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FEBRUARY 2020

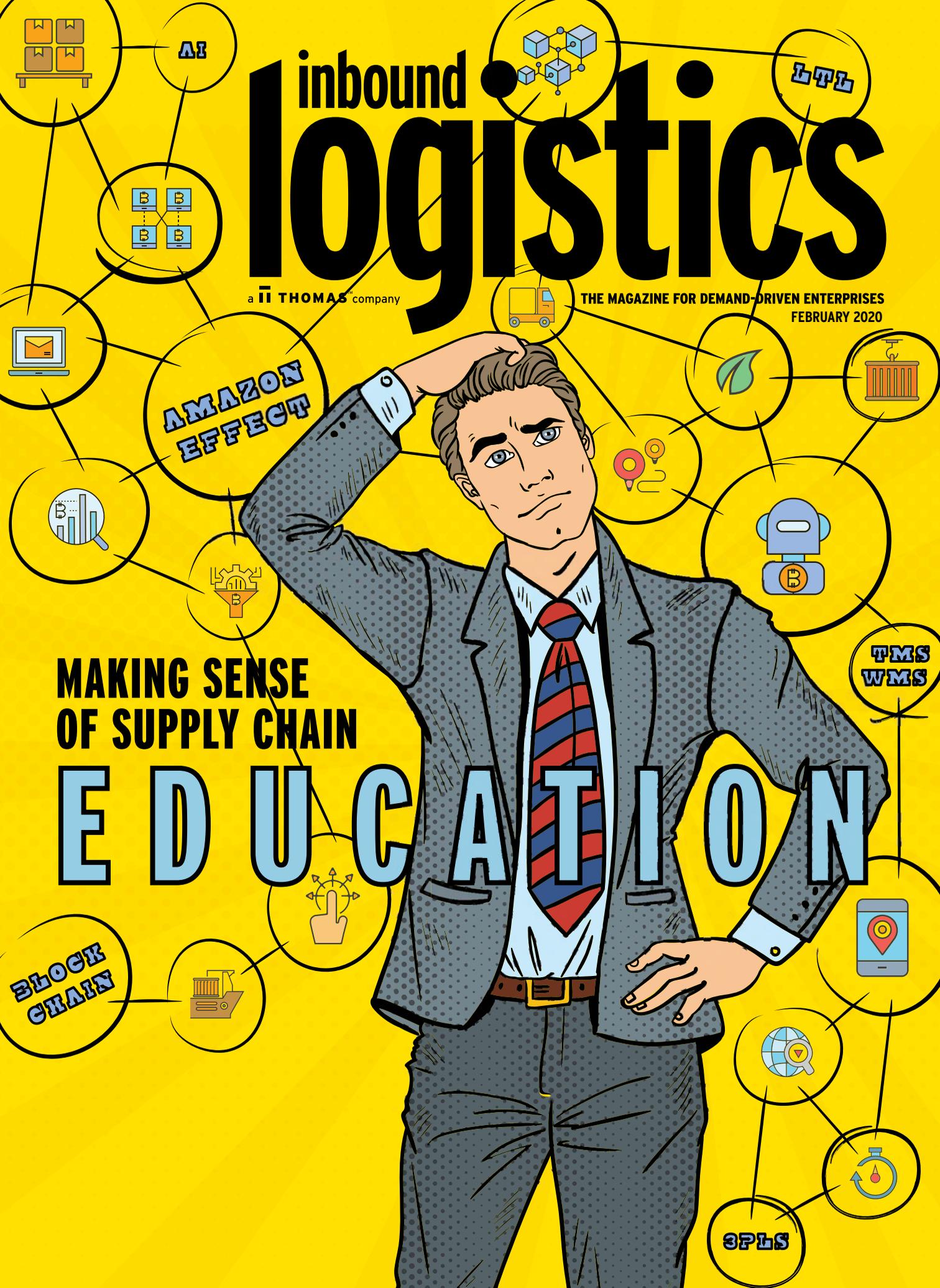
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EDUCATION

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BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION



BRAND ON THE RUN

More Americans trust the **U.S. Postal Service (USPS)** than any other brand, but they trust tech giants Amazon and Google more than teachers, the police, and even Oprah Winfrey.

That's according to a new study from research company Morning Consult, which ranks America's 25 most trusted brands. USPS tops the rankings, with 42% of Americans trusting the postal service "a lot." When asked why they trust USPS, the most common responses are the postal service is "reliable" and "they always deliver the mail no matter the weather."

Overall, the second-most-trusted brand is Amazon, which 38.8% of respondents trust "a lot," while 37.9% say the same about Alphabet-owned Google.

SOURCE: MORNING CONSULT

TOP 10 MOST TRUSTED BRANDS

- **USPS**
- Amazon
- Google
- PayPal
- The Weather Channel
- Chick-fil-A
- Hershey
- UPS
- Cheerios
- M&M's

Working for the Weekend

Want that order delivered on Sunday? Not a problem. Package carriers are turning to weekend deliveries to meet the always-on demands of e-commerce customers.

UPS, for example, plans to more than double its weekend deliveries in 2020 after adding Sunday to its weekend services at the start of the year. The carrier will expand its year-round Saturday service, which started in 2017, to 40 million more U.S. customers.

The average volume of overall U.S. weekend deliveries doubled to 13.5 million units between 2013 and 2019, according to a ShipMatrix report. Online retail sales, which surged 127% to almost \$591 billion in 2019, fueled the jump in weekend deliveries, finds research firm eMarketer.

FILLING THE

FOOD CART

Online food and beverage sales will reach

\$143B

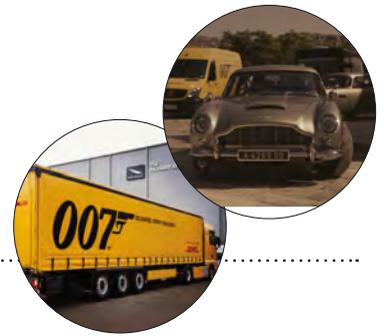
by 2025,

representing

30%

of all omnichannel food and beverage spending.

—FMI and Nielsen predictions



LICENSE TO DELIVER

When shooting the 25th James Bond movie, *No Time To Die*, producers called on **DHL** to move the film and stunt equipment—from the legendary Aston Martin to key props—between film locations in Norway, Jamaica, Italy, and all over the United Kingdom.

This isn't DHL's first starring role in a Bond film. The logistics provider has transported the unique equipment for five James Bond films since *Casino Royale* in 2006.

American Bear-Lines

On November 21, 2019, American Airlines Cargo safely transported 10 brown bears from Argentina's Ezeiza International Airport to Dallas-Fort Worth International Airport. The bears originated from the Mendoza Zoological Park near Buenos Aires, and ended their journey at a wild animal sanctuary in Colorado.

The six female bears traveled in the forward cargo compartment of the aircraft, and the four male bears traveled in the aft cargo compartment of the aircraft—each in their own cage. Cargo space on the airline's B787-8 aircraft was reserved entirely for the bears, and no other cargo was on board.

After arriving in Dallas, American Airlines crew members carefully loaded each bear into a trailer for the duration of the trip to Colorado.



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Surge Protector

Mark Hogan left a successful career in accounting 35 years ago to pursue a job in freight transportation. As CEO of UTXL, he sets the culture for his team and helps shippers weather seasonal volume surges.

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CHECKING IN

STAFF

PUBLISHER Keith G. Biondo
publisher@inboundlogistics.com

EDITOR Felecia J. Stratton
editor@inboundlogistics.com

SENIOR EDITOR Katrina C. Arabe
karabe@inboundlogistics.com

CONTENT MANAGER Jaclyn Ix
jix@inboundlogistics.com

CONTRIBUTING EDITORS
Tamara Chapman • Merrill Douglas
Karen M. Kroll

CREATIVE DIRECTOR Jeof Vita
jvita@inboundlogistics.com

DESIGNER Ellen Swandiak
ellen@inboundlogistics.com

DIGITAL DESIGN MANAGER Amy Palmisano
apalmisano@inboundlogistics.com

PUBLICATION MANAGER Sonia Casiano
sonia@inboundlogistics.com

CIRCULATION DIRECTOR Carolyn Smolin
EDITOR AT LARGE Rena Behar

SALES OFFICES

PUBLISHER: Keith Biondo
212-629-1560 • FAX: 212-629-1565
publisher@inboundlogistics.com

WEST/MIDWEST/SOUTHWEST: Harold L. Leddy
847-446-8764 • FAX: 847-305-5890
haroldleddy@inboundlogistics.com

Marshall Leddy
612-234-7436 • FAX: 847-305-5890
marshall@inboundlogistics.com

SOUTHEAST: Gordon H. Harper
404-229-9691 • FAX: 404-355-2036
south@inboundlogistics.com

MIDWEST/ECONOMIC DEVELOPMENT: Joseph Biondo
516-578-8924
jbiondo@inboundlogistics.com

NORTHEAST: Rachael Sprinz
212-629-1560 • FAX: 212-629-1565
rachael@inboundlogistics.com

MEXICO & LATAM: Guillermo Almazo
212-629-1560
mexico@inboundlogistics.com

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Keith Biondo, Publisher

Robot Return Ratios

More robots are on the way to Walmart, says John Crecelius, the retailer's vice president in charge of in-store innovations. Walmart will add shelf-scanning Bossa Nova robots to 650 more U.S. stores in 2020, for a total of 1,000 or more by the fall. Either Bossa Nova or Simbe robots will be in "the majority" of Walmart's 4,750 U.S. stores one day, predicts David Wilkinson, NCR's senior vice president, global retail, who will maintain the store robots.

Why more robots? Competition from Giant Eagle, Stop & Shop, Schnucks, Albertsons, and, of course, Amazon. Everyone. Anyone?

Stockouts cause walkouts, right? Walmart has to keep in-store customers happy and buying more, and protect a valuable brand by avoiding a stockout reputation on social media. The impact of Walmart's investment in in-store sales to better match shifting currents of demand to supply will be extraordinary.

Walmart does not provide specific data on the benefits of its demand-driven investment in robots, but we can guess what's at stake. Reporting a total 2019 revenue of \$514 billion, Walmart posted phenomenal growth in fiscal year 2019, especially in e-commerce sales—up almost 40% year over year, according to the company. Financial experts estimate Walmart's e-commerce sales at \$28 billion. Back that out of total revenue, and we're left with \$486 billion.

Removing other non-in-store sales leaves \$400 billion or so for all in-store sales. Walmart operates 11,000-plus stores across the world. That amounts to approximately one-tenth of the total retail stores, using Crecelius' 1,000-store target for robots this year. It makes sense to invest in stores that have the highest sales, offering the best robot return on investment. Let's guess that would be approximately 10% of the \$486 billion in sales, or \$48 billion of in-store sales, amped by stockout-reducing robots.

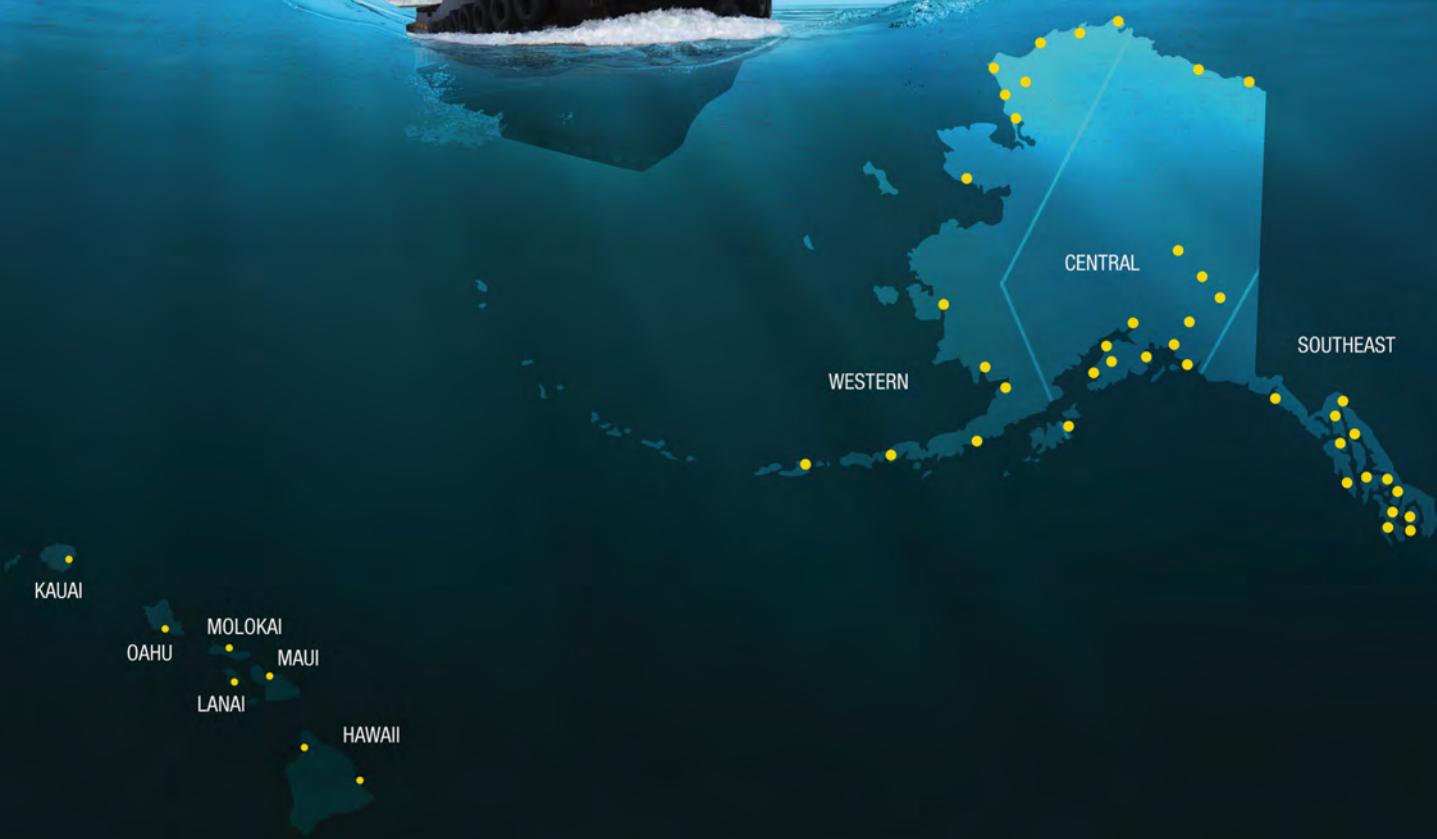
What is the average loss due to stockouts? This one is tougher. Naturally, Walmart provides no information. Retail industry estimates range from 4% to 8.6% in lost sales due to out of stocks (OOS), depending on how good the retailer is at demand management. Walmart is the world's largest retailer, in great part due to its excellent supply chain practices. So let's peg the OOS losses at 3% in these 1,000 soon-to-be roboticized stores, or \$1.5 billion in OOS losses. Let's say the aisle-walking OOS robots are not perfect and only reduce stockouts by 33%.

That's \$500 million in doable stockout savings *per year* in just 1,000 stores. Customer experience and brand protection benefit amounts are anybody's guess. I've run out of space on my back-of-the-napkin calculations.

As Walmart demonstrates, clearly monitoring and better matching demand to supply using robots pays huge dividends. ■

Keith Biondo

Shipping to Alaska or Hawaii?



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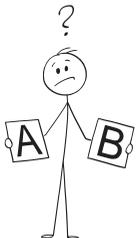
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GOODQUESTION

Readers Weigh In



What supply chain terms do people sometimes confuse?

Carrier vs. broker or 3PL. Shippers often don't recognize the value difference—and motivations—of an asset owner versus a non-asset player. We're measured the same, but when the rubber meets the road, it's the asset provider who has to deliver. The key is to understand where a broker brings value.

Greg Orr
President, CFI

Savings vs. value. Purchase price variance does not always equal savings. To eliminate confusion, establish a comprehensive process that does not end when a new route guide enters the ERP system.

Charlie Midkiff
SVP, Global MLS & Client Services,
Odyssey Logistics & Technology

Demurrage vs. detention.

Demurrage—storage charges that occur when a container is left at the ocean or rail terminal beyond the allotted amount of free time—is different from detention, which refers to storage charges that occur when the shipper or consignee holds on to the ocean carrier equipment beyond the amount of free time allotted by the ocean carrier.

Micah Holst
Chief Commercial Officer,
Ascent Global Logistics

Logistics park vs. logistics center.

Logistics parks use an intermodal hub to anchor distribution centers nearby, usually serving e-commerce and manufacturing locations. Logistics centers offer direct-rail service in multi-customer, multi-commodity business parks.

Chris Gutierrez
President, Kansas City SmartPort

Fulfillment vs. distribution.

Fulfillment centers support a warehousing strategy that meets customer experience requirements and favors speed in a direct-to-consumer model without reducing quality performance historically serviced by retail elements downstream from a DC.

Dr. Robert Berg
Director of Implementations,
Sunland Logistics Solutions

Partial truckload (PTL) vs. less than truckload (LTL). A PTL doesn't take up a full truckload and won't qualify for discounted shipping prices with LTL carriers. Most LTL carriers price loads six pallets or less and with a maximum weight of 8,000 lbs. Anything above that—in pallet count and/or weight, but less than a full truckload—is a partial load.

Farah Ali
CTO and Co-Founder, FreightWeb

Supply chain as an industry vs. a business function/discipline.

If you work in the supply chain department for a shipper (manufacturer, retailer, wholesaler), you work in the business function of supply chain. If you work for a provider of supply chain services/products to shippers, you work in the supply chain industry.

Rodney Apple
Managing Partner,
SCM Talent Group

Strategic planning vs. management.

While each term impacts the function of supply chains, they have different purposes. Planning involves analysis, while management focuses on integration.

Steve Dowse
SVP, Product Management,
Blume Global

Have a great answer to a good question?

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

What supply chain insight would you share with your younger self?

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

A photograph of a man wearing a white hard hat and an orange safety vest over a blue shirt. He is holding a red walkie-talkie to his mouth with his right hand and a clipboard with his left hand. The background is a blurred industrial or construction site.

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[INSIGHT]

DIALOG

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Quick TIP

Invest in software-as-a-service (SaaS) technologies, such as SaaS-based quality management software tools that affordably and efficiently enable manufacturing teams to achieve greater agility when it comes

to creating and managing quality processes throughout the supply chain. Communicate those quality management process enhancements to suppliers to ensure they are upheld at every leg of the supply chain. A brand is only as strong as its weakest supplier.

—Morgan Palmer
CTO, ETQ

have to arrive at the same time, many factors affect forecasting for lead time based on the information given by the supplier. In contrast, Amazon, with its massive warehouses and controls in place, has everything on hand that it is selling. The tracking is simple once it ships to customers.

I find communication starts to become speculative when a supplier runs into a delay, especially when you have to cross foreign lines. And production companies are always looking at the competitive market for pricing. Usually, suppliers are able to sell cheaper by using the cheapest form of shipping, third-rate carriers that don't have the technology to provide tracking, or just give the ship date information without live tracking along the way.

—Sean McNally
Project Manager
The Advance Group



Re. Supply Chain AI: This Time It's for Real

bit.ly/supplychainAIforreal

Because the supply chain has historically been slow to adopt digitization, there simply hasn't been enough collected data for artificial intelligence (AI) and machine learning (ML) algorithms to make reliable suggestions. As we begin to see a more

modern supply chain emerge in 2020, AI and ML algorithms will start to enable a 30,000-foot view of the supply chain and provide valuable insights to ease previously tedious processes like product redirects, new partner and supplier onboarding, order cancellations, oversupply, and more.

—Jorge Rodriguez
SVP, Product Development
Cleo

Re. Three Track-and-Trace Techniques for Better Transparency

bit.ly/track_n_trace

Good article, but it fails to mention the 800-lb. gorilla in the room: the integrity of the information being put into the systems. It mentions that products shipped are passed through different countries, suppliers, and transport companies. But if you're a production company and need parts from China, Korea, and India, and they

Re. What are the 2020 top supply chain buzzwords or phrases?

bit.ly/supplychain2020buzzwords

The following will continue to get ink but they won't be happening in 2020:

- 5G wearables
- Quantum computing
- Self-driving trucks
- A consolidated Internet of Things platform market
- Edge overtaking cloud
- 8K TVs

—ABI Research





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10 TIPS

Streamlining E-Commerce Fulfillment

Creating an efficient e-commerce fulfillment strategy isn't easy. Here are tips every digital retailer needs to know to simplify the process.

1 OFFER SAME-DAY FULFILLMENT ONLY IF YOU CAN ACHIEVE IT.

If you can't deliver same-day fulfillment, offer a different version, such as same-day shipping for orders placed before a cut-off time, or pickup of an online order at a retail location. Make it happen with system-based, accurate inventory levels by location; inventory positioned close to buyers; customized fulfillment that focuses on expedited delivery; and a delivery platform with options that ensure the right product arrives at the right place and at precisely the right minute.

2 OPTIMIZE YOUR ONLINE USER EXPERIENCE.

Ensure that your online store's ordering system is easy to use and customers can quickly find the right products. To achieve the right balance, segment SKUs based on what you think customers will buy versus trying to put too much out there and risking the high costs of inventory duplication.

3 DRIVE DOWN ABANDONMENT RATES BY RE-EVALUATING CART CONVERSION KPIS.

Use data analytics to understand where customers are abandoning and how to improve the closing rate.

4 THINK BIG WHEN SHIPPING HEAVY ITEMS.

Big items require big solutions and customized delivery options. If you regularly ship heavy items, consider supplementing your service offerings with additional options such as in-home delivery or assembly. Customers are often willing to pay an additional fee for better final delivery service.

5 USE SCORECARDS TO TABULATE YOUR WINS AND LOSSES.

Smart companies use daily scorecards to gather, compare, and disseminate meaningful, actionable intelligence. Sending a regular performance monitor to company leaders can identify trouble areas today, and lead to future success.

6 CUT COSTS THROUGH ECONOMICAL TRANSPORTATION.

Use a transportation management system in your fulfillment process to provide insight into the most economical shipping mode, offer product tracking capabilities, and help meet customer service expectations, including same-day and next-day shipping options.

7 KEEP AUDITING FREIGHT BILLS TO LOWER TRANSPORT COSTS.

By using an audit process across all modes, companies know the rate they paid so they can hold carriers accountable for accurate billing. This also enables shippers to identify service gaps and improve their ability to make good decisions going forward.

8 LOOK BEYOND TODAY'S CONFIGURATION PLACEMENT.

By growing outward in ways that benefit the consumer experience—backed by purchasing data and freight cost audits—your company can better prepare to support increased demand and changes in customers' delivery expectations.

9 REACT TO THE CONSUMER, RESPOND TO THE COMPETITION.

As consumers look for more information, be prepared to respond to their demands. Making data such as reviews and shipping information readily available gives consumers confidence in your products. Meanwhile, take note of your competition and prepare to move in directions they aren't—giving you the edge when it comes to winning the customer.

10 DON'T OVERLOOK THE DETAILS TO MAINTAIN SKU-LEVEL PROFITABILITY.

Measure SKU-level profit by analyzing landed costs of inventory items, making sure you are offering the right products at the right price. After all, selling a \$10 item that costs \$12 to produce, market, and ship makes no sense.

SOURCE: RICK BRUMETT, VICE PRESIDENT OF CLIENT SOLUTIONS, TRANSPORTATION INSIGHT



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LEADERSHIP

Conversations with the Captains of Industry

Surge Protector



Mark Hogan
CEO, UTXL

About 35 years ago, Mark Hogan left a successful career as an accountant to pursue a job in freight transportation. He hasn't looked back.

by Merrill Douglas

Mark Hogan had been working in the freight industry for 12 years when he and colleague Paul Schultz decided to start a non-asset-based third-party logistics (3PL) firm. They saw an opportunity to serve shippers who needed extra capacity, outside their core carriers, during seasonal volume surges.

A large shipper might tender loads directly with anywhere from 10 to 100 or more core carriers. "But there's always a portion of their freight for which they need to source capacity from good niche carriers through a reliable 3PL," Hogan says.

With financing from Roger Crouch, founder and chairman of MNX Trucking, Hogan and Schultz founded Kansas City-based UTXL in 1997. Schultz has since retired as president, but Hogan continues to serve as CEO. He recently offered insight into how UTXL operates and how he leads the team.

IL: Why did you move from accounting into the freight industry?

I'd been working for five years as an accountant in the oil and gas industry when I went to Chicago to visit my sister. She introduced me to her friend Beth. That was 35 years ago, and Beth and I have been married for 34 years. In those early days, when I started thinking about moving to Chicago, I realized there's no oil or gas there. I had to find another kind of work.

I'd read John Naisbitt's book *Megatrends*, which describes how economies evolve from agriculture to manufacturing to service businesses. I'd spent summers in high school and college loading and unloading trucks and I enjoyed that. Also, my dad managed a warehouse, so that world was familiar to me. When a friend who worked for an airfreight company at O'Hare Airport mentioned an opening there, I decided to apply. And I got the job.

IL: What did you find so appealing during those summers at the trucking company?

Just when I thought I'd seen everything you could possibly ship in a trailer, I'd open another one and say, "I can't believe it! There's an airplane fuselage!" I enjoyed the work, and the pay was good.

IL: Why do shippers with core carrier programs need a 3PL to help during volume surges?

Back when we started UTXL shippers were trying to reduce their carrier bases and were looking at larger carriers that could handle more lanes, rather than hundreds of small,

niche carriers. Many good carriers got absorbed by the larger ones, and the big carriers grew even bigger. But there were inefficiencies such as a lot of deadhead and driver turnover.

So we started a freight brokerage focused on creating efficiencies through good service and communication between shippers and carriers, especially shippers that tend to shy away from small to mid-sized carriers.

When a shipper needs capacity to help with a surge, they might call on thousands of viable full-truckload carriers. For the recent holiday peak, we used more than 400 team carriers; almost all would be invisible to the large carriers we serve. Because we work with those carriers year round, we have the established relationships and communications channels in place to make their services available to customers who might need them for only a few weeks.

IL: What challenges do the carriers in your network face, and how does UTXL help mitigate those issues?

The biggest challenge is that small to mid-sized carriers depend mostly on brokers for the freight they haul. They need honest communications from those brokers, especially on multistop loads. They need to know that what we tell them is true. We're careful not to overcommit to shippers or carriers. We make sure everybody knows what's expected of each party, including us. And we operate 24/7. Almost half of our freight is booked between 6 p.m. and 6 a.m.

IL: What qualities make you an effective CEO?

While 35 years of experience in freight transportation helps, I also recognize the value of teamwork, documented processes, and automated checks and balances. If something breaks, we can look at it and ask, "Did we not follow the process? Do we need training? Do we need to add a process, or fix one?" All the technology tools we've implemented are designed to enforce people's compliance with our processes. As CEO, my job is to set the culture and make sure everyone operates as a team.

IL: Which business leader inspires you?

Sam Walton, the founder of Walmart. We have a picture of him in our office with this quote: "The key to our success, though, must be that we all truly embrace the philosophy of being servant leaders, both with our customers and each other."

Taking a Shine to Seasonal Employees

When UTXL needs more employees, Mark Hogan calls on the experts—people who already work at the company.

"During surge seasons, such as the December peak when we need extra help in operations, we like to bring in people our full-time employees refer," says Hogan. "Some come back year after year." And some eventually become full-timers themselves.

Most of those new recruits come to the company with no prior transportation experience. They don't need it. "Give me a person who has the right attitude, who can learn, who is servant-minded, a team player, and not afraid of computers, and we can teach them," Hogan says.

Peak season gives Hogan and his managers several weeks to identify people who would make great additions to the business. "It's an opportunity to see who really shines, who works well under pressure, who pursues perfection, and who seeks to achieve excellence," he says.

IL: What makes you excited about waking up and going to work each morning?

No matter how large their fleets are, a lot of asset-based carriers end up saying no to more freight opportunities than they say yes to—it's not the right lane, it doesn't get their drivers home, it doesn't get their equipment to maintenance facilities, or they don't have good backhauls. Because UTXL works with so many great niche carriers, I get to say yes to a lot more opportunities than I could in the past.

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

Our youngest daughter graduates college in May 2020, so my wife and I will be empty nesters. We both work with our children's ministry in church on Sunday. Normally my brain is focused on five things at once, but when I work with the kids, I'm not thinking about anything but what we're doing. We like to travel, and we hike and walk a lot. I also play golf. One of the most satisfying things I do in our business is participate in customers' golf outings to raise money for children's causes. ■

[IN FOCUS]

NOTED

The Supply Chain in Brief



> **GOOD WORKS** Truck drivers and other employees at **Averitt Express**, a transportation and supply chain management company, raised \$1 million in 2019 for **St. Jude Children's Research Hospital** through its Averitt Cares for Kids charity program. The donation is the largest-ever employee contribution to the hospital.

> SEALED DEALS

• Logistics and transportation services company **BDP International** implemented the **FourKites** machine learning platform to expand its predictive shipment visibility. FourKites provides real-time shipment location data and predictive tracking, which alerts BDP and its customers when a container is in jeopardy of missing an inland cutoff or sitting idly for an extended time, among other circumstances.

• **Porsche Cars Canada** selected global logistics provider **DB Schenker Canada** to operate its new parts distribution center in Mississauga, Ontario. For the next three years, DB Schenker will work with the automobile manufacturer to run a streamlined logistics process that caters to Porsche's customer base.



• **Dana Incorporated**, an equipment supplier for conventional, hybrid, and electric vehicles, selected **Transplace** to manage its North American transportation network. Transplace's artificial intelligence and machine-learning technology will enable efficient network designs, cross-customer shipment collaboration, and real-time shipment tracking.

• **Tompkins Robotics** partnered with **Nordstrom** to design and deploy parcel-sorting systems to help streamline the fashion retailer's e-commerce and replenishment needs at several U.S. locations. Nordstrom can add or remove the t-Sort autonomous robots without interruption, enabling the company to ramp up easily for peak seasons.

• UPS venture capital arm **UPS Ventures** completed a minority investment in **Arrival** and intends to purchase 10,000 of its electric vehicles. UPS and Arrival are collaborating to implement advanced driver-assistance systems that increase safety and operating efficiencies, as well as the potential for automated movements in UPS depots.



upthechain

H&M chief operating officer **Helena Helmersson** was appointed as chief executive officer of the fashion retailer. Helmersson started on the ground floor of H&M's sustainability work, previously managing its sustainable supply chain efforts and then serving as global head of production. She joins a growing list of executives who have risen to that post through supply chain roles.



Centric Brands, whose brands include BCBG Max Azria and Calvin Klein, appointed **Laura Ritchey** as its new chief operating officer. She will be responsible for developing a global operating platform and overseeing the group's sourcing, warehousing, logistics, and information technology efforts. She brings more than 20 years of experience in the industry, most recently as chief operating officer at FullBeauty Brands.



SEKO Logistics completed its largest-ever acquisition in purchasing **Air-City**, a New York-based freight forwarding company.

Logistics and technology provider **GlobalTranz** acquired **Cerasis**, a North American third-party logistics, less-than-truckload, and multimodal shipping service.

Nolan Transportation Group, a third-party logistics provider in North America, acquired **Eagle Transportation**, a Mississippi-based freight brokerage that focuses on temperature-controlled shipping.

RoadOne Intermodal Logistics, a single-source intermodal, distribution, and logistics company, acquired **Crown Transportation** in Savannah, Georgia.

> SHOVEL READY



Real estate investment firm **Elion Partners** acquired a 197,600-square-foot last-mile

industrial distribution facility in Boynton Beach, Florida, for \$26 million.

Toshiba America Business Solutions is opening a 328,355-square-foot distribution center in Horn Lake, Mississippi, to expand its distribution in response to client demands. Toshiba plans to recruit 40 new employees when opening the facility in August 2020.

> RECOGNITION

• **CFI** was recognized by the Truckload Carriers Association in its **Fleet Safety Awards** competition. CFI achieved the lowest accident frequency rate among U.S. carriers that amassed 100 million or more miles in North America in 2019. Greg Orr, president of CFI (above, left), credited the achievement to the dedication of the company's safety and operations teams and the perseverance of its drivers.



• **Dupré Logistics** received the **Dow Gold Safety Excellence Award** during the 2019 annual North America road carrier safety director meeting in Freeport, Texas. Al LaCombe, vice president of safety and risk management at Dupré Logistics, accepted the award.

• As of December 2019, **J.B. Hunt Transport Services** hired 10,000 veterans since 2014, and more than 15% of its employees are now veterans. J.B. Hunt also recognized its first company driver to complete 5 million safe miles without a preventable accident.



> GREEN SEEDS

Starbucks aims to cut its waste and carbon emissions in half by 2030. The company plans to conserve or replenish 50% of water used for its operations and coffee production, switch to reusable packaging, and add more plant-based options to its menu.



Nestlé plans to spend \$2.1 billion to cut one-third of its plastic use by 2025 and replace it with packaging made from recyclable materials. The multinational food and beverage company established a \$260-million venture fund to invest in startups that

focus on sustainable packaging, and plans to buy 2 million metric tons of recycled plastic.

Madewell expanded its partnership with Fair Trade USA to make 90% of its denim Fair Trade Certified by 2025. The fashion retailer partnered with Fair Trade USA in 2019, and produced a collection of Fair Trade Certified denim at a zero-discharge factory in Vietnam. Madewell added three new certified factories and plans to release new women's and men's Fair Trade products in 2020.

[IN FOCUS]

TAKEAWAYS

Shaping the Future of the Global Supply Chain

Blockchain Pilots Aren't Landing

A majority (80%) of supply chain blockchain initiatives will stay at the pilot stage through 2022, according to new Gartner research. Many organizations pushed to create robust use cases for the supply chain; however, most were inspired by banking and insurance pilots, and didn't translate to supply chain. This should not discourage supply chain leaders from experimenting with blockchain—its use cases simply require a different approach.

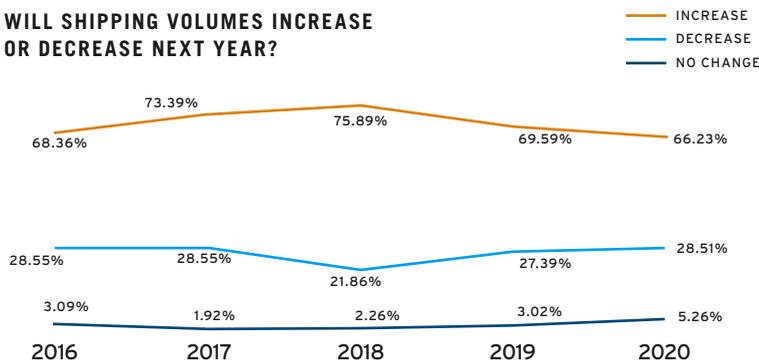
The initial idea for supply chain use cases was adopting a technology-first approach that exclusively targets blockchain infrastructure, mirroring the banking and insurance sector approach. This strategy failed because many supply chain use cases need to capture events and data for physical products, packaging layers, and transportation assets, unlike digital-only financial technology use cases.

Supply chain leaders also need to understand how to digitize these events for sharing across a potential blockchain-enabled ecosystem of stakeholders. Many are adopting a broader view across their supply chains, mapping all requirements from sourcing to final distribution.

Although many blockchain initiatives didn't survive past the pilot phase, they did motivate supply chain leaders to reassess process and technology. This analysis can help leaders gain a more comprehensive view of their supply chain's health, and pinpoint what needs to change before they are able to implement blockchain technology effectively.

Before starting another initiative, supply chain leaders should identify and establish key criteria and technology options for capturing data that can measure their organization's readiness to embrace blockchain.

WILL SHIPPING VOLUMES INCREASE OR DECREASE NEXT YEAR?



SOURCE: AVERITT EXPRESS

SHIPPERS HAVE HOPE FOR 2020

What supply chain challenges did shippers experience in 2019, and what supply chain services held their interest compared to previous years?

The Averitt Express 2019 State of the North American Supply Chain survey of more

than 1,800 shippers from a variety of industries throughout North America finds: **• 66.2%** of shippers anticipate increased shipping volumes in 2020—a 3.4% drop from 2018 that also marks the lowest confidence level in five years

• 12.3% of shippers struggled with capacity challenges in 2019 compared to the 26.1% who struggled in 2018 **• 43.3%** of shippers say trade tariffs negatively impacted their business in 2019 while only 5.2% report positive effects

Warehouse Sustainability Doesn't Measure Up

Only a small number of warehouse operators—18% of those surveyed—currently use sustainability metrics to analyze their environmental impact, finds a new Transport Intelligence warehouse benchmarking survey.

Of those who do use sustainability metrics, not one was able to say how much energy they used per square meter or how much carbon dioxide they produced at their warehouses, the survey notes.

The three overall metrics warehouse operators use most frequently are operations metrics (76%), customer metrics (68%), and financial metrics (64%). Surprisingly, only half of respondents say they use employee metrics to track workforce turnover or temporary employees. Sustainability, however, was by far the least-used category of metrics.

"All companies these days are quick to talk up their green credentials. However, it is worrying that so few have any systems in place to assess their environmental impact," says John Manners-Bell, CEO of Transport Intelligence. "If you don't measure your sustainability, how can you improve it?"

TAKEAWAYS

5 STEPS TO A CONTRACT HIGH

In the mid-2000s, a U.S. computer manufacturer signed a long-term contract with an overnight delivery service to transport its products. By the eighth year of the 10-year contract, both the manufacturer and carrier wanted out. But both companies knew ending the agreement would be a lose-lose.

The result: two years of distrust, retaliatory measures, and frustration.

Finally, the two companies decided to scrap their old contract and replace it with what Michael Wilson, vice president of marketing and packaging for AFFLINK, calls a “relationship” agreement.

“Two years into the new contract, the carrier was able to reduce costs, enhance supply chain efficiency, and eliminate the friction,” Wilson says.

Because Wilson believes relationship contracts can benefit distribution in many different industry sectors, he suggests taking the following steps to put one into action:

1. Build a partnership mentality.

Most contracts are designed to protect each party’s interests. Put that concept aside. Develop a contract that builds relationships and serves both parties at multiple levels.

2. Have a shared vision.

Some contracts are designed to give greater power to one party over the other. Again, toss that aside. The focus must be a shared vision of how the two parties can work together for the benefit of the end customer.

3. Commit to guiding principles.

Expect issues and misalignments to occur, especially with long-term contracts. Add a preamble to the contract that emphasizes that both

parties are committed to honesty, loyalty, transparency, integrity, and fairness. These become the contract’s guiding principles.

4. Lay out the terms of the agreement.

After the first three steps are agreed upon, hammer out the economics of the relationship contract. This is where the responsibilities of all parties and charges are outlined. “Old-fashioned agreements tend to get adversarial at this point,” Wilson says. “Relationship contracts handle step 4 as a problem-solving exercise.”

5. Create governance teams. Both partners in a relationship contract should have matching teams that address specific issues as they come up. For instance, two “excellence teams” can work together, focusing on continuous improvement and innovation. This breathes life into a relationship contract.

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INTERNATIONAL

WAREHOUSING

TAKEAWAYS

Map Mishaps Throw Last-Mile Drivers Off Course

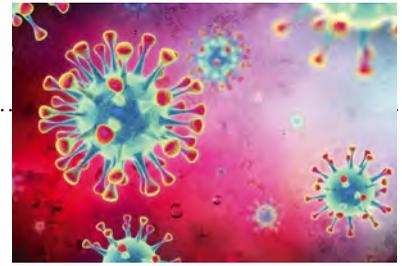
Nearly all last-mile delivery drivers say they would be more effective if they had better maps, according to a new report from Mapillary, a street-level imagery platform that uses computer vision to automate mapping. The delivery industry is racking up \$2.5 billion in wasted salary and \$611 million in extra miles due to bad maps, the report finds. One-third of drivers say they could save upward of five hours each week if they had detailed, up-to-date maps. Other inefficiencies include:

- **Extra miles:** 78% of drivers report driving more than five extra miles per day due to bad routes, with 22% reporting between 15 and 25 extra miles and 11% reporting between 25 and 50.
- **Drop-off locations:** 72% take more than four minutes to find the exact location for a typical delivery, with 36% taking more than seven minutes and 14% taking more than 10 minutes.
- **Delivery windows:** 96% waste significant time during the day waiting for delivery windows, with 76% wasting more than 15 minutes and 35% wasting more than 30 minutes.
- **Parking availability:** 62% take more than four minutes to find parking, while 32% take more than seven minutes.
- **Parking tickets:** 57% receive multiple parking tickets per month, with 33% racking up more than eight tickets.
- **Undelivered packages:** 86% take packages back as undeliverable; 38% take back more than 25 packages per week.

When it comes to specific map challenges:

- **99% of drivers** say they would be more effective if they had better maps.
- **95% report problems with maps**, including longer routes, long distances from drop-off locations, and road closures.
- **38% encounter issues with maps** every day they work, with 12% reporting issues with every delivery.
- **50% say that a map problem** during one delivery delays deliveries for the rest of the day.
- **92% say maps have significant room for improvement.**

Better maps will result in more deliveries at a faster pace, saving companies millions of dollars each year, the survey finds. With increasing consumer demands for speedy delivery times and big retailers such as Amazon, Best Buy, and Walmart providing same-day delivery, the pressure is on for logistics companies to achieve faster last-mile delivery and optimal customer experiences.



CORONAVIRUS PRECAUTIONS

The Chinese government's response to the coronavirus outbreak has impacted 280 supplier sites near Wuhan, China, according to Bindiya Vakil, chief executive officer of Resilinc, a provider of cognitive supply chain monitoring and mitigation solutions. Businesses could experience supply chain disruptions for three to six months, which is comparable to disruptions caused by the swine flu in 2009.

The government extended the Chinese New Year holiday from January 31 to February 10 in many cities, shutting down businesses and transportation systems and keeping factory workers at home.

The industries most affected by the disruption include aerospace, automotive, general manufacturing, consumer goods, consumer electronics, food and beverage, life sciences, and industrial chemicals, among others. Items hit hard in the pharmaceutical industry include hospital gowns, which are in short supply.

Here are five ways manufacturers with primary and sub-tier suppliers in the region can plan ahead:

- 1. Anticipate scenarios**, such as generating time horizons and reviewing inventory levels among suppliers.
- 2. Look to suppliers and subcontractors** outside the organization to ensure readiness.
- 3. Communicate internally and externally.**
- 4. Train your employees.**
- 5. Connect the dots** among suppliers—you are only as strong as your weakest supplier.

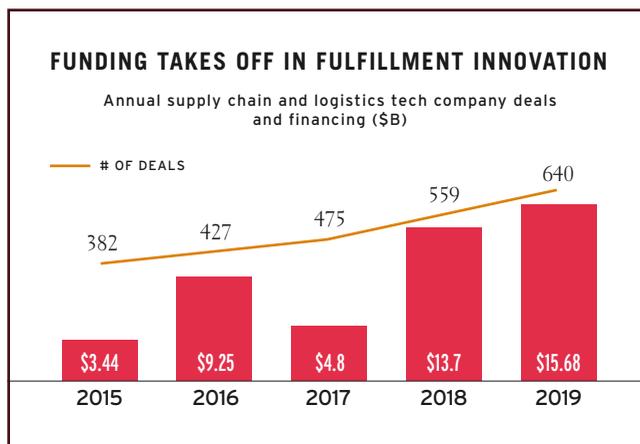
State of Retail Tech

Equity funding to retail tech companies slowed globally in 2019—down 31% to \$45.2 billion—largely due to a slide in funding to e-commerce platforms and enabling technologies, finds CB Insights’ State of Retail Tech report, a comprehensive look into retail trends from 2019 and what to look for in 2020.

Specifically, funding to supply chain and logistics tech companies rose by 14% in 2019, reaching \$15.7 billion (see chart), fueled by consumer demand for speed, as well as innovation in inventory management and unmanned delivery.

What should retailers watch for in 2020? Some vertical-specific highlights from the report include:

- **Robots will speed last-mile fulfillment.** More retailers will test robotic last-mile fulfillment modes in urban areas in 2020, especially as more microfulfillment centers are created.
- **Stores will become smarter than ever.** Autonomous checkout, artificial intelligence-powered inventory management, and real-time sales analytics will empower retailers to process consumer insights.



- **New retail formats will be everywhere.** From new “retail-as-a-service” platforms to ride-hailing vehicles, the customer journey will expand beyond the traditional storefront.



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[INSIGHT]

VIEWPOINT

by Neil James

Managing Director, Blueglass Consulting

neil.james@blueglassconsulting.com | +44 (0)7585 405046

How Supply Chain Drives Business Value

World-class companies such as Apple, Cisco, Amazon, and Unilever have found a way to foster strong collaboration between their supply chain and commercial teams to execute business strategy, and this is a key driver in their success.

So what are the key requirements to build these high-performing alliances? Supply chain teams can work on two key enablers to drive business value.

1. Understand the commercial strategy and support it. Understanding the business and its key execution requirements underpins proactive and focused support of the strategy. Without this understanding, the supply chain-commercial partnership reverts to a reactive, transactional interaction in which the supply chain is seen as a low-value back-office provider.

Building this understanding requires the supply chain team to explore the following questions with their commercial colleagues:

Where does the business really need to win? What are the must-wins? Which products across the portfolio are critical for short- and long-term success? Are specific regions or customers crucial?

How do we win? What is our competitive strategy in the must-win areas? For example, are we driving a premium product strategy? Is price our differentiator? Or is strong leadership in a key market segment a success factor?

How do we work together to ensure we win? Proactively explore the value that the commercial strategy aims to deliver to customers and identify how supply chain capability influences this. How can you address quality, service levels, or costs?

2. Build a partnership of equals with the commercial team. A culture in which the supply chain is seen as a back-office provider solely required to react to demands from the commercial team does not support a high-performing business model. An important foundation for a strong supply chain contribution is a partnership of equals with the commercial team. An environment that allows the supply chain function to both challenge and support the business is critical.

Optimizing operations to drive business in the short term, and innovating to underpin and enable new business models and growth streams for the future, require a high level of openness, trust, and engagement between teams. It can seem an almost impossible challenge to shift the perceptions and behaviors in both commercial and supply chain teams.

But a supply chain team proactively and assertively seeking a productive relationship with their commercial colleagues can have a huge impact.

The supply chain team can start to create this sort of partnership by focusing on three key areas:

Engage commercial stakeholders proactively. Adopt a practical approach using the three questions outlined earlier to start a dialogue and, importantly, to move rapidly to tangible proposals for supporting business priorities.

Build supply chain awareness in the commercial team. Investing time to engage commercial staff in both the challenges and opportunities of supply chain management helps build understanding and trust across teams.

Adopt an enterprise-level focus. Demonstrating the alignment of the supply chain function to business outcomes is the key mindset for the team. It is easy to become focused on metrics or key performance indicators, which have limited significance across the wider business. But translating them to business outcomes allows other teams to engage with and support them.

This is not an easy journey for the supply chain team to take, and it requires sustained commitment. But as so few businesses are able to master this challenge, the potential value in building competitive advantage is huge. ■



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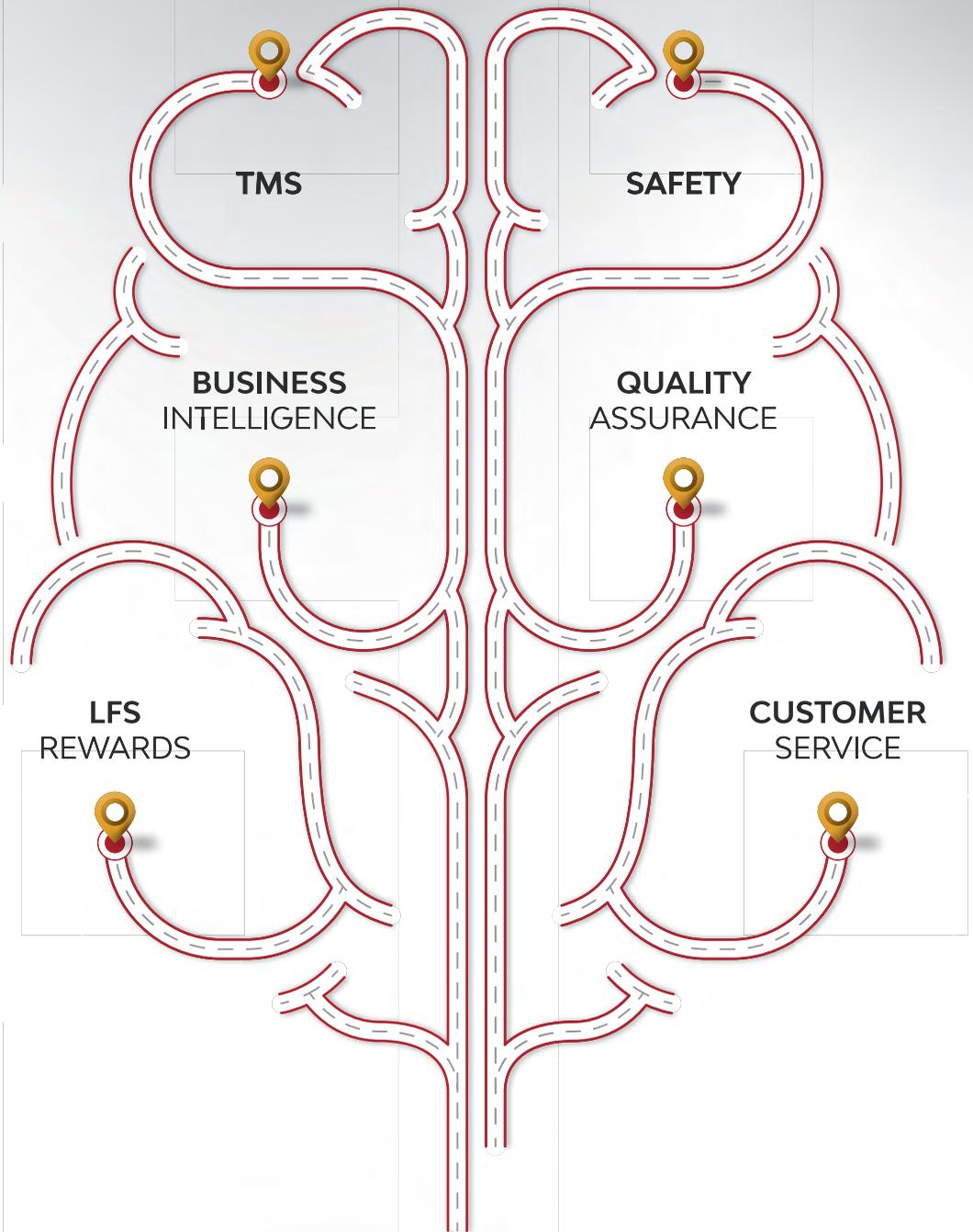
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[INSIGHT]

IT MATTERS

by *Morgan Zimmermann*

CEO, Netvibes-Exalead, Dassault Systèmes
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AI Powers Sustainable Manufacturing

One of the greatest potential benefits of artificial intelligence (AI) is helping the world become more sustainable. This includes addressing the three P's of sustainability—people, planet, and profit—in manufacturing.

Today's millennial workforce is committed to long-term policies that will provide a more stable environment. Industrial actors that don't align on sustainability goals have, or will have, difficulty finding a future workforce and customers eager to invest in products and services that don't represent their values. Companies are increasingly evaluated less on their profit and loss statements and more on their engagement with the three P's of sustainability.

AI strengthens the following three main “pillars” aligned with the three P's metric to enable companies to meet sustainability targets:

1. Workforce of the future (people). Creating the workforce of the future involves capturing and transferring knowledge and know-how from today's employees, and empowering people with technology to create experiences that spark innovation and help build a more sustainable future.

AI helps make best practices hidden in documents actionable. Any employee can leverage them to make a greater impact on the enterprise. Thanks to AI, that knowledge can be delivered

faster—at unimaginable scale and at the right time—by using augmented/virtual reality, collaborative platforms, and 3D, making training more intuitive. Thus, the workforce can make better-informed decisions. The symbiotic relationship between AI and people makes them both smarter.

2. Global operations optimization (planet). By adopting lean practices throughout the product life cycle, companies can minimize their global environmental footprint. This goes further than solving problems on the shop floor. It's about evaluating and streamlining all operations in a continuous feedback loop.

Eliminating waste is a core concern of manufacturing. Getting rid of anything that doesn't add value in critical areas, like moving a product unnecessarily, requires AI technology that can self-learn from constantly evolving targets (sales, inventories, resources, capacity). AI can anticipate the most beneficial tradeoffs to limit waste.

3. Value network orchestration (profit). Collaborative digital platforms that leverage AI are

creating sustainability throughout the value network while enabling the delivery of unique experiences to market. Companies gain visibility into resources and processes and how they're interconnected. Manufacturers can coordinate all stakeholders more efficiently and agilely.

Testing ideas, products, and the experiences they provide in the virtual world before actually producing them in the real world can lead to inventing new usages and the products supporting them.

AI sifts through data at lightning speed, evaluating millions of potential scenarios to find the right information. Firms can capture, standardize, and analyze data to evaluate a business activity's environmental and social impacts and communicate takeaways for informed decision-making.

THE REAL WORLD: EFFICIENT AND BALANCED

Only virtual worlds provide the right observation and decision-making deck for manufacturing. By speeding access to virtual worlds, AI technology is making the real world more efficient.

AI not only delivers new insights and knowledge; it also allows industry to capture and understand experience and reuse it to contribute to a more balanced and sustainable life. ■

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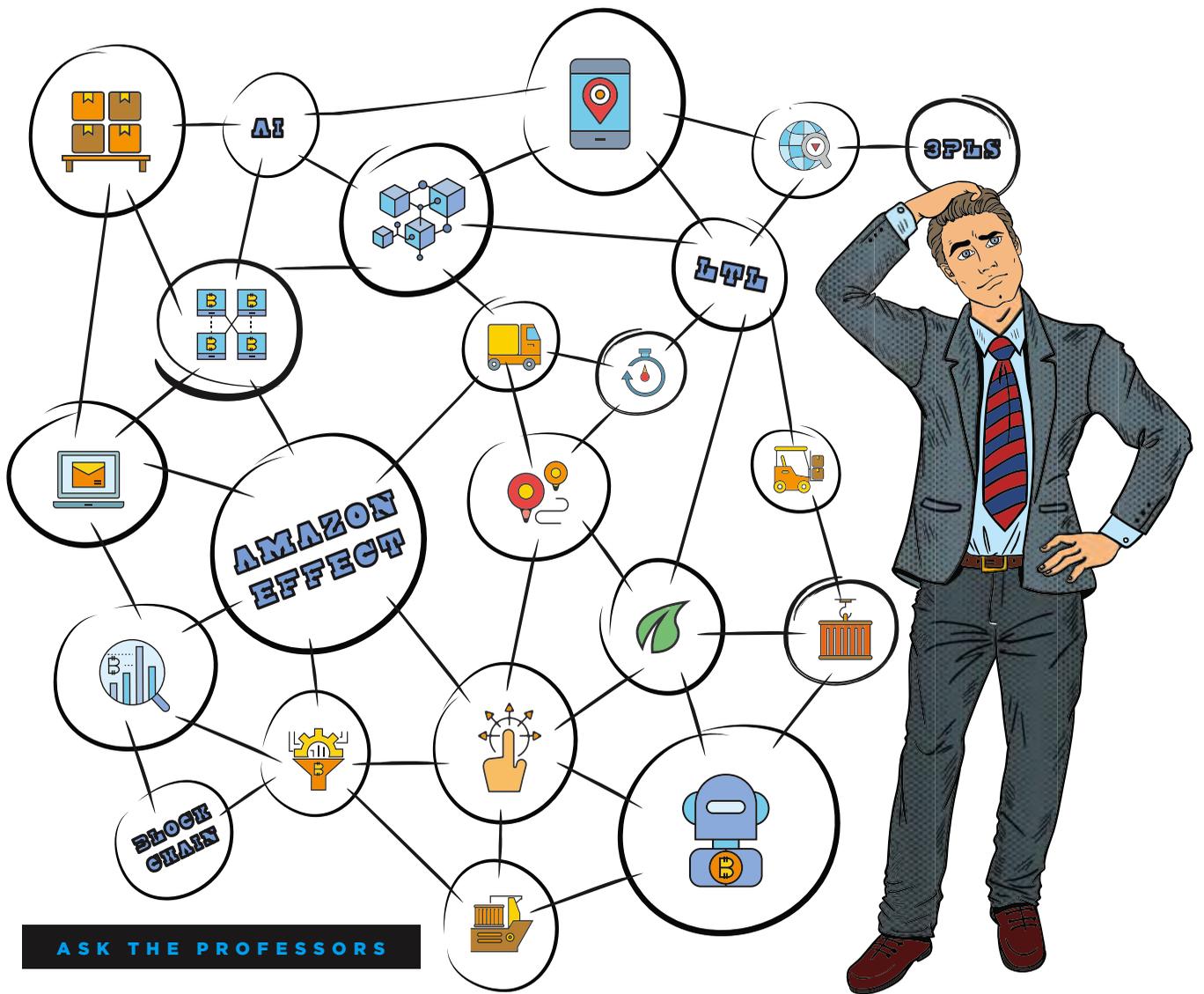
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ASK THE PROFESSORS

Making Sense of Supply Chain Education

Class is in session! Professors at some of the country's leading supply chain education programs join INBOUND LOGISTICS for a lesson in how they are preparing the next generation of professionals, whether they come from business programs or engineering schools, for tomorrow's challenges. BY TAMARA CHAPMAN

What are the latest trends in logistics education, and how does your program address them?



Nehemiah Scott

Director, Supply Chain Management Program, Gies College of Business, University of Illinois at Urbana-Champaign

One big trend is the development of a curriculum that helps students learn about and experience the breadth and depth of supply chain management. Our program requires students to complete a supply chain internship, which allows them to connect what they have learned in the classroom to how supply chain processes operate in the real world.

We prepare students to instantly begin adding value on their internship and expect that they learn new methods and technologies that they can use to contribute to their end-of-internship projects and future coursework in the program.

Another trend is the ever-growing challenge of aligning the curriculum with the real-world needs of manufacturing and non-manufacturing companies. To address this, we developed an SCM Corporate Affiliates Program with a group of world-class companies—Shell, Echo Global Logistics, Harting USA, Aldi, and others—that are our corporate partners in supply chain management education.



Ana Muriel

Director, Supply Chain Management Lab, Department of Mechanical and Industrial Engineering, University of Massachusetts Amherst

A major trend that has profoundly changed logistics education—and engineering education in general—is experiential learning. Not only do most of our students participate in internship and research experiences, but they are also exposed to hands-on projects and case studies that allow them to apply the tools learned in creative ways at every step.

Data analytics continues to gain momentum. In our program, we are developing new courses on data analytics and machine learning, along with new classroom activities involving large data sets for our more traditional optimization-based courses. The latter go hand in hand with increased demand for data-driven decision-making.

In the era of big data, students need to understand the full cycle, from cleaning the data to devising an algorithm that will work with—and take full advantage of—the data at hand.

The application areas our programs expose students to are also evolving. Humanitarian logistics, the sharing economy, and the need for ever-faster delivery and quicker response to demand and supply fluctuations all provide timely topics to address in the classroom.



Nick Vyas

Executive Director, Center for Global Supply Chain Management, Marshall School of Business, University of Southern California

The supply chain is no longer what we used to think of as transportation and warehousing 30 or 40 years ago. It's much more than that, so one trend is that there are so many new areas that we've made supply chain subjects.

To provide advanced acumen for operations excellence, we offer students from all business disciplines electives in emerging technology, data analysis, supply chain analytics, and supply chain finance. Schools have to have these components in their overall business curriculum so they can give non-supply chain students exposure to the supply chain and supply chain students exposure to other business areas.

That helps them all become much more well-rounded leaders.

Continuing Education for Urgent Needs

In today's rapidly changing marketplace, supply chain and logistics education providers have to be fast responders, up to speed not just on industry trends but also ahead of the curve on education innovations.

That's because supply chain practitioners increasingly contend with everything from accelerating technology advances to transformations in customer expectations. Think Amazon's promise to deliver products to the doorstep in the blink of an eye. "Everyone demands things they didn't demand before," says Brian Thompson, chief commercial officer of SMC³, which designs and provides education for the transportation industry.

Supply chain practitioners also find that once-routine functions have grown exponentially more complex. Where once something as important as pricing and costing was straightforward, it now requires a sophisticated framework for case-by-case analysis. "In the trucking supply chain, the lines between transportation modes and technology systems are increasingly fuzzy," Thompson says. And negotiating fuzzy lines requires informed judgment.

Not so long ago, companies could rely on senior staff to teach younger employees the ropes and to cultivate the skills essential for troubleshooting. But with so many baby boomers retiring, many firms find themselves facing what Thompson calls a knowledge transfer gap.

Bridging that gap increasingly falls to organizations with an education mission. They're designing new programs around specific skill sets and delivering them over platforms that afford participants maximum flexibility, including the ability to fit classwork into a busy schedule. SMC³, for example, is launching an online and interactive less-than-truckload certification program that covers everything from operations and business analytics to carrier pricing and costing. Highly specialized subjects like these might merit little more than a single introductory lecture during an undergraduate class, Thompson notes, but on the job they're essential.

What's also essential is immediate access to skills training and knowledge transmission. Shippers and service providers need education organizations to offer the same immediacy they must deliver to their own customers.

INDUSTRY 4.0

How do you prepare students to see—and eventually promote—supply chain and logistics functions as centers for innovation and problem-solving?

Vyas: In addition to an annual global supply chain summit, case competition, and experiential trip, the Marshall School of Business sponsors an annual hackathon. Basically, we take one unique problem—typically it's one confronting a large company or an infrastructure provider—and bring professionals and multidisciplinary (undergraduate and graduate) students together to participate. We say, "We have 24 hours to solve this problem. How would you address it?"

It's incredible how everyone comes in with different backgrounds and takes different approaches. In the end, about 25-plus teams all approach the problem uniquely. This shows how you can leverage thinking in today's world.

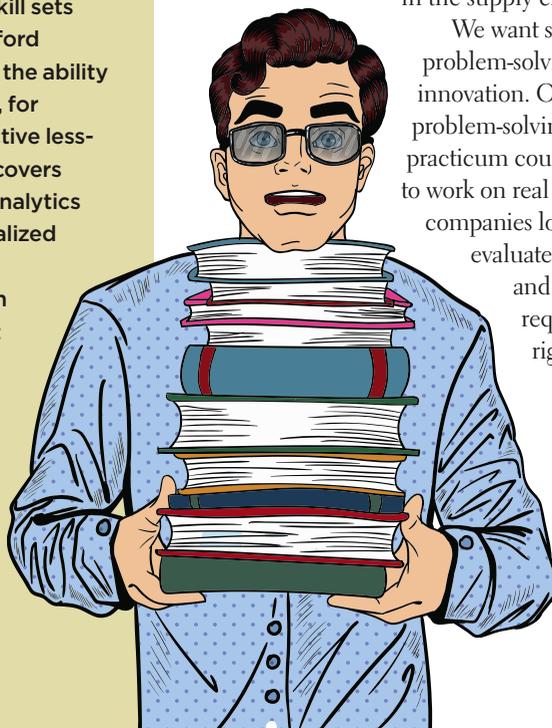
Scott: As technological advancements continue alongside the emergence of Industry 4.0, we see the innovative nature of supply chain and logistics more than we ever have before. It is imperative that students are up to speed on this.

We like to highlight innovation through coursework and discussions that contain examples from everyday experiences with the supply chain.

For instance, students immediately relate to e-commerce because for many, online shopping is the primary method for purchasing goods and services. But they may not realize the amount of supply chain innovation that takes place in, say, order fulfillment. We make sure students have an in-depth understanding of how the flexibility and choices they have as consumers are made possible by investments and innovations in the supply chain's structure and processes.

We want students to understand that problem-solving is itself a process of innovation. One of the most rewarding problem-solving experiences comes in our practicum course, where students are required to work on real supply chain projects that companies looking for solutions assign and evaluate. Projects range from strategic and exploratory to data-intensive, requiring quantifiable outputs and rigorously tested conclusions.

Muriel: Students first see the value of innovation and problem-solving in supply chain and logistics when analyzing the groundbreaking strategies



of companies such as Walmart, Amazon, UPS, and Dell. Our emphasis, however, is on providing a solid foundation in modeling and problem-solving, as well as software tools that are applicable to a wide range of settings. This way, they acquire the skills to devise creative, data-driven logistics strategies when faced with new challenges.

Just as important, projects and case studies based on real industry practice allow students to get hands-on experience and gain the confidence to tackle new situations and innovate.

SKILL SETS

What do you hear from industry about its skill and knowledge needs, and how are you shaping the curriculum with these in mind?

Muriel: Our industry partners call for a mix of technical savvy, analytics know-how, leadership skills, and effective communication. Some also emphasize the importance of negotiation skills.

The major shift we see is greater focus on data analytics and interest in data-driven optimization. In response to these needs, we are offering new analytics, leadership, and project-management courses, requiring students to use various programming languages in a sequence of courses. We're also introducing projects that involve large data sets.

Scott: I recently spoke to a senior vice president of supply chain, who talked about the skills missing in his workforce. He noted that a high-level superficial understanding of supply chain concepts is there, but the how-to knowledge is sometimes missing. This can include, but is not limited to, dependent and independent demand management, multi-echelon supply chain forecasting, sales and operations planning, inventory decision choices, category management, and sourcing decisions.

Our courses are designed to go deeper on these topics. For instance, if a student is hired as a sourcing analyst, we want to make sure they are equipped with the how-to knowledge of defining business requirements and the criteria for selecting and communicating with the best suppliers. If a student is hired as a logistics analyst, we want to make sure they know how to create or modify a model that optimizes crucial supply chain decisions, maximizes return, and minimizes risk for the company.

Our syllabi are designed to introduce concepts followed by the how-to knowledge component, whether through in-class activities, team-based simulations, data-based projects, case studies, or experiential learning opportunities. We love for our students to be in a position to demonstrate their understanding of the how-to component. We find that our students love it as well.

Another need is the ability to use new technologies to understand and derive insights from data. Our students get a lot of practice using data to make important decisions. At Gies College of Business, all students are required to take two data-analytics courses during their freshman and sophomore years.

Our program infuses context-specific, data-based approaches to solving real-world logistics problems into course plans. In courses such as logistics management and supply chain modeling, students are exposed to various mathematics, data analytics, statistics, optimization, and simulation modeling methods. They also learn the appropriate software tools to appropriately tackle complex supply chain problems.

Students must also technically, theoretically, and pragmatically support their arguments through a combination of nontechnical and technical report writing.

Vyas: Because of rapid transformation, companies are looking for graduates with a heavy data-science and technology background. They are seeking graduates to help digitize the company and enhance global connectivity.

I often find that legacy companies are stuck in this peculiar dilemma of trying to transform while continuing to manage the business. Disruptions are occurring all over, and they just don't know how to move forward. The new generation of leaders will need to help companies shift from legacy-minded to cutting-edge without losing focus on day-to-day execution.



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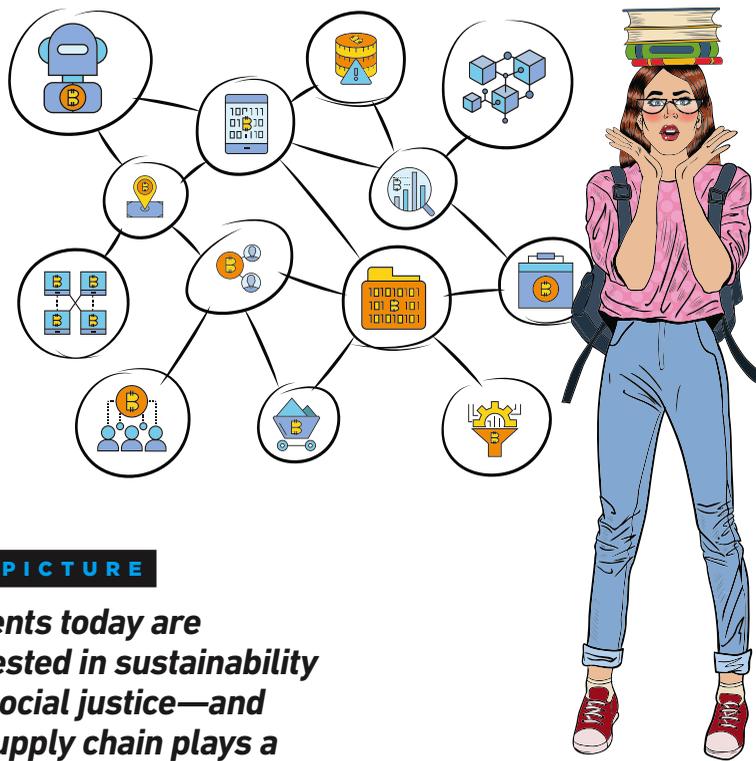
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BIG PICTURE

Students today are interested in sustainability and social justice—and the supply chain plays a big role in any company's approach to these issues. How does your program prepare students for decision evaluation and decision-making related to these topics?

Vyas: Our program integrates a focus on sustainability and corporate social responsibility into the curriculum with new-age tools and methodology. We emphasize that decisions can no longer be based just on speed to market and cost.

Through case studies and work projects, we challenge students to look at the supply chain in a broader spectrum and ask big questions, such as how to take care of natural resources. In supply chain, we often can be myopic, so we are conscious to make sure we continue to create a well-rounded executive.

Muriel: We discuss the sustainability and social justice aspects of decisions across the curriculum as we analyze classic supply chain strategies or work on developing our own solutions to new problems. In their coursework and projects, students are specifically asked to address these issues. In some cases, the

response is to build mathematical models that will account for these aspects.

As we get deep into devising algorithmic solutions to logistics problems, we aim to help students recognize that they cannot blindly follow or recommend solutions the computer generates. They need to analyze solutions across a variety of dimensions—such as the impact on the workforce, the community, and the environment—which underlying models may not capture.

Our mission as logistics engineers is to provide not a one-stop solution, but decision-support tools that allow students to explore different objectives and analyze various what-if scenarios in balancing competing goals.

Scott: We make sure our students can connect standard supply chain topics and concepts to pressing sustainability and social justice issues.

For example, in our logistics management and supply chain basics courses, we challenge students—through projects, cases, and in-class activities—to have critical conversations about hot-button topics that intersect with supply chain and logistics—everything from

the impact that supply chains have on raw materials producers who may earn less than \$2 per day to the connection between deforestation and consumer safety in supply chains, to discussing the role that companies and supply chains can take in eradicating forced labor.

EXTRA CREDIT

Given today's diversified work environments, what "soft" skills do supply chain students need to succeed?

Muriel: The soft skills supply chain management students need include the ability to work effectively in diverse teams, so our program prepares them through group assignments and projects in every course and a final team capstone experience. We use team-making software to ensure teams are diverse.

Effective communication to a variety of audiences is also important. Students also need to learn and adapt as new challenges and technologies arise, so we provide a strong foundation that sets them up for lifelong learning, allowing them to seek and assimilate new information and tools.

Scott: As innovation continues and supply chains become longer, students must be relational and interpersonal, accepting of the similarities and differences they have with others. Effectively working with people from different backgrounds has never been more important.

In addition, students should be skillful in managing paradoxes. They must be able to balance being innovative and exploratory with being efficient in thought and action. We challenge students to become thought leaders willing to push the fold of innovative ideas within the supply chain field.

At the same time, students must be meticulous in their observation, critical thinking, and listening skills. Their work, both as a student and a future professional, should be a manifestation of these skills. ■

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Leveraging Your Suppliers: What *You* Can Do for *Me*

ENGAGING IN STRATEGIC PARTNERSHIPS WITH SUPPLIERS CAN NET BIG GAINS.

by Merrill Douglas

When you host a big wedding reception, you don't just order dinner, flowers, music, a cake, and all the rest. You tap the expertise of a caterer, a florist, a band or DJ, a baker, and maybe even a wedding planner, to host a celebration for the ages.

Like the couple who assembles a team of wedding experts, a company that forms strategic partnerships with suppliers—of materials, components, services, or other items of value—can gain a lot from the resources and knowledge those partners bring to the table. Vendors may help you develop new products, save money on manufacturing, avoid quality problems, recover from supply chain hiccups, or seize new opportunities.

"It's not only when times are bad that you need to collaborate," says Pawan Joshi, executive vice president of product management and strategy at E2open, a provider of cloud-based supply chain software based in Austin, Texas. E2open's portfolio includes Collaborative Manufacturing, which is used by brand owners that engage closely with partners such as contract manufacturers and suppliers of materials and parts.

It's rare that a brand owner can place an order and then see the product arrive in perfect condition, at the right time, in

the right quantity, and ready to be sold, Joshi says. Things change. You might order 10,000 units but then suddenly face a demand spike, requiring 20,000 units to capture all potential sales. Or of the 10,000 units you ordered, 100 might arrive with serious flaws. Then you'll need replacements, and you'll need to root out the cause of the defect.

When E2open's software detects a supply chain exception, it flags that item and notifies everyone who might play a role in the solution.

Say, for example, the brand owner suddenly has to double the order it placed two weeks ago. "Do you have the capacity to do that?" the software will ask the contract manufacturer.

"The software reaches out to the packaging supplier to ask, 'Do you have enough packaging to support this?' It reaches out to the component and ingredient manufacturers and their suppliers to ask, 'Do you have capacity?'" says Joshi.

The software also contacts the logistics services provider, requesting trucks to ship the extra volume.



If the partners all say yes, then everything lines up. “If the answer is no, then you start collaborating to resolve that exception,” Joshi says.

Sometimes, a supplier might learn about a supply chain exception and propose a solution even before the brand owner asks for help. “You want to encourage people who are physically or logically closest to solving that problem to raise their hands and say, ‘Here’s the way to solve it,’” he adds.

This kind of collaboration is so important to one E2open client that the brand owner tracks how often each partner steps up to help solve exceptions, and it includes those metrics in its vendor scorecard.

VMI CHAIN

Vendor managed inventory (VMI) is a tried-and-true form of supplier collaboration that reduces buyers’ carrying costs. Under a VMI program, suppliers retain ownership of materials, components, or finished products until the buyer actually needs them for a manufacturing process or a sales channel.

Sometimes a VMI partnership involves a chain of several suppliers and service providers. That’s the case, for example, for some of the wireless

communications carriers that include Quality One Wireless (Q1) of Orlando, Florida, in their supply chains.

Q1 serves as an intermediary between many wireless communications carriers—such as AT&T, Sprint, Verizon, T-Mobile, and U.S. Cellular—and original equipment manufacturers (OEMs). When the carrier wants to offer a new wireless device for its network, Q1 works with an OEM to bid on that project. If the bid succeeds, Q1 manages the engineering and testing, and handles the logistics required to deliver the product to warehouses that serve the carrier’s retail channels.

But those wireless devices may pass through yet another link on their way to the wireless carrier. In 2019, Q1 formed a partnership with WIT Logistics (a unit of Walker SCM in Valley Stream, New York) to collaborate on a VMI program for one carrier that Q1 serves. Under that program, ownership of the wireless devices passes from Q1 to WIT Logistics, and then from WIT Logistics to the wireless carrier.

“The customer places a purchase order with WIT,” explains Rob Ferrentino, chief financial officer at Q1. “Then WIT places that purchase order with us. We fulfill that purchase order to WIT, and WIT holds onto that inventory.”

WIT stores the inventory at a variety of strategically placed distribution centers. “As the customer wants or needs the inventory, WIT delivers it to them,” Ferrentino says.

The wireless carrier designed this arrangement to support its VMI program. “The customer set up this agreement with WIT and then we set up our agreement with WIT in terms of fulfilling those needs,” says Ferrentino. Q1 has also joined in similar relationships with other logistics companies to serve other customers.

PARTNERSHIP FOR INNOVATION

Just as suppliers can help customers develop new products, a company might help its suppliers create products and services. For instance, food producer



and agribusiness Land O'Lakes, based in Arden Hills, Minnesota, has collaborated with at least two firms to help change the way shippers move freight.

Working with Uber Freight, part of ride-sharing company Uber, Land O'Lakes helped to develop new lanes in Texas, where Land O'Lakes needed capacity and Uber Freight needed more carriers for its digital brokerage network.

Land O'Lakes also helped Plus.ai of Cupertino, California, test autonomous vehicle (AV) technology for tractor-trailers, hoping to eventually alleviate the ongoing driver shortage.

Land O'Lakes started working with Uber on its digital freight brokerage in 2017. "We helped them by defining what we were looking for as a shipper," says Jason Wicklund, logistics manager at Land O'Lakes. The shipper had two main goals: finding more truck capacity, and obtaining data to help Land O'Lakes refine its supply chain strategies.

Pricing data from Uber Freight's dashboard might tell Land O'Lakes, for example, that shipping a certain load on Thursday rather than Monday would save the company \$250. And a tool that lets carriers rate specific shipper locations—much as ridesharing passengers rate their rides—helps Land O'Lakes make its facilities more attractive to carriers.

BUILDING A BASE

At the same time, the relationship has helped Uber Freight enlarge its carrier base in Texas. Land O'Lakes' Purina Feed business needed more capacity in that market, especially on the lane between Nacogdoches and Fort Worth.

"By getting our shipments, they were able to build up some partnerships as well as leverage the tool to get more access to a large group of owner-operators in the country who operate in Texas," Wicklund says.

For Plus.ai, Land O'Lakes offered the chance to test a self-driving tractor-trailer on a northern cross-country route. Hauling a load of Land O'Lakes butter from Tulare, California, to Quakertown, Pennsylvania, in November 2019, the



Land O'Lakes collaborated with autonomous tractor-trailer developer Plus.ai and Uber Freight to help them test autonomous vehicle technology, which the food producer hopes to use someday. Land O'Lakes also helped Uber Freight bring its service to Texas, where Land O'Lakes needed capacity, and their demand helped Uber sign up more carriers.

truck encountered weather conditions that earlier cross-country AV tests had not seen.

"They ran through rain, sleet, and snow," Wicklund says. "It was a great opportunity for them to understand how this works—whether the instrumentation and calibration were producing the right results—which they did."

For safety's sake, relay teams of drivers and support engineers took turns sitting in the truck throughout the trip. But the technology did most of the driving.

Land O'Lakes hopes to do more cross-country runs with Plus.ai as well as regional runs, Wicklund says. Company officials hope that AV will help create more capacity for the company's loads.

But that doesn't mean Land O'Lakes will replace drivers with entirely self-driving trucks. Instead, it hopes to transform the truck driver's job into something more attractive—more like the job of a conductor or pilot.

"If the driving is less stressful because the technology helps out, maybe more people will want to continue to drive semis across the country," Wicklund says.

Of course, collaboration may start long before it's time to fill orders. Suppliers can also play a big role in new product development.

"Very early on, a product development team—consisting of an engineer and procurement and manufacturing representatives—would want to understand feasibility," says John Heller, product marketing manager at Vertex Software in Ames, Iowa. That means learning, for example, if a supplier can make a product based on a particular design, and if the engineers have chosen the best possible materials.

"Additionally, as they're stepping through the design, they'll want to get feedback from the supplier about a better way of doing something," he adds.

Vertex's cloud-based platform lets product development teams and their external partners easily share 3D models of products in development, and exchange data and comments about the products and their components.

"More and more companies seek to bring in suppliers earlier in the process and to achieve greater amounts

of collaboration early on, so they can mitigate risk, reduce cost, and have a better shot at meeting product expectations when it comes time for product launch,” Heller says.

Engineers who want to share data about products under development often spend a lot of time extracting information from computer-aided design (CAD) systems and putting it into a format that another party can view without CAD software.

Often, that means taking screenshots of schematic drawings and attaching them to emails, perhaps in a PowerPoint deck, or asking people to convene over Skype to view a 3D model. Those are not efficient ways to share information or collect feedback, Heller says. And teams that use those methods must take extra steps to safeguard intellectual property.

Vertex extracts 3D models from CAD systems and presents them on its secure platform to any authorized party. A user can view the model from any angle, zoom in on subcomponents, extract parts of the design to display by themselves, draw circles and arrows, insert questions and responses, and otherwise use the platform to discuss the design.

Companies use the Vertex cloud-based platform to share 3D models of products in development so they can collaborate with suppliers (and others) on design, materials, and other factors.

A supplier might, for example, suggest swapping one material for another that is just as strong but costs less. Or it might suggest small design changes that let it take advantage of a process it already performs for another customer, creating economies of scale.

The Vertex platform significantly reduces the time it takes to prepare for collaborative sessions and can shorten entire product development schedules, Heller says.

PRIZEWINNING PARTNERS

Like the companies that use Vertex’s platform, packaging distributor TricorBraun in Oak Brook, Illinois, works closely with suppliers to satisfy the needs of its own customers. TricorBraun serves companies in food and beverage, health care, personal care, and other industries with plastic and glass containers, closures, dispensers, tubes, and flexibles.

The distributor relies on suppliers to provide stock packaging that they manufacture and design, and also to produce custom packaging that TricorBraun, its customers, and the suppliers design collaboratively, says

Mark O’Bryan, TricorBraun’s chief operations officer.

To illustrate how its supplier partnerships work, Matt Ramsdell, TricorBraun’s vice president, design and engineering, points to three companies that won TricorBraun’s Development Partner Awards for 2019. The first, Currier Plastics, provided key support to several major design and engineering programs that year. “Achieving those

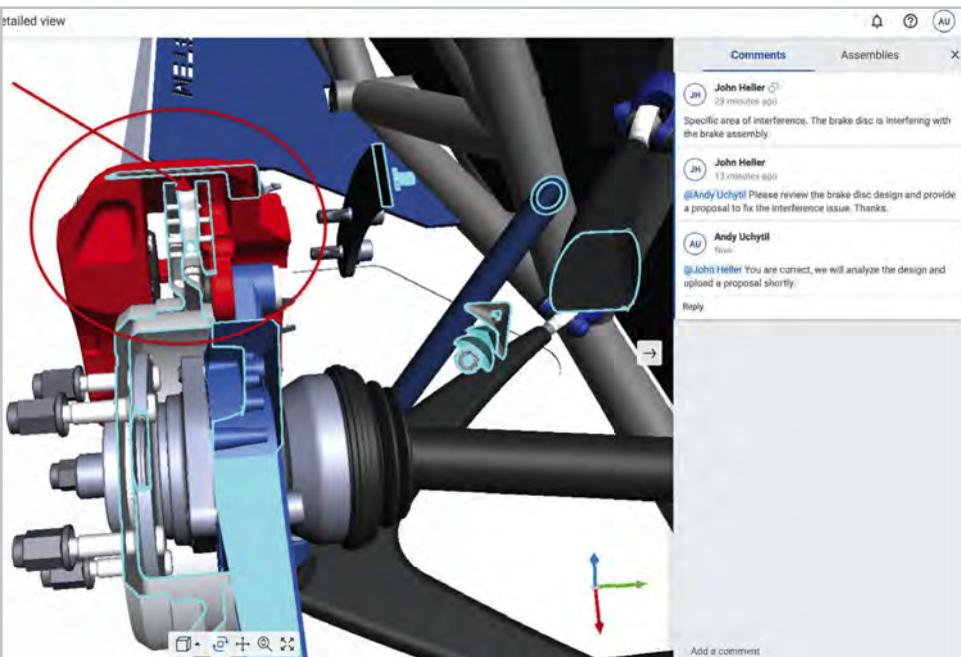
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success stories required both technical capability and willingness of this supplier to engage not only with TricorBraun but with the end customers, on site at their manufacturing facilities,” he says.

Kutterer Mauer helped TricorBraun with programs that were complicated due to their part design requirements, automation and assembly needs, or commercial demands. “Their willingness to provide engineering support, think long term, and consider various tooling strategies has been a significant differentiator,” Ramsdell says.

PSG Inc./Fast Plastic Parts will consider any challenge that TricorBraun’s customers present. “They supported conceptual work that turned into running production off-unit tools, were willing to try a litany of resins in tools that were not designed or built for that purpose, and were able to manage some production miracles as we developed new child-resistant packages,” he adds.

Not every partnership produces miracles. But for companies that take good advantage of suppliers’ capabilities, the results may offer plenty of marvels to celebrate. ■



7 NOTABLE WOMEN in SUPPLY CHAIN & LOGISTICS

Meet the women who are succeeding at high levels in their companies, driven by a passion for supply chain and logistics, self-confidence, authenticity, and the ability to untangle the spaghetti of information that drives business decisions.

BY KAREN KROLL

While men still dominate supply chain and logistics, women continue to make inroads and succeed at substantive roles. One key to progress is that companies are setting hiring goals. “When people know an activity is being observed, it influences behavior,” says Dana Stiffler, vice president with Gartner Research.

Rather than establishing hiring quotas—a concept that can carry negative baggage—organizations can set a goal of assembling diverse interview panels, for example. This helps organizations present an attractive face to job candidates and gain a more nuanced range of feedback about candidates’ performance and potential.

The hard work and dedication of many women in the field, as well as their willingness to seize opportunities and take chances, are driving progress. The women featured here describe the keys to their success and offer insight that can help others navigate their careers.

**TONYA
JACKSON**

Senior Vice President, Chief Supply Chain Officer,
Lexmark International

How can women prove themselves in a male-dominated field?

Supply chain results are tangible and measurable. Either you shipped or made your inventory levels, or you didn’t. There’s accountability. It’s hard to argue when you deliver results.

Your mom is one of your role models. What lessons did she pass on that help in your supply chain career?

She taught me to meet people where they are. That helps me as a manager because you never know what people may be going through, or what they know or don’t know. I try to start every conversation by reaching out to people where they are and going from there.

How would you describe your leadership style?

I try to balance collaboration with having to say, ‘This is the way it has to be.’ Every now and again, I have to take a stand and be confident in that stance, even if some view it as confrontational.

How can other women become more confident taking a stand?

Go back to the problem and take the person out of it. That’s easier said than done, but if you can stick to solving a problem, it’s not confrontational. And if the facts are on your side, generally you’re not the confrontational one. You’re just in a tense situation because you’re trying to solve a problem.





**LAUREN
MAYHER**

Americas Logistics Operations Manager,
Allyn International

Describe a professional challenge and how you handled it.

I supported a client who asked that we onboard all its locations across the globe into our systems. We hired eight people and worked with IT, human resources, and other areas to implement the project—all in about six months.

The biggest challenge was managing the locations that weren't used to our systems and strategies. They were used to, for instance, calling 'mom-and-pop trucking' to move their shipments.

To win them over, I had to fully understand their concerns and offer creative solutions. In fact, we learned we could enhance some features in our system to optimize their processes and make the experience a positive one.

How does your perspective as a young woman work for you in an area that tends to be male dominated?

I find it important to be transparent and authentic about what I do and don't know. Most companies these days don't want 'yes men.' They want people who are honest about their capabilities and will follow through on their commitments.

**MERI
STEVENS**

Worldwide Vice President,
Deliver Organization,
Johnson & Johnson

What strengths can women generally bring to the supply chain field?

Dealing with the current healthcare ecosystem is complex; it's changing rapidly. Many women are good at managing complexity because we have learned to juggle work, children, family, parents, homes, and so on. We're able to be agile and prioritize, untangling the spaghetti of information to drive needed choices.

What advice would you give women in the supply chain field?

Be bold to bring forth big ideas, but before you go into the decision meeting, make sure you seek out appropriate sponsors for your platform. Then, when you present the idea, people will support you.

It takes work and self-confidence to build these coalitions, but it will pay off. When I started, as a woman, it was tougher to find sponsorship. I had to outwork everyone both at work and at home to be successful. As a result, I was tired most of the time and not always at my best. But it was the only way at that time.

Now, doors are more open, and there are more women role models and those offering to sponsor and support. Working harder is not the most effective strategy.

Lastly, building critical skills such as analytics and data science will make a difference. Supply chain is a data-driven environment and it will only be more data driven as time goes on.



MARIELLE CAGE

Global Lead, Supply Chain Design,
TCO and Analytics, Eaton Corporation



How has working in a traditionally male-dominated field affected your career?

I've never considered myself a 'woman in supply chain,' but rather a supply chain professional. I started my supply chain career in my mid-20s with a lot of young male colleagues who were in similar procurement roles.

Many of the women, including myself, went on to have children a few years later, and had to slow down a bit at that point in our careers. There may have been a gap in career progression between us and our male colleagues for a few years, but we all caught up eventually in the long run.

What steps have been key to your professional success?

Throughout my education, I had several great internships abroad that convinced me my career would be international. Supply chain was the perfect entry point. I was born in France and have experience in multiple industries and business segments, such as computers, manufacturing, energy, and electronics, both in Europe and North America.

I am also multilingual—I speak English, French, Spanish, and Italian. Being able to speak a second or third language transcends spoken dialogue and enables you to relate to different cultural groups more personally.

Women continue to fill more supply chain positions at all levels. Between 2016 and 2019, the percentage of women in all supply chain roles inched from **35%** to **39%**, according to the 2019 Women in Supply Chain survey by Gartner Research and Achieving Women's Excellence in Supply Chain.



ANNETTE DANEK-AKEY

Executive Vice President,
Supply Chain, Penguin Random House

Describe the benefits and disadvantages of being a woman in supply chain.

In the past, I struggled—for instance, figuring out how to take a long break in the bathroom because there were no lactation rooms. And I almost didn't get to work on the second shift in the warehouse because some men in upper management thought it wouldn't be safe for me to work those hours. But other men stuck up for me.

I was told I needed to be tougher and to be more 'in charge.' I wasn't recognized for my teamwork and collaboration skills.

In the process, I learned different points of view and studied different types of leaders. Being a woman in a field with a lot of men forced me to learn to find common ground and be curious about others. Those are great skills for a leader in today's environment.

What advice would you give a woman starting out in supply chain?

Be open to opportunities and possibilities. If you need to, create your own opportunities. Someone could say no, but you never know. Find a professional organization you like. Your professional life will have ups and downs, and being involved can help cushion the low points and allow you to share the joys.

MARIA NIERADKA

Head of Business Operations, Repligen

How can the approaches taken by women and men in the workplace differ?

Over the years I have noticed when I interview candidates for a job and they have 85% of the skills required, men candidates start with the 85% and project confidence, building on their accomplishments. Women start with the 15% they don't have. In coaching women, I work to give them confidence to communicate their achievements effectively.

What steps in your career would you do differently?

I would have been braver sooner and been more assertive in getting assignments. I was lucky to have great people around me who believed in me more than I believed in myself.

What advice would you offer other women in supply chain?

Because so many men are decision-makers, especially in operations, it's important to have both male and female advocates. Also, get profit and loss experience. Anything you can do to get a role with financial accountability opens more career options.



ANNE HERMAN

Vice President, Global Operational Excellence, and Chief Customer Officer, MSA Safety

What's one professional challenge you've tackled and what steps were key in your success?

I took a role in product approvals, an area that was struggling, and in which I wasn't a subject matter expert. But I was able to take a transferable skill—problem solving—and apply it. I learned I am good at fixer-uppers.

When stepping into a new area, you need to articulate your transferable skill sets, such as change management or data analytics, and look for positions that need them.

You also need confidence. Women tend to not raise their hands unless they can check off every box on a job description. Confidence comes from taking chances and learning you can do new things.

How have you handled criticism about being too nice?

Many people are used to the traditional management style: 'Here's what you have to do; now go do it.'

I think it's a balance, but there's strength in being collaborative. For instance, I took on a larger role in optimizing our plant footprint and spent several years closing plants, moving the corporate headquarters, and effecting cultural change as we moved to a more open work environment. The changes impacted about 500 employees and we lost only five.

By communicating—we held about 120 communication sessions—and listening, I could help build consensus. ■

“We need diverse thinking or we won't get the innovation we need,” says Meri Stevens, worldwide vice president, Deliver Organization, Johnson & Johnson.

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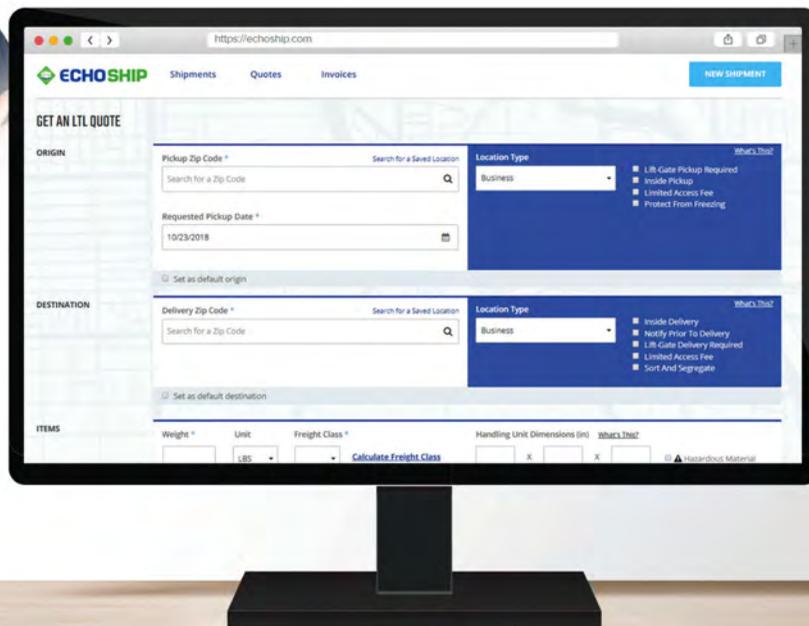
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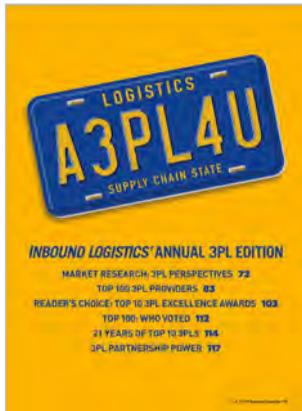
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Mike Mobley, Senior Vice President of Operations, discusses how outsourcing to a qualified third-party logistics provider helps keep companies moving in the right direction

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5 THINGS YOUR 3PL REP SHOULD BE DOING FOR YOU

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THE TOP 100 3PLS

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3PL POWER

Whether brand new, solidly up and running, or decades old, shipper-3PL partnerships thrive on open communications, flexibility, and trust.

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DIGITAL JOURNAL RESPONSES

Doug Waggoner addresses the evolving role of supply chain technology in meeting customer expectations.



OUR AUDIENCE HAS STAMPED IT LICENSE-PLATE OFFICIAL: THESE TOP-TIER THIRD-PARTY LOGISTICS PROVIDERS DESERVE ACCOLADES AND THE DISTINCTION OF BEING A TOP 10 3PL.

This year more than 18,000 ballots—an all-time high—were cast. The 3PLs garnering the most votes in our Readers’ Choice Top 10 3PL Excellence Awards survey received effusive praise, with voters listing the attributes that equate to excellence: attentiveness, reliability, flexibility, and ability to execute.

Being able to execute is key when the supply chain is dynamic and demanding. By handling a portion or all of a company’s transportation and logistics operations, 3PLs deliver the goods.

GETTING IT DONE

Says one voter of top spot holder Echo Global Logistics, “Without them, I could not get my job done.” With goods flowing and supply chains humming, companies can turn their attention to what they do best—customer service, production, and profitability.

3PLs also help shippers manage information, along with their goods. Our *3PL Perspectives* report underscores a key value they bring—technological expertise. They leverage technology to manage shippers’ operations and deliver efficiency-boosting insights, as well as provide IT solutions that customers can use in house.

Information management is crucial when shippers can’t afford to miss demand

signals and delivery deadlines. This applies to all verticals and links in the supply chain.

Nearly all facets of the supply chain are represented in our survey, which drew responses from varied verticals—consumer packaged goods, pharmaceutical, home appliances—and diverse job titles—from procurement to transportation management. (See About the Survey Respondents on the next page.)

Voters include supply chain decision-makers from well-known brands such as Avon, Best Buy, Costco, Dow Chemical, General Mills, Google, Macy’s, Nestle, Nike, Toyota, and Whirlpool.

SERVICE REIGNS SUPREME

Without question, shippers value service—80% of respondents rate service as more important than price. This is an increase from last year when 75% indicated they prioritized service over price. Only 20% say price is their main consideration. Forty-four percent rate poor customer service as the reason 3PL partnerships fail.

Year after year, the IL 3PL survey reveals the key role customer service and execution play in shipper supply chains. The most laudable providers offer innovation, technology solutions, and the global connections necessary to keep shipments moving. ■

AND THE WINNERS ARE:

- 1**
ECHO GLOBAL LOGISTICS
- 2**
TRANSPPLACE
- 3**
HUB GROUP
- 4**
C.H. ROBINSON
- 5**
KENCO
- 6**
WERNER
- 7**
(tie)
DHL SUPPLY CHAIN GLOBALTRANZ
- 8**
SUNSET TRANSPORTATION
- 9**
(tie)
SEKO LOGISTICS
PENSKE LOGISTICS
- 10**
R2 LOGISTICS



4 ECHO GLOBAL LOGISTICS

IN THEIR OWN WORDS

Echo Global Logistics offers accountability and personalized customer service. *CavClear*

WHY THEY WON:

Echo combines service and technology to create impressive, customized third-party logistics solutions for each of its customers.

“At Echo, we put a premium on technology and customer service in order to meet the complex needs of this highly competitive, rapidly expanding industry,” says Doug Waggoner, chairman and CEO.

“Our employees follow through on Echo’s promise to simplify transportation management, helping our clients become a shipper

of choice and continue to do what’s best for their business,” he adds.

Steven Judge, senior manager at Newell Brands, praises the 3PL for providing accurate, reliable, and profitable results. “Our relationship with Echo began with the goal of helping us simplify our transportation management and has grown to include a deeper analysis of our shipping operations,” he says. “Echo acts as a true partner, always keeping our best interest in mind. They come to us with ideas

for improvement in a truly consultative manner.”

Echo prioritizes ensuring high-quality customer service and results. “Echo sets itself apart by solving the complex challenges that shippers and carriers face in the market,” says Waggoner. “Whether that’s addressing a lack of visibility into their supply chain or providing more robust, data-driven reporting, the company ensures its customers have the tools and reliable support they need to meet their transportation management goals.”

Doug Waggoner
Chairman & CEO



CLIENT ROSTER:

- Archway
- Culligan International
- Greenheck
- Johnstone Supply
- Monster Beverage
- Stonecrop Technologies
- Newell Brands
- Taraca Pacific

ABOUT THE SURVEY RESPONDENTS

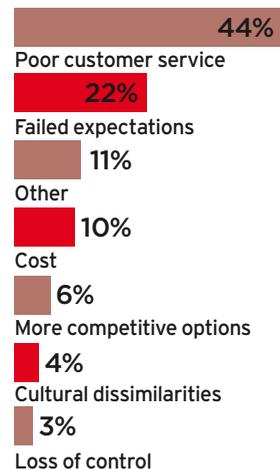
FUNCTION	
Corporate management	34%
Logistics/distribution	24%
Supply chain/purchasing/supply management	19%
Transportation management	12%
Operations	11%
INDUSTRY	
Retail/e-commerce/wholesale	44%
Manufacturing	38%
Services	18%
ANNUAL TRANSPORT/LOGISTICS SPEND	
\$10-\$49 million	46%
More than \$50 million	23%
\$1-\$10 million	21%
Less than \$1 million	10%

SERVICES READERS BUY	
Motor freight (TL/LTL)	82%
Third-party logistics (3PL), contract logistics	77%
Small package delivery, expedited freight, express services	72%
Warehousing and distribution	67%
Supply chain technology, software/systems	56%
Air freight	48%
Rail, rail intermodal	46%
International shipping, freight forwarding	45%
Ocean, ocean intermodal	38%
Materials handling systems, equipment, forklifts	35%
Site, port, or facility selection	29%
Fleet operations, dedicated contract carriers	26%
Transportation equipment	20%
Packaging/labeling systems	10%

WHAT IS MORE IMPORTANT?



WHAT IS THE #1 REASON 3PL RELATIONSHIPS FAIL?



LEADERSHIP

Conversations with the Captains of Industry

The Future of Logistics Technology



Recently, *Inbound Logistics* sat down with Doug Waggoner, Chairman of the Board of Directors and Chief Executive Officer at Echo Global Logistics for a Q&A.

IL: What is Echo's perspective on technology for logistics?

At Echo, we believe in technology's potential to simplify transportation management and continuously improve efficiency. That's been our goal since we rolled out our technology 15 years ago. When we were founded in 2005, the industry was extremely fragmented. As an innovator, Echo has set ourselves apart by offering best-in-class technology to allow transparency and visibility for shippers. We're constantly looking for ways to continue to disrupt the shipping world for shippers, carriers, and our employees. Today we continue to have technology at the core of everything we do.

IL: What are the key benefits of Echo's technologies?

Echo's technological advancements over the last 15 years enable us to serve shippers and carriers in new and better ways with improved productivity, predictive analytics, and enhanced freight visibility. Our multi-modal capabilities allow us to serve small and medium-sized businesses, as well as Fortune 500 shippers, across the U.S. In addition, our strong relationship with our carrier network provides reliable access to capacity to serve our shippers' needs.

IL: What technology does Echo offer?

Our latest technology platform, EchoAccelerator, supports over 16,000 shipments a day and is the proprietary architecture that powers EchoShip, our self-service shipping platform, and EchoDrive, our carrier facing web portal and mobile app. We're simplifying the freight marketplace with solutions that address our clients' and carriers' needs, while increasing the productivity of our employees.

IL: Tell me about EchoShip for shippers?

EchoShip, our online shipping portal, consolidates and simplifies shipping by enabling customers to build loads, store frequently used shipment information, and track shipments in real time. Shippers can also search, view, and pay all invoices using EchoShip.

IL: Tell me about EchoDrive for carriers?

EchoDrive, our dispatcher portal and driver app, gives carriers real-time access to search, bid, manage, track, and

get paid on available loads. It gives dispatchers the ability to manage loads and drivers from one centralized location, while letting drivers provide real-time tracking and submit documents quickly, allowing for faster payment.

IL: Is Echo a tech company or a broker?

As I like to say, we are a technology company that happens to be in logistics. Our roots were in technology. This has helped us evolve to keep up with the changing landscape and we continue to invest in our technology development.

IL: Is Echo a digital freight marketplace?

I think that Echo, along with a couple other companies, was one of the first digital freight marketplaces. There are a few large competitors in our space, and all of us have been investing in technology for a long time. We built a lot of scale, which matters in this business, as does lane density. We have big IT and data science budgets. Everyone is enamored with these new start-ups and that is fine, we were once a start-up, too. But to get overly enamored and think that some of the big companies in our space are not applying massive amounts of technology and data science to an existing marketplace that has tens of thousands of participants is a huge oversimplification.

IL: What are your thoughts on the new entrants to the space?

Here is the problem with 'build it and they will come' – it is a very big and fragmented space, with hundreds of thousands of shippers and carriers. No one company is going to capture and become the de facto market standard. In our case, we have 35,000 shippers and 50,000 carriers, and that only reflects a portion of the market. Our shippers are using multiple forms of transportation partners and almost all of our carriers are hauling freight for multiple shippers. It is not feasible that one company is going to create a mobile app and website and have everyone come running to them.

IL: What role do people play in addition to your technology offering?

I like to say we offer technology at your fingertips...experts at your side. In our business, relationships matter. Having a relationship with a shipper and solving their problems and coming through for them when they are in a pinch matters. The same thing happens for trucking companies. We think

What Sets Echo Apart?

The Echo Brand Promise. We simplify transportation management, handling crucial tasks so clients can focus on what they do best. Clients, carriers, and Echo team members enjoy an exceptional experience grounded in the Echo Way.

Better Technology. The heart of our offering is our proprietary technology—quickly adaptable, highly scalable, and uniquely easy to use for clients and carriers. Through efficiently integrated portals, we ensure better data collection and transmission, seamless communication, comprehensive reporting, and real-time visibility.

Expert Logistics Professionals. Echo has the best people in the business, a team of energetic, enthusiastic, expert logistics professionals determined to deliver the highest quality service experience. With outstanding coverage, we help ensure your goods arrive where and when you need them, whatever the mode.

Exceptional Service. Above all, Echo values exceptional service in every client interaction. We recognize that one solution does not fit all, so we evaluate your transportation needs, discover efficiencies, and deliver the best value for your spend. Echo ensures you get the transportation management solution that's right for you.

the success of our model and other companies like us is, in part, due to the people component of our model and the relationships we built, and the service and solutions we provide. That's why we invest in our 2,300 employees in 30 branch offices throughout the US. At the same time, because of the critical scale we have with size and density, our buying power lets us be much more efficient.

IL: Any final thoughts?

We've talked a lot about our technology, but it's really our employees, whether they are building the technology or using it, who simplify transportation management for our shippers and carriers.

EXPERTADVICE

Tapping into Echo's knowledge and expertise

5 Reasons Outsourcing Transportation Management Will Improve Your Logistics Operation

By Mike Mobley, Senior Vice President of Operations, Echo Global Logistics

Is your logistics department ready for growth? Optimizing your transportation operation involves much more than moving freight at the lowest price. To drive real innovation and long-term value for customers, many shippers have turned to Managed Transportation services and are seeing great success.

So how can outsourcing to a qualified third-party logistics provider (3PL) help keep you moving in the right direction?

1. GET GREATER FLEXIBILITY AND TECHNOLOGY

3PL partners give customers access to their resources, which means you'll benefit from a more extensive technology and logistics operations infrastructure. As one significant example, top 3PL providers are already invested in a Transportation Management System (TMS) or have developed their own to support a shipper's logistics operations. This gives their customers access to logistics technology most could not afford on their own.

2. FOCUS ON OTHER PARTS OF THE BUSINESS

With Managed Transportation, customers get the best of all possible worlds. You gain access to knowledgeable, experienced supply chain professionals with specific areas of expertise around industry regulations, modes, carriers, and more. Resources and time once spent trying to do everything can now be spent on production, marketing, establishing customer relationships, and developing new ideas. In other words, leave logistics to the professionals so your people can focus on building and running your business.

3. MINIMIZE OVERALL COSTS

You might think outsourcing is more expensive than hiring and attempting to handle all logistics functions internally. But companies can lower overall costs by leveraging the capabilities of a 3PL. This ROI can come from the provider's expertise at optimizing transportation planning, sourcing capacity, negotiating more favorable rate agreements with carriers, and reducing workload for employees through process automation. Armed with the latest technology, 3PL providers can leverage the power of analytics and reporting to understand drivers of transportation spend to be able to spend smarter. 3PL providers can also help reduce infrastructure investments otherwise necessary in software, personnel, equipment, and facilities.

4. ENJOY ECONOMIES OF SCALE

On their own, many shippers typically don't have much negotiating leverage with carriers—at least not on the scale of a 3PL. With a Managed Transportation partner, shippers should expect to benefit from their collective buying power because the 3PL can secure not just lower rates, but capacity at crucial times when the market is tight. Confident knowledge of the market and its daily

fluctuations, consistent freight prices, carrier qualification, and technology to improve carrier communications (such as real-time track-and-trace capability) are some of the other ways 3PLs can leverage their own scale to reduce costs and ensure greater capacity for the benefit of their customers.

5. IMPROVE CUSTOMER SERVICE

Since every shipper's main goal is a high level of service for their end customer, this too needs to be a focus for any 3PL they work with. An experienced 3PL will build and execute a strategy to help overcome the challenges of delivery speed, information flow, visibility, and delivery accuracy. This can extend to service reporting and the availability of data analytics for use in tools like Key Performance Indicators (KPIs) and vendor performance scorecards.

As more shippers lean on logistics service providers to deliver quality, value, and customer service, 3PL partnerships are built on lifelong strategy, rather than a short-term fix. Doing your research and hiring the right Managed Transportation service provider will help you get more things done and raise customer satisfaction, drive higher profit margins, and fuel the growth of your business.

5 Things Your 3PL Rep Should Be Doing For You

By Sean Burke, Chief Commercial Officer, Echo Global Logistics

You should expect exceptional service from your third-party logistics (3PL) provider, but how do you know you're getting it? Your 3PL representative's main job is to help ensure your supply chain runs efficiently. However, without the right communication and technological tools, he or she might not be able to help you avoid costly or otherwise preventable disruptions.

Echo's approach to transportation management was voted #1 by readers of *Inbound Logistics* in the 2018 Top 10 3PL Excellence Awards for the second year in a row. Take it from the experts: your 3PL rep should simplify transportation, not complicate it. To help select the best transportation providers for your business, we narrowed down the top five services your rep should be performing for you.

1. OFFER ROBUST, CUSTOMIZABLE TECHNOLOGY

The technology your 3PL representative utilizes must be robust enough to handle your most complex transportation needs. Preferably, it should be built in-house rather than taken off the shelf so it can be customized to your specifications. The technology should allow your 3PL to analyze your transportation practices and identify inefficiencies for improvement. It should measure your performance against key performance indicators (KPIs), support real-time tracking, and deliver accurate reporting. Most importantly, the technology should drive continuous improvements to your supply chain and help make managing your business a lot easier.

2. PRIORITIZE COMMUNICATION

You should be able to reach your 3PL any time—even if it's 9 p.m. on a Friday. Your rep should be proactive in communicating with you about tracking updates, load deliveries, and any critical

information regarding your shipment. Going above and beyond is a sign of a great 3PL and a great rep. Whether that means having afterhours support in place or being available through email or phone, your rep should be ready to answer your questions day and night, so that if you encounter any issues with your supply chain, they can be resolved quickly.

3. SOLVE PROBLEMS QUICKLY

Timing is everything in logistics. The success of the transportation industry hinges on many parties adhering to a tight schedule. Your provider should be prepared to handle unforeseen issues. Trucks break down, inclement weather surprises everyone, and traffic is anything but predictable. Your 3PL rep has been through this before and should be equipped to offer you the support you need to navigate any disruption quickly. If a load is delayed or a shipment is damaged, your rep should be in contact not just to let you know, but also to offer potential solutions.

4. BE AN INDUSTRY EXPERT

The transportation industry is constantly impacted by factors outside your control such as state and federal regulatory changes, weather disruptions, and driver capacity issues. For example, we saw Hurricane Florence affect whole communities in the Southeast and Mid-Atlantic, causing road and terminal closures and extensive damage to infrastructure. Your 3PL rep should have a knowledge base that's a mile wide and a mile deep. In other words, your rep should be an expert who offers advice concerning any developments that might affect your business.

5. PROVIDE BETTER OPTIONS

There's an ideal mode for every shipment, and it may not be what you were expecting—in a good way. Your 3PL rep has access to a wide range of transportation resources. But providing options is more than offering different modes.

Your 3PL rep should understand your business, including how much flexibility you have regarding pickup and delivery dates as well as whether your delivery location is open on weekends, has preferred carriers, or offers extended hours of operation. Based on this understanding, he or she should seek a balance between the range of cost and service options available and provide unique carrier or modal solutions that exceed your expectations. All of this is part of your rep's job and should be included in the services you have come to expect from your 3PL provider.



**USE THE 3PL
DECISION
SUPPORT TOOL**
SEARCH on any of
these data points
to match your
requirements to the
Top 100:
bit.ly/3PL-DST

PROVIDING INNOVATIVE AND RELIABLE SUPPLY CHAIN SOLUTIONS, THESE THIRD-PARTY LOGISTICS PROVIDERS DRIVE HOME THE GOODS. PRESENTED IN ALPHABETICAL ORDER, THESE ARE THE 100 3PLs INBOUND LOGISTICS EDITORS SELECTED AS THE BEST OF THE BEST.



ECHO GLOBAL LOGISTICS

800-354-7993 | echo.com

ASSET/NON-ASSET: Non-asset-based

AREAS SERVED: US/Canada/Mexico

MARKETS SERVED: Transportation

LOGISTICS SERVICES: LLP/4PL, Integrated Logistics, Omni-Channel Logistics, JIT, Global Trade Services, Inbound Logistics, Logistics Process Reengineering, Supply Chain Finance, Vendor Management, Shared Services

TRANSPORTATION SERVICES: TL, Intermodal, Fleet Acquisition, Equipment/Drivers

SPECIAL SERVICES: Consulting, Sustainability

TECHNOLOGY SERVICES: CRM/SRM, EDI, ERP Integration, GTM, Optimization, Predictive Analytics, Supply Chain Design, TMS, Visibility

CRM/SRM Customer/Supplier Relationship Mgmt	JIT Just in Time	TMS Transportation Management System
DCS Dedicated Contract Carriage	LLP Lead Logistics Provider	VMI Vendor Managed Inventory
ERP Enterprise Resource Planning	LTN Less Than Truckload	WMS Warehouse Management System
GTM Global Trade Management	PLM Product Lifecycle Management	
	TL Truckload	



A.N. DERINGER
 ALLIANCE SHIPPERS
 AMERICOLD
 APPROVED FREIGHT FORWARDERS
 ARMADA
 ASCENT GLOBAL LOGISTICS
 ATLANTA BONDED WAREHOUSE CORPORATION
 AVENGER LOGISTICS
 BENDER GROUP
 BLG LOGISTICS
 BURRIS LOGISTICS
 C.H. ROBINSON
 C.L. SERVICES
 CAPACITY LLC
 CARDINAL LOGISTICS MANAGEMENT
 CLX LOGISTICS
 CORPORATE TRAFFIC LOGISTICS
 COYOTE LOGISTICS
 CRANE WORLDWIDE LOGISTICS
 CROWLEY LOGISTICS
 CRST SPECIALIZED TRANSPORTATION
 CT LOGISTICS
 CTSI-GLOBAL
 DF YOUNG
 DHL SUPPLY CHAIN
 DISTRIBUTION TECHNOLOGY
 DLS WORLDWIDE, AN RRD CORPORATION
 DSC LOGISTICS
 DUPRE' LOGISTICS
ECHO GLOBAL LOGISTICS
 ELM GLOBAL LOGISTICS
 ENGLAND LOGISTICS
 EVANS DISTRIBUTION
 FEDEX SUPPLY CHAIN
 FIDELITONE

FLS TRANSPORTATION SERVICES
 FREIGHT MANAGEMENT
 GEODIS
 GLOBALTRANZ
 HOLMAN LOGISTICS
 HUB GROUP
 INGRAM MICRO COMMERCE & LIFECYCLE SERVICES
 J.B. HUNT TRANSPORT
 JOHANSON TRANSPORTATION SERVICE
 KAG LOGISTICS
 KANE IS ABLE
 KDL (KEYSTONE DEDICATED LOGISTICS)
 KENCO
 KNIGHT-SWIFT LOGISTICS
 LANDSTAR SYSTEM
 LEGACY SUPPLY CHAIN SERVICES
 LOUP LOGISTICS
 LYNDEN
 MALLORY ALEXANDER INTERNATIONAL LOGISTICS
 MATSON LOGISTICS
 MD LOGISTICS
 MGN LOGISTICS
 NFI
 ODW LOGISTICS
 ODYSSEY LOGISTICS & TECHNOLOGY
 PENSKE LOGISTICS
 PERFORMANCE TEAM
 PHOENIX LOGISTICS
 PILOT FREIGHT SERVICES
 PLS LOGISTICS SERVICES
 PORT JERSEY LOGISTICS
 PORT LOGISTICS GROUP
 PROTRANS INTERNATIONAL
 PUROLATOR INTERNATIONAL
 R2 LOGISTICS

REGAL LOGISTICS
 RINCHEM
 ROMARK LOGISTICS
 RUAN
 RYDER
 SADDLE CREEK LOGISTICS SERVICES
 SCHNEIDER
 SEKO LOGISTICS
 SHIPPERS GROUP
 SUNLAND LOGISTICS
 SUNSET TRANSPORTATION
 SYFAN LOGISTICS
 SYNCREON
 TAYLORED SERVICES
 TOLL GLOBAL LOGISTICS
 TOTAL QUALITY LOGISTICS
 TRANSGROUP GLOBAL LOGISTICS
 TRANSPACE
 TRANSPORTATION INSIGHT
 TUCKER COMPANY WORLDWIDE
 UNIVERSAL LOGISTICS HOLDINGS
 UPS SUPPLY CHAIN
 UTXL
 VERST GROUP LOGISTICS
 VOLTA LOGISTICS
 WAGNER LOGISTICS
 WEBER LOGISTICS
 WERNER LOGISTICS
 WSI (WAREHOUSE SPECIALISTS, LLC)
 XPO LOGISTICS

WHETHER BRAND NEW, SOLIDLY UP AND RUNNING, OR DECADES OLD, SHIPPER-3PL PARTNERSHIPS THRIVE ON OPEN COMMUNICATIONS, FLEXIBILITY, AND TRUST.

3PL POWER

BY MERRILL DOUGLAS

A strong connection with a third-party logistics (3PL) company can make all the difference in your supply chain operations. When shippers and 3PLs function as partners, they jointly tackle challenges, devise innovative strategies, spot new opportunities, and respond nimbly to the ups and downs of daily operations.

Partnerships evolve over time. At each stage, there's something to learn about how to work together to achieve the best results.

LOYALTY THROUGH THE YEARS

David Wozniak and Andy Hafertepe have worked together for about 20 years. Wozniak is marketing director at Taraca Pacific, a small firm based in Virginia Beach, Virginia, and San Francisco that imports and sells plywood. Hafertepe is divisional vice president at Echo Global Logistics in Chicago. But when he and Wozniak first met, Hafertepe and his group worked for a company called American Backhaulers.

The two stuck together through several mergers and acquisitions, most recently when Echo acquired Command Transportation in 2015.

Behind this long partnership is a set of close personal relationships. “When somebody knows your business and what your needs are, they cater to that,” says Wozniak. “Andy and his group have always done that.”

Echo’s main job for Taraca today is to manage distribution to a large home center retailer with locations throughout the United States. Echo holds the inventory in third-party warehouses located around the country. “And then they manage the trucking out of each of those locations,” Wozniak says. “We have an inventory set up, we carry backstock, and we ship daily to our large retailer as well as to other customers.”

The 3PL team developed and improved that distribution network over time. “We started getting the rates down and getting the best carriers,” Hafertepe says.

When Hafertepe’s team became part of Echo, one big change Taraca saw was access to Echo’s in-house information technology. “That allowed us to have more controlled inventory management, and a system whereby we could order trucks right through their website,” Wozniak says. Taraca and Echo also started using electronic data interchange (EDI).

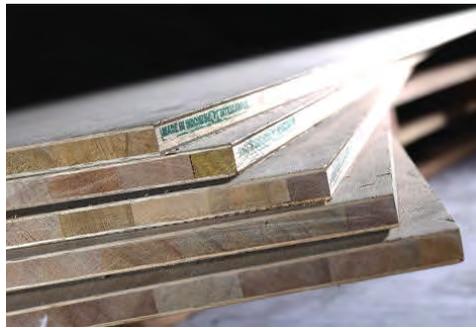
Recent trade conflicts have posed new challenges for the Taraca-Echo partnership. Taraca has traditionally sourced plywood from China. When the United States imposed tariffs

TARACA PACIFIC

+

ECHO GLOBAL LOGISTICS

Taraca Pacific manufactures and distributes lumber, plywood, and millwork. A long-term partnership – and friendship – with 3PL Echo Global Logistics is a key element of success.



on goods from that country in 2018, Taraca began to develop sources in other countries. It asked Echo for help with its evolving supply chain.

Echo quickly helped Taraca find additional, reasonably priced storage in ports where it was needed. “A lot of our changes had to be made on the fly,” Wozniak says. “The information was coming in the middle of the night from the White House, so we didn’t always know exactly what was going to happen when.”

Hafertepe’s team has also helped with simpler challenges. Once, a large customer told Taraca it wanted to add 4x4-foot panels to go with the 4x8-foot panels that Taraca currently supplied. To get that program going sooner, with a large inventory of the 4x8-foot product already in the United States, the logistics team brought saws to five warehouses and got to work.

“We took Taraca’s 8-foot SKU, cut the sheets in half, labeled and repacked them, and Taraca was in business a lot sooner,” Hafertepe says.

According to Wozniak and Hafertepe, two keys to a successful shipper-3PL partnership are communication and trust. Those values are critical, for example, when discussing freight rates. Prices rise and fall with market conditions, Wozniak says, and he trusts Echo to give him the best rates available at the moment.

“We do check—we look elsewhere from time to time,” he says. “I’ve never found Echo not to be up to date on the market situation.”

All customers call around to spot-check prevailing rates on occasion. “When I go to sleep at night, I want to know that if Wozniak calls five other carriers for rates, that I’m within \$50,” Hafertepe says.

Open communication and a sense of loyalty have deepened the relationship between the shipper and 3PL teams over the years. “We’re friends now,” says Hafertepe. “If you can get to that point as a customer or a 3PL, it makes work so much easier.”

THE EVOLUTION OF SUPPLY CHAIN TECHNOLOGY

by **Doug Waggoner**,
Chairman and CEO,
Echo Global Logistics

1 How have consumer expectations of retailers changed over the past five years?

Consumer expectations of retailers are changing rapidly. Consumers used to have standard expectations about competitive pricing and quality customer service. But nearly every industry has grown quickly over the past five years, and business models have evolved, so it's not surprising that retail is experiencing major changes as well.

Today's consumers have higher expectations—they want connected omnichannel experiences, personalized interactions, and nearly immediate shipping options that cater to shoppers' convenience.

2 How important is the supply chain for meeting customer expectations?

The supply chain is often a forgotten factor, but it plays the largest role in meeting modern customer expectations. Building a better supply chain boosts customer satisfaction because it has a direct impact on two of the most critical customer expectations: price and delivery. An efficient supply chain allows retailers to cut costs, which allows the business to lower prices, and it improves the company's overall profitability.

In today's retail market, fast fulfillment is an absolute must for many consumers. A high performance supply chain means you'll be able to meet—or exceed—customer expectations on delivery timing, and that drives higher customer satisfaction and repeat business.

3 How has supply chain technology evolved?

Technology has completely transformed the supply chain, changing the entire structure of how we work, from internal communications to physical processes. 14 years ago, when Echo launched our technology, it was a highly fragmented industry and Echo was at the forefront. Today, we continue to develop and evolve our Digital Freight Marketplace to keep us in that position, most recently launching EchoAccelerator, our flexible and robust proprietary architecture that supports shipper, carrier, and managed transportation systems.

Technology has made supply chains more transparent than ever before, giving the customer full visibility and immediate answers about delivery status. Take for example, EchoShip, our self-service shipping platform that consolidates and simplifies shipping by enabling customers to build loads, store frequently used shipment information, and track shipments in real time. Shippers can also search, view, and pay all invoices using EchoShip.

EchoDrive gives carriers the ability to book, manage, and get paid on freight hauled for Echo. The platform's load management tool and document upload capabilities streamline operations, keeping dispatchers organized and helping drivers get back on the road faster. EchoDrive users get real-time access to search, view, and bid on available freight, reducing the effort associated with finding freight for their available equipment.

Modern supply chain software is much more efficient, which expedites processes. Thanks to greater transparency, we can identify potential errors more easily, which means supply chains can adapt more quickly and complete processes more rapidly.

Ultimately, supply chain technology allows businesses to integrate processes across their organization.

4 Are smaller businesses at a disadvantage?

Building an efficient supply chain is a major investment of time, money, and human resources. It's a challenge for businesses of all sizes, but smaller businesses often are at a disadvantage, mostly due to a lack of investment power, modest IT budgets, and limited access to supply chain/logistics professionals.

In particular, smaller businesses tend to have a trickier time achieving supply chain visibility, building and maintaining critical supplier/partner relationships, and staying up to speed as technology evolves. This is where the power of a 3PL partner like Echo really comes into play.

Quality 3PL partners, such as Echo, often provide logistics technology as part of their service, and at no additional cost to the shipper. Most provide access to rates a shipper could not negotiate on its own which helps to level the playing field.

5 What can smaller businesses do to improve their logistics processes?

Improving your supply chain and logistics processes doesn't always have to mean a large-scale overhaul that takes a lot of time and money to implement. Smaller businesses looking to improve their logistics processes should focus on four things:

- Choose suppliers/partners that are of a similar size and operating on a similar scale to build and maintain resilient supplier/partner relationships.
- Increase your supply chain visibility, which benefits your organization and your supplier. Internally, it allows employees to access vital information that can help them strategize more effectively. Externally, supply chain visibility allows your suppliers to check your inventory in real time so they can serve you better.
- Engage your IT department to learn about new software that can potentially streamline supply chain processes.
- Partner with a 3PL like Echo to leverage their robust buying power and advanced technology, ultimately simplifying your transportation management and allowing you to focus on what you do best.



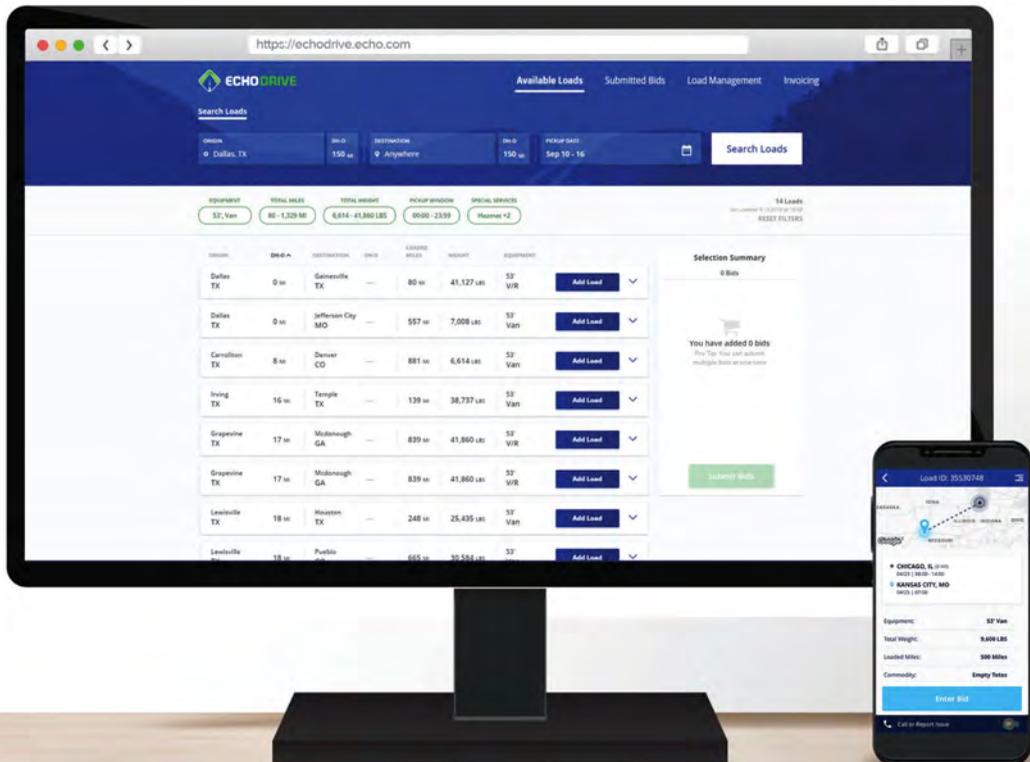
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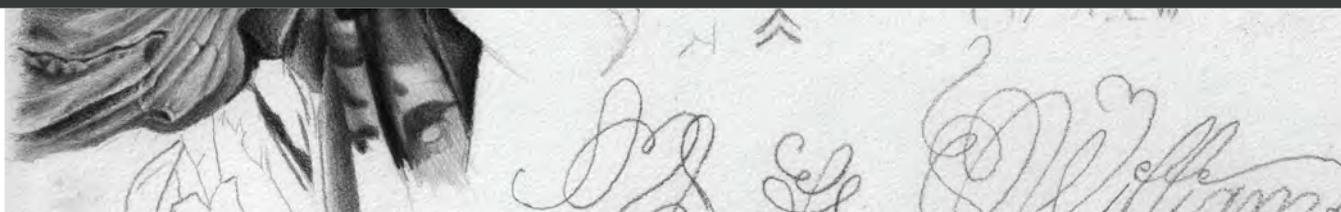
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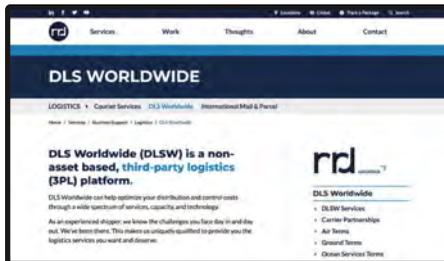


SSG William R. Wilson III – Drawing by Michael Biondo

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IN THIS SECTION: 3PL - Education

3PL



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Echo Global Logistics, Inc. (Nasdaq: ECHO) is a provider of technology-enabled transportation and supply chain management services. Echo maintains a proprietary, web-based technology platform that compiles and analyzes data from its network of more than 50,000 transportation providers to serve its clients' needs. Offering freight brokerage and managed transportation services across all major modes, Echo works to simplify the critical tasks involved in transportation management.



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EDUCATION

SCHAR SCHOOL OF POLICY AND GOVERNMENT, GEORGE MASON UNIVERSITY schar.gmu.edu/tpol

Unlike a traditional urban planning degree, the Master's in Transportation Policy, Operations, and Logistics program at George Mason University's Schar School explores the intersections of planning, policy, and practice within the fields of logistics, operations management, and transportation policy. You will master the knowledge and skills needed to effectively and efficiently supply and operate transportation facilities and services. Courses are held in the evenings on Mason's Arlington, Virginia, campus, on a part-time or full-time basis.



IN THIS SECTION: Education – Warehousing

EDUCATION



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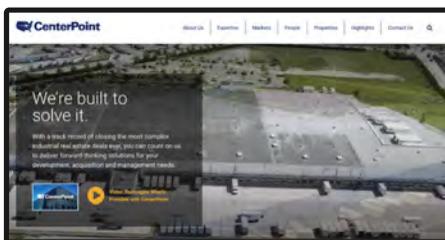
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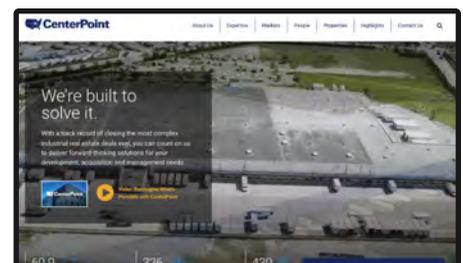
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video

THE SMARTPHONE SUPPLY CHAIN

Offered by LLamasoft

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About 2,800 smartphones are manufactured per minute—what does it take to get this vital piece of technology into consumers' hands so rapidly? From earth metals to state-of-the-art manufacturing, smartphones are the product of an intricate global supply chain. In this video, Razat Gaurav, chief executive officer of LLamasoft, provides a unique perspective on the smartphone supply chain.



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2020 State of the Third-Party Logistics Industry Report

Offered by 3PL Central

The third-party logistics (3PL) industry will experience a host of new issues, challenges, and golden opportunities in the new decade. This report outlines the six biggest opportunities and 20 best practices that will help 3PLs succeed in 2020, covering topics such as paperless warehouses and e-commerce customer demands.



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Unlocking Less-than-Truckload Savings in the Southeast

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Florida offers compelling advantages for shippers, carriers, freight forwarders, and 3PLs, making it one of the most heated and challenging less-than-truckload (LTL) markets in the United States. This free e-book offers insights and strategies for managing the complexities of moving LTL freight in the Southeast.



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5 Signs You Need a New Training Provider

Offered by Lion Technology

Training personnel to manage and ship dangerous chemicals is not a rote exercise—one mistake can lead to serious injury, death, evacuations, hospitalizations, highway closures, and lasting environmental contamination. Make sure your training meets high standards when it comes to quality, accuracy, and knowledge retention.

Supply Chain Insights

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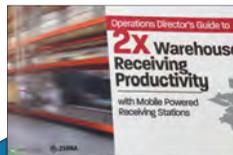
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Airfreight Forwarders Guide

Offered by Inbound Logistics

Need to move goods quickly? Here's a comprehensive guide to airfreight forwarder partners that offer speed and reliability with their end-to-end solutions. From hazmat and multimodal transport to online booking and transportation management, partnering with these companies will help ensure your supply chain runs as smoothly as possible.



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How to Achieve Warehouse Productivity with Mobile-Powered Receiving Carts

Offered by Newcastle and Zebra

How much movement is wasted in your warehouse? Operations directors can read through this free e-book to learn the benefits of deploying mobile receiving-cart technology in warehouses or distribution centers, and how leading companies are using mobile-powered carts to increase productivity without major changes to their processes.



DOWNLOAD

bit.ly/2020-customer-insight

The State of the Digital Customer Experience

Offered by Simpler Media Group

The digital customer experience has become a focal point of retailers' core strategies. The teams that succeed operate within an evolved organizational culture, share a universal view of the customer experience, and evolve toward creating more enjoyable experiences. Simpler Media Group analyzes insights from customer experience executives to help retailers refine their digital transformation and experiential strategies.

podcast

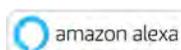


Jim Dempsey

How Can Shippers Better Respond to New Consumer Demand Signals?

GUEST: Jim Dempsey, National Sales Director, Panasonic

Consumers who were once delighted by two-day shipping have now come to expect next-day or same-day delivery. To keep up, shippers have reinvented their supply chains with better technology, more comprehensive data, and new reverse logistics processes to ensure customer satisfaction. Jim Dempsey, national sales director of Panasonic, discusses how these tools can help make the shipping process seamless for consumers in 2020 and beyond.



[IN FOCUS]

INBRIEF

New Services and Solutions

>PRODUCTS

> The M260TE mobile terminal from **ACD Elektronik GmbH** is now available in the Android Industrial+ version with an optional 2D long-range scanner. The scanner, integrated into the handle, reads all commonly used 1D and 2D barcodes.

> Designed to support Internet of Things (IoT) deployments in the supply chain, the new **Impinj R700** reader can process small, global RAIN tags at high speeds. Featuring a 1-GHz dual-core processor, 1-GB RAM, and Gigabit Ethernet, the reader lets users quickly build IoT solutions.

> **CSafe Global** launched the AcuTemp Plus Series of solutions to meet the temperature-controlled shipping needs of pharmaceuticals, clinical trials, and emerging cell and gene therapies. The packaging is designed with ThermoCor vacuum-insulated panels.

> **DeltaTrak**, a cold chain management and food safety solutions provider, introduced the FlashLink RTL Prime 2G and 3G In-Transit loggers. Designed for monitoring location and temperature during the transport of live poultry,



> Designed for e-commerce, **Sitma Machinery's** e-Wrap 2.0 can assemble packages and envelopes of varying sizes with different types of wrapping materials, including bio film and paper. The packaging machine can integrate a feeding system that prints and applies paper inserts, such as invoices, return notes, and other documents, to the packaging without glue.

the devices offer real-time reporting and a PDF backup report.

>SERVICES

> Intralogistics solutions provider **Dematic** now offers its micro-fulfillment solution to general merchandise and apparel retailers, expanding its services from the grocery industry. Designed to support rapid e-commerce order fulfillment, the solution can be installed in as few as 12 weeks and in locations as small as 10,000 square feet.

> **Momentum Logistics**, a subsidiary of port operator GulfTainer, launched Delaware operations. The first U.S. venture for

Momentum Logistics, the new service offers inland transport and distribution, as well as freight forwarding and warehousing.

> Shippers doing business between Asia and the United States can get help establishing supply chains with the recent partnership between **SEKO Logistics** and **Air & Ground World Transport** (AGWorld). The platform of services helps shippers develop new trade relationships, leveraging AGWorld's network of offices in Hong Kong, Shanghai, Beijing, Taipei, Shenzhen, Guangzhou, Manila, and Ho Chi Minh City and SEKO Logistics' more than 120 branches in 40 countries.

>TECHNOLOGY

> Warehouse and distribution center dock operations can now interconnect their equipment with the new cloud-based 4SIGHT Connect Digital Dock from **4SIGHT Logistics Solution**. The 4SIGHT system provides real-time access and management of dock data and KPIs, letting facility managers control the entire dock operation via remote monitoring.

> The new release of **inconsosLM** (Slotting Management System) distributes inventory to available areas and locations in the warehouse. Featuring improved algorithms, extended parameters,

and increased tailoring for displaying different warehouse scenarios, the solution lets facility managers optimize the use of resources in the warehouse, shortening processing times and increasing picking speeds.

> The **Digital Container Shipping Association**, a non-profit group established to help digitalize container shipping, published a common set of processes, as well as data and interface standards for track and trace that can be downloaded from its website for free. The new standard simplifies shipment visibility across multiple carriers.

> **TRANSPORTATION**

> The **CMA CGM Group, COSCO SHIPPING, Evergreen,** and **OOCL** introduced the Ocean Alliance Day 4 Product, which starts in April 2020 and covers the Trans-Pacific and Trans-Atlantic lanes. Through Ocean Alliance, shippers can leverage more port calls, direct links, and faster transit times through 38 services.

> **Yang Ming Marine Transport** launched a Taiwan-Japan service, which cuts the transit time between Taiwan and Japan's Kansai region by up to two days.



> **DHL Express** invested \$3.8 million to expand its service center in Cleveland, Ohio, to support a surge in e-commerce and a strong manufacturing presence in the region. The expanded facility, located near the Cleveland Hopkins International Airport, is about 20,000 square feet larger, maximizing processing capabilities and supporting earlier deliveries.

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Swinging for the Fences

Before a single major leaguer steps up to the plate on opening day March 26, 2020, industry players are already scoring with supply chain team-ups and spring training send-offs.



COVERING THE BASES

Spring training send-off MVP Old Dominion Freight Line helped 8 MLB clubs move equipment and other supplies across the country to warmer climes, including:

- The Los Angeles Angels. Haul: exercise equipment, consumables, and other spring training supplies. Spring base: Tempe, Arizona.
- The New York Mets. Haul: more than 10,000 items, including 600 baseball caps and four pitching machines.

DON'T JUST THROW IT



SC Johnson is fielding **1,000,000+** plastic cups used each season at Miller Park back into its supply chain, drafting the Milwaukee Brewers in a recycling play addressing one of the biggest sources of waste at their ballpark. Starting with the 2020 season, spectators at Miller Park will be able to put PET-based drink cups with the SC Johnson logo in designated receptacles for the company to collect, clean, regrind, and recycle into its Scrubbing Bubbles bottles.



AHEAD OF THE GAME

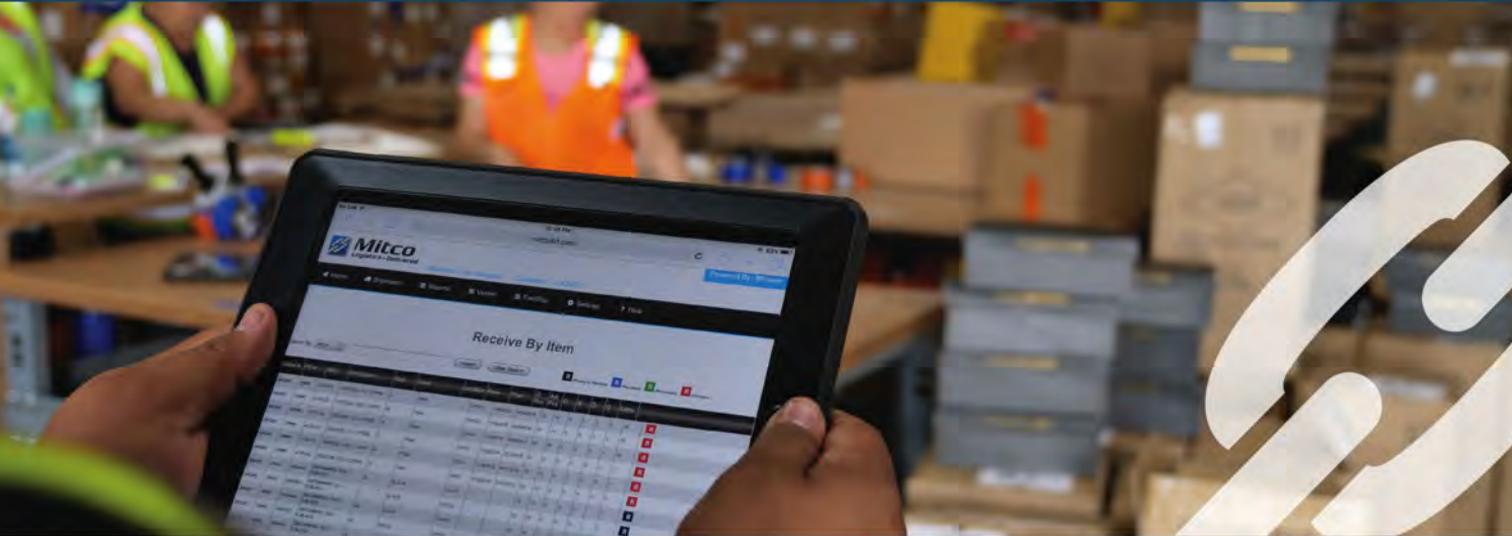
The Maryland Stadium Authority, which manages Oriole Park at Camden Yards, is catching cigarette waste. Baltimore Orioles fans place discarded cigarettes in nine receptacles located around the stadium. The cigarettes are processed into plastic pellets that are then used to create recycled materials. The leftover tobacco is composted.

ON DECK



The Boston Red Sox marked Truck Day on Feb. 3, 2020, as a moving crew took about 5 hours to load a 53-foot truck with supplies for the team's spring training in Florida. For the 24th consecutive year, driver Al Hartz made the nearly 1,500-mile trip from Boston to Fort Myers with:

- 20,400 baseballs
- 1,100 bats
- 200 batting gloves
- 200 batting helmets
- 20 cases of bubble gum



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Balance of product can be consolidated into 53' rail trailers for delivery to DC at lower carrying cost at same or similar transit to IPI



Trucks arrive at DC's with balance for Midwest and East Coast distribution





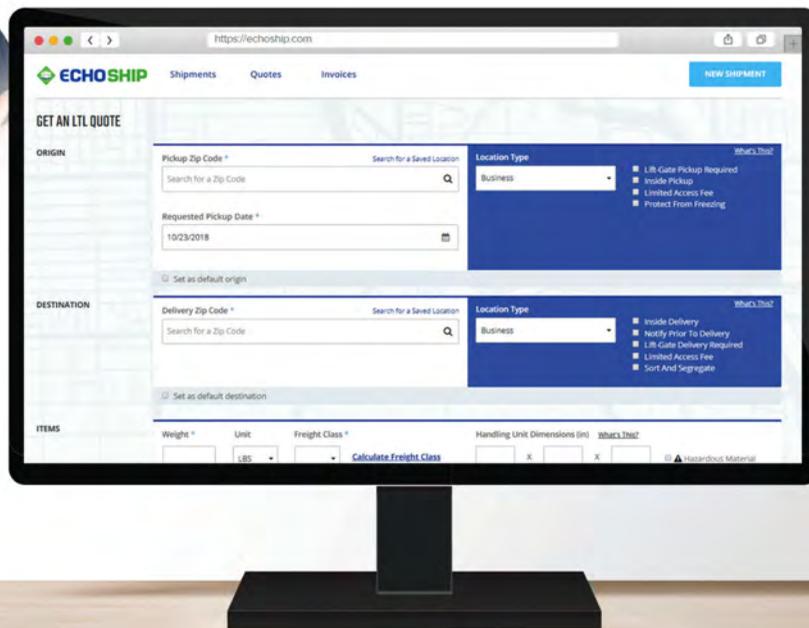
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