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BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION

Intellectual curiosity Strong work ethic Courage

The three innate factors fundamental to success at the executive level, according to Brent Beabout, Executive Vice President, Supply Chain, Nordstrom.

(See LeaderShip, p. 16)

Warehouse Staffing: DID YOU KNOW...

- That if a company does not pay its payroll taxes, you could be liable to pay them, even if you already paid the payroll taxes to the staffing company as part of your agreement?
- That if a staffing company does not procure, loses, or obtains faulty workers' compensation insurance, your company could be liable for paying claims that would have otherwise been covered by the staffing company's insurance policy?

Bottom line...Perform due diligence on your staffing providers to ensure you minimize exposure to these potential issues.

> (See bit.ly/StaffingYourWarehouse)

60% of Fleets

running between one and 100 trucks have yet to adopt the U.S. DOT's electronic device (ELD) mandate taking effect in December 2017.

— CarrierLists survey of nearly 2,000 carriers

ZERO

The number of customer complaints about product damage fun food maker Jel Sert received after switching to a halfpallet program.

(See Casebook, p. 69)

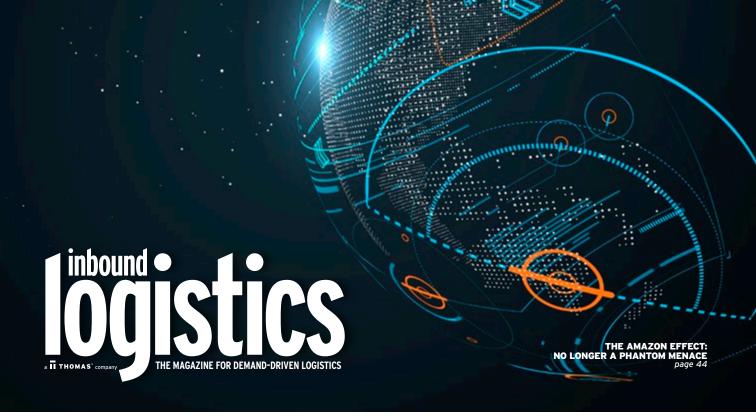


MORE THAN HALF A CENTURY

That's how long UPS driver Tom Camp spent behind the wheel of a brown delivery truck without an accident, setting a company safety record.

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• CASEBOOK New Pallet Program Better by Half
Fun food manufacturer Jel Sert finds pooled half-pallets provide
full supply chain benefits.

INDEPTH

The Amazon Effect:
No Longer a Phantom Menace

As Amazon continues to raise the bar, the pressure on competitors to match consumer expectations set by the online behemoth is real.



Transportation Trends: Turn Up the Air
The airfreight market has been flying high, but
headwinds persist.

52 Who's Who in Airfreight Forwarding *Inbound Logistics'* annual guide spotlights some of the airfreight partners that help shippers soar.

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INDEPTH

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INFOCUS

21 NOTED

25 TRENDS

Young professionals find happiness in supply chain careers; industrial companies face a gap between the Internet of Things and ERP; U.S. Bank launches a new barometer for assessing the U.S. shipping industry; the right strategy can help retailers of any size meet customer shipping demands.



29 GLOBAL

Shippers are keeping a close watch on Cuba, and analyzing market and product gaps waiting to be filled; Chilean multinational logistics agency Agunsa has teamed up with Japanese shipping firm K-Line to form a dedicated automotive logistics company, KAR Logistics; UPS and SF Holding joint venture receives regulatory approval in China.

78 PRODUCT SPOTLIGHT

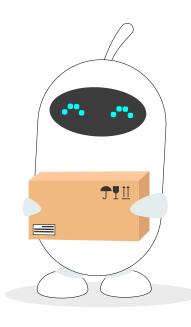
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QUICKBYTES

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WHITEPAPER DIGEST

Looking for insight into supply chain best practices and trends? Want to review the latest logistics sector research? Our whitepaper database is packed with up-to-date information on all aspects of supply chain operations.

bit.ly/IL_WPDigest

ONLINE COMMENTARY



Staffing Your Warehouse:

Addressing Hidden Risks bit.ly/StaffingYourWarehouse

Staffing is key to your warehouse's ability to grow and handle peak season demand. Here's how to minimize your exposure to potential labor issues.



How Supply Chain Managers Can Use Artificial Intelligence bit.ly/sc_Artificial_Intelligence

With more companies hopping on the AI bandwagon, the technology will affect supply chain planning across industries. Find out which verticals have the most to gain and how supply chain managers can make smarter decisions.



Why the Rise of the 4PL is Good News For Your Business bit.ly/RiseOfThe4PL

Some shippers find the 3PL model doesn't go far enough. Here's how to make 4PLs work for you.

FOR MORE NEWS, TRENDS, AND COMMENTARY SEE INBOUNDLOGISTICS.COM

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CHECKINGIN



e all know the best way to approach an unguarded railroad crossing is

to stop, look, and listen. That same advice applies when examing the

economy, which will likely roar through 2018 at full speed. While it is

tempting to climb aboard and enjoy the ride, that is the exact wrong approach

Many companies and sectors have reported growth during the past few months of 2017. IL's recent research focusing on the trucking and 3PL sectors, both leading

covering Arkansas, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota,

South Dakota, and Oklahoma, compiled by the Creighton University Heider

■ The overall index moved above growth neutral for an 11th straight month,

■ Only one in five supply managers indicate NAFTA is important to company

■ Economic optimism expanded to a strong 63.8 from 63.6 in September.

■ The Business Conditions Index hit 58.8, its highest reading in four months and

up from 58.2 in September, indicating continued "growth over the next three

"Healthy profit growth, still low interest rates, and an improving global economy

Other studies show similar readings in the rest of the country. The U.S. private

sector added 235,000 jobs nationally in October 2017, versus the 200,000 new jobs

expected, according to ADP. All that economic activity means more jobs, more jobs mean more consumer spending, more consumer spending means more

So, if you are lucky enough to be in a company experiencing growth,

and expect the economy to roar right into 2018, stop, look, listen, and then

processes. Remember, there will come a day when the roaring sound fades

reinvigorate your supply chain initiatives or expand your demand-driven logistics

into the distance. If you prepare now—while you are flush—and invest in people, processes, and solid gain-sharing vendor-to-customer relationships, you'll be well positioned as you wait for the next growth train to approach your crossing.

boosted the economic outlook among supply managers in the nine-state region,"

reports Professor Ernie Goss, PhD, director of Creighton University's Economic

Strong growth for durable goods manufacturers in the Midwest.

Those aren't the only sectors posting growth. Recently released manufacturing stats

from a supply chain or logistics improvement perspective.

economic indicators, shows that trend will continue.

College of Business, show:

buying and selling.

Forecasting Group.

growth.

pointing to solid growth ahead.

to six months," according to the research.

Stop, Look, Listen



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STAF

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Good Question...

READERS WEIGH IN

What is the best business book you ever read and why?

One of the best quick-study books I have read is Winning Every Day by Lou Holtz. Catering to the sports enthusiast, the book reminds readers the fundamental element of business is that people are led, not managed, to success. Defining the differences and connection between talent, motivation, and attitude, Holtz lays out a game plan that anyone can follow to achieve greater success.

Paul Kithcart President

Group Transportation Services, An Ascent Global Logistics Company

The value of a book depends on what is happening in your life at the time you read it. I read Robert Kriegel's book, If It Ain't Broke...Break It!: And Other Unconventional Wisdom for a Changing Business World while leading supply chain improvements at a consumer products company. The book explains how to work smarter partly by examining real-life examples of success attained in unconventional ways.

Henry Canitz

Director of Product Marketing and Business Development Logility

The E-Myth Revisited. Written for small business, but applicable for companies of all sizes. Build your

business into a system of systems, and optimize each part to ensure it is repeatable and does not rely on individual skill.

> Mark Crouse Director of Sales Ops, NA Quintiq

While Ely Goldratt's *The Goal* was written more than 30 years ago, its principles are still relevant. The story about a plant manager trying to save his job and marriage helps readers apply basic principles to evaluate a process, identify bottlenecks, and focus on improving the process and its efficiencies.

Jason McCourt, CTP Senior Support Consultant Paragon Software Systems

The principles in Good to Great are timeless. Its leadership and management strategies support excelling in an evolving world. "Clarity of strategy" is an especially important concept that can allow a person or organization to make solid long-term decisions despite complexity and noise around them. Core components of greatness are timeless.

Gary Neights Product Manager Elemica

Reading List

IL's LinkedIn followers reveal their favorite tomes:

Who Moved My Cheese? By Spencer Johnson M.D.

The One Minute Manager By Kenneth Blanchard and Spencer Johnson

How to Win Friends and Influence People By Dale Carnegie

Excellence in Execution By Robin Speculand

Sell or Be Sold By Grant Cardone

Never Eat Alone: And Other Secrets to Success By Keith Ferrazzi and Tahl Raz

HAVE A GREAT ANSWER TO A GOOD QUESTION?

Be sure to participate next month:

If you were given authority to purchase one product or service for your supply chain operations, with no budget restrictions, what would you buy?

We'll publish some answers.
Tell us at editorial@inboundlogistics.com or
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44 Amazon's relentless effort to create a truly customer-centric and easy shopping experience should be observed and taken seriously by every retailer. It's clear that consumers are now more willing than ever to allow brands into their homes if it means increased convenience. As such, brands must leverage every channel they have access to, in order to remain relevant."

Luke Starbuck Vice President of Marketing, Linc

commenting on the launch of Amazon Key, an offering that allows Amazon to deliver products inside homes, and soon, give in-home access to other service providers.



Reader Email

bit.ly/2017GlobalLogistics

aiwan was compared with China, indicating Taiwan as an independent country, in the Southeast Asia & India section in your 2017 Global Logistics Guide. This is politically incorrect because 1) the Chinese government has reiterated that Taiwan is an integrated part of China (P.R.C.); and 2) Taiwan has never been accepted as an independent country by any kind of international organization, such as the United Nations.

> Wenyi Kuang, PhD Candidate **Department of Supply Chain Management** Eli Broad College of Business, Michigan State University

Editor's Note: While their political identity is globally recognized, the different administrations have created measurably distinct logistics quotients.



One More Tip

10 Tips for Transportation Sourcing Follow these best practices to cut costs and avoid mistakes when choosing modes and carriers.

bit.ly/transportationsourcing

Johan Vagerstam

Good summary! I would add: Share information and feedback. Carriers don't know your business and your requirements as well as you do. Share crucial information and challenges you're facing today. Communicate and share feedback on the price, service, and lead time to carriers.



Interview Insight

Profile of Yone Dewberry, chief supply chain officer, Land O'Lakes

bit.ly/YoneDewberry

Randy Dicker

Enjoyed the article. Like Yone, I was involved in a hub-and-spoke model rollout a few years back. One big concern from the "spokes" was service level. Not only did service level slightly improve, the cost of one-off and small shipments decreased. We were able to work with the vendors on some products and create purchase orders that went directly to the hubs, saving us the extra shipment.



Welcome **Perspective**

3PL Perspectives 2017

Inbound Logistics' 12th annual 3PL Perspectives market research report

bit.ly/IL3PLresearch2017

Robin Rushnell Taney

This is a great article, especially the part about growth. In these economically chaotic times, it's encouraging to hear that the logistics sector is doing well.



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Boosting Warehouse Productivity

xcessive inventory hurts productivity when pickers must search for products to fulfill orders. In order-picking operations where seasonal products rotate in and out as the months go by, the productivity drain can be even more pronounced. Brian C. Neuwirth, vice president of sales and marketing for UNEX Manufacturing, reveals how to boost warehouse productivity.

Throw away or recycle empty boxes and packing materials to keep aisles clear. This frees up valuable space, makes areas safer for workers, and offers more storage. Only bare essential items should occupy a workspace.

Make organization a priority. Keep storage racks organized and label shelves. Less time searching and more time picking orders and replenishing items make for a more productive and successful warehouse.

Streamline moves. Instead of moving an item from one location to another, then moving it somewhere else before picking it, try to handle products just once.

Reduce travel time. Bring goods to the picker using conveyors or sortation units. Travel time takes away from picking orders so the fewer touches and less travel needed to complete an order the better. Combine smaller orders into a single travel to reduce the time it takes to fulfill each order.

Improve accuracy. Have a discrete pick location for each SKU to eliminate the need for pickers to sort through multiple SKUs to find the right one. Accuracy is improved along with speed. Assign slow-moving items to vertical locations and keep the fastest-moving items closer to the floor level to speed picking.

Optimize warehouse layout. The right layout offers maximum efficiency and incorporates best practices—such as placing fast-selling items closer to pickers—learned from previous holiday seasons.

Display products clearly. Store inventory on shelves with tilted trays or knuckled tracks to present products to pickers. Allowing them to see what they're picking eliminates errors.

Slot SKUs intelligently. Review the type of product (weight, size, shape), how often it is touched, the distance an order picker would need to travel to get to the location, and how accessible the location will be once the picker gets there. Re-slot often to keep items in the optimal location.

Organize your warehouse by what works best for your business—either stocking materials by products that sell quicker than others, by groups of products most frequently sold together, or by seasonal items. As your product mix will probably change over the years, plan your storage needs based on current and future order-picking needs, taking into account your projected growth.

Evaluate your storage medium. Using modular racks that can scale to fit your warehouse configuration minimizes wasted space. Plus, if you use racks that can be easily adjusted to product mix changes, you can reconfigure them to use with different products, which saves money.





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Fashioning a Shipshape Supply Chain

OW DOES A RETAIL SUPPLY CHAIN resemble the infrastructure of a nuclear submarine? We don't know, but Brent Beabout sure does. He spent 13 years as an active-duty U.S. naval officer, a career that culminated in the role of engineering officer on one of those powerful undersea vessels. Then he moved on to some major power centers in the business world.

Beabout's civilian career took him to engineering and supply chain roles at Amazon, DHL Express, Office Depot, and Walmart/Sam's Club before landing him in 2017 in his current position. He is now executive vice president of supply chain at Nordstrom, the Seattle-based fashion retailer.

Beabout spoke with *Inbound Logistics* recently about his development as a supply chain leader.

IL: What are your responsibilities at Nordstrom?

In my primary role, I support all aspects of Nordstrom's supply chain, which places inventory in Nordstrom and Nordstrom Rack retail stores and fulfills e-commerce orders, which go directly to our customers' doorsteps. I'm in charge of distribution and fulfillment center operations, transportation, inventory management, engineering, supply chain technology, and vendor management groups in North America.

In my other role, I'm responsible for store operations, supporting loss prevention, and building services for all Nordstrom facilities, including all stores. This role also encompasses store logistics employees who operate in the back rooms—unloading trucks, shipping e-commerce orders, and performing related duties.

IL: You've worked at Walmart and Amazon—two companies that set the standard for supply chain operations. What are the most important lessons you brought to Nordstrom from those companies?

Both Amazon and Walmart realized fairly early that their supply chains could provide a competitive advantage in the retail sector. Other retailers are now taking notice, beginning to realize that supply chain can be wielded as a key differentiator, especially when combined with a strong product offering to provide a compelling, seamless, and frictionless shopping experience.

No two supply chains are alike. They vary due to many factors, such as company history, people, strategy, and design. While the science of what to do is fairly straightforward, the art to leading and improving any given supply chain is to recognize where you're starting, what the company needs from its supply chain to be competitive, and how fast you can implement change to reach that end goal. Change needs to be 'feathered in' at the correct rate to ensure you're bringing everyone else along for the ride.



IL: How did your experience on nuclear submarines influence the kind of leader you are today?

I had the privilege of serving as an officer on nuclear submarines for several tours of duty. My early years were spent learning, qualifying, and operating the nuclear power plant and then tactically employing the submarine to accomplish its mission. My last role during my active-duty career was as the engineer officer on the submarine, responsible for everything nuclear, electrical, mechanical, and hydraulic on the ship. This scope comprised about 75 percent of the submarine's crew, equipment, and space.

One of the great things about a military background is that you get thrown into a leadership position on day one. By your late 20s, you've pretty much seen it all. I chuckle when I see how current leadership challenges I face are often just repackaged situations that I encountered years ago while serving on a submarine.

IL: What other experiences early in your career helped to shape your leadership?

I've had the great fortune of working in many different positions throughout my career. I take on supply chain leadership positions that involve reimagining the role in the organization and/or starting from scratch.

This movement has allowed me to have dozens of bosses over the years. I have seen both good and bad leadership traits, and I have been conscientious about taking a best-of-breed approach to develop my own leadership style.

IL: How do you think the people who report to you describe your leadership style?

I believe my team would say I'm highly collaborative but firmly decisive, and that the best decisions get informed by the collective wisdom, experiences, and knowledge of the group. However, the decision maker needs to be clear about the final decision, so the organization can move with speed and efficiency.

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

Three innate factors are fundamental to success at the executive level. First comes intellectual curiosity—a constant striving to learn what is beyond the status quo, which naturally leads to lifelong learning. Second is a strong work ethic. Going the extra mile makes up for almost any other shortcoming you can imagine. Third is courage. You have to be willing to step outside your comfort zone to take things on,

even when you don't know all the answers. When looking for high-potential employees, I often look for these three traits.

One additional skill that has been a hallmark of my career is the ability to perceive and combine two seemingly unrelated fields in a new and unique way.

IL: What are some of the most significant changes you've seen in the supply chain world over the course of your career?

The sheer scale and complexity of global networks, combined with the realization that supply chains are now a source of competitive advantage, have directly led to the professionalization of the supply chain field. While supply chain was historically regarded as an unsophisticated backroom function, it's now common for the chief supply chain officer to have a seat at the table and an office in the C-suite. This movement to put supply chain at the center of the enterprise has created a demand for supply chain executives who embody a wide range of capabilities. These include skills in large-scale people leadership, math-intensive network optimization, big data analytics, negotiation, financial management, and communication.

IL: What initiatives are at the top of your agenda these days?

Nordstrom's supply chain is undergoing significant change as we quickly move toward an organization that fully supports our goal of being a leading fashion retailer in a digitally connected world. This transformation requires new skills, new facilities, and new tech capabilities. It's exciting to be involved in this effort and I feel lucky to be part of the team.

Models of Leadership

Brent Beabout spent most of his formative years in the Navy, so it's no surprise that he looked to senior military leaders as role models. "They taught me the true value of servant leadership and maintaining 'a quiet hand on the tiller' when things didn't go according to plan," he says. "These are leadership skills I try to emulate every day."

In the business world, Beabout points to Larry Bossidy, former CEO of Allied Signal, as an important influence. "I have had the pleasure of meeting and learning from him on several occasions," Beabout says. "His personal insights and his seminal book on the value of execution really hit home with me. Plenty of people regularly generate good—or even great—ideas, but relatively few can rally the organization and deliver the results, especially at scale. I strive to be one of those relative few."

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READER

PROFILE

as told to Karen M. Kroll



Marianne McDonald is vice president, global transportation for Avnet, a \$17.4-billion global technology distributor headquartered in Phoenix, Arizona.

RESPONSIBILITIES

Global transportation services, carrier selection, contracts supporting 40 warehouse locations (owned and 3PL), day-to-day global trade compliance operations, and import/export execution.

EXPERIENCE

Global transportation leader, Avnet; director of global logistics for Coca Cola, Toys "R" Us, and Reebok; vice president, logistics, APL Logistics; director, import department, Limited Stores.

EDUCATION

B.S., Criminal Justice, St. John's University, Jamaica, New York.

Marianne McDonald: Stand and Deliver

VNET SHIPPED ABOUT 99 BILLION UNITS IN FISCAL 2017. Some were one-component, one-package shipments, and others were palletized, large-volume shipments.

Of course, transportation is a significant cost, and we have several money-saving initiatives underway. For example, we regularly review with our businesses the dollar value and percentage of shipments expedited to identify opportunities to reduce costs.

We look at the customer promise date, and work back to the date the shipments are ready to ship to choose the optimal service and cost without jeopardizing delivery. To date, we've recognized a 40-percent shift from expedited services to more economical services, without impacting our ability to meet customers' delivery dates.

We're looking at our ability to negotiate globally, and have had success pooling volumes on some international shipments. Recent negotiations resulted in six-figure savings.

We are the last group to touch a shipment before it goes out the door. We want to do everything we can to make sure each shipment leaves in the manner it should.

I attended college on a full, four-year debate scholarship. In debate, you prepare to argue both sides of an issue because you never know which side you'll be given. That has been helpful in business.

I mentor young women, and try

The Big Questions

When you're not at work, what do you like to do?

The beach is my getaway. It gives me solitude, and allows me to wind down and regenerate. I will read and get lost in a book, typically with my dog sitting next to me.

If you had \$1 million to start a business or a philanthropic endeavor, what would you do?

I would do something associated with children, whether from a food or an education perspective. In my travels, I've seen adults using children to beg for money and it breaks my heart.

If you could throw a dinner party for anybody in the world, living or from history, who would you invite?

I would have two guests: Nelson Mandela because I'm fascinated by what he endured as an individual and then what he accomplished, and Erik Weihenmayer, who went blind as a teenager, yet has climbed the summits of the seven largest mountains and kayaked the Colorado River.

Do you have a hidden talent or guilty pleasure?

A lot of people are surprised I play the piano.



to put them in situations where they talk to different groups. People who aren't comfortable speaking up can limit themselves.

After college, I was interested in pursuing law, but needed a break from school. Bloomingdale's offered me a job in its executive program, and I was moved into the import area. I had a wonderful mentor who gave me a strong understanding of where products came from and how to get them on the sales floor.

I was with Coca Cola during the 2010 earthquake in Haiti. More than 80 percent of our employees' homes were

damaged, and the rainy season was coming. Management asked how quickly I could procure tents for them.

I knew nothing about procuring tents, but went to several sporting goods companies. One immediately supplied 125 tents at cost. My airfreight contacts offered their services, also at cost, to get the tents to the region. Then several truckers moved them over treacherous terrain.

I received a picture of about 80 employees after the tents had been distributed. All wore huge smiles; they'd be able to keep their families safe.

With Avnet, I recently spent 18 months

in Singapore. We're developing a new product for our trade compliance area, and our APAC region will be the first to deploy. I spent time working with the folks there on trade compliance and import-export rules and regulations.

I had to step out of my comfort zone, but it gave me a chance to work with my colleagues in APAC. It also allowed me to let my director at headquarters step up and run the business here.

I try to stay focused on my people. I want to make sure we tap into their talent, give them opportunities for exposure and education, and let them know their contributions make a difference.





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NOTED

THE SUPPLY CHAIN IN BRIEF

GOOD WORKS



Lufthansa Cargo transported more than 80 tons of drinking water, apparel, food provisions, and hygienic supplies to Aguadilla, on the west coast of Puerto Rico, to help the island's recovery efforts in the aftermath of Hurricane Maria. The Lufthansa Cargo McDonnell Douglas MD 11 aircraft departed from Frankfurt Airport, Germany, and was met at Rafael Hernández International Airport by members of the Puerto Rican government.



Delta Air Lines, its
Cargo division, the Delta
Foundation, and its
employees partnered
with the American
Red Cross and other
non-profits to provide
hurricane and earthquake

relief. The group contributed \$3.75 million; operated relief flights filled with thousands of pounds of water, generators, baby food, and other supplies; and added dozens of flights to evacuate tens of thousands of people to safety, in response to hurricanes hitting Texas, Florida, and the Caribbean, and earthquakes destroying homes in Mexico. Delta's cargo team is also coordinating delivery of supplies to Puerto Rico donated by Delta business partners.



Global logistics software group WiseTech Global acquired two global rate management solution providers: Cargoguide and CargoSphere. The acquisitions boost WiseTech Global's multimodal rate management capabilities. Cargoguide and CargoSphere will continue to deliver their solutions directly to their respective worldwide customers as well as to the 7,000 logistics providers across 125 countries that utilize WiseTech's integrated supply chain execution solutions.

Supply chain solutions provider NFI acquired California Cartage and its affiliated companies. With this acquisition, NFI expands its port drayage, transloading, deconsolidation, customs examination, and warehousing solutions. With a presence at nearly every major U.S. port, the acquisition enables NFI to service shippers in the transition of goods from import to port to final destination in North America.

UP THE CHAIN



Fast-fashion retailer **Primark** appointed **David James** as supply chain director. James was previously director of logistics at Primark, which he joined from U.K. supermarket chain Sainsbury's in 2014. In his new position, James supports the company's rapid growth; Primark currently has more than 290 stores across Europe and the United States.

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SEALED DEALS

World's Finest Chocolate picked 3PL Redwood Logistics as its transportation management partner. Redwood implemented a customized version of MercuryGate's transportation management system (TMS) across World's Finest Chocolate's warehouse, shipping, and tracking operations for increased efficiency and business intelligence. Redwood's TMS customizations for the chocolate maker include multiple integration interfaces, custom workflows, and dozens of carrier and warehouse users.

Chocolate maker Ferrero will implement systems from supply chain management solutions provider SAP Ariba to manage its entire buying process, minimize risk, identify new sources of savings, and build a sustainable supply chain. Through SAP Ariba's integrated platform and cloudbased applications, Ferrero plans to consolidate all of its spend and collaborate with a global network of partners on sourcing and orders through invoicing and payment.

GREEN SEEDS



Ruan Transportation Management Systems hit a milestone of 1 million miles on a compressed natural gas (CNG)-powered Class 8 tractor. The vehicle, a 2014 Kenworth T660, is part of a fleet of 40 tractors based in Ruan's operation in Fair Oaks, Indiana. These vehicles pull 80,000 GVW loads of milk primarily from Fair Oaks to Southern Indiana. Vehicles in this operation have run approximately 50 million miles in total, representing nearly 7.5 million gallons of diesel not consumed.

recognition

Brad Jacobs, chief executive officer, XPO Logistics, will receive the 2017 Connie
Award presented by the Containerization & Intermodal Institute in Newark, New Jersey. The award recognizes contributions to containerization, world



trade, and the transportation field; recipients are acknowledged for their innovative spirit. Jacobs founded XPO Logistics in 2011. Under his leadership, XPO uses its technology and scale to transform how goods are moved around the world.

A. Duie Pyle was recognized as a recipient of the American Trucking Associations (ATA) President's Trophy for 2017, a national safety award presented to U.S. motor carriers. The ATA President's Trophy recognizes truckers for their overall safety program in three categories based on annual mileage; Pyle was chosen in the Between 25 to 100 Million Miles category. One example of how Pyle works to improve safety and driver performance is its internal Truck Driving Academy, which is audited and certified by the Professional Truck Driving Institute.

SHOVEL READY



Penske Logistics and developer InSite Real Estate recently broke ground on a \$98.5-million, 606,000-square-foot distribution center in Romulus, Michigan.
Representatives from the city, county, chamber of commerce, Detroit Region Aerotropolis, and Michigan Economic Development Corporation commemorated the occasion with a shovel ceremony (pictured). The new facility is scheduled to be completed by fall 2018 and is expected to bring about 400 new jobs to Romulus.



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Young Professionals and Supply Chain: So Happy Together

The opportunity for interesting work, as well as development and advancement, top the list of requirements for young professionals, according to the 2018 CSCMP/Penske *Young Professionals Survey* of 300 supply chain professionals younger than 30.

The average young professional responding to the survey has worked in the supply chain sector for about three years and is employed by a third-party logistics, manufacturing, or transportation and warehousing company.

Additionally, the survey uncovered the following:

- 81 percent of respondents strongly agree that the supply chain is a good career choice.
- 86 percent of respondents say they are either very satisfied or somewhat satisfied with their current employer.
- 76 percent describe their work as satisfying, 67 percent say rewarding, and 60 percent say exciting.
- 71 percent agree that it's easy to advance in the field.
- The majority say they prefer in-person training, delivered through mentoring or taskbased activities.

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Industrial Companies Map Data Gap

Eighty-four percent of industrial companies face a disconnect between data from connected devices and strategic decision making and operations, limiting the Internet of Thing's (IoT) digital transformation potential, according to a research study conducted by IFS, a global enterprise applications company. Only 16 percent of survey respondents consume IoT data in enterprise resource planning (ERP) software.

IFS divided survey respondents into groups: IoT leaders and laggards, depending on how well their enterprise software prepared them to consume IoT data, and digital transformation leaders and laggards,

depending on how well their enterprise software prepared them for digital transformation. Among the survey's key takeaways:

- IoT is a technology that underpins the loose concept of digital transformation.
- The two leaders groups overlap, with 88 percent of digital transformation leaders also qualifying as IoT leaders.
- Digital transformation leaders make more complete use of IoT data than digital transformation laggards; leaders are almost three times as likely to use IoT data for corporate business intelligence or to monitor performance against service level agreements.
 - Digital transformation leaders are

more likely than digital transformation laggards to be able to access IoT data in applications used beyond the plant floor. They are more than four times as likely to have access to IoT data in enterprise asset management software, twice as likely than digital transformation laggards to be able to access IoT data in high-value asset performance management software, and almost twice as likely to be able to use IoT data in ERP.

The survey results suggest a real need for more IoT-enabled enterprise applications designed to integrate data from networks of connected devices into the context of the business.

Assessing U.S. Shipments and Spend

A tighter truck market, increase in national shipments, and accelerated factory output are among the highlights of the Q3 2017 U.S. Bank Freight Payment Index, which measures quantitative changes in shipment and spend activity (see chart) based on data from transactions the company processes.

Highlights include:

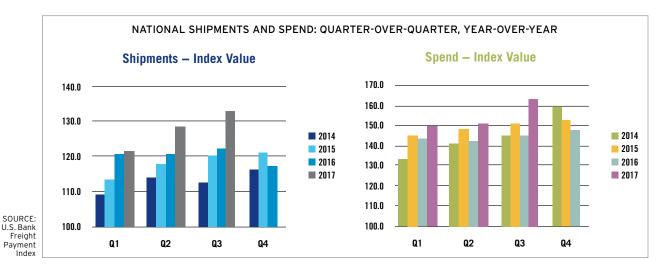
■ An 8.3-percent jump in U.S. Bank's national spend index, the largest quarterly gain since Q4 2014. The gain reflects a tighter truck market, in part from increased vehicle demand in the aftermath of

Hurricanes Harvey and Irma.

- The national shipment index increased 3.3 percent, which was slower than the 5.8-percent surge in the second quarter, but still solid, considering the hurricanes' impact.
- An acceleration in factory output as the U.S. dollar retreated from high levels and businesses began reinvesting in capital equipment.

The index also breaks down data into regions, based on the shipment's state of origin. Among the regional findings for the third quarter:

- The Northeast region saw the biggest shipment index gain, at 10 percent. Better manufacturing activity and slightly higher housing starts compared to Q2 drove the gain.
- Shipments in the Southeast inched up a mere 0.1 percent, as Hurricane Irma disrupted the supply chain. At the same time, spend volume jumped nearly 5 percent as truck capacity tightened.
- The Midwest led in overall spend, jumping 13.3 percent to a record high. A rebound in general manufacturing activity assisted the region.





Addressing Expedited Delivery Expectations

Amazon and other large retailers set customer expectations by offering expedited delivery at low or no cost. Retailers of all sizes must compete on the same turf, yet lack the negotiating power that could net meaningful discounts with commercial carriers. And private carriers often assess charges such as delivering to a residential address, penalties for failing to meet contracted volumes, and peak holiday premium surcharges.

Many retailers deploy parcel shipping systems that exacerbate these issues, says a new Forbes Insight report titled *Shipping as Strategy: How Small and Midsize Retailers Can Best Meet Customers' Delivery Expectations in the Age of Amazon*, developed in association with Pitney Bowes.

While most retailers use the carrier-specific shipping software commercial carriers provide to handle the bulk of their shipping, aspects of these same systems make it cumbersome for shippers to switch carriers seamlessly and access more favorable pricing. Shippers also underutilize the U.S. Postal Service, the report finds.

The report offers this advice to help retailers better meet customer expectations:

- **1. Create a multi-carrier strategy.** Review your carriers and pricing. Will you offer next-day or same-day shipping? Is the USPS part of your existing shipping mix?
- **2.Use the USPS.** The upgrades the Postal Service has made over the past several years, coupled with its scale of presence across the United States six days per week, make it well positioned for B2C deliveries. Look at how and where flat-rate packaging can help you save money.
- **3. Plan for peak periods.** Scale up available labor as needed for pickup, pack,

ship, and customer service. Forge a relationship with your carriers so that you know deadlines and cut-off dates in advance. Keep communication lines open during peak periods, and have a contingency plan to use different carriers, if necessary.

- **4. Automate the process.** Where can automation help your business and support a multi-carrier strategy? Automate as much as you can from click to delivery.
- **5.** Identify the right shipping partner. Look for partners that can provide service guarantees, favorable pricing and payment terms, without limiting your ability to go global—leading to deeper savings for you.
- **6.**Know your products and options. Document your data product dimensions, weight, and more. Import that data into the system and the software can fill in the blanks.





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GLOBAL

THE WORLD AT A GLANCE



U.S.-Cuba Trade: Where Do Sanctions, Sourcing, and Compliance Meet?

Between the changing diplomatic ties between the United States and Cuba, and expectations that the Trump administration will redraw U.S. policy toward Cuba, sanctions with the island nation are unclear. The country is still embargoed and for nearly all products, normalized trade has to overcome many hurdles.

Shippers are watching Cuba closely, and analyzing market and product gaps waiting to be filled. There are, however, many unanswered questions and misconceptions around sanctions.

With the high potential for fines or,

more likely, seized shipments, global trade and supply chain managers need to take a critical look at the changing realities of sanctions, sourcing, and compliance when trading with Cuba.

Here's a current roundup of key questions and answers:

I do not have the time to follow embargoes while running my business. Is there anything I can do to mitigate risk?

Companies need to anticipate risk well before shipment and sourcing. Businesses that succeed in the global arena are those that weigh the right trade and sourcing factors ahead of, or in tandem with, sourcing and prior to transactional decisions.

How can I ensure that employees or partners do not ship to denied or restricted countries?

In the United States, companies have an obligation to ensure that they do not transact business with prohibited or restricted entities, corporations, countries, or persons.

It's incredibly challenging, however, to collect, maintain, and update denied, restricted, and sanctioned data from multiple global lists—some of which change hourly. Technology solutions can help

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companies fulfill their responsibility by simplifying the ongoing research and management of sanctioned, denied, and restricted party details, and by automating the practice of screening customers, prospects, suppliers, employees, and more against this data.

How can I ensure that my transactions are screened prior to purchasing?

Cloud-based technology solutions are available to help companies of all sizes quickly and efficiently screen customers, suppliers, and/or trading partners against a database of international restricted and denied party lists.

The most advanced solutions allow companies to tailor screening processes to fit unique risk parameters—for example, a medical equipment supply company needs different screening lists than a financial services business—transaction volumes, and any integration requirements with enterprise resource planning or global trade management systems.

How do changing diplomatic relations impact sourcing?

Sourcing goes hand-in-hand with practical distribution and transport. If properly

vetted line-item and party details can populate manifests, then companies can enjoy added efficiencies and are better equipped to focus on business development. Supply chains must be responsive to changing denied-party screening status, and incorporate fluctuating duty rates or trade agreements into the sourcing and/or manufacturing equation.

In addition, leading companies are uniting denied party screening with supply chain trends. From volume data, commodities, and production inputs, market leaders are qualifying overseas trading partners and monitoring cross-border supplier relationships to reveal meaningful business intelligence.

If I am in a location that is authorized to ship to Cuba, what other regulations do I need to adhere to? What is a security filing?

More and more countries are adopting the World Customs Organization's (WCO) Standards to Secure and Facilitate Global Trade (SAFE Framework) modernization initiative and implementing security filing requirements. In addition to exporters and carriers, global security filings are also becoming the responsibility of forwarders. With security filing requirements on the rise, and countries such as Cuba adopting advance manifest requirements, intermediaries and/or carriers must capture required information from shippers and transmit the data to customs agencies. Technology solutions can help companies stay up to date with evolving security filing capabilities.

My company is really about the bottom line; however, how can I counter the potential for fines?

Many companies have discovered that streaming data into leading business applications is a prime opportunity to consolidate screening processes. With the right content populating existing systems, businesses are better equipped to avoid fines, improve processes, and mitigate risk.

It is essential, however, that companies not drain IT resources to establish this type of robust connectivity. Technology and expertise are often required to map existing fields and databases to ensure that information seamlessly powers systems via a number of electronic methods and protocols.

-Joe Mallozzi, Vice President, Transportation Management, Descartes

K Line, Agunsa Drive KAR

To leverage rising automotive import traffic in Latin America, particularly in Chile, multinational logistics agency Agunsa has partnered with Japanese shipping firm "K" Line to create a dedicated automotive logistics company.

The new company, KAR Logistics, offers integrated transportation services as well as warehousing, customization, pre-delivery inspection, and spare parts services. Its target is automotive companies and finished vehicle importers in Chile and throughout Latin America.

Located near the Chilean port of San Antonio, in the country's Valparaíso region, KAR Logistics provides cross-docking and warehousing facilities. It also maintains a



To meet demand for car import services, "K" Line and Agunsa have teamed up to form a dedicated automotive logistics company, KAR Logistics.

presence in Noviciado, close to the capital Santiago, where it can accommodate up to 7,000 finished vehicles. The company

operates its own fleet of GPS-equipped car transporters and is currently working with General Motors.



China Ups Delivery Service to the U.S.

Two leading express companies are joining forces to leverage their complementary networks, service portfolios, technologies, and logistics expertise. China's Ministry of Commerce approved a planned joint venture between UPS and SF Holding, the parent company of SF Express. The agreement allows UPS and SF to collaborate on developing and providing international delivery services from, initially, China to the United States, and, in the future, to other trade lanes.

UPS is the world's largest express delivery company and a major global supply chain integrator. SF is China's market leader in express delivery, with extensive China-wide network coverage, comprehensive service capabilities, and the highest brand recognition in the Chinese small package industry. The newly approved joint venture continues a UPS and SF collaboration that began in 2015, when UPS Worldwide Express service was made available at SF's Heike retail stores in Shanghai and Shenzhen.

Aligning the two transportation networks provides global shippers with greater coverage, additional routing options, increased capacity, and more choice in transit times and service options.

Shippers seeking an economical solution for less-urgent shipments can opt for Global Reach Plus, the new joint venture's deferred express product that features the full visibility and reliability of a premium express service.

Do Buy, Says Dubai

E-commerce is booming and everyone wants a piece of the pie, including Dubai .

The country recently announced its first free trade zone dedicated to e-commerce in the MENA region: Dubai CommerCity, a multi-million-dollar, 2.1-million-square-foot complex that is a joint venture between Dafza and Wasl Asset Management Group.

The project is designed to promote Dubai's position as a leading platform for international e-commerce, and to support economic diversification and smart transformation strategies. Dubai's aim is for the project to help accelerate the growth of the e-commerce market, which is expected to reach USD \$20 billion in 2020 in the GCC countries.

Dubai is banking on CommerCity to provide an environment that stimulates creativity and attracts direct foreign investments in line with Dubai Plan 2021, which aims to create a unique and sustainable economy based on innovation.



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knowledgebase

George Prest, CEO, MHI gprest@mhi.org • 704-676-1190

The New Era of Smart City Logistics

et's talk about your company's futureproof strategy to meet the challenges and opportunities of Smart City Logistics head-on.

Oh, wait. You don't have one yet? You're not alone. According to the fourth edition of MHI's Annual Industry Report, "Next-Generation Supply Chains: Digital, On-Demand and Always-On" (available as a free download at www.MHI.org) a full 50% of the 1,100 manufacturing and supply chain industry leaders surveyed are not aware of Smart City Logistics.

The reason for MHI's emphasis on Smart City Logistics is three-fold:

- **1.** According to the United Nations, 54% of the global population currently lives in urban areas, and by 2050 nearly 86% of developed countries' populations—and 64% of developing countries' populations—will too. Domestically, 65% of the current U.S. population lives in cities of more than 50,000 people.
- 2. The National Retail Federation reports that the number of online shoppers grew by nearly 20 million from 2015 to 2016. Consumers are spending more and ordering more frequently online and retailers are looking for smart solutions to last-mile delivery challenges.
- **3.** In the U.S., goods transport via freight and delivery truck courier dominates 25% of urban road capacity.

Taken together, the continued migration of people to cities and increase in online shopping will generate even more freight deliveries to and within urban areas. Without intervention and strategic planning to achieve an optimal Smart City Logistics environment, these trends will cause even more traffic congestion, higher carbon dioxide emissions, and untenable noise and pollution.

Collaboration and Smart City Logistics

Cities worldwide, particularly in Europe and Asia, are leading the charge on Smart City infrastructure. Domestically, San Francisco, New York and Chicago have begun to roll out some of the more aggressive Smart City programs, initially in the areas of public safety, commuter transportation and parking.

To create and achieve the objectives of a Smart City Logistics strategy, a company or a municipality simply cannot go it alone. There are too many factors, data points and stakeholders intertwined within this unique challenge. Rather, the smartest strategy is to build collaborations between city government, multiple businesses (including competitors), academia, environmental organizations, transportation operators, independent researchers, consultants and more.

So which systems and solutions should companies consider as part of the development of a future proof Smart City Logistics strategy? And where can your organization start?

To answer these questions, MHI added two new Solution Centers at MODEX 2018: "Smart City Logistics and Connected Supply Chain" and "Transportation and Logistics." Located side-by-side, these Solution Centers will provide an abundance of solutions and resources for building your own Smart City Logistics strategy, as well as the professional connections essential to forming strategic collaborations.

The Smart City Logistics and Connected Supply Chain Solution Center highlights Industry 4.0 and Industrial Internet of Things (IIoT) solutions: sensors, software, cloud computing, driverless vehicles, robotics and automation, predictive analytics, artificial intelligence, augmented reality wearable devices and mobile technologies.

Likewise, the Transportation and Logistics Solution Center houses solutions that bring people, markets and goods together in a way that is faster, more efficient and more sustainable, including via road, rail, sea and air freight transportation.

As the largest international supply chain expo in North and South America, MODEX runs April 9-12, 2018 in the Georgia World Congress Center in Atlanta.

Incidentally, this year's MODEX theme is "Make Your Business Futureproof." I hope you will accept our invitation to attend and learn more about how to develop and refine your Smart City Logistics strategy. For more information or to register, please visit www.MODEXshow.com.







Making Strategic Carrier Decisions For Customers With a New TMS

To better serve customers, MD Logistics implemented a game-changing TMS.

THE CHALLENGE

Transportation expenses associated with shipping commodities across the world can be mitigated with strategic freight decisions. Successful companies understand the importance of freight optimizationthe process of strategically selecting carriers based on a variety of factors, including price, service offerings, and retail compliance.

Historically, MD Logistics utilized a Transportation Management System (TMS), which manually optimized freight solutions for customers that elected for the value-added service. But this system lacked full integration into the MD Logistics WMS, the ability to rate shop, optimize freight spend, and route freight automatically.

THE SOLUTION

MD Logistics noticed their customers were making freight decisions in house, often resulting in securing high freight prices for carriers that weren't the most strategic choice for their commodities. To better serve customers, MD Logistics implemented a game-changing solution by

adopting the Agile TMS and integrating it into its current JDA/ RedPrairie Warehouse Management System (WMS). This integration allows MD Logistics to find customers the most strategic carrier based on a variety of factors, including price, transit times, and retail compliance.

This turnkey solution requires no human intervention, such as manual entry or carrier negotiation, once rates and services are established. Instead, Agile TMS works with the WMS to automatically price shipments simultaneously amongst carriers that meet a customer's

specific delivery needs, keeping strict

quality control. MD Logistics can efficiently and cost-effectively handle freight selection and important tasks such as filing claim paperwork, auditing invoices, and managing nondeliverables for customers that opt for the value-added service. Custom reports are easily generated through the WMS, enabling MD Logistics and their customers to analyze their supply chain to make continuous improvements. The integrated TMS also removes guesswork from the equation; customers can track their shipments until final delivery through MD Logistics' online portal, MD Net.



To learn more about MD Logistics, call 317-838-8900, email info@mdlogistics.com, or visit www.mdlogistics.com.



A Single Point of Contact Offers A Dynamic Supply Chain Solution

THE CHALLENGE

TruGolf's rapid growth drove them from being a niche within a niche to becoming a staple in the industry. As the leader in indoor golf simulator technology, TruGolf's award-winning software recreates the artistry of the game by bringing an outdoor sport indoors.

Offering a wide range of options, TruGolf's simulation software, *E6Golf*, provides the most realistic virtual golf experience and most precise swing analytics available anywhere.

TruGolf initially used several providers, resulting in delayed and lost shipments and miscommunication. Not being experts in logistics, TruGolf struggled to find a single point of contact who could guide them in the problem-solving and decision-making

process—resulting in ineffective time management and unhappy partners.

THE SOLUTION

SEKO provided TruGolf with a single point of contact who was always "in the loop." With their awardwinning technology, paired with a single point of contact and 24/7 team, SEKO provided TruGolf with the resources to problem solve and take dynamic action.

Due to the increased partner communication and shipment solutions, TruGolf has gained an increased relationship with the end user. Damage claims and lost freight were reduced drastically, and due to the affluent customer base and fragile nature of goods, TruGolf was able to attain the accountability and discretion they so needed.

Benefits of the SEKO Solution:

- Direct point of contact to address any and all logistics needs.
- Increased communication and efficiency resulting in an increased product demand.
- 40 percent reduction in damaged goods and lost freight.
- MySEKO technology deployed for simplicity and visibility.

"Because of the personal relationship we have with SEKO, we have the accountability that helps us have a better personal relationship with our end users and business partners. With SEKO, we are only a phone call away from knowing what's going on or being able to solve any sort of problem that could arise. With a robust five-year plan including expansion into Europe and Asia, we want to have a relationship with a partner and carrier that can grow with us."

- Mason Jones Marketing Director, TruGolf



To learn more about SEKO's solutions, call 630-919-4966, email hello@sekologistics.com, or visit www.sekologistics.com.

THOUGHT LEADERS



MARTIN HUBERT

CEO, Freightgate sales@freightgate.com +1 (714) 799-2833 www.freightgate.com

Why invest in an API solution?

The transportation industry is changing and it's changing fast. There are new players in the market like Uber Freight and they have a head start with their digitalization strategy. Offering a cheap and reliable service will not be enough when all of your competitors have moved forward.

Many problems can't be solved by EDI connectivity. With rating and routing, for

API Trumps EDI. We Tell You Why.

example, instant feedback is vital. Batch processing is outdated, expensive to maintain, and too rigid and slow to work well in the dynamic world of logistics—time to move on.

How would I go about leveraging a best-in-class, scalable rate engine instead of wasting time and money by trying to re-invent the wheel?

Developing and maintaining a best-in-class, cloud-based rating solution is an extensive endeavor requiring a great breadth of knowledge. We have seen a substantial increase in inquiries regarding leveraging our rate engine via API access by various different sub-systems on the client side. By establishing strategic partnerships with our customers we give them a competitive advantage and an opportunity to access a broader range of resources and expertise. This fosters innovation to help generate new ideas, develop better products, and save costs.

Our customers trust us with these inquiries because we offer the only commercially available solution supporting the DOT (Department of Transportation) endorsed API framework for Electronic Freight Management (EFM). No wonder, as we have been the innovation leader since 1994, as the first to offer web-service enabled tracking & tracing, rate management, and built-in carbon footprint modeling.

How much effort does it take to implement a solution like that?

We use a guideline of approximately 4-8 weeks, depending on your own infrastructure.

Trusting an experienced solution provider like Freightgate definitely pays off because it reduces your risks and gives you the opportunity to start immediately. In today's world, time to market is more important than ever before.

Q: Are there any limitations?

You can easily handle hundreds of thousands of transactions. In terms of availability and accessibility, only a proficient and knowledgeable cloud solution provider is able to maintain a stable business process. With Freightgate, we maximize your system's availability. We offer any-any rating and routing APIs, either mode specific (FCL, LCL, AIR, FTL, LTL, Rail, Parcel) or as a super-set mixed mode comparison allowing cross-modal optimization. In the latest version, we've added a mash-up that will also consider spot rate requests.

What are the advantages of using a state-of-the-art API?

- Immediate deployment
- Vast scalability
- Proven technology
- Unmatched dynamic routing (door-door, any-any, etc.) for ALL modes
- Built-in CO modeling
- Cross modal comparison
- Multidimensional security

What should you be looking for in a cloud partner?

- Experienced
- One-stop shop

Educating the Supply Chain

Technological disruptors and game-changing opportunities continue to shift the way logistics and supply chain professionals do business. In addition to leading the technology company SMC³, I help cultivate two yearly supply chain conferences, Jump Start and Connections. The events stand as industry-leading supply chain forums, providing shippers, carriers, 3PLs, and other supply chain professionals with indispensable insights about trends and challenges in the wider logistics arena.

The next event, Jump Start 2018, will be held in midtown Atlanta from January 22-24. A full agenda and speaker list is available at www.smc3jumpstart.com.

What's in store for Jump Start 2018 attendees?

Jump Start has always been celebrated for powerhouse content and unrivaled networking opportunities. From the agenda to the surprises we have in store during the networking reception, our team has put together an exceptional event this year.

During Jump Start 2018, speakers are slated to dissect the transportation trends that will define the year ahead and explain how to avoid transportation pitfalls. Jim Burnley, the former Secretary of the Department of Transportation, will be on hand to talk through the current regulatory environment. We've lined up more than 30 experts and thought leaders to discuss e-commerce's impact on last-mile shipping, the influence of technological innovation on the supply chain, and other pertinent topics.

We've also set aside 17 hours of dedicated networking time to give people a chance to connect and continue to learn from each other.

The yearly Jump Start conference is always in Atlanta. Why?

Atlanta, the transportation hub of the Southeast, is the best place to gather together and analyze the issues that will come to define the year ahead. The city has also become one of the leading cities in technology infrastructure.

In fact, Forbes recently put Atlanta on a short list of cities that may soon overthrow Silicon Valley as the tech capital of the U.S. SMC³ is proud to call the Atlanta area home and contribute to the spirit of innovation that permeates the area.

Is there an overarching goal for Jump Start 2018?

At SMC³, our guiding principle is education. The technology products we develop and the conferences we host are created for the benefit of the entire transportation community. We're able to put together such an education-oriented conference because we truly want every industry stakeholder to learn, collaborate, and explore new ways to make their businesses succeed.

Our goal is for everyone to return to their respective companies refreshed, inspired, and ready to get down to business. Jump Start 2018 attendees will 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.



ANDREW SLUSHER

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LEAN SUPPLY CHAIN

BY PAUL A. MYERSON

Instructor, Management and Decision Sciences, Monmouth University and author of books on Lean for McGraw-Hill, and supply chain for Pearson pmyerson@lehigh.edu | 732-571-7523

Sometimes It's Better Not to Be So Pushy

upply chain processes fall into one of two categories: pull systems, where a company initiates execution in response to a customer order (reactive) and push systems, where execution is initiated in anticipation of customer orders (speculative).

The boundary that separates push processes from pull processes is one measure of a supply chain's "leanness"—the farther upstream that pull starts, the leaner the supply chain.

Consider even the most agile and lean operation, such as Dell's build-to-order supply chain (vs. the more recent Dell make-to-stock retail channel). Dell designs, assembles, tests, packages and ships online or phone orders in a process known today as "mass customization." It is still push to a degree, but the boundary is farther upstream, starting with procurement.

Even in that case, critical suppliers operate satellite facilities near Dell manufacturing sites. Those facilities are designed to be flexible and agile to support just-in-time production and can ship product within two hours of request.

The push/pull boundary is critical to making strategic network design decisions with a global view of how supply chain processes relate to customer orders. For example, if Dell did not closely collaborate with its

supply partners located nearby, with the uncertainty of customer orders, it would have to carry a large amount of inventory. And, without flexible manufacturing processes, Dell wouldn't be able to fulfill customer demand on time and at a reasonable cost.

A Strategy That Fits

A flexible and responsive supply chain strategy is a better fit with Dell's competitive strategy of providing a large variety of customized products rather than one focused largely on cost. Furthermore, if it weren't for strategic sourcing, Dell would be much less successful as it works closely with suppliers and shares design and production processes while providing them with cost, timing, and quality targets.

The relative proportion of push and pull processes also impacts supply chain cost and performance. When deciding between push vs. pull, companies look at the tradeoffs between the cost of inventory, resources, and fulfillment cycle time. Factors to consider are:

- Demand variability and product lifecycle. Mature products with stable demand can be more easily handled with push. Products in introductory or growth stages, with high forecast variability, lend themselves toward a pull strategy.
- **Product variability.** Similar to the Dell example, products that are customizable or make to order are a better fit for pull strategies, while products that are standardized are a better fit for push strategies.
- **Setup times.** While Lean is all about reducing changeover times, it's not always possible to do so. In those cases, push might make sense. If you can get relatively fast changeovers, then pull is the answer.
- **Lead times.** Manufacturing and distribution facility capabilities, size, and location relative to the customer may drive lead times. In general, the longer the lead time required to fulfill orders, the better fit for a push system.

Many companies have more than one supply chain based on products, customers, distribution channels, and other factors. It's a worthwhile effort to consider the push/pull boundaries you have in place today and where they should be to best serve your customers and shareholders in the future.









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E-COMMERCE

BY NICK JENSEN

Senior Director of Fulfillment, ShipBob njensen@shipbob.com | 844-474-4726

5 Steps to an Efficient Fulfillment Center

o capitalize on the e-commerce boom, fulfillment centers—which are different from distribution centers in that they do not distribute inventory but fulfill customer demand in either B2B or B2C businesses—need to scale and react nimbly and agily. Fulfillment centers must also be as efficient as possible to maximize customer satisfaction.

Fulfillment centers do not generate profit—they are pure cost centers, where transportation and labor are the two biggest expenses that degrade margins. Thus, the best way to drive down fulfillment costs is to improve the margin.

Here are five considerations for improving fulfillment center efficiency.

- 1. Planning is critical, but only works when you have accurate data. It's critical to understand historical performance by line item (pick, pack, support labor spend) and utilize this past data to gauge capacity for the hour/day/week. Without those KPIs, you can't make educated decisions about process path flow and order fulfillment.
- 2. What goes in must come out (and vice versa). Pick staffing should be equal to pack (input vs. output). Measure the pack queue's health in minutes of work available, with 30 minutes the lower control limit and 60 minutes the upper control limit. This ensures that unplanned labor moves, which are significant efficiency drains, are minimal,

and pick and pack can continue picking and packing. If the process fails and they run out of work, you lose efficiency and must make up that cost somewhere else.

3. There are only three ways to increase output. When efficiency is lost, production (output) is lost against planned capacity. The only ways to increase output are by adding labor hours (hiring/overtime), increasing working hours per day (overtime/adding or adjusting shift schedules), and processing faster.

Processing faster is the most appealing solution, but is also the most complex and mismanaged. Before you can innovate, it's key to nail the basics of shift planning and execution. Only then can you find gains by keeping your workers in work and managing down time. Look to your workers for ideas to improve your operation; who knows better about what is broken in your process than the people performing those functions daily?

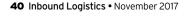
4. Forecast accuracy is difficult to achieve. Significant variability in work available can cause inefficiencies and

capacity failures. Depending on your operation size and variability level, you need to plan for your forecast's lower and upper limit.

For example, if your daily/weekly forecast accuracy ranges between +/-10 percent, you should have a plan to solve for 90 percent and 110 percent of your forecast that your operations team can seamlessly execute. Solutions include temporary staffing, variable shift schedules, part-time schedules, voluntary time off, and investment in projects for longer-term strategic operations. Ultimately, you must have a plan for the variance and hold your teams accountable to execute accordingly.

5. Always optimize for shipments with an understanding of what adds value and what doesn't. Think of every process that does not produce shipment volume as an indirect cost. Report productivity based only on order volume (the true measure of production and cost). And optimize to either produce more or spend less on non-producing process paths that simply support order shipping.

To drive fulfillment center efficiency, you have to master the basics. Spending less to produce more affords you the ability to innovate by freeing up capital that you would otherwise spend on production. Efficiency breeds innovation, which breeds efficiency; this is a cycle that can continue to evolve.





















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VIEWPOINT

BY BARIS TASDELEN

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Using KPIs to Optimize Transportation Data

ata drives sound business decisions. The same principle applies to decisions surrounding transportation issues. Specifically for parcel, the best data source is carrier invoices, supplemented by the manifest (TMS) data where possible.

Your carriers should make invoice data easily available, especially if you use a third-party vendor to review and pay your invoices. They should be able to provide you with customizable reports that will either directly offer the key performance indicators (KPIs) you are looking for or the raw data necessary to develop them in house.

Here's a list of five KPIs you can utilize to improve supply chain visibility, cut transportation costs, and enhance parcel shipping service.

1. Ground/air ratio: Are you using the right service? Just because a package has to get to the customer in one or two days, it doesn't mean you have to use next-day or two-day service.

Both national carriers offer ground services with next-day guaranteed delivery, and for ZIP codes that fall within the one-day "ground footprint," the packages will get there in one day, for less money.

You can request the transit times for your specific origins from your carrier rep, and make sure that the packages in the one or two transit day areas are routed correctly via ground service. To determine potential savings that you can achieve via service level optimization, you or your data vendor can run a report or perform analyses.

Using Key
Performance
Indicators can help
improve supply
chain visibility, cut
transportation costs,
and enhance parcel
shipping service.

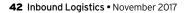
2. Average zone: Are your distribution centers (DCs) located in the best area? Are you using the right DCs to ship to your customers? Whether you are operating from a single distribution center or six, examining data is crucial to determine if your destination(s) are aligned with the correct origins.

The goal should be to reduce the zones for your packages, as longer zones mean longer transit times and higher costs. High zones could be the result of system (WMS/OMS) issues, sub-optimal DC location, or inventory that is not where it is supposed to be

3. Packages per shipment: Do you have multiple packages going to the same destination? Whether you are shipping to your stores or major customers, if you are sending multiple packages in the same shipment, you can achieve savings by using hundredweight (HWT) pricing. HWT pricing will rate a shipment at 200 pounds, rather than 10 packages of 20 pounds each. This can reduce the cost by as much as 50 percent.

There is a point, however, where less-than-truckload (LTL) gets more economical than parcel HWT. To determine if that is true, you can view your data and then collect the packages that are being delivered to the same address on the same day and rate it with alternative scenarios as single packages, with HWT pricing, or with LTL pricing.

If there is enough volume, you need to negotiate the terms with your carrier, because HWT pricing has to be set up for each shipper account.







4. Accessorial spend compared to total spend. Accessorial spend can be as much as 30 percent of the total shipping cost. The most troubling part of that statement is that most high-cost accessorials come as a surprise to the shipper.

Charges such as address correction, additional handling, and large package surcharges are unplanned costs that impact your bottom line. By keeping a close eye on your data, you can eliminate some of these charges.

5. Year-over-year spend increase (not the announced general rate increase, but the real one). Every year, carriers announce a General Rate Increase (GRI) in the 4- to 6-percent range. The problem with

rate increases is that they are never linear, and almost always, the total impact to the shipper is higher than the announced amount.

Measuring the True Impact of General Rate Increases

For example, in 2017, FedEx reduced its dimensional factor to 139, which is driving up billable weights and transportation costs. By looking at the dimensions in the data, you can predict how much this new rule change is costing you.

Also, by tracking your average cost per shipment over time, you can see the GRI's actual impact, as well as other changes in your contract, network, or shipping policies.

Having the KPI data available to

make informed decisions will be necessary. If you expect to make continuous improvements over time within your organization, don't overlook KPI data. KPIs can help justify pricey and timely improvements by providing data to show how improvements could outweigh costs.

Not only that, KPIs will allow your management to make informed, datadriven decisions on how the overall organization is performing.

These are only a few of the many possible KPIs you can draw from your parcel data. For each organization, the priorities and the key performance indicators will vary. The goal is to identify the ones that matter to your business goals and track them regularly.

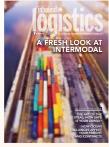


 $ICC = \frac{C + T + I + W + X + (S - R1) + (O - R2)}{Annual # Material Cast}$

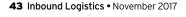
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THE AMAZON EFFECT: No Longer a Phantom Menace

by Sandra Beckwith

A long time ago, in a galaxy far, far away, online shoppers didn't mind waiting for their deliveries. But the force awakened once Amazon raised the delivery bar with Prime Now same-day service.

Other e-commerce retailers large and small began hustling to retain online customers by matching that delivery window. Available in 32 major metropolitan markets across the country, Prime Now provides free sameday scheduled delivery for Prime account holders and one-hour delivery in certain cities for \$7.99.

"Retailers are all facing consumer impatience now," says Kevin Ledversis, sales director for Newcastle Systems, a Massachusetts manufacturer of mobile workstations that help improve warehouse productivity. "Consumers are looking for that immediate delivery option. This is especially true with millennials, who have grown up ordering on phones. They expect speed."

In fact, the predominant same-day delivery shopper is likely to be an urban male millennial, according to Business Insider Intelligence research.









To speed delivery to e-commerce customers in New York City, Walmart acquired Parcel, a technology based, same-day and last-mile transportation company offering evening deliveries and custom text message notifications.

Even so, it will take time before same-day delivery is an option for most online shoppers. While 41 percent of shoppers want "hyper local "—same day or even one-hour delivery—just 24 percent of retailers offer it, reveals Temando research. And consumer demand isn't enough to make it happen. E-tailers need three Ps and one D to provide same-day delivery options:

- Population density
- Proximity of goods to customers
- **P**rofitability
- Delivery systems

Retailers are targeting regions with enough population density near distribution centers to make the effort feasible—and they're redefining "distribution center." Major chain retailers including Macy's and Office Depot are using their stores as fulfillment centers in certain markets, offering same-day delivery on e-commerce orders when the purchased item is in stock at the shopper's local store.

≫ May the Visibility Be With You May the Visibility Be With You May the Visibility Be May the Visibilit

Turning stores into micro-logistics centers introduces an assortment of challenges, however. "Retailers need the technology that gives full visibility of their inventory so that when they say a product is available for same-day delivery, it actually is," says Daphne Carmeli, founder and president of Deliv, a company that provides delivery services to retailers in 33 major markets.

Then there's the issue of what can be delivered profitably. Retailers need to assess what does and doesn't make sense to deliver quickly. "The shipping cost might be the tipping point that drops

the product below the line of what makes sense, but the other issue is the margin associated with specific products. There's no way you can deliver a \$3 USB stick the same day profitably," says Toby Brzoznowski, co-founder and executive vice president of LLamasoft, a supply chain design software company in Ann Arbor, Michigan.

What's more, stores aren't designed as fulfillment centers. "This is the next major battleground," says Scott Deutsch, president of North America for E+P, a supply chain software provider. "How do you improve the back of the store operation so it becomes more like a mini-warehouse?"

"Omnichannel technology lets us turn any existing facility into a shipping location," says Sean McCartney, executive vice president of operations services at Radial, a Pennsylvania commerce technologies and operations provider that works with about 23,000 stores nationwide.

"Stores use our order management system to set rules that determine what gets shipped from where," he adds. "The rules are usually optimized around the customer experience, cost, or efficiency, but the sweet spot is all three."

Brzoznowski cautions against moving into store fulfillment too quickly, though. "Some retailers go too far out of the gate too quickly," he says. "There's additional overhead and inventory to carry. Factor in markdowns on fashion and you might quickly see a diminishing return on that investment."

With locations within 10 miles of 90 percent of the U.S. population, Walmart is one chain that's well positioned to leverage its stores as fulfillment centers

for same-day delivery. The second-largest online retailer behind Amazon is currently providing same-day delivery of groceries in six markets—San Jose, Denver, Phoenix, Tampa, Orlando, and Dallas.

"We wanted to test what would happen when we gave customers a choice between same-day delivery and pick-up—would they gravitate toward one or the other?" says Ravi Jariwala, Walmart spokesperson. "We learned that they like being able to choose the option that fits their lifestyle at the moment."

HighJump, a Minneapolis-based supply chain management software provider, works with grocery stores to streamline in-store order picking for both same-day delivery and pick up. The store's staff "shoppers" use HighJump software to consolidate order picks for multiple customer orders while keeping the orders separate in their carts.

"The software is mapped out according to the store's physical layout to make shoppers as efficient as possible," says Jon Kuerschner, vice president of product management and consulting.

This kind of efficiency helps reduce the retailer's cost for same-day service. "With traditional grocery shopping, the customer provides nearly all the labor in the process. With delivery, the retailer has to absorb all the cost," says Bruce Welty, founder of Locus Robotics, the e-commerce fulfillment robotics arm of Quiet Logistics in Massachusetts.

For same-day delivery to be profitable for other types of retailers, warehouses require maximum efficiency, as well. "Retailers have to keep finding ways to take costs out because same-day delivery introduces costs to absorb," Welty says.



In addition to strategies already in place to fill orders quickly, omnichannel retailers are leveraging distribution center equipment and technology that's designed to improve productivity and minimize waste when filling orders.

Robotics from companies such as Locus Robotics, which claims to cut picking costs in half, as well as iWARE-HOUSE fleet telematics from forklift manufacturer Raymond Corporation optimize vehicle warehouse movements. Newcastle System's mobile workstations can power a laptop, barcode and label printer, scanner, and scale as needed, eliminating the need for employees to walk back and forth to the hardware.

The Path to the Dock Side

On the road, E+P's Truck Driver software transfers orders recorded at the warehouse onto an app on the driver's mobile device in real time. The app automatically guides the user through the route and documents delivery progress, sending all information back to the warehouse management system. The company's fleet dimensioning technology is also used with crowdsourced delivery vehicles, making sure that an available driver's vehicle has room for the package being picked up and delivered.

Last-mile delivery—getting an order to a customer within a designated delivery window—isn't one size fits all. "In this omnichannel world, you need an optimized hybrid approach based on cost and order requirements," says Deutsch.

While Walmart is testing having employees drop off packages on their way home from work, it also recently acquired Parcel, a same-day and last-mile delivery company serving New York City. Crowdsourcing works for Deliv, the market leader in same-day delivery services. Drivers who range from soccer moms to Uber and Lyft contractors learn about delivery gigs through a number of platforms.

Who's paying for these delivery services? It depends who you ask.

When Locus Robotics' parent company tested different price points for same-day delivery, the only option shoppers selected was "free." "Customers



E-commerce fulfillment solutions such as this Locus Robotics robot enable retailers to ship orders fast.

love same-day delivery as long as they don't have to pay for it," says Welty.

According to the Temando study, 38 percent of the shoppers surveyed who wanted to receive an item on the same day were willing to pay for that speed.

Deliv's research shows that free delivery can make sense (and cents) for retailers. When one national retailer eliminated its same-day delivery charge during a promotional period, it enjoyed a 600-percent increase in delivery volume. Free delivery boosted both conversion rates and basket values, as well.

Most Deliv retailers charge \$5 for delivery, but about 25 percent offer it free—particularly above a specified dollar value threshold. The percentage of retailers absorbing the delivery cost is increasing, too.

E-tailers looking to keep up with Amazon need to assess their service coverage, determine which products they can deliver same day profitably, establish speedy and cost-effective fulfillment systems, and tap into or create a delivery network.

Then, Carmeli says, it comes down to in-store execution. "Retailers need to make sure an order is ready to be picked up when they say it will be ready."

And they could consider buying a few drones.

A New Hope for Malls

The demand for same-day delivery of e-commerce orders is forcing thirdparty logistics providers and others to expand their fulfillment center networks so they have more facilities near large population centers.

This, in turn, is driving conversations about converting abandoned shopping malls into distribution centers.

"It's a timely topic," says Ben Conwell, senior managing director of the e-commerce and electronic fulfillment specialty practice group at real estate services firm Cushman & Wakefield.

The firm predicts that within the next five to 10 years, about 25 percent of the country's malls will fail and become prime candidates for redevelopment. Within about five years, Conwell says, the industry should start to see some of them converted to distribution centers.

Why not sooner? There are currently four obstacles:

- 1. The properties are zoned for retail, so zoning will have to be changed.
- **2.** Mall neighbors often fight redevelopment because of fears there will be a steady stream of tractor trailer traffic.
- **3.** While local officials see their malls dying, they cling to hope that the situation will change and retailers will continue to generate significant sales tax income.
- **4.** Restricted use agreements with other retailers still operating at the mall need to be addressed.

Still, Conwell says, a number of fundamentals make the properties appropriate for new life as distribution centers.

"There's proximity to a significant population and frontage to existing roadway infrastructure," he says. "It's inevitable-demand will continue to push the value of those assets."



Transportation Trends:

TURN UP THE AIR

The airfreight market has been flying high, but headwinds persist.

By Karen M. Kroll

t's boom times for air freight," says David Oxley, senior economist with the International Air Transport Association (IATA). The volume of freight tons jumped about 11 percent from 52.2 million in 2015 to 58.2 million in 2017, according to IATA's 2017 Mid-Year Report. While the industry struggled during and immediately after the financial crisis that started in 2007, it has been going strong for the past 12 to 18 months, Oxley notes.

Over the past year or so, several major airfreight companies have purchased additional aircraft. In June 2017, UPS announced it would convert three Boeing 767 passenger planes to freighters. This followed the company's 2016 plans to purchase 14 Boeing freighters, with an option to purchase 14 more. In 2015, FedEx said it would acquire 50 Boeing aircraft. And in 2016, Amazon divulged it was leasing 40 planes from Atlas Air.







By weight, less than one percent of goods travel via air freight. However, these products account for about 35 percent of the value of goods.

The air cargo industry can be split into two broad categories, explains Alain Decors, managing director with Luxembourg-based consulting firm Airfreight Development Worldwide. Express companies or integrators tend to handle all aspects of air freight, including the responsibilities, such as preparing goods to move through customs, that typically fall to freight forwarders and cargo handlers. They often invest substantially in the equipment needed to rapidly unload, sort, and reload their planes.

In contrast, traditional airlines that handle both cargo and passengers often engage outside firms, such as freight forwarders, to handle these roles. The challenge is that both organizations want to maximize their profits, Decors notes. As a result, the model tends to be less competitive.

Moreover, by focusing on cargo shipments, integrators often can offer greater flexibility than passenger lines. "Integrators are not contingent on passenger routes," says Marc Scott., PhD, and assistant professor of supply chain management at the University of Arkansas. Most also are better equipped to transport specialized, larger types of cargo, such as industrial machinery.

Growing Economies Drive Air Freight

Two significant airfreight drivers are strengthening cross-border trade and growing economies. In April 2017, the World Trade Organization (WTO) forecast growth of 2.4 percent in world merchandise trade volume, up from 1.3 percent in 2016. The WTO did, however, note that uncertainty about economic and policy developments meant growth could range from 1.8 to 3.6 percent.

Increasingly, global supply chains and markets also are behind the uptick in air freight. Global exports of manufactured goods rose from \$8 trillion in 2006 to \$11 trillion in 2016, according to the WTO. In emerging markets, air cargo often is the only reliable method to connect customers with goods, says Tim Reiff, director of air services with C.H. Robinson, a third-party



To better serve airfreight shippers, FedEx Express is modernizing its fleet. It recently made a firm purchase of 30 ATR 72-600F aircraft with options to purchase up to 20 additional planes.

logistics and supply chain management provider based in Eden Prairie, Minnesota.

"We've noticed an uptick and see expanding opportunities in several trade lanes, such as Asia and the United States, and Asia and Europe," says Stuart Lund, vice president of air capacity and procurement with Atlanta-based UPS.

Africa, although it must work through many challenges, likely will be an upcoming growth area. "Africa is a sleeping giant," notes Cathy Roberson, founder and head analyst with Logistics Trends & Insights, based in Atlanta. As Africa's middle class continues to grow, its consumption likely will rise.

Air cargo can be critical for food, pharmaceuticals, and other products that must be transported in temperature-controlled containers over long distances, Roberson says. For instance, many food items are imported to countries in the Middle East, often using air freight.

E-commerce as a Driver

E-commerce, and the growing expectation of both consumers and businesses for ever-shorter delivery times, also has prompted greater interest in air transportation. "The marked shift in customer expectations can only be achieved through air freight," says Toby Brzoznowski, cofounder and executive vice president of LLamasoft, a supply chain management solutions provider based in Ann Arbor, Michigan. Even many companies that don't use air freight as their traditional transport mode are turning to it more often for non-emergency shipments.

Air transport also allows companies to quickly respond to demand fluctuations. "Air has shorter lead times than other modes," Reiff says.

Indeed, air cargo has been key to

businesses that operate with a "fast fashion model," and need to quickly move goods to markets around the world, says Doug Fisher, assistant professor and director of the Center for Supply Chain Management at Marquette University, Milwaukee. "It doesn't require the nine-month lead time needed for a cargo load of jeans, for example."

Advancing software enables shippers to more closely examine the trade-off between transportation and inventory costs. Brzoznowski notes that ocean shipments often take anywhere from 45 to 90 days. Port disruptions can add to the uncertainty and variability. Shippers who are unable to confidently predict when their goods will arrive often maintain higher inventory levels. In some scenarios, the working capital tied up in inventory eclipses the expense of air freight.

Fuel costs, which have moderated over the past few years, also likely have convinced more companies to shift to air cargo. IATA forecast 2017 fuel prices of \$64 per barrel. That's up from 2016 levels of \$52.1, but far below the 2012 levels, which topped \$120 per barrel.

Challenges Ahead

While the airfreight industry has enjoyed several strong years, challenges lie ahead. "All good things tend to come to an end," Oxley says, adding that he has noticed signs of moderation in the cyclical upturn.

For one thing, the growth of fragmented, global supply chains appears to be slowing. Over the past several decades, many companies established supply chains that were scattered across the globe. They'd often rely on air freight to deliver materials to their far-flung locations.

More recently, however, companies have begun to pull back. Reshoring—the



practice of bringing manufacturing back to the United States from overseas—has added 400,000 direct manufacturing jobs in the United States since 2010, according to Boston Consulting Group.

As companies substitute technology, such as 3D printing, for labor, they have less reason to chase low-cost labor countries, Fisher says. Instead, they can manufacture close to their customer base, cutting their need for air transport.

Faster Than Air?

Moreover, other modes of travel promise to eat into air cargo's speed advantage. For instance, Hyperloop One, a privately held company that aims to move people and freight at speeds topping 600 miles per hour, plans to be operating several routes by 2021.

Driverless trucks, which will be able to run 24/7 so long as they're fueled, also likely will cut into the domestic air cargo market. While noting the regulatory structure and insurance companies still need to catch up to the technology, "it's just a matter of time until we see that kind of capacity going on major lanes," Fisher says.

Another challenge involves the multiple Pre-loading Advance Cargo Information (PLACI) initiatives in pilot stages around the world. These include the Air Cargo Advanced Screening (ACAS) in the United States, and Preloading Consignment Information for Secure Entry (PRECISE) in the European Union.

"Although the initiatives have an important role to play in the safety and security of air transport, multiple systems might cause complications," Dubkov says. Some may view the multiple projects as "an endless exercise," he adds.

To meet the challenges confronting the air cargo industry, carriers need to provide their customers with real-time data and analytics, so they can make informed decisions and better manage their supply chains, Scott says. At the same time, shippers need to analyze the trade-offs between different modes of transportation.

"Today's industry requires a flexible, adaptable supply chain," Reiff says. "Incorporating the right air shipping strategy into a multi-modal, global supply chain will not only help reduce costs, but it will also promote efficiency."

Deciding Between Modes

Air travel almost always is the most expensive transport mode. So, how can shippers determine when it will pay to ship products through air rather than ground or ocean? Here are four factors to consider:

- 1. What's the value of the product? It generally makes sense to use air freight for high-value items, such as electronics, and more quickly capture the sales dollars they'll generate.
- 2. How heavy are the items? Many airfreight charges are based on the weight of the products, says Paul Lewis, vice president of policy with the Eno Center for Transportation, a Washington DC-based independent think tank.
- 3. How time-sensitive are the products? If they need to get to market quickly or they might not sell—say, Halloween costumes—the expense of air freight is more easily justified. Similarly, if the failure of components to arrive on schedule will halt a manufacturing process, air freight might be warranted, says Dan Boaz, president and chief executive officer with Airfreight.com, a provider of premium freight services.
- 4. How robust is the inventory management system? A system that provides accurate, updated visibility can allow shippers to choose slower transportation methods and then closely monitor their goods' progress.



Air transport may eventually lose its speed advantage to Hyperloop One, which claims it will move cargo at airline speeds at a fraction of the cost.





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| FORWARDING | |

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How to Transform the Supply Chain for Omnichannel Retailing



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How to Turn Data Into Supply Chain Action



To keep ahead of today's complex, fast-moving supply chain, shippers need tools that enable them to make smart, data-driven decisions and be proactive, not just reactive. Fortunately, transportation management technology now provides organizations with greater visibility and control over their supply chain than ever before.

But generating data simply for data's sake doesn't eliminate waste, reduce costs, or improve service. The systems must be in place to give managers the insights behind the data. The most effective transportation management systems (TMS) are available as customized solutions to incorporate a shipper's unique industry and supply chain requirements. A one-size-fits-all solution usually doesn't fit everyone very well.

Today's advanced transportation management systems incorporate a comprehensive, graphical view of a company's entire transportation network and dynamic dashboards of KPIs, while also incorporating relevant information from outside sources, including weather and traffic alerts. This "control tower" approach to transportation management gives shippers an all-encompassing, real-time view of their entire supply chain.

Along with capabilities that allow shippers to plan, execute, and track shipments, today's TMS also provides the business intelligence, reporting, and analytics needed to make strategic, data-driven decisions.

These tools deliver insights faster than ever. Historically, reports for shippers would take quite a bit of time to pull, and the end result would be made up of Excel spreadsheets. And in some cases, the data would be out of date and no longer relevant. A flow of real-time data from connected trucks, trailers, and other assets means shippers have a real picture of what's going on out in the field rather than waiting for phone or fax updates. They can react in real time to natural disasters or volume increases associated with seasonality demands.

However, with a new TMS, databases are available specifically for shippers to access customized reports, when and where they need them. These "self-service" reports are much more engaging and can drill down into specific shipments, regions, lanes, carriers, and more by accessing data warehouses via a cloud-based TMS. Using data visualization, managers can focus on critical targets and avoid time-consuming data exercises.

Here are four questions shippers should answer when selecting a TMS solution offered by a 3PL to assess how it will help create actionable intelligence.

- 1. IS THE REPORTING DETAILED ENOUGH? For root cause analysis, insist on reporting that includes carrier performance, and pickup and delivery times to track service and cost fluctuations.
- 2. DOES IT OFFER REAL-TIME VISIBILITY? The ability to view shipments in real time and incorporate weather and traffic alerts from the web allows shippers to make more informed decisions.
- 3. CAN YOU USE THE DATA TO ANTICIPATE PROBLEMS? A TMS can help "predict the future" to address disruptions before or as they happen to maintain customer service. In the case of unavoidable delays such as due to weather, the system can notify shippers so they can adjust operations accordingly.
- 4. DOES IT OFFER CONTROL TOWER **FUNCTIONALITY?** Control tower functionality enables shippers to quickly view real-time info on all affected shipments and then take action, such as reassigning the shipment to another carrier, rerouting a shipment, changing the destination or continuing on, and can recalculate the new ETA and provide detailed, accurate updates to key personnel within their own organization as well as customers.







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TRANSPLACE



How to Transform The Supply Chain for **Omnichannel Retailing**

As retailers transform their market strategy to embrace new e-commerce and marketplace channels, their supply chain must be ready to pivot as well. Some brick-and-mortar merchants are adding online sales, direct and through partners, while some online retailers are investing in physical stores. Either way, e-commerce will continue to play a larger role in retailers' strategies.

Omnichannel is not just a logistics decision. Re-orienting the company to embrace omnichannel retailing requires integration with IT, sales and marketing, and procurement as well as transportation.

No matter which direction a company is headed, it's easier to ramp up new channels by partnering with trusted resources such as 3PLs to create a branded experience across the array of customer touchpoints.

Developing the supporting infrastructure for a new channel may be

difficult. If a retailer adds a channel, such as selling through an online marketplace or its own direct-toconsumer site, it may make sense to segment that channel with a unique supplier or fulfillment process. A shift to direct-toconsumer selling may require adding parcel



carriers to the transportation mix.

A few strategic decisions will have wide-ranging implications. For instance, the retailer must decide whether out-of-stock items will still be available on the website and mobile app for ordering. There are pros and cons to each option. But it's a strategic decision that cascades through marketing, sales, customer service, logistics, procurement and so on. It requires integration with the website and the ERP and WMS. Connecting store inventories with the online presence is another challenge. Customers may opt to purchase locally if they need the item in a hurry or want to check it out in person.

To begin—or speed up—a pivot to omnichannel retailing, organizations should assess what they can do in-house, and which areas require outside help. Some 3PLs offer comprehensive e-commerce assistance, including website integration and digital marketing.

Given the reports of the retail apocalypse, it may be easy to think retail is dying. It's not. It's just evolving rapidly. The retailers that survive will be those who can ride the wave of change.

AN OMNICHANNEL SUPPLY CHAIN

- 1. OMNICHANNEL IS CROSS-FUNCTIONAL. It's an enterprise-wide transformational strategy, not a supply chain initiative. IT will require involvement from all quarters including IT, procurement, marketing, and sales as well as logistics.
- 2. INTERNATIONAL PRESENCE. Consider international sales as a new channel; few U.S. brands have a large presence in foreign lands. Those that do have developed a cachet that plays well. Keep in mind that international sales require capabilities in translations, currency conversions, and trade regulations.
- 3. INCLUDE RETURNS IN PLANNING. Some omnichannel transformation strategies start with the returns process. That approach allows you to work your way up the chain from the consumer to the distribution center. Return rates are higher for some sectors than others; apparel and shoes typically are sent back most often as people order multiple sizes to try on.
- 4. ADAPT MEASUREMENTS TO CULTURE. Tie online sales to store performance to engage the retail culture. Using stores as buy-online-pick-up-in-store points leverages the physical locations for upselling opportunities and expands the logistics footprint.
- 5. UPGRADE DATA EXCHANGE. Migrate from outdated EDI processes and adopt APIs and web services to transfer key product and logistics information. EDI is too slow to support the real-time decision-making required to support omnichannel retailing.



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How to Manage Your Carrier Relationships After the ELD Mandate

4 WAYS TO MANAGE CAPACITY POST-ELD

As the mid-December deadline approaches for the implementation of the Electronic Logging Device (ELD) mandate for most commercial truck drivers, shippers are, not surprisingly, worried about how it will affect their supply chain capacity.

Under Federal Motor Carrier Safety Administration rules, most trucks built after 2000 must be equipped with an ELD starting Dec. 18, 2017. Fleets already using older electronic onboard recorders are grandfathered in until December 2019.

Early estimates say that the ELD mandate will effectively shrink the nation's trucking fleet for the first several months. How much depends on how many owner/operators decide to exit the industry altogether.

In the short term, rates are predicted to rise 10 to 20 percent in 2018. It won't be possible anymore for a lone wolf trucker to grab a load that risks running afoul of the hours-of-service regulations for the right price. Shipments in the 500- to 700-mile range that could be run in one day with just minor log book violations may now take two days, requiring higher rates and extra holding costs. Some shippers may have to boost inventories to cover slower deliveries. The impact may be felt most in traffic-congested regions such as the New York-Boston corridor or Los Angeles where driving a few miles can take hours.

Over time, the industry will recover and should actually be more efficient as fleets incorporate the data available from the ELDs into their operations for better utilization of drivers and equipment.

Shippers and receivers can help with the transition and beyond by understanding the limitations that drivers face. Drivers may pull into a yard to drop a load and be nearly out of time. If the clock expires, they are legally unable to drive the truck. Drivers will no longer be able to wait for a dock "off the clock." Minutes or hours spent waiting will count toward the driver's duty time. Truck fleets may charge higher rates or penalties to shippers that take excessive time to load or unload. Keep in mind that under the ELD regulations, shippers may not coerce drivers into violating the regulations, and those that do face stiff fines.



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1. DEVELOP DEEPER CARRIER RELATIONSHIPS.

Discuss plans with your 3PLs and carriers now; don't wait until the shortage hits. Some shippers will only work with compliant fleets to avoid having loads caught up in enforcement actions. Consider alternatives such as LTL and intermodal.

- 2. USE A TMS FOR LOAD TENDERING. With a TMS, select carriers for certain lanes and use sequential tendering to find the best service in tight capacity conditions.
- 3. COMMIT LOADS BASED ON CAPACITY, NOT RATES. Work with carriers on commitments of capacity rather than lowest rates for as much capacity as is available. Then tap the open market for the remainder of the loads. Without commitments you could run short on capacity at critical times.

4. PRIORITIZE TRUCK LOADING/UNLOADING.

Shipper/receiver docks will play a big role in keeping drivers on time. With truck idle time being captured by ELDs, it will quickly become clear who the culprits are in making drivers wait. Shippers should stick to appointment times, preload trailers, and take other steps to make drivers more efficient.



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With an emphasis on speed and service, Rickenbacker International Airport helps shippers move freight with speed, care, and efficiency.

hen companies opt to use air to transport cargo, they are making a strong commitment to having speed become a supply chain priority. However, a key, often-overlooked characteristic of air cargo can undermine that core benefit: the potential challenges of moving freight quickly once it has reached the ground, says David Whitaker, chief commercial officer for the Columbus Regional Airport Authority, which runs Rickenbacker International Airport (LCK), Columbus, Ohio's freighter hub for the eastern United States.

The issue, Whitaker explains, is a myriad of challenges at traditional gateway airports, where cargo flights contend for space and resources with passenger flights. The result is that "you can fly anywhere in the world in one day, yet sometimes it takes days to recover air cargo once it gets to the airport," he says. Among the key factors causing this are trucking access, congestion, and the long trips from ramps to warehouses.

Rickenbacker is different, Whitaker says. The airport primarily serves cargo flights, allowing it to focus on the needs and challenges of the parties involved in that field. This gives Rickenbacker a speed and service advantage.

"Rickenbacker is a very big airport but it has been set up in a way to conveniently serve the air cargo industry," Whitaker says. "The airplane is parked within a few short meters of the cargo building, which is connected to the roadway system. Your air cargo is off the plane, into the building, and going toward its destination often within a couple of hours after arriving. That's simply not what happens elsewhere."

Speed and Service: A Winning Combination

The industry is rapidly taking notice. Total cargo at Rickenbacker has increased 28 percent in 2017, and the airport has moved 81,000 metric tons in total aboard freighters through September. Whitaker says the momentum spurring Rickenbacker's growth can be traced to its dedication to the basic tenets of speed and service.

"We move your air cargo the way it should be moved," Whitaker says.

"Once it gets on the ground here at Rickenbacker, it's not going to be lost, delayed, or caught up in congestion."

RCS Logistics, a Hong Kong-based logistics provider, operates three weekly charters into LCK, servicing most of the United States within two days; it also has operated 27 additional charters in 2017. RCS maintains a 48,000-square-foot bonded container freight station on the ramp at Rickenbacker. The company distributes air freight from Rickenbacker to as far away as New York to the east and Nevada to the west. Rickenbacker's tender times—the recovery time for cargo after it lands—is a boost for RCS Logistics' daily operations.

"LCK is a great fit for our customer base because we can deliver faster from the central location of Columbus, Ohio," says Brian Heaney, president

and chief operating officer of RCS Logistics. "LCK allows us to increase our speed because of the ease of doing business in the port. We have been able to decrease our transit times because of our charters and on-tarmac container freight stations.

"The major challenges that we face in other ports is the time it takes from wheels down to cargo availability," he adds. "The airline to warehouse transfer is normally eight to 24 hours. In LCK, it happens in less than three hours. We have freight arriving and out to distribution centers in less than nine hours."

Speed is not solely about how quickly the planes or trucks travel, of course. Columbus' simple geographic advantage adds to Rickenbacker's appeal, Heaney says.

"Location, location, location," Heaney says. "On top of the ease of doing business in LCK and not having to deal with the challenges at bigger airports, the pure location of the airport makes it that much better. Seventy-five percent of our customers' distribution centers are one to two days away via truck. LCK is all about going faster and speed to market. That is what our customers want."

A Partner, Not Merely a Provider

Whitaker says Rickenbacker's staff prides itself on being more than just infrastructure providers—they are also service providers who bring together stakeholders such as airlines, freight forwarders, terminal operators, trucking operators, and others to pursue common goals.

Staff and other resources are dedicated to working with clients on various aspects of the air cargo supply chain, helping to inform them and link them with suitable partners. As neutral agents, Rickenbacker staff can facilitate speed and service through these partnerships. They also can create a tight-knit air cargo community within the airport, even among competitors and differing links in the air cargo supply chain.

"We are deeply engaged with all facets of the industry," Whitaker says.



Rickenbacker International Airport distinguishes itself from other gateway airports by moving air cargo swiftly once it reaches the ground. Shippers that opt for Rickenbacker can expect much lower tender times than at most other gateway facilities.

"We like to say that we're dot connectors. As an airport, we don't make, ship, or fly anything, but we're important dot connectors and very engaged with every step of the process. It's one way we can differentiate ourselves from other airports."

LCK staff provides contacts and resources for shippers and forwarders, such as identifying viable trucking solutions and providing contacts for booking freight on LCK partner airlines. They even help with catering and crew arrangements so the air carriers can operate more confidently and comfortably.

In addition, LCK manages the ground handling for all freight cargo, encompassing tasks such as ramp marshalling, loading and unloading, working with customs to clear cargo and crew, hotel accommodations, and transportation.

"A business unit of the airport authority does whatever is needed from a ramp perspective, and that has been a key part of our success," Whitaker says. "We don't rely on a third party to provide these services. We own the equipment and provide those services. We also derive revenue from that, which helps us be self-sustaining as an airport."

Collaboration in the Warehouse

A prominent example of innovative partnerships at work at Rickenbacker is its Air Cargo Terminal No. 5, which was constructed through a public-private partnership with input from major stakeholders. The terminal houses airlines, forwarders, and associated

supporting agents, all under one roof with the terminal operator. The model has proven critical to boosting Rickenbacker's speed and ability to be responsive to industry customers.

In most similarly sized air cargo warehouses, freight forwarders handle their own cargo in the building and the facility is divided into spaces for each forwarder with heavy walls, gates, and fencing. "It impacts the efficiency of the way the building can function," Whitaker says.

At Air Cargo Terminal No. 5, only the warehouse operator moves cargo in the building and the freight forwarders do not move their own cargo. There are no dividers, making for more ease and efficiency of movement. In fact, a common space inside the building with a kitchenette and conference room encourages collaboration among the various industry players, while large plate glass windows nearby let everyone observe the aircraft operations in progress.

"It's an unusual setup, but they all work well together in there," Whitaker says. "It's unique to have all the players in the air cargo business collaborating within a building like that."

Whitaker says Rickenbacker staff members are hustling to improve awareness of the advantages the airport offers. In part, that means convincing shippers, forwarders, livestock exporters, industry players, trucking companies, and others who are accustomed to larger gateway airports to take a look at Rickenbacker and the distinctive benefits it offers to customers.



At Rickenbacker International Airport, airport personnel manage all the ground handling of cargo rather than outsourcing it to a third party. That helps the airport ensure proper management of that critical component of the process.

"We know that we're not the only airport in the eastern half of the United States and people are invested elsewhere, but we want them to give it a try," Whitaker says. "Perhaps we can do some smaller shipments with them to see if that works, and then perhaps move toward making it a larger operation. We think they'll want to once they see the operation up close."

Rickenbacker's vocal backers are not limited to airport staff. "We have the benefit of shippers in our market saying, 'Listen, I have a preference for Columbus,'" Whitaker says. "It is very powerful for us, and we are deeply grateful for the engagement of the shipper community, especially those that have really leveraged their business around Rickenbacker. It has been very helpful."

RCS Logistics opened an office in the Columbus area eight years ago to serve local customers. In the years since, according to Heaney, the company has seen "nothing short of an explosion of customers" in Columbus through its charters from Hong Kong and its container freight station. "We have been able to draw in a whole new group of customers that see the value of a great airport," Heaney says.

"To me, LCK was a blank canvas and an untapped airport," he says. "We saw the potential and invested heavily in the market. We now employ more than 40 people and have moved millions of kilos of freight through the port."

Keeping It Real

Whitaker believes LCK has thrived, benefiting itself, its customers, and the region, because it has concentrated on being a freighter-dedicated hub and never chasing unrealistic expectations. The airport's operators look for opportunities to innovate, but never without a purpose.

Perhaps most importantly, airport operators have engaged with stakeholders and sought to learn how they can best serve them. "Airports must be willing to step out of their role as landlord or construction manager," Whitaker says. "They need to engage in the entire air cargo supply chain that touches them."

Globally Inspired Growth

"International" is a crucial word for Rickenbacker International Airport in Columbus, Ohio. International cargo accounted for nearly half of the air cargo handled through September 2017, and has grown a staggering 69 percent so far this year.

"We're making great progress in that regard, because we were not an exporting location about a year and a half ago," says David Whitaker, chief commercial officer for the Columbus Regional Airport Authority, which runs Rickenbacker.

Whitaker says Rickenbacker is relatively new as a gateway airport and the bulk of the cargo increase can be attributed to new capacity or newly used capacity.

"In some cases, airlines have been using Columbus in conjunction with another city to achieve their export balance before departing for their home country," Whitaker says. "But we're seeing an increasing reliance on Columbus as the sole U.S. stop for exports."

Rickenbacker has carved out a place for itself in the livestock shipping field, becoming an authorized Port of Embarkation for the export of animals. "It's very valuable,"

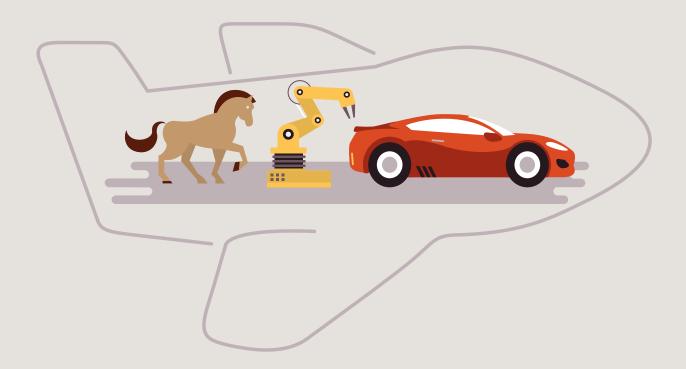
Whitaker says. "Horses provide export weight and a different commodity. There's a real niche industry in the movement of livestock globally, and we've been able to capitalize on it."

Whitaker says Rickenbacker's staff occasionally runs into misconceptions about Columbus as a gateway location, sometimes from potential clients accustomed to large airports that share acreage with passenger plane operations. They assume Columbus would cost them more, but Whitaker says Rickenbacker has lower fees than its competitors.

Sometimes potential clients have doubts about the swiftness of the ground operation and overall infrastructure at the airport before they see it. Whitaker encourages potential clients to visit and see the airport in action so that they can appreciate its strengths up close, especially the swift movement of cargo once it lands on the ground.

"The airport is capable of much larger numbers, and we're going to try to get there," Whitaker says.





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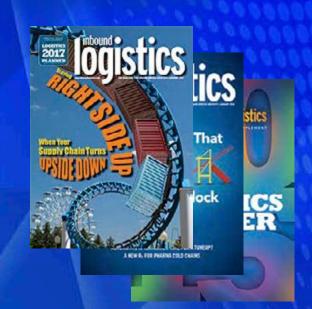


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[INPRACTICE]



Casebook by Merrill Douglas

New Pallet Program Better by Half

he Jel Sert Company makes fun foods—freezable novelties, beverage mixes, and instant puddings. Around six years ago, retailers started asking Jel Sert to deliver mixed stockkeeping units (SKUs)—say, a colorful blend of Fla-Vor-Ice or different varieties of Otter Pops—on half-sized pallets. Those loaded pallets would go straight to store aisles as eye-catching displays.

But the only half-pallets Jel Sert could buy at the time were of uneven quality and caused a lot of product damage in transit.

Then CHEP, Jel Sert's preferred pallet provider, developed a new half-pallet and offered it to Jel Sert as part of its pallet pooling program. This new solution saved money for Jel Sert and cut complaints about product damage to zero.

Founded in 1926, Jel Sert is a

third-generation family business based in West Chicago, Illinois. From its first gelatin-based dessert, the company's product line has expanded to include treats such as MONDO Squeezers, Royal and My-T-Fine puddings, and Wyler's beverages and freeze pops.

Jel Sert makes all of its products in West Chicago and distributes to retailers across the United States from three distribution centers in that suburb.

The company loads product onto about 300,000 pallets annually, says Mike Martinez, vice president of customer service and distribution at Jel Sert. The majority of those platforms are 48-inch by 40-inch

Fun food manufacturer
Jel Sert finds pooled halfpallets provide full supply
chain benefits.









Jel Sert, which makes Otter Pops and other fun foods, switched to CHEP's half-pallets to reduce costs and product damage.

pallets provided by CHEP, which is based in Alpharetta, Georgia.

Retailers started asking for "promotions"—mixed product assortments on half-pallets, used as free-standing displays—because they wanted to more efficiently use their selling space. "Retailers want to be able to display more SKUs in a smaller footprint in their stores," Martinez says.

Martinez mentioned this request at a monthly meeting with his sales representative from CHEP. Unfortunately, at that time, the pallet supplier didn't make a half-pallet. So Jel Sert found two companies that could build half-pallets to the company's specifications, using recycled materials.

Those recycled pallets weren't cheap,

Martinez says. But the biggest problem they posed was that the top deck board—the upper surface, on which product sits—was inconsistent in coverage. The boards that made up the top deck had wider spaces between them on some pallets than on others.

"Inconsistent quality on pallets can contribute to product damage," Martinez says. For example, if the spaces are too wide, cartons may sag while in transit. "Our customers were complaining," he adds.

Compounding the problem was the fact that no single supplier could build enough half-pallets to meet Jel Sert's need. "We had to go to a second supplier, and those inconsistencies just doubled," Martinez says.

The relationship also created waste. Jel Sert bought pallets from the two suppliers, shipped them to retailers, and never saw them again. So Jel Sert had to keep ordering more and more pallets.

Push for Promotions

Jel Sert was not the only CHEP customer coming under pressure to provide half-pallets for store promotions. "Stores are shrinking," says Brandon D'Emidio, director of product management and innovation at CHEP North America. "Retailers want to have additional SKUs in a shrinking store. Products on 'promotions' continue to grow, while labor costs continue to rise." Given those trends, CHEP started to explore how to help customers with store fulfillment strategies, including a 40-inch by 24-inch half-pallet.

As a global company, CHEP provides pallets, containers, and reusable plastic crates through a pooling network that delivers conveyances for loading, picks them up when they're unloaded, performs maintenance and repairs, and then puts them back in circulation. At the time its North American business was laying plans to add half-pallets to its portfolio, CHEP already provided similar units in Australia and Europe. The company applied lessons learned in those markets to the new half-pallets, D'Emidio says.

For example, CHEP made sure to provide plenty of top deck coverage to eliminate the risk of damage. It also chose a novel strategy for binding the pallet layers together. "Our pallet has metal brackets instead of wooden blocks," D'Emidio says. That allows a forklift or pallet jack to take hold of the pallet on the 24-inch side as well as on the 40-inch side, making it easier to maneuver the unit through narrow aisles or doors.

The CHEP pallet also features three runners at the bottom, rather than a full bottom deck, providing ease and speed when lifting it on the 40-inch side.

"Just picking up a custom-sized



pallet can be difficult," says Martinez. "Engineering contributes to a pallet that will be damaged less."

In addition, CHEP designed its half-pallet to provide 87-percent coverage on the top deck. "And it has a lot of coverage around the perimeter, where the outsides of the cases will be," D'Emidio says. This improved support is another design feature that reduces product damage.

CHEP also made a special effort to enforce standards in the platform's construction. "When customers order a CHEP platform for their promotions, they know what they're going to get," D'Emidio says. The same goes for the retailers who receive the promotions. "That standardization helps to drive efficiency throughout the supply chain,"he adds.

CHEP was ready to start delivering the new half-pallets in 2014, but Jel Sert wasn't ready to take them just yet. The company was in the midst of its peak season, which runs from roughly March through August. "To execute a program of this magnitude in the middle of busy season would be difficult," Martinez says. So CHEP waited until 2015 to make the transition to the new half-pallets.

Before committing to switch, Jel Sert had to verify that CHEP's solution represented an improvement. "For us, the question was, 'Can you meet our demand with your supply? Can you get to a pricing point that will make it favorable for Jel Sert, versus the old way we were doing it?" Martinez says.

Taste Test

The company started small, with one major retail customer. "We did a trial load, just to get customer feedback," Martinez says. "It was positive, and that was all we needed to hear." Jel Sert then made the switch to CHEP's half-pallets for all its store promotions.

That was the end of product damage on half-pallets. Jel Sert has never tracked data on customer complaints



CHEP's reusable pooled half-pallets, used instead of custom-built, single-use pallets, helped Jel Sert cut carbon emissions in its supply chain.

about pallets, but Martinez estimates that in the past, the company received about 10 per season. "Since we've been on the CHEP pallet program, we've received zero," he says.

Martinez also thinks displaying Jel Sert's products on a better-looking half-pallet helps to boost sales. "Having a presentation-style product leads to a better overall look," he says.

A nice side benefit is that using CHEP's pooled pallets, rather than the custom-built, single-use pallets, has helped Jel Sert cut carbon emissions in its supply chain. "We perform lifecycle analyses on the pallets to determine our environmental footprint, and we benchmark that against the recycled pallet," D'Emidio says. "Since companies are able to reuse our pallets, the carbon footprint is a lot smaller."

By adopting the pooled half-pallets, Jel Sert avoids releasing 100,000 pounds of carbon dioxide into the atmosphere each year and takes nearly 130,000 pounds out of the solid waste stream, according to CHEP.

"A lot of recycled half-pallets are used and shipped and never seen again," D'Emidio says. "They might end up in a landfill, or who knows where. Ours can continue to be reused."

Since Jel Sert adopted the new

half-pallets, other manufacturers have embraced them as well. "We continue to see strong growth for this platform in both the United States and Canada," D'Emidio says.

Jel Sert has no current plans to expand its use of CHEP's half-pallet. But Martinez is happy with the solution as it stands. "We had a need in the market," he says, "and CHEP helped solve it."

PALLET PROGRAM PLUSES

By adopting pooled half-pallets from CHEP, fun foods maker Jel Sert was able to:

- Eliminate product damage.
- Avoid releasing 100,000 pounds of carbon dioxide into the atmosphere each year.
- Take nearly 130,000 pounds out of the solid waste stream.
- Improve product presentation in retail stores.



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SUMMARY: Global trade is a fast, complex environment that many organizations

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SUMMARY: Adopting just-in-time (JIT) inventory principles has enhanced

production operational efficiency, cost effectiveness, and customer responsiveness for many organizations. But the real key to success is providing a solution that applies JIT principles to the specifics of each client's industry and accurately tracks and delivers on-time performance, regardless of industry conditions, leading to the greatest

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TITLE: Think Like a Big Shipper

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DHL Supply Chain

TITLE: The Supply Chain Talent Shortage: From Gap to Crisis

DOWNLOAD: http://bit.lv/DHLSupplvChain

SUMMARY: The supply chain sector is facing a talent shortage that is guickly

escalating from a gap to a potential crisis. In some industries, the talent gap could threaten the ability of companies to compete on the global stage. What are organizations doing to address the problem? DHL Supply Chain surveyed 350+ supply chain and operations professionals

around the world to find out.

J.B. Hunt

TITLE: A Leaner Supply Chain

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SUMMARY: Supply chains are inherently complex and interconnected. And the greater the number of products produced or destinations for goods, the greater the potential for complexity and the greater the necessity for systematic, enterprise-level approaches to preserve value for the company at every link in the supply chain. Download this whitepaper to discover how a more integrated supply chain can contribute value to

your company.

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TITLE: Winning the Battle for eCommerce Last-Mile Excellence

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SUMMARY: Amazon is driving consumer delivery expectations. Their delivery services are not just the gold standard, they are the standard by which other retailers are judged. Amazon is the reason people now think 2-day-and-under delivery times are no longer expedited service – they are expected service. So what's a retailer not named Amazon to do? Make your last mile your best mile. Last-mile service is truly the makeor-break part of a transaction. When a customer is either pleased with delivery services or disappointed if something goes wrong, the appreciation (or the blame) goes not to the logistics provider but to the retailer. There are a host of options and strategies to improve lastmile service, but to make your last-mile service a true competitive advantage, you'll need two things: technology and the right logistics provider. Find out more by downloading this free whitepaper.

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TITLE: Purchasing and Implementing a Yard Management System

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SUMMARY: You will find everything you need to know about purchasing and

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PRODUCTSPOTLIGHT

FORKLIFTS

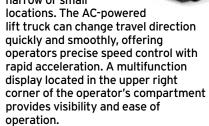


Raymond 8250 AC Walkie Pallet Truck: Powered by a lithium-ion power pack from battery maker Brammo, Raymond Corporation's 8250 instantaneously sends and receives communication between truck and battery pack. An onboard battery management system lets the user schedule charge times, notifies the user when charging is required, and monitors charging and usage.



Driven by Balyo, Yale MPEO80-VG Robotic Lift Truck: Yale Materials Handling Corporation's new robotic end rider lift truck picks up, transports, and drops off pallets anywhere on the floor using infrastructure-free navigation technology to map and guide itself. Without the need for tape, wire, or other additional infrastructure, the Yale robotic end rider lift truck adjusts to changing layout configurations. It can also switch to manual mode to help warehouses adapt to unexpected demands.

Hyster Electric Forklift J30-40XNT: The compact design and tight turning radius of this threewheel lift truck allow it to maneuver narrow or small





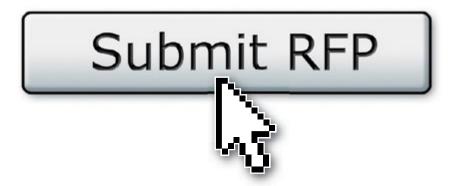
Jungheinrich EFG 213-220: This new series of electric counterbalance trucks can increase productivity by running two shifts on one battery charge. Jungheinrich offers to cover the cost of a new battery if these lift trucks don't run two full shifts without stopping to charge the battery for five years. The vehicles also have curve control. which automatically reduces speed while turning corners, helping to ensure control over loads. The full-suspension seat helps cushion the operator from vibrations and bumps when traveling over uneven surfaces.

Mitsubishi FB16PNT-FB20PNT: This three-wheel electric counterbalance forklift series features a heavyduty AC drive and hydraulic motors. If the seat belt is not buckled, the Integrated Presence System locks out the lift truck's powered hydraulic functions and travel, sounds a warning buzzer, and illuminates a seat belt icon on the display. Electric power steering increases energy efficiency and operator comfort. Its wet disc brakes are durable and perform in wet or corrosive conditions.





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INBRIEF

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//Services//

UPS and **Polonez Parcel Service**,

a consolidated shipping service into Poland and other countries, reached an agreement that provides Polonez Parcel Service customers in the United States a parcel drop-off point at more than 8,700 UPS Access Points including 5,000 The UPS Store locations. Polonez Parcel Service customers can transact business online at www.polonezparcelservice.com and then drop off their pre-paid shipments at UPS Access Point locations throughout the United States.

Averitt Express expanded its direct less-than-truckload (LTL) network to provide full state coverage of Illinois and additional points in Wisconsin. The company's new distribution center in Peoria. Illinois, which is located adjacent to the General Wayne A. Downing Peoria International Airport, made the expansion possible. The facility, which has eight dock doors and nearly 14,000 square feet of warehouse space, serves as a distribution hub for Averitt's LTL and truckload network that includes more than 100 locations around the country.

iGPS Logistics, a plastic pallet pooling service provider, partnered with **PURE Bioscience**, creator of a patented, non-toxic silver dihydrogen citrate antimicrobial, to provide pallet shippers with a sanitization solution. EPA-registered PURE Hard Surface is mist-spray applied to the surfaces of plastic pallets inside a trailer to quickly eliminate microorganisms. Test results showed bacteria counts cut by more than 96 percent. The new PURE pallet sanitization solution helps food shippers comply with the Food Safety Modernization Act requirement.



//Transportation//

Trinity Logistics USA and Etihad Airways are partnering to operate a 777F freighter between Vietnam's Hanoi International Airport and Ohio's Rickenbacker International Airport. Along with their twiceweekly direct freighter service between Colombo, Sri Lanka and Rickenbacker International, this latest service provides shippers three weekly flights from Asia to the U.S. East Coast, with Columbus, Ohio, as the first airport of entry.

Hamburg Süd launched a weekly, direct service from Peru's Port of Paita to Philadelphia, a seasonal route that will run from November 2017 to February 2018, in time for South America's main mango and grape season. With a transit time of nine days, the service provides exporters in Peru and importers in the United States with a service designed for these perishable cargoes. Connections to the U.S. Gulf Coast and other ports along the U.S. East Coast, as well as to Europe, are also available through Hamburg Süd's network via a transshipment hub in Cartagena.

► Hutt Logistics and Hutt Trucking.

a transportation, logistics, and warehousing services provider, expanded its Hudsonville, Michigan, warehouse. The 81,000-square-foot addition to the existing facility more than doubles the company's total deep-frozen food storage capacity. Hutt



can now store more than 19,000 pallets at its Hudsonville location. Hutt stores and transports food products requiring deep frozen (up to -20 degrees Fahrenheit) capability and process control.

AirBridgeCargo Airlines (ABC) expanded options for European shippers from Munich to Asia via its hub in Moscow, connecting the city with 12 destinations in six Asian countries within a 48-hour delivery time, including cargo handling. One of ABC's 18 Boeing 747 freighters operates the service. In addition to export shipments, AirBridgeCargo aims to bolster import volumes to Europe via Munich, providing trucking operations across Europe in cooperation with its motor carrier partners.

All-cargo airline **CargoLogicAir** (CLA) launched a weekly service connecting London and Frankfurt with Dubai and Hong Kong.
Departing from London every Saturday, CLA's new Boeing 747-8 Freighter offers shippers more than 148 tons of cargo capacity per week from Europe to the Middle East and Hong Kong, and a direct Hong Kong-London Stansted service that arrives back into the UK every Monday. This service also incorporates stops in Houston, Frankfurt, and Abu Dhabi.



Panasonic System Communications Company
of North America, a provider of mobile computing
solutions, unveiled Panasonic P.180 service, an end-toend connectivity platform that offers LTE connectivity
worldwide for Panasonic Toughbook users. With a
globe-spanning network, pricing predictability, and no
roaming fees, the Panasonic P.180 platform supports
scalable and global supply chains.



INBRIEF

➤ Ocean carrier **World Direct Shipping** will add a weekly sailing to Central Florida's Port Manatee from the Port of Tuxpan, in the north-central portion of Veracruz, Mexico, to augment the service it has operated each week since November 2014 to Port Manatee from Coatzacoalcos, in southern Veracruz. The first sailing from Tuxpan is scheduled for January 2018. World Direct Shipping plans to shift the 430-foot-long *M/V Queen B (pictured)* to the Tuxpan service from the Coatzacoalcos service while deploying the 413-footlong *M/V Pafilia* on the Coatzacoalcos route.



//Technology//

MercuryGate International, a

transportation management system (TMS) provider, launched MercuryMaestro, a business intelligence platform designed to enhance the value and visual presentation of data captured within MercuryGate's TMS solutions. MercuryMaestro works with the MercuryGate TMS and provides data structures, data integration, reports, dashboards, and exception management. The new platform lets shippers identify data relationships and trends.

Manhattan Associates unveiled new additions to its transportation management system (TMS) to allow shippers to utilize the transportation market's sharing economy. Part of the Manhattan Active Supply Chain Solution suite, Manhattan's TMS 2017 allows shippers to add capacity, improve information flow across extended distribution networks, and obtain real-time visibility into in-transit inventory. Manhattan also enhanced its readyto-ship functionality for inbound transportation flows and expanded support for LTL shippers with density-based rating.

Elemica, a business network for process industries, and DHL Resilience360, a cloud-based supply chain risk management platform, partnered to build a solution providing insight into risk events and their impact on supply chains. Elemica's Risk Solution applies DHL Resilience360's risk management capability, correlating incidents with the user's assets. orders, and shipments to track the impact of disruptive events. Supply chain trading partners connect across Elemica's business network to gain visibility into potential disruptions.

Roambee, an Internet of Things (IoT) logistics and asset monitoring company, unveiled the BeeBeacon, a mobile monitoring technology that combines BLE/Wi-Fi/GSM hotspots and beacons to provide visibility into package-level delivery and asset management. BeeBeacons attach to individual packages and assets, transmitting location and condition to Bees hotspots in transit or in storage, and in real time through Bluetooth Low Energy (BLE) protocol. The Bees send realtime data to Roambee's Honeycomb IoT API platform.

The PalletPal Order Picker Load Leveler from ergonomic materials handling equipment maker Southworth
Products has a universal design that allows it to attach to any standard order picking lift. It uses a calibrated spring mechanism to automatically adjust the height of a pallet load so employees can load or offload items at a comfortable working height. A built-in turntable allows operators to spin the load if needed.





Doint venture partners Virgin Atlantic Cargo and Delta Cargo opened Pharma Zone at their joint facility in London Heathrow. The new Pharma Zone supports the growing volumes of temperature-controlled healthcare and life science products transported by both airlines and enhances their ability to meet the strict quality and service requirements of pharmaceutical companies and their freight forwarding partners. Opened on Oct. 2, 2017, the Pharma Zone, at their Cargo Point facility, is a fully segregated area dedicated to handling and storing pharmaceutical shipments within a strictly regulated temperature environment with active container storage.

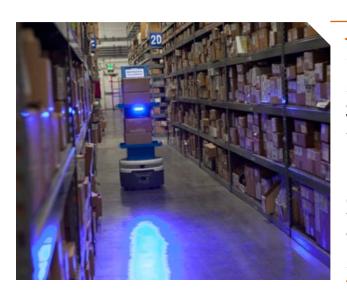


//Products//

MELO LX offers a health management solution for truck drivers with its integrated wearable smart device. A built-in panic button with GPS enables truck drivers to quickly transmit data to emergency dispatch services when they have a health concern. Upgraded features to be launched by the end of 2017 include flu detection, blood alcohol, and non-invasive blood glucose monitoring for diabetics.

Softbox Systems, a provider of cold chain packaging for the pharmaceutical industry, introduced AEON, a new line of reusable highperformance parcel shippers. The shippers use vacuum insulation panels and phase change modules to enable more than 96 hours of temperature stability and longterm repeatable performance in reuse. Initially, AEON will be sold in three payload sizes for 36 to 46 degrees F temperature control. The company will launch additional temperature ranges in December 2017.

Newcastle Systems, a provider of mobile-powered workplace solutions for warehouses, manufacturing facilities, and retail floors, launched the Atlas Series Mobile Dimensioning Workstations to enable quick and accurate dimensioning. Each workstation is equipped with a QubeVu DimStation, which provides dimensioning on virtually any shape in less than one second. The dimensioning stations allow warehouses and distribution centers to manage extreme volumes quickly and accurately.



■ 3PL RK Logistics Group opened a 50,000-square-foot distribution center in Fremont, California. The new warehouse provides specialized inventory management, fulfillment, and expedited plant delivery services for Silicon Valley companies, and increases RK's network to 14 supply chain operations in the greater San Francisco Bay Area. Services at the new facility include secured warehousing and inventory management for parts, components, and finished goods; inventory optimization, order picking, and fulfillment; and light manufacturing such as preassembly and kitting. The site also supports RK's specialized transportation programs for sequencing parts into Lean production lines.



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Focus: Analyzing supply chain challenges and prospects; trends in reverse logistics; supply chain collaboration; transportation contract law; real-time visibility in LTL transportation

CONFERENCES

JAN 22-26, 2018 Orlando, Fla. PEX Network

OPEX Week: Business Transformation World Summit 2018

opexweek.com

AUDIENCE: Operational excellence and business transformation executives Focus: Building an operational excellence program from the ground up; shifting focus from cost stripping to customercentric growth opportunities; leveraging continuous improvement to boost customer experience; integrating global manufacturing, supply chain, and operational assets

JAN 29-31, 2018 Dallas, Texas National Industrial Transportation League (NITL)

2018 Transportation Summit

bit.ly/NITL2018

AUDIENCE: Logistics professionals **FOCUS:** Navigating the intergenerational workforce; rail, ocean, and highway freight transportation issues; trends in rail and ocean transportation; highway transportation update; energy outlook

FEB 4–6, 2018 Sea Island, Ga. Georgia Ports Authority

Georgia Foreign Trade Conference

gaforeign trade.com

AUDIENCE: Senior-level shippers, maritime executives, senior managers, and decision-makers

Focus: Challenges facing shippers, carriers, ports, terminals, and the maritime community; legislation and new technologies impacting global trade; current and future market conditions and growth opportunities

FEB 6-8, 2018 Vancouver, Canada Informa Exhibitions

Cargo Logistics Canada

cargologisticscanada.com

AUDIENCE: Stakeholders in import, export, and domestic supply chains **Focus:** Air cargo trends; forecast for ocean carriers and Canadian/North American supply chains; technology and the supply chain workforce; future of the retail supply chain; the practical and ethical dimensions of the autonomous supply chain

FEB 25–28, 2018 Phoenix, Ariz. Retail Industry Leaders Association (RILA)

Retail Supply Chain Conference 2018

bit.ly/RILA2018

AUDIENCE: Stakeholders in the retail supply chain; logistics, supply chain, and distribution professionals

Focus: Keeping pace with a changing retail landscape; omnichannel fulfillment trends; reinventing the retail supply chain; the supply chain's key role in serving customers; leveraging analytics for supply chain advantage

MAR 6-8, 2018 Atlanta, Ga. Worldwide Business Research

LogiMed US 2018

logimedusa.wbresearch.com/about-us

AUDIENCE: Supply chain vice presidents and directors from medical device and diagnostics manufacturers **EAGLIS.** Post practices to improve the

Focus: Best practices to improve the end-to-end supply chain and minimize cost in today's healthcare environment; cost optimizing the supply chain; advancing the global supply chain; how manufacturers and providers are working together to advance the supply chain and improve patient care

MAR 11-13, 2018 Tampa, Fla.

International Warehouse Logistics Association (IWLA)

2018 IWLA Convention & Expo

bit.ly/IWLA2018

AUDIENCE: Warehouse logistics stakeholders

Focus: Motivating employees for continued growth; effective warehousing strategies; the latest in warehousing innovation; warehouse law; how to recruit, train, and retain today's workforce; optimizing efficiencies to meet operations challenges

MAR 26–28, 2018 Orlando, Fla. Express Carriers Association (ECA)

22nd Annual MarketPlace 2018

expresscarriers.org/marketplace

AUDIENCE: Supply chain and logistics professionals

Focus: Forming logistics partnerships; finding regional and specialized carriers that can provide a viable supply chain alternative; new technologies and transportation services

APR 9–12, 2018 Atlanta, Ga.

MODEX 2018

modexshow.com

AUDIENCE: Manufacturing and supply chain professionals
FOCUS: How Industry 4.0 and the Industrial Internet of Things are impacting supply chains; exploring the latest equipment and technology solutions from more than 850 providers; futureproofing

APR 18-19, 2018 Atlanta, Ga.

your company's supply chain

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Home Delivery World 2018

bit.ly/homedelivery2018

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THE LAST MILE



U.S. Primed for Amazon HQ

When Amazon announced plans to open a second North American headquarters, economic development groups shifted into overdrive to develop innovative strategies for attracting the mega etailer's revenues and employment opportunities.

Pulling out all the stops

Stonecrest, Georgia's city council voted to de-annex 345 acres of land and call the new area the City of Amazon, if selected.

In Tucson and Southern Arizona, economic development group Sun Corridor sent a gift to attract Amazon's attention: a 21-foot Saguaro cactus (which Amazon donated to the Arizona-Sonora Desert Museum.)

Birmingham, Alabama

installed three massive Amazon delivery boxes around the city and plans to add more boxes.

\$5 billion

Cost to construct and operate the new facility, which will employ as many as 50,000 workers.

Top contenders

Austin, Texas

Denver, Colorado

SOURCES: Moody's Analytics, New York Times Upshot

Only 7 states

don't have a location bidding for Amazon's second headquarters

Amazon's wish list

- Suburban or urban area with more than 1 million people
 - Region that will attract technical talent
- ✓ 30 miles to population center.
 - Within 45 minutes of an international airport
- Not more than 1 to2 miles to major highways and arterial roads
 - At-site access to mass transit



cities and regions submitted a bid to host the new headquarters





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