set up to have their shipments receive preferential treatment to be processed due to the time-critical nature of their usual shipments. Also, there is often not another carrier involved for the drayage, as the expedite carrier itself will cross and deliver the goods to their final destination in Mexico.

Before you ship to or from Mexico, ensure you are working with an experienced trans-border carrier that can manage the complexities involved with this important trade partner south of the border.
No one has the relationships and knowledge to get your shipment across the border more efficiently.

Complete management of the crossborder process and total visibility along the way.
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Hidaka Forges Automated Inventory Solution

THE CUSTOMER
Since its founding in 1989, Hidaka USA Inc., a sheet metal fabrication company in Dublin, Ohio, has provided customers with quality prototypes, simple stampings, and complex assemblies.

THE PROVIDER
AIM Computer Solutions Inc., based in Fraser, Michigan, provides business software solutions for automotive manufacturers to meet specific ERP needs.

by Karen Kroll

Like most manufacturers, Hidaka USA Inc., a sheet metal fabrication company, conducts regular physical inventories of its raw materials, work in process, and finished goods. It had been using a paper-based, manual system that was time-consuming and vulnerable to mistakes, making it difficult for management to be confident they had the materials and finished goods needed to meet customer orders.

Over the past 30 years, Hidaka has designed and manufactured steel and aluminum parts, including prototypes, simple stampings, and complex assemblies, for companies in a range of industries. In contrast to Hidaka’s high-tech production processes and equipment, however, its inventory system was largely manual.

Employees entered information onto paper inventory tags and then manually keyed it into the company’s ERP system. “If we couldn’t read someone’s handwriting, people ran through the plant trying to figure out the part number,” recalls Diane Rosso, director of administrations with the Dublin, Ohio company.

Along with these inefficiencies, “Our primary challenge was having accurate and timely inventory counts for making decisions,” Rosso says. The manual system provided too many opportunities for error.

In addition, it took several days for data to move from the inventory process into Hidaka’s ERP system, which resulted in information that was outdated before it was entered. Some inaccuracies didn’t surface until weeks after the manual inventory was completed.

When Hidaka was awarded an unusually large order from a customer, management knew it would need timely, accurate information to remain ahead of the project’s many facets. “That was our jumping-off point,” Rosso says.

A MATTER OF TRUST
Hidaka turned to AIM Computer Systems Inc., an enterprise ERP technology solutions and business process improvement consulting provider. Hidaka had already implemented AIM’s ERP system and AIM was familiar with the inventory challenges Hidaka faced. “We had trust in them,” Rosso says.

Further boosting their trust, a newly hired AIM employee with a manufacturing background spent several days each week at Hidaka to assist with the implementation. He worked with Rosso and her colleagues to develop an implementation plan to ensure the system was running before Hidaka was scheduled to conduct its March inventory.
**CASEBOOK STUDY**

Taking Stock

**CHALLENGE**
When Hidaka USA received an unusually large customer order, the management team knew its manual, paper-based physical inventory process wouldn’t provide the timely and accurate information needed to ensure the order was met.

**SOLUTION**
Hidaka implemented the Mobility Physical Inventory app from AIM Computer Solutions. The app, which runs on Android-based tablets, automates the inventory process, improves visibility, and provides more accurate and timely information.

**RESULTS**
- The direct labor hours needed to conduct inventory counts dropped from 320 to 160.
- The cost to conduct physical inventories fell by 30%.
- Hidaka’s inventory process is now automated, timely, and less prone to error.
- Production scheduling and material ordering are more effective and accurate.
- Hidaka can better manage large or time-sensitive orders.

**NEXT STEPS**
Diane Rosso, Hidaka’s director of administrations, and her team are looking at using the solution to help predict maintenance needs for die molds and to track the time required to run different machines along with the level of downtime experienced. Hidaka also continues to work with the system to better predict when to place material orders and how much to order. “We can better match how production wants to run the parts to be as efficient as possible,” Rosso says.

Hidaka implemented AIM’s Mobility Physical Inventory app. AIM Mobility is a series of manufacturing productivity apps that integrate with AIM’s ERP software. AIM Mobility apps run on Android-based tablets. (The apps also work on Android phones, although the smaller screen size can make it difficult for a user to review all information.)

AIM’s mobile inventory solution also uses barcode scanners. Hidaka employees scan products’ inventory labels, eliminating the need to hand-write part numbers and quantities. And by leveraging wi-fi and Bluetooth technology, the AIM software, tablet, and scanner work together to communicate in real time. The solution’s automatic data collection capability boosts both the efficiency of the inventory process as well as the accuracy of the records.

**GETTING EVERYONE INVOLVED**
Because the AIM physical inventory solution touches nearly every department, Rosso included employees from production, inventory, quality, accounting, and the plant floor and front office, among other functions, in the implementation, which lasted several months. Along with the software, Hidaka purchased laptops, tablets, and scanners.

Downloading the AIM mobile inventory app is similar to downloading any other app, explains Jeff Sawka, director of implementation services for AIM. Users typically have a slight learning curve, but most find they’re comfortable with the solution after about one hour of working with it, he adds.

Many quickly recognize the benefits, Sawka says. They can see the data was entered cleanly and quickly, eliminating the need to manually key it in.

Because the AIM system uses information gathered through barcodes, Hidaka employees now are also responsible for entering their production quantities into the AIM app. In the past, employees had to manually write on paper their production records, including the part and process numbers, quantities, and other information. “We went from being one day behind because we were entering information by hand on paper to real time,” Rosso adds.

Another benefit: managers can easily use the AIM app to find up-to-date information on the location of each part in the production process.

To conduct its first inventory using the AIM system, Hidaka borrowed eight tablets from AIM. Employees scanned serialized barcodes on the approximately 4,200 products on the production floor.

The AIM system is programmed to prevent typing errors and to provide real-time feedback about retired or ineligible products. The AIM inventory app also provides immediate information on

Hidaka USA supplies customers with high-quality prototypes. When a time-consuming physical inventory process made it difficult to fulfill orders, the company implemented AIM’s Mobility Physical Inventory app, which prevents manual errors and cuts labor costs.
product variances, so employees can double-check any that raise concerns while the inventory is underway.

AIM sells its apps as solutions. Once purchased, an app is available to employees throughout an organization. AIM also can provide consultants to assist with implementation and other projects.

With the AIM inventory app in place, Hidaka's cost to conduct inventory dropped by about 30%. Previously, between 16 and 20 employees would work for about 320 labor hours to complete the inventory. This dropped to about 160 labor hours with AIM.

More importantly, Rosso and her team have greater confidence in the resulting data. Now, when a customer asks if Hidaka can fill an order, employees can quickly check the system to identify the materials available and determine how they can meet a customer's request.

More accurate inventory data also helps Hidaka purchase raw materials more effectively. With its previous system, the company may have run through its supply of raw material but not immediately realized it because information was days behind.

The AIM Mobility Physical Inventory app, in combination with the AIM ERP system, automatically checks that each product's item number, its progress through the manufacturing process, and the quantity available, all conform to the written records.

“People are having more goods delivered, faster, than ever before. Which means your fleet is generating more emissions than ever before. What if you could cut your fleet’s carbon footprint to zero and save money doing it?”

In November 2019, the fleet of tractor-trailers delivered 1.5 billion gallons of compressed natural gas, enough fuel to power nearly 70,000 homes.

“The person scanning the item on the floor is confirming that the lot exists,” Sawka says. It soon becomes clear that items that were not scanned represent over-statements of inventory, and items that are scanned but not recognized are additions or gains to the records on the books. “You get both losses and gains, as well as a confirmation of what's on the books,” he adds.

Because conducting inventories with the AIM solution is easier and less time-consuming than a manual process, companies often conduct them more often. Some organizations move to monthly or even weekly inventories, at least for parts of their production process.

Just as important, organizations using AIM’s inventory app can be more certain of the quantities they have on hand. “That drives the integrity of the production schedule,” Sawka says. Solid inventory numbers help companies place more accurate orders with vendors. That's key with materials such as steel, which typically have a long lead time.

The information the AIM solution provides also improves production scheduling. Companies can better plan how they’ll use raw materials and other resources when they have an accurate idea of how much they have.

With the AIM inventory app in place, “We are more prepared to tackle any project,” Rosso says.
In this section:

3PL

**ECHO GLOBAL LOGISTICS** [www.echo.com](http://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 50,000 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.

**JARRETT LOGISTICS SYSTEMS** [www.jarrettlogistics.com](http://www.jarrettlogistics.com)

Jarrett Logistics Systems offers managed transportation services that deliver key supply chain visibility and empower key decision makers to make entire organizations more efficient. The company’s freight brokerage services provide capacity at competitive rates, while its warehousing and order fulfillment offerings ensure your operations run leaner and more effectively.

**LOGISTICS FREIGHT SOLUTIONS (LFS)** [lfs-inc.com](http://lfs-inc.com)

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ALPEG A na.alpegagroup.com

Alpega's cloud-based TMS solutions connect supply chain partners across logistics ecosystems via a SaaS platform to collaboratively manage end-2-end transportation activities. Global, flexible and modular, Alpega solutions address the needs of simple to complex logistics networks and can stand-alone, integrate, and scale appropriately. Through collaboration with trading partners, increased visibility across networks, and improved asset utilization, companies can reduce freight spend and carbon footprint—providing an efficient, sustainable logistics IT solution for today's supply chain.

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MATERIAL HANDLING INDUSTRY (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.

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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.

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.

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EPA SMARTWAY www.epa.gov/smartway

In 2004, EPA launched SmartWaySM—an innovative brand that identifies products and services that reduce transportation-related emissions. The impact of the brand, however, is much greater, as it 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.

SUPPLY CHAIN EXECUTION

TMS

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video

MADE IN AMERICA
bit.ly/UphoffonFox
As surveys continue to show that consumers will pay more for goods made in America, “U.S. manufacturing makes good economic sense,” according to Tony Uphoff, president and CEO of Thomas. During an interview with Fox Business News, Uphoff shares his insights on trends in the U.S. manufacturing industry, why companies are beginning to reshore, and how the trade war with China is bringing more jobs back to the United States.

whitepapers

Take Command of Demand With Retail Solutions  Offered by Hub Group
Consumer purchases used to be limited to what retailers had on their shelves. E-commerce means everything is in stock, and retailers are shifting gears to chase demand. Learn how retailers can optimize their supply chains by working with providers to craft timely forecasts, identify efficiency improvements, and modify plans as needed using diverse services and technologies.

The Ultimate RFP Checklist for Shippers  Offered by FLS Transport
Your RFP is much more than an opportunity to find the cheapest shipping lanes. It’s also your opportunity to find and select the right freight partners that will make your business and life run smoother. FLS put together this free guide to help you award lanes, reduce freight costs, and find the best business partners and carriers as you navigate today’s unprecedented market.

Parcel Cargo Chains Coming of Age  Offered by Pierbridge
Consumers are shopping from merchants around the globe on their smartphones and other devices at the click of a button. Cargo chains are emerging to facilitate and accelerate cross-border last-mile parcel deliveries. The challenge for retailers and supply chain partners is making them seamless to end consumers. This free whitepaper shines a light on building a solid cargo chain.
Supply Chain Insights

whitepapers

North American Carrier Survey
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Six Signs You Need to Re-evaluate Your Lift Truck Power
Offered by Yale
Many operations face similar challenges, including more inventory than storage space, excess power units, and insufficient productivity. But what if you could address these challenges—and others—simply by re-evaluating your lift truck power source? Get this free whitepaper to diagnose your power challenges and start your journey to efficiency.

The Business Case for Transportation Management
Offered by Transplace
As the supply chain has evolved, so, too, have transportation management systems (TMS)—now providing organizations with greater visibility and control over their supply chains than ever before. Download this free whitepaper to examine how transportation management solutions can help your company reduce risk, improve operational efficiency, and drive meaningful change.

podcast

Are Your Shipping Systems Properly Integrated to Match Supply Chain Output?
GUEST: Eric Rempel, Chief Innovation Officer, Redwood Logistics
Efficient supply chains rely on the right systems being in place to keep things moving. But shippers see the most benefits from not only the right systems, but also how well they’re integrated into the supply chain. Eric Rempel of Redwood Logistics walks you through the steps to better connect your systems so they accurately address your shipping needs.
>U.NEX: Manufacturing's new Keg Flow Solution for distribution centers keeps beer kegs flowing smoothly through supply chains. Keg Flow stores traditionally hard-to-handle kegs in an ergonomic and space-saving fashion with room for more kegs per pallet and a versatile steel roller track.

>WMS: Compact Store EKS from Jungheinrich can expand system EKS C a terpillar a plans relocated 11/8/19   2:32 PM a

> Products

>UNEX Manufacturing’s new Keg Flow Solution for distribution centers keeps beer kegs flowing smoothly through supply chains. Keg Flow stores traditionally hard-to-handle kegs in an ergonomic and space-saving fashion with room for more kegs per pallet and a versatile steel roller track.

>Services

>DHL Express relocated its service facility from Canonsburg, Pennsylvania, to a new, larger service center in Pittsburgh that can process documents, small parcels, and palletized freight. The new facility features an interior conveyor system, which includes a raised catwalk for safety and sorting efficiency.

>A&R Logistics plans to expand its East Coast distribution with a new export facility in Georgia’s Savannah Gateway Industrial Hub. With an opening planned for winter 2020, the facility will add approximately 2 million square feet of capacity to run up to eight packaging lines alongside A&R Logistics’ export division.

>More shippers can bring deliveries over the threshold with FedEx Freight’s expansion of FedEx Freight Direct, an e-commerce solution for the delivery of bulky items to 80% of the contiguous U.S. population. Freight Direct brings large items such as furniture and TVs through the door into residences and businesses.

>The Jungheinrich EKS 215a from Mitsubishi Caterpillar Forklift America is an automated guided medium-to-high-level stacker with adjustable forks to transport special load carriers and closed pallets. Based on Jungheinrich’s vertical order picker design, the EKS 215a automated guided vehicle can be used in mixed operations mode alongside manual lift trucks and pedestrians.

>WMS system Compact Store 8.0 from Weland Solutions has a contemporary interface along with new capabilities such as putaway and storage of incoming goods and improvements to order-starting features. It supports inventory management functions such as combining and prioritizing orders and refilling items.
> **Dematic**'s new micro-fulfillment solutions combine automated technology with Dematic iQ software to let retailers with a small footprint fulfill orders efficiently. The software integrates easily with other systems and allows retailers to maintain control over their data, while the physical components can be located close to end consumers in spaces as small as 10,000 square feet.

> **UPS** launched multiple new healthcare solutions in October 2019. The UPS Premier offerings use advanced sensor and tracking technology. A new priority handling operating model differentiates levels of service for healthcare shippers, under the umbrella of the new UPS Healthcare and Life Sciences unit.

> Shippers can learn about new supply chain technologies at Honeywell Robotics, a new technology center opened by Honeywell in Pittsburgh. The innovation hub will focus on artificial intelligence, machine learning, computer vision, and advanced robotics for use across supply chains with an eye toward the automated warehouse of the future.

> Building upon its undergraduate supply chain management program at the Reh School of Business, New York’s **Clarkson University** added a Master of Science degree in supply chain management. The online degree includes 30 credits in a one-year interdisciplinary program designed for working professionals.

> **RLS Logistics** plans to increase its direct-to-consumer fulfillment capabilities with the renovation of two facilities and a new Midwest location. RLS intends to double its capacity by early 2020.

> **Crown Equipment** opened a sales and service center in Springfield, Missouri, to offer customers materials handling technologies, products and services, from forklifts to warehouse design solutions.

> **3PL Central** updated its unified small parcel suite, including SmartScan, SmartPack, and SmartParcel software. The company consulted warehouse operations professionals in high-volume e-commerce shipping to integrate its features into a single suite.

> **Samskip** will run four times weekly between Duisburg, Germany and Falköping, Sweden. The service connects southern Sweden’s industrial area with the rest of Europe using Duisburg as a gateway to Southern Europe, and will also decrease CO2 emissions by a minimum of 50% compared to its road service counterpart.
IN BRIEF

> Descartes Systems Group launched an analytics and reporting solution to aggregate data provided by its other products. The new Descartes Analytics system uses Microsoft Power BI and can integrate with the Routing, Mobile and Telematics solution; Descartes Transportation Management; Descartes MacroPoint; Descartes Datamyne; and Descartes Aljex software to provide customizable reports.

> The Elemica digital supply network added Elemica ePOD, an electronic proof of delivery mobile application for drivers. With the help of ePOD, carriers can provide real-time shipment data for better service to shippers and lower tracking operating costs.

> Freightgate and BDP International partnered to combine the TMS platform of the former with the technology of the latter. BDP is working to implement its robotic process automation technology with Freightgate’s Logistics Cloud for an improved carrier selection process and more configurable system.

> Global eTrade Services (GeTS) launched an artificial intelligence system, the CALISTA Intelligent Agent. The Intelligent Agent works with the existing CALISTA supply chain orchestration platform, with 28 country-linking Customs nodes, to provide intelligence on route options, free trade agreements, import and export formalities, and recommended steps in the event of disruptions.

> Organizations can assess tax and duty costs and other impacts with LLamasoft’s new addition to its Supply Chain Guru X platform. The new Taxes and Duties Analytics Capabilities give users insights into new sourcing, procurement, and distribution strategies that can minimize costs in a complex network.

> The new CoreTemp product temperature monitoring software from Coretex helps food retailers gain visibility into refrigerated shipments. The application provides continuous temperature monitoring and real-time alerts for potential temperature and transportation issues.

> The new CoreTemp product temperature monitoring software from Coretex helps food retailers gain visibility into refrigerated shipments. The application provides continuous temperature monitoring and real-time alerts for potential temperature and transportation issues.

> Span Alaska Transportation opened a service center in Anchorage to streamline freight handling to and from the Lower 48 states to Alaska. The 54,000-square-foot, 88-door service center began operations in October 2019.
> **TRANSPORTATION**

> To boost trade along the New Silk Road between China and Europe, rail and consolidation logistics services provider [cargo-partner](#) expanded its direct LCL services along the route. This gives the company full coverage of Southern and Eastern Europe as well as multiple LCL gateways throughout the continent.

> **YRC Freight** added next-day short-haul shipping in Texas. The Regional Next-Day Texas Service utilizes direct loading to provide faster shipping times.

> **Yang Ming Marine Transport** launched the new East India and North Europe Express direct service in late October 2019. The fleet of nine 6,500-TEU vessels provides weekly service between 14 ports of call.

> **Partners Virgin Atlantic and Delta Cargo** will offer more trans-Atlantic cargo options between the United Kingdom and United States in 2020. Delta joins Virgin Atlantic at Gatwick Airport for the first time to provide more routes. The airlines also plan to increase capacity between New York’s JFK airport and London Heathrow, and later add more Virgin Atlantic flights between Heathrow and both Seattle and Los Angeles.

> The Asset Gateway, a new asset-tracking device from fleet management solutions company [KeepTruckin](#), is designed to operate continuously, providing increased asset visibility. Charging from an integrated solar panel or drawing power from the trailer, the Asset Gateway logs GPS data every minute and sends the data to the KeepTruckin Dashboard every five minutes.

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JAN 26-28, 2020
NASHVILLE, TN
AirCargo 2020
aircargoconference.com
Presented by the Airforwarders Association, Airports Council International-North America, and the Air Expedited Motor Carriers Association, the conference features a women’s networking event.

CONFERENCES

JAN 20-22, 2020
SAN ANTONIO, TX
NIT League Transportation Summit
nitl.org
Presented by the National Industrial Transportation League, the conference features panel discussions on issues affecting rail, ocean, and highway freight transportation.

JAN 21-24, 2020
ORLANDO, FL
OPEX Week: Business Transformation World Summit 2020
bit.ly/OPEX2020
Hosted by IoT, OPEX Week delves into best practices in business process re-engineering, robotic process automation, sustainability, and blockchain.

FEB 2-4, 2020
SEA ISLAND, GA
Georgia Foreign Trade Conference
gaforeigntrade.com
Presented by Georgia Ports Authority, GFTC explores the outlook for global trade. Session topics include container, roll-on/roll-off, breakbulk, and agri-bulk transportation.

FEB 4-6, 2020
VANCOUVER, BC
Cargo Logistics Canada
cargologisticscanada.com
Offered by Informa Markets, the event helps industry professionals learn, share, network, and move their supply chains into the future. It addresses the needs of cargo owners, shippers, and agents who manage the flow of goods through Canadian supply chains.

MAR 9-12, 2020
ATLANTA, GA
MODEX 2020
modexshow.com
Hosted by MHI, MODEX 2020 lets supply chain stakeholders explore the latest in materials handling and IT solutions. The exhibits and educational seminars allow attendees to discover and explore industry trends.

MAR 12-13, 2020
SAN DIEGO, CA
LogiMed
bit.ly/LogiMed2020
Presented by Worldwide Business Research, LogiMed brings together leaders from both the manufacturing and provider sides of the medical device supply chain. Attendees identify the best practices to improve the end-to-end supply chain, better serve customers, and minimize healthcare costs.

MAR 15-17, 2020
SAN DIEGO, CA
2020 IWLA Convention & Expo
iwla.com/convention
The IWLA Convention & Expo gives warehouse logistics companies and suppliers the opportunity to network and build business relationships through educational sessions and meetings. Discussions focus on effective warehousing strategies and innovations.

MAR 24, 2020
MACON, GA
Georgia Logistics Summit
galogisticssummit.com
Bringing together supply chain stakeholders and leaders in the state’s infrastructure and economic development community, the event offers insight into the state’s trucking industry and the issues most important to its success.

APR 7-8, 2020
CAMBRIDGE, MA
Supply Chain Strategy and Management
bit.ly/MITsupplychainstrategy
MIT Sloan Executive Education’s spring course explores supply chain integration, technology sourcing, and strategic partnering.

APR 27-29, 2020
DALLAS, TX
ECA MarketPlace 2020
expresscarriers.org/marketplace
Hosted by the Express Carriers Association, the conference facilitates networking and business development, letting shippers and carriers participate in one-on-one interviews.

MAY 5-6, 2020
DALLAS, TX
American Supply Chain Summit 2020
supplychainus.com
Presented by Generis Group, the event examines how workforce management, advanced analytics, process improvement, and automation are being rolled out in the world’s best facilities.
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URBAN LOGISTICS

WHERE THE E-COMMERCE BOOM INTERSECTS WITH URBAN CENTERS, LOGISTICS GET STREET-AND SPACE-SMART.

NEW YORK CITY
Transportation officials created about 2,300 new loading zones in commercial areas around the city in 2018. The city is also investing $100 million to encourage the use of waterways, marine terminals, and rail lines for incoming cargo.

PARIS
Freight trucks enter the city at night and deliver packages to small warehouses near homes. In the morning, bikes and electric vans deliver them to residences. Some convenience stores and flower shops serve as pickup spots for packages.

HAMBURG, GERMANY
A drop-off site receives freight trucks carrying containers full of packages. From there, fleets of electric tricycles complete the last mile.

SÃO PAULO, BRAZIL
The Nighttime Delivery Pilot project by logistics laboratory Cislog from the University of São Paulo with support from the World Bank, showed unloading time decreased 33% (12 minutes) and speeds increased 200% to 300% over daytime peak congestion speeds.

WAREHOUSES REACH THREE STORIES
- The first three-story warehouse in the United States was completed by Prologis in 2018. Located near downtown Seattle, the new Prologis Georgetown Crossroads industrial warehouse counts Amazon and Home Depot as tenants.
- The second three-story warehouse is not far behind. In summer 2019, DH Property Holdings broke ground on a three-floor warehouse in Red Hook, Brooklyn, with ramps for trucks to reach separate floors.

THE FUTURE IS UNDERGROUND
Google affiliate Sidewalk Labs got the go signal from area development group Waterfront Toronto to create a smart city on 12 acres in a disused area of Toronto, Canada. The urban innovation company plans to build an underground freight network with tunnels connecting buildings to a logistics hub. Smart containers, which could be filled with one or multiple packages, on self-driving delivery dollies would complete the last mile.

SOURCES: THE NEW YORK TIMES; MIT CENTER FOR TRANSPORTATION & LOGISTICS; SIDEWALK LABS; WORLD BANK
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