WHAT’S MORE IMPORTANT, COST OR CUSTOMER SERVICE?
THE TRUTH IS OUT THERE
Connecting you to Chicago

CP prides itself on providing customers with the best service and optionality in the marketplace. Strategically located northwest of downtown Chicago, CP’s intermodal facilities at Bensenville and Schiller Park provide direct access to Chicago, northern Illinois, southern Wisconsin and eastern Iowa. Three major highways surrounding the intermodal yards means we can help move your cargo to its final destination faster.

CP Connects

cpr.ca/chicago
City Haul
The top global locations with the best conditions for opening an import/export business, restaurant, or tech startup:

**Singapore** is the best city to start an import/export business with a well-established logistics ecosystem and excellent access to markets.

**Lisbon** is the best city to open a restaurant, with affordable real estate and an extensive hospitality ecosystem.

**San Francisco** is the best city to launch a tech startup, with a flourishing tech ecosystem, and access to talent and venture capital. — *[Movinga]*

**OCTOBER 3, 1863**
The day when President Abraham Lincoln proclaimed the last Thursday of November a national day of thanksgiving. Decades later, President Franklin Roosevelt officially declared that Thanksgiving should always be celebrated on the fourth Thursday of the month to encourage earlier holiday shopping.

— *[US Census Bureau]*

**LIGHTNING-ROUND SEASON**

The 2019 holiday season is the shortest since 2013, with only 26 shopping days between Thanksgiving and Christmas. That led many stores to begin their holiday promotions earlier than usual, including one major discount retailer promoting deals on toys, electronics, home goods and sporting goods on Oct. 25.

— *[CBRE Retail Trends Report]*

**GIVE ME A BRAKE A B O U T**

13.5% of commercial motor vehicles inspected in the U.S. and Canada during Brake Safety Week in September 2019 were removed from roadways for brake-related violations. Inspectors checked 34,320 commercial vehicles, placing 4,626 out of service for critical brake violations.

— *[The Commercial Vehicle Safety Alliance]*
CONTENTS

DECEMBER 2019  |  VOL. 39  |  NO. 12

32
THE CX FILES: THE TRUTH IS OUT THERE
Technology tools offer mind-bending ways to delight customers, often also providing benefits for supply chain management.

40
HUNGER GAMES: MANAGING FOOD LOGISTICS CHALLENGES WHEN DEMAND SPIKES
When consumers are ravenous for a trendy food or beverage, supply chain professionals must hit their mark to meet demand and boost sales.

44
A HIRE PURPOSE: 11 STRATEGIES TO RECRUIT SUPPLY CHAIN TALENT
Competition has never been tougher to obtain supply chain talent, forcing companies to rethink recruitment strategies.

INFOCUS

1 INFO SNACKS
18 NOTED
20 TAKEAWAYS
56 IN BRIEF
64 LAST MILE
Santa Claus logistics

INSIGHT

6 CHECKING IN
What’s the word?
10 GOOD QUESTION
When choosing a logistics provider, what’s more important: cost or customer service?
12 DIALOG
14 10 TIPS
Growing a green supply chain
24 SPONSORED KNOWLEDGE BASE
Leverage your 3PL’s real estate assets for in-demand cold storage...24
What’s the deal with flexible warehousing?...25
Need speed across the supply chain? It’s all about the barcode...26

INPRACTICE

16 READER PROFILE
Lisa Veneziano, executive director of global after sales supply chain, warehousing and logistics at General Motors is a driving force behind GM’s service parts.
Only pay for the speed you need...
Dynamic Routing!℠

On time and on budget.

At Lynden, we understand that plans change but deadlines don’t. That’s why we proudly offer our exclusive Dynamic Routing system. Designed to work around your unique requirements, Dynamic Routing allows you to choose the mode of transportation – air, sea or land – to control the speed of your deliveries so they arrive just as they are needed. With Lynden you only pay for the speed you need.

lynden.com | 1-888-596-3361
MORE NEWS ONLINE

GOING THE DISTANCE: SECURING SUPPLY CHAINS FROM CYBER ATTACK

The complexity and multi-layered nature of supply chains have made them an obvious mark for cyber attacks. Here’s how to deter hackers. bit.ly/cyberattackproof

FOSTERING A DATA-CENTRIC CULTURE IN FULFILLMENT OPERATIONS

Investing in data management can help your distribution center run smoother. To get buy-in for a data-driven approach from the entire organization, here are three points to make. bit.ly/fulfillmentdata

BUILDING THE SUPPLY CHAIN SKILLS OF THE FUTURE

The gap between the skills needed to compete in an increasingly digital supply chain and those available in most organizations is widening. Find out how your company can develop the needed skills for the future. bit.ly/futureSCskills
You promised on time, in full. We’ll help deliver.

With Old Dominion, your time-sensitive shipments will arrive on time and in full to meet shrinking retail delivery windows. Our Must Arrive By Date (MABD) service is supported by our industry-leading on-time record and low claims ratio. Let us help strengthen your retail partnerships, protect your vendor scorecard and deliver value in every shipment. OD provides 100% door-to-door visibility with a Customer Service Representative as your single point of contact.

For more information, visit odfl.com or call 1-866-637-7333.
CHECKING IN

What’s the Word?

We asked the experts in our audience for the hot supply chain words or phrases you and your colleagues will be talking about next year. Here goes.

Door to floor. Given e-commerce deliveries of larger consumer products, door to floor is a thing, explains Bob Hitt, industry go to market manager for Salesforce. Some call these “over the threshold” deliveries. Studies show that porch pirates swipe up to 30% of e-commerce deliveries; Amazon launched its Key in-home delivery service to try and stop that. We’ll see.

Gig worker. Gig is a work arrangement consisting of income-earning activities outside of traditional, long-term employer-employee relationships. Think contractors, contingency or project workers. “Embracing this growing segment of workers is key to helping companies handle variability—from last-minute orders to seasonal swings—while remaining agile and efficient,” according to Robert O’Dwyer, logistics industry principal for Kronos. Many new age workers prefer this kind of arrangement because it affords more life flexibility. There’s friction ahead as states such as California and New Jersey target gig worker arrangements, forcing employers to convert gig workers to regular employees. Why? Taxes.

Supply chain digital twin. This concept will necessarily grow in acceptance in 2020 and beyond, predicts Dr. Madhav Durba, group vice president of LLamasoft. Exponential increases in computer processing power impact supply chain modeling. “This has led to the rise of cloud and algorithmic intelligence, which means that a digital representation of your supply chain no longer needs to be a patchwork of models for sourcing, manufacturing, and distribution,” says Durba. Instead, a living model can be digitally rendered to simulate real-world events, essentially an actionable and what-ifable model of your business logistics network.

Supply chain impatience. In the continuing trend of wanting deliveries to arrive more and more quickly, two-day delivery has evolved into same-day delivery. Thanks primarily to Amazon, we’ve moved beyond transportation to a consumer-driven cultural phenomena as customers have been conditioned to expect blindingly fast B2B deliveries as well.

Destruction of density. One result of the growth in supply chain impatience is the requisite impact on shipment density and the loss of the transportation and logistics cost savings that higher shipment density provides. The challenge for logisticians in 2020 will continue to be offsetting the higher costs of shipment density loss by using the latest logistics technology to better match demand signals to supply.

As the practice evolves, so does the language of logistics.
MODEX HELPED ME LEARN HOW WE CAN MOVE UP ON THE AI AND AUTOMATION CURVE.

GIL KANNER
VP, Operations at PharmaLink

STARTING MARCH 9, YOUR SUPPLY CHAIN POSSIBILITIES ARE ENDLESS

CONNECT: 950 leading solution providers showcasing new equipment and technologies

LEARN: 100+ free education sessions and 4 powerful keynotes

MEET FACE-TO-FACE: thought leaders and industry peers from the U.S. and 140 countries across the globe

ATTEND: Registration is free

LEARN MORE & REGISTER TODAY AT MODEXSHOW.COM
And the Awardees are...

ABF Freight System, Inc.
Alliance Shippers, Inc.
Armada
Bill Davis Trucking, Inc.
Bold Transportation, Inc.
C.A.T. Inc.
C.R. England, Inc.
Canon USA, Inc.
Combined Transport, Inc.: Blackwell Consolidation, LLC
Contract Transportation Systems, Co. (Sherwin Williams)
CRST Dedicated Services, Inc.
CRST Expedited, Inc.
CT Transportation, LLC
Delta Automotive Services, Inc.
DHL Express
Dillon Logistics, Inc.
Doug Andrus Distributing LLC
Duncan and Son Lines, Inc.
Eagle Transport Corporation
Fortune Transportation
Georgia-Pacific Consumer Products LP
Gorton’s
Halvor Lines, Inc.
Hardy Brothers, Inc.
Heartland Express, Inc. of Iowa
High Country Transportation, Inc.
Hirschbach Motor Lines
HP Inc.
Hub Group
J.B. Hunt Transport, Inc.
Johnson & Johnson
KBX Logistics, LLC
Kimberly-Clark Corporation
King Solutions, Inc.
Kohl’s Department Stores
LEDVANCE LLC
Logistics Trans West Inc. - Logistiques Trans West Inc.
LTI, Inc.
McDonald’s
McFarland Truck Lines, Inc.
Meijer
Meijer Logistics LLC
Mesilla Valley Transportation
Michelin North America, Inc.
Navajo Express, Inc.
Nordstrom, Inc.
Nussbaum Transportation Services, Inc.
Nu-Way Transportation Services, Inc.
Old Dominion Freight Line, Inc.
OutWest Express, LLC.
Palmer Moving Services
Penske Logistics, LLC
Quick-Way, Inc.
Raven Transport
RJR Transportation
Roehl Transport, Inc.
Ruan Transportation Management Systems, Inc.
S & S Transport, Inc
Schilli Corporation
Schneider
Sheehy Mail Contractors, Inc.
Southeast Transportation Systems, Inc.
SSBB Inc DBA Delta Distribution
Stokes Trucking, Inc.
Swift Transportation Co. of Arizona, LLC
TransAm Trucking, Inc.
TransWay, Inc.
Trinity Logistics Group, Inc.
Walmart Transportation, LLC
Werner Enterprises
Whirlpool Corporation
Woody Bogler Trucking Company

Congratulations to the 2019 SmartWay Excellence Award winners!

These SmartWay Partners are leaders in freight supply chain efficiency and environmental stewardship. Since 2004, U.S. EPA’s SmartWay Transport Partnership has been a market-driven initiative that empowers businesses like yours to move goods in the cleanest, most energy-efficient way possible, while protecting public health and reducing the impact on the environment.

To learn how your company can achieve excellence visit: [epa.gov/smartway](http://epa.gov/smartway)
When choosing a logistics provider, what’s more important: cost or customer service?

With a tumultuous global economy and trade uncertainties, the most important consideration is value. Can they provide global visibility to your supply chain? Can they help you effectively navigate the ever-changing regulatory landscape?

_Park Williams_
VP, North America Sales
BDP International

Driving costs out of the supply chain is a given when choosing a logistics provider. What’s key is building long-term, mutually beneficial partnerships that deliver efficiency, transparency, and supply chain optimization year over year.

_Bill Goodgion_
President
Ascent Global Logistics

Why not have both? With the volatility of order profiles and the new metric of next-day delivery, it is extremely important you and your selected logistics provider perform a detailed design session to align on the key metrics of success, and on how when volumes go up, so does the price.

_Michael Wohlwend_
Managing Principal
Alpine Supply Chain Solutions

Customer service. Simply put—you can win and lose with cost, but you will always lose with poor customer service. A cheap rate still carries a minimum level of service expectations. Without customer service, your rates won’t matter.

_Bryce Williford_
Senior Director, Commercial Sales
BlueGrace Logistics

You can win and lose with cost, but you will always lose with poor customer service. Without customer service, rates won’t matter.

Now is not the time to trade off costs for customer service. While costs cannot be ignored, with the growth of e-commerce and the heightened expectations of customers, enterprises are leveraging transportation as a competitive weapon, and it is a critical element of the customer experience.

_Brian Hodgson_
Senior Vice President, Industry Solutions
Descartes Systems Group

Depends on the mode of shipping, type of product, and parameters of the move. If you’re shipping LTL or truckload without time restraints, then cost is most important. On the other hand, if you have time restraints or need added attention because of your product, then customer service should be the #1 consideration.

_Scott DiCicco_
Account Manager
Exline Global Logistics

Customer service, especially when an emergency strikes. You want a partner that invests as much time/resources into relationships with customers and partners as it does developing solutions.

_Yamini Vellore_
CIO & Head of Customer Success
Blume Global

Have a great answer to a good question?

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

Will the supply chain management function be obsolete in 10 years?

We’ll publish some answers. Tell us at editorial@inboundlogistics.com or tweet us @ILMagazine #ILgoodquestion
No two products are alike. No two third-party logistics providers are either.

When you’re choosing between 3PLs, make sure you’re doing an apples to apples comparison of the proposals. Ruan’s Integrated Solutions bring additional value to every shipment through our people, process, and technology platform.

With 88 years of experience, we provide a wealth of knowledge to each client. And our process generates savings by optimizing your supply chain, whether your integrated solution requires logistics, warehouse management, Ruan assets, or more. And our flexible, best-of-breed technology platform scales to meet your needs, improving visibility, reducing spend.

For more information about how we can design a solution that brings more value to you (whether you’re shipping apples or steel), call (866) 782-6669 or visit ruan.com.
Quick TIP

Adopt a customer-back approach to deliver exactly what your customer is looking for—even if it breaks a process you and your company are used to. It’s easy to get lost in the complexities and lose sight of the purpose of a process or task, but for manufacturers and wholesalers, the customer’s end goal is most important. It doesn’t matter to your customers how a shipment gets delivered; it matters when it arrives and whether it’s intact.

—Jamin Dick
Head of North American Supply Chain, Alibaba.com

Re. Good Question: Was the Popeyes chicken sandwich shortage a supply chain fail or marketing savvy?
bit.ly/GQ_Popeyes_sandwich

Marketing savvy. Supply and demand has always been the driving factor in supply chain management issues. Kudos to Popeyes for creating a demand where there is still clearly plenty of supply.

—Amy DePaoli
Director of Marketing
Pilot Freight Services

Re. Good Question: What advice would you give someone just starting out in logistics/supply chain?
bit.ly/SC_industry_advice

Solving real-world challenges is an exciting and rewarding career in today’s rapidly evolving digital supply chains. However, be aware most supply chains have become extremely complex, especially with the new end-to-end focus.

The supply chain is no longer the traditional siloed manufacturing or logistics functions focusing on cost cutting and efficiency—it’s now based on the interdependence of people, processes, and technology synchronized to responsively meet market demand and, in the case of healthcare, improve patient outcomes.

The most important consideration as you start your career is to understand the impact end-to-end visibility can have on a business. Understand inventory visibility, demand signals, logistics assets, and status of orders. Analyzing and sharing data about visibility and then collaborating to meet demand is quickly becoming the new frontier for digital transformation leading to major business performance improvements—more than we thought possible with transactional business applications like ERP.

At the start of your supply chain career learn to recognize and look through traditional silos and collaborate cross-functionally. With emerging digital network platform capabilities like Amazon, network partners can share data and collaborate seamlessly across the platform; that is when real transformation of ecosystems will happen.

—Roddy Martin
Chief Digital Strategist, TraceLink

Re. Unpacking the Biggest Threat to a Multi-Trillion-Dollar Industry
bit.ly/visibility_in_logistics

Where does the transparency start? With the carrier/driver? Do they have the technology to show the updates required to feed the transparency data stream? If not, then it is going to be difficult to provide this. Has Amazon built this data network into their system for equipment they don’t own? If not, then things won’t stay clear for long.

—Max Mason

Fast TAKE

Real-time visibility and analytics has become a powerful tool in transportation for shippers and LSPs. Two critical factors for success include: 1) a large network connecting shippers, suppliers, carriers, and 3PLs, and 2) normalized high-quality data that can be consumed to gain greater insight into supply chain operations.

—Brian Hodgson
Senior Vice President,
Industry Solutions
Descartes Systems Group
Simplify Transportation With Our Proven Technology

DLS Worldwide leverages a technology-backed platform to enable visibility and simplify transportation. Select from LTL, Truckload, International and Domestic Freight Forwarding options, all with our innovative TMS System, DLSW Connect.

Email agentinquiry@dls-ww.com or visit rrd.com/dlsworldwide
LTL • Truckload • Air • Ocean • Intermodal • White Glove
Growing a Green Supply Chain

Green is the new black in supply chains. Whether it’s a conscious effort or the byproduct of streamlining your operations, going green can pay off.

1 WALK THROUGH YOUR SUPPLY CHAIN OPERATIONS FROM BEGINNING TO END.
At each step, stop and ask why. Now, ask the same question four more times. The “Five Whys” technique is an effective tool to expose weaknesses and redundancies in your green supply chain operations.

2 ESTABLISH A BASELINE.
Tap an experienced third-party logistics (3PL) provider to model your current systems, including variables such as labor, inventory, and transportation costs, while also considering future needs. Modeling validates current processes, highlights improvement areas, and suggests hybridized solutions.

3 FIND THE LOW-HANGING FRUIT.
Typically, inventory levels and placement are easy pickings. More product means more space, labor, equipment, waste, and energy consumption. Consider investing in a good warehouse management system if your organization has the in-house expertise to implement it. Otherwise, partner with a 3PL.

4 GO FOR NO-BRAINERS.
Simple and inexpensive changes can impact energy and cost savings. For example, consider switching to LED lights, which last five times longer than fluorescent lights and use at least 75% less energy than incandescent lighting. The return on investment can be as quick as a year or two, and the result is a net-green positive on your supply chain.

5 GET LEAN AND MEAN.
Implementing lean operations is the most strategic way to green your supply chain. From the CEO to the assembly line, every member of a lean organization relentlessly seeks out waste and eliminates it. If a system or process does not add value, lose it.

6 THINK OUTSIDE THE BOX.
One large office equipment manufacturer with a closed-loop distribution network was already recycling 100% of cardboard packaging, but wanted to do more. The company replaced cardboard packaging with collapsible, returnable plastic totes, diverting 300,000 large cardboard boxes from landfills annually.

7 WASTE NOT, WANT NOT.
When a cable internet company—which sees 3.1 million pieces of inbound equipment annually—aimed to reduce its carbon intensity, it implemented a solution that included a hands-free, data-capture receiving process that enables quick and easy component harvesting for reclaimed accessories. The tested, repaired, and refurbished products provide customers with like-new equipment and saves more than 3.4 million pounds of waste from landfills annually.

8 ELECTRIFY YOUR OPERATIONS.
Many service providers are paving the way for the adoption of alternative fuel vehicles and electric vehicles by providing lease and maintenance options, as well as equipping facilities with charging requirements. Consider electrifying your fleet through a lease program to minimize risk and maximize efficiency.

9 DO WHAT’S RIGHT.
When it’s a toss-up, go green. Your customers will thank you.

10 CHOOSE YOUR PARTNERS WISELY.
Look for a reputable 3PL with a strong track record in optimizing green supply chains. Choose a company that considers continuous improvement core to its business and that will continually challenge your processes.

SOURCE: TOM REGAN, GROUP DIRECTOR OF CUSTOMER LOGISTICS, RYDER
Your **Multi-Go** Service provider for your refrigerated and van **Multi-Stops**

**UTXL, Inc. Since 1997**
www.UTXL.com · info@UTXL.com
(800)351-2821
Taking the Wheel of GM’s Service Parts

In August 2019, we opened a 1.1-million-square-foot ACDelco and GM Genuine Parts processing center in Burton, Michigan, GM’s largest single investment in a warehousing and logistics facility in the United States in nearly 40 years. The facility handles parts packaging, kitting, and distribution, both domestically and globally, for 120 million service parts annually.

One of my most significant accomplishments was overseeing and empowering my team to bring this to fruition. We had an aggressive timeline, so project management was key, especially with 70 days of weather delays. We had a plan, but also had to be flexible and modify the execution details multiple times to meet the launch timing.

Day to day, I oversee a global organization within GM. We’ve done a lot of work to identify best practices from around the world and leverage them across all our operations to improve everyone’s performance, working hard to overcome a “North American” mentality.

One example is the way we organize our outbound work into waves for picking. Because we don’t have the same systems in every location, we initially didn’t think we could use the same processes everywhere. However, we took the batching concept and used desktop through the ignition switch recall, for example, Mary stood front and center, and was a great role model for the company and industry around the priority of integrity and product safety.

Lisa Veneziano Answers the Big Questions

1. If you received $1 million to start a new business or philanthropic venture, what would you do?

I would contribute to efforts against domestic violence. About five years ago, my area within GM started supporting a safe house for victims of domestic violence. We’ve since expanded to multiple domestic violence centers close to our U.S. warehouses. The need is there, but people don’t like to openly talk about it.

2. Any role models or people you particularly admire?

Mary Barra, chair and chief executive officer of GM. Her commitment to integrity is paramount. When we went

3. If you could represent the United States in the Olympics, what would you do?

Marathon running. I’ve completed 16 Boston Marathons and have come within 38 seconds of going to the Olympic marathon trials. While I love the competitive aspect of running, I also often come up with creative ways to handle various challenges while on longer runs.

Lisa Veneziano is executive director, global aftersales supply chain, warehousing and logistics, General Motors Customer Care and Aftersales.

Responsibilities: Leading an integrated, global team responsible for supply chain planning, warehousing, packaging, distributing, and logistics for automotive replacement parts and accessories heading to GM vehicle owners across the globe. The organization covers almost 100 facilities in 22 countries.

Experience: Within GM, positions in industrial engineering, processing and parts distribution center operations, logistics, global supply chain, ACDelco sales, and global lean warehousing operations for Customer Care and Aftersales.
tools to batch work in similar ways across locations, even without the same systems. As a result, we’re able to schedule work so customers receive their materials within more consistent time frames.

In college, I knew I wanted to earn a technical degree. However, I wasn’t interested in mechanical or electrical engineering, and at the time, my school didn’t offer a supply chain degree. I discovered industrial engineering, which ended up being a great fit.

When I moved into leadership positions within Customer Care and Aftersales, the cross-functional positions I held became key to gaining a broader knowledge of the business. These experiences have helped me succeed in my current role.

GM does a lot to attract and develop women for supply chain and logistics roles. This is important since warehousing operations positions are not as flexible as office jobs. The advice I give women, regardless of their role, is not to feel guilty about not doing everything. Identify your priorities and put them on your calendar. These are just as important as your professional priorities.
The Supply Chain in Brief

> SHOVEL READY

Food and beverage distributor **Ben E. Keith** broke ground on its new foodservice distribution center in Albuquerque, New Mexico. Expected to be completed in November 2021, the 261,000-square-foot facility will include Dematic Multi-Shuttles, Frick refrigeration and security systems, LED lighting, warehouse management systems, a test kitchen, and a training center.

> GREEN SEEDS

As part of its global sustainability program, air cargo handler **Worldwide Flight Services** is converting most plastic products used in its cargo handling operations to the BioNatur Plastics line manufactured by M&G Packaging. The biodegradable plastic products reduce fossil fuel-based plastic usage and greenhouse gas generation.

> m&a

- **A&R Logistics**, a supply chain services provider for the chemical industry, acquired **Plantgistix Holdings**, a provider of packaging, warehousing, and export services to the plastic resin sector.
- **Canadian Pacific** acquired **Central Maine & Quebec Railway (CMQ)** from Fortress Transportation and Infrastructure Investors. CMQ owns 481 miles of rail lines primarily in Maine and Quebec.
- **MODE Transportation** merged with **SunteckTTS** to form a 3PL that will operate under the MODE name.
- **Kerry Logistics Network Limited** acquired a majority interest in Turkey’s **Asav Lojistik Hizmetleri Anonim Sirketi** to further expand its global network.
- Refrigerated warehouse owner **Lineage Logistics** bought cold-storage company **Emergent Cold** to increase space for chilled and frozen foods moving through the Port of Charleston.
- **Roadrunner Transportation Systems** sold its intermodal services business to **Universal Logistics Holdings**.
- **Manitoulin Global Forwarding** acquired **Associated Cargo Specialists** (Canada), which operates as ACS Logistics.

> UP THE CHAIN

**Alicia Cano** was signed by womenswear company **Gerry Weber** as director of supply chain management. Cano is responsible for optimizing supply chain processes and operations at the retailer, which is currently undergoing a restructuring process.
Averitt Express won the First Place LTL Fleet Safety Award from the Tennessee Trucking Association. The Fleet Safety Awards recognize an organization's safe driving record. Pictured from left to right: John Walton, director of safety and compliance, Averitt; Devin Rackley, driver, Averitt; and Major Brandon Douglas, Tennessee Highway Patrol.

The Association of American Railroads gave CSX Transportation's Brian Zacker the 2019 Professional Environmental Excellence Award for integrating environmental stewardship across multiple departments at CSX. As senior manager of environmental field services, he reshaped how the railroad stages rail materials to ensure supplies are reused and recycled, reducing costs and eliminating stormwater impacts from stray materials.

Old Dominion Freight Line was named the Overall Winner of the Mastio Quality Award for national LTL carriers for the 10th year in a row. Old Dominion topped the list of 25 LTL carriers assessed in the annual Mastio & Company survey, which measures 35 key attributes, including damage-free delivery and on-time pickup.

The Women In Trucking Association (WIT) recognized Dupré Logistics and YRC Worldwide as 2019 Top Companies for Women to Work For in Transportation. WIT recognizes companies for fostering gender diversity, offering competitive compensation and benefits, providing flexible hours and work requirements, and encouraging professional development and career advancement.
Shaping the Future of the Global Supply Chain

ARTIFICIAL INTELLIGENCE GETS REAL

About 90% of respondents to an IFS global research study into the attitudes and strategies towards artificial intelligence (AI) among business leaders report at least some plans to implement AI in various parts of their business. Among the key findings:

- Industrial automation is the most commonly reported area of investment, with 44.6% planning AI projects. Customer relationship management (CRM) and inventory planning and logistics tie for second place at 38.9%.

- When asked how they plan to use AI, 60.6% say they expect it will help them make existing workers more productive (see chart). Just under half, 47.9%, say they will use AI to add value to products and services they sell to customers. About 18.1% say they will proactively use it to replace existing workers.

- While a majority of respondents anticipate productivity increases from AI, 29.3% anticipate AI will lead to a reduction in headcount in their industry. To manage this, 56% of respondents state that society could best prepare by changing educational programs to prepare workers to make direct use of AI tools to increase their own productivity. Another 23.4% say they expect the market to create new jobs for people displaced by AI, while 15.4% suggest a shortened 30-hour work week.

Supporting Women Behind the Wheel

Two U.S. senators, working with Ellen Voie, president and CEO of the Women In Trucking Association, introduced legislation that would require the Federal Motor Carrier Safety Administration (FMCSA) to take a formal role in supporting women drivers.

Senator Jerry Moran (R-KS) and bill co-sponsor Senator Tammy Baldwin (D-WI) are working with the FMCSA to create the Women of Trucking Advisory Board.

The bill, announced Nov. 14, 2019, will establish an advisory board of “not fewer than seven members…to contribute balanced points of view and diverse ideas regarding the strategies and objectives…to create new opportunities for women in the trucking industry.”

The FMCSA administrator will appoint the advisory board, which will then report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

“This bill exactly supports our mission to increase the ranks of women working in the trucking industry, to address obstacles, and to celebrate success,” Voie says.
Top 10 Manufacturing Predictions

What's ahead for global manufacturing? “Manufacturing companies are transforming from efficiency-oriented operations to resilient organizations driven by a tighter connection to markets and customers,” says Kevin Prouty, vice president, Manufacturing Insights, IDC. Here’s what Manufacturing Insights predicts for the years ahead:

1: By 2023, 65% of global manufacturers will realize a 10% savings in operational expenses through process digital twins driven by Internet of Things (IoT) and machine language routines that factor in unstructured data sets.

2: By the end of 2021, half of all manufacturing supply chains will have invested in supply chain resiliency and artificial intelligence, resulting in productivity improvements of 15%.

3: By 2021, 30% of manufacturers will have a digital application unit that will use low-code technologies to create business-relevant applications without needing the coding skills required.

4: By 2023, 60% of G2000 manufacturers will address growing industry talent shortages by making significant investments in intelligent robotic process automation.

5: By 2022, the need for operational resiliency with data-driven processes will lead 60% of manufacturers to shift their smart factory strategy focus from technology implementation to process change management.

6: By 2025, driven by increased sustainability requirements, 30% of manufacturers will utilize blockchain and IoT to provide reliable provenance, leading to a 90% increase in audit efficiency.

7: By 2021, 20% of manufacturing companies will have started to treat their assets as internal customers, leading to a 40% reduction in asset downtime.

8: By 2024, 40% of OEMs will leverage field asset IoT data to intelligently diagnose pending issues and resolve unplanned downtime by 25%.

9: By 2024, 75% of all consumer-facing manufacturers will have materially transformed their supply chains to manage customization at scale.

10: By 2022, 70% of manufacturers will use cloud-based innovation platforms and marketplaces for cross-industry and customer co-development that creates 50% of new products and service ideas.

TAKEAWAYS

MODEX HELPED ME LEARN HOW WE CAN MOVE UP ON THE AI AND AUTOMATION CURVE.

GIL KANNER
VP, Operations at PharmaLink

STARTING MARCH 9, YOUR SUPPLY CHAIN POSSIBILITIES ARE ENDLESS

- CONNECT: 950 leading solution providers showcasing new equipment and technologies
- LEARN: 100+ free education sessions and 4 powerful keynotes
- MEET FACE-TO-FACE: thought leaders and industry peers from the U.S. and 140 countries across the globe
- ATTEND: Registration is free
DRONES MAKE THE MEDICINE GO DOWN

UPS Flight Forward Inc. and CVS Pharmacy have successfully completed the first revenue-generating drone delivery of a medical prescription from a CVS pharmacy directly to a consumer’s home. This was followed by another delivery of a medical prescription to a second customer in a nearby retirement community. Both flights used the M2 drone system by UPS partner and drone systems developer Matternet.

The deliveries mark another milestone in a collaboration between UPS and CVS to develop a variety of drone delivery use cases, including business-to-consumer operating models. The companies plan ongoing drone delivery program development in order to bring to market the speed and convenience advantages of UAVs.

The recent prescription delivery flights occurred with FAA approval to conduct a residential drone delivery and according to FAA regulations.

The flights launched from a CVS store in Cary, North Carolina, and flew to CVS customers’ homes. The drones flew autonomously but were monitored by a remote operator who could intervene if necessary. The drone hovered about 20 feet over the properties and slowly lowered the packages by a cable and a winch to the ground. One of the packages was delivered to a CVS customer whose limited mobility makes it difficult to travel to a store to pick up a prescription.

PICK-UP and DELIVERY so seamless

we might as well be invisible.

It’s our job to transport your cargo to its destination with zero complications – on time, every time, drama-free – and we do it well.

Syfan Logistics is an asset-based, $150 million company with over 250 team members and four decades of experience. We are a leader in transportation logistics because of our 24/7 commitment to technology, communications, our own fleet of trucks – and the experience to eliminate problems before they happen. We haul it all, while our industry expertise is focused on food, auto and package delivery.

No surprises. Just reliable shipping and logistics. Because when we make a promise, we deliver.
That’s a Wrap: Holiday Shipping Tied Up in Knots

During the holiday shopping season, all eyes are on shipping, with more than half of consumers (60%), and nearly three-quarters of millennials (74%) claiming they were disappointed with holiday shopping services in the past. Stats from Pitney Bowes’ 2019 Global Online Shopping Study reveal the top shipping frustrations:

1. **Free shipping still reigns supreme, with 24% of shoppers disappointed with the cost of shipping.** Free shipping is the #1 most important loyalty driver vs. other delivery-related experiences.

2. **29% of online shoppers were disappointed with delayed shipments.**

3. **Most consumers (59%) track their packages either daily or multiple times per day, making inaccurate tracking all the more disappointing.**

More than half of consumers (51%) have either enrolled or are interested in enrolling in a carrier tracking program (UPS MyChoice, FedEx Delivery Manager, and others).

Greg Syfan, President, Jim Syfan, CEO and Steve Syfan, Executive Vice President

SyfanLogistics.com | Gainesville, GA | 855.287.8485 | 770.287.8485
Leverage Your 3PL’s Real Estate Assets For In-Demand Cold Storage

Finding available cold storage real estate in key markets is becoming more difficult than ever before. Online grocery delivery and the wider e-commerce market have monopolized cold chain facilities near population centers, leaving new or expanding cold chain operations in a lurch as they struggle to locate themselves nearer to their customers.

A recent report from CBRE showed that the U.S. cold chain would need to add 100 million square feet to its footprint before 2020 to keep pace with demand, which has driven a boom in cold storage construction. Building new facilities is a slow and costly process, however, and cold chain shippers need solutions right now.

3PLs Are Hot in Cold Storage

Whatever challenges your perishable goods operation faces, the right 3PL can offer innovative solutions. 3PLs in the cold storage space are continually investing in technologies ranging from temperature tracking to warehouse and transportation management systems to maintain optimal visibility and ensure that perishable goods arrive fast and fresh.

Inbound Logistics • December 2019

technology resources across their customer base, 3PLs can typically offer noticeable cost savings for one- and two-day shipping operations that shippers may not be able to achieve on their own.

• **Flexibility.** 3PLs can typically scale up or down very efficiently to keep pace with demand. Working with many clients also gives 3PLs broad capabilities in terms of services such as packaging, labeling, inventory management, and more, facilitating customized solutions that directly meet each client’s needs.

• **Sustainability.** Consumers don’t just want their food fast anymore—they also want it organic, locally sourced, and/or ethically grown. 3PLs can leverage their networks to assist shippers with sourcing more sustainable suppliers that meet the demands of their customer base.

• **Creativity.** The 3PL sector has been driving innovation in the warehousing space for decades. When traditional facilities are hard to come by, 3PLs can offer more out-of-the-box solutions for warehousing and fulfillment. For example, 3PLs may be able to quickly set up micro-fulfillment operations to enable fast relief to strained markets or offer optimized service from nearby secondary markets to fulfill primary market demands.

Finding the Right 3PL for Cold Storage

Finding the right 3PL already has the right temperature control capabilities in place for warehousing and transportation. In addition, they should have certifications from the Food and Drug Administration, American Institute of Baking, and Good Manufacturing Practices to ensure they comply with all best practices for your products. Find a 3PL with these qualifications and you’ll be glad you did.

For help with your temperature-controlled storage needs, contact Phoenix Logistics today.
What’s the Deal With Flexible Warehousing?

There are several companies offering flexible warehouse space—Flexe, Stord, and Flow are a few examples. What has caused this trend?

Many companies’ supply chain needs have changed rapidly due to the consumer demand for same-day or next day delivery of products. Companies want flexible warehousing options with skilled, efficient labor to handle and ship their products.

Flexible warehousing is a hot topic in the warehousing industry because many companies want to store high-turnover product in spaces for short periods of time. Despite its new name, flex warehousing has existed in the logistics industry for a long time. It simply went by different names, such as public warehousing, multi-client space, or public space.

This type of warehouse space allows many clients’ products to be received, handled, stored, and shipped out in a flexible environment, as opposed to dedicated space and labor reserved for only one contract client at a time.

The Inside Scoop on Flex Warehousing

Typically, the flex warehousing companies do not own any industrial real estate. They use software to match the customers’ need with a warehouse’s open space. The downside of flex warehousing is the lack of dedicated labor to handle certain, highly sensitive products, such as chemicals, perishable foods and large, easily damaged goods.

Seeking out a third-party logistics provider with its own dedicated workforce, as well as a robust and flexible Warehouse Management System software and RFgen scanning capabilities, is still a company’s best option for handling and storing sensitive goods. Logistics services like RF scanning and an Oracle-powered WMS can work in tandem with highly trained, safety-minded material handler’s skillsets to ensure clients’ needs are met. 3PLs with transportation assets even a small fleet of trucks have another leg up on their clients need for speed. Even better, a 3PL with logistics software, like its own transportation management system and/or B2B systems integration software, can easily fulfill the needs of a short-term client.

Current 3PLs Already Meeting the Need

3PLs with a focus on logistics management can rest assured that they are competing capably against the new kid on the block. By quickly adapting to various industries and commodities, and responding to client requests with urgency and an extremely high level of customer service quality, a strong 3PL will find it can outlast even the most convenient warehousing options of the 21st century.

WSI is one of the largest 3PLs in the nation, with nearly 15 million square feet nationwide. We serve the chemical, paper, consumer packaged goods, packaging, building materials, and electronics industries. In 2016, WSI celebrated its 50th anniversary of providing Absolute Reliability to its clients. Our WMS, the Oracle-powered JD Edwards EnterpriseOne software, can process inbound and outbound shipment orders for products ranging from t-shirts to bulk plastic pellets. Our experience with seasonal goods, like holiday wrapping paper, Halloween costumes, and fishing rods, has made us one of the best in the industry. We can react quickly to retailer, distributor, and manufacturer needs, no matter the good. Looking for 50,000 square feet of space for 3 months? We have that. Need 400,000 square feet for 5 years? We can do that, too.

Our sister companies, WSI Transportation, LLC, and 360data, offer personalized transportation and supply chain visibility solutions, respectively.

Our focus is on Absolute Reliability to the client. That motto has instilled in our organization an innate flexibility to meet our client’s changing needs, for more than 53 years. Contact us today at 920-830-5000 for availability, pricing, transportation, and dedicated labor information, or visit us at: www.wsinc.com.
Need Speed Across the Supply Chain? It’s All About the Barcode.

The Amazon effect has upended the retail industry and wreaked havoc on supply chains. Speed has emerged as the critical success factor. Every extra minute it takes your team to locate a product or validate a shipment makes it harder for you to compete.

One of the smartest places to start upping your competitive game is also one of the simplest. Barcode labels. They’re recognized as the lowest hanging fruit and the logical place to begin improving productivity—and something as simple as the right label printer can help speed up your internal processes. Barcode labels already play an essential role in your supply chain. They are also a smart and cost-effective way to start making productivity gains in your warehouse.

Barcoding saves valuable time and ensures accurate information at every key warehouse station, including:

- **Receiving**: Applying barcode labels as soon as inbound items arrive ensures they can be accurately unloaded, checked in, put away, or handled by automated applications.
- **Picking**: Generating labels for each item picked allows them to be scanned in a staging or packing area where they are easily sorted for shipment.
- **Packaging**: Creating new labels is vital for identifying finished goods that you have kitted, assembled, or packaged.
- **Shipping and Returns**: Ship-to-order applications can incorporate customer-specific labeling, scanning to fulfill orders, and generating return shipping labels and paperwork that include time-saving credit and put-away location data.
- **Cross-docking**: Ideal for time-sensitive or fast-moving goods, cross-docking sends inbound items out again without their spending time in your facility. Warehouse workers with mobile printers and scanners can hop inside inbound trucks at the dock and start relabeling cartons for store or customer delivery, increasing the efficiency of that important last-mile delivery.

With so many places to streamline, it’s important to select the right printers. The compact and lightweight new Brother TD-4 family of desktop printers offers market-leading performance, connectivity, and ease of use, all backed by the industry’s best two-year warranty and nearly 30 years of industry experience and innovation. Like the best-selling RuggedJet Series mobile printers from Brother, the new TD-4 printer family seamlessly integrates with and prints directly from WMS and mobile devices.

In this “new normal” competitive environment there’s no room for failure. To achieve 100% scannable labels, opt for reliable, quality Brother printers with the right technology for your application.

Direct thermal printers are ideal for shipping labels, receipts, and many general-purpose uses. However, if you are labeling racks, or need labels to be 100% scannable after six months or more, you’ll want the enhanced durability of thermal transfer technology.

Traditionally, that’s meant buying different printers for each method of printing. Thanks to Brother’s new TD-4 family, there’s even a model that prints both direct thermal and thermal transfer labels. So, while you’re doing more with fewer people, you might also do more with fewer printers.

All Brother barcode printers are flexible, fast, easy to use, and competitively priced to help you compete more effectively. By saving time and money with more barcoding from Brother, you may find the Amazon effect working in your favor.
Jump Start 20
THE DEFINITIVE SUPPLY CHAIN INTELLIGENCE GATHERING
JANUARY 27-29, 2020  I  ATLANTA

REGISTER TODAY!
www.smc3jumpstart.com

An SMC³ Event
Four Ways Reusables Benefit the Circular Economy

The consumer-packaged goods (CPG) supply chain is changing. From faster, more frequent deliveries to specialty packaging, the way goods are handled and delivered has adapted and evolved. But change can come with consequences and the amount of packaging waste due to e-commerce has skyrocketed.

As a result, re-usability and sustainability are top of mind for many companies and consumers.

At its core, reusable packaging supports a circular economy. From cradle to grave, packaging can be manufactured, used, reused, and reprocessed without impacting the solid waste stream. This is a huge benefit considering limited- and one-time-use packaging contributes to the waste crisis.

Reusable packaging—totes, containers, racks, and pallets—can be a sustainable material handling solution, especially for transportation. Its durability, cleanability, and consistent dimensions create a more streamlined, environmentally friendly option for shippers.

Reusable packaging startups are changing the way CPG goods are delivered, but it is an option for the entire supply chain. CPG companies can fully embrace re-usability by incorporating this packaging in their warehouses, distribution centers, retail stores, and during transportation to meet the circular economy revolution head on.

In addition to waste reduction, here are four other ways reusable packaging can increase supply chain sustainability:

1. Reduces packaging waste. Reusable packaging has a long service life and can be used repeatedly throughout the supply chain to reduce waste accumulation. Reusable packaging also can eliminate multiple layers of paper, plastic bags, and other expendable packing materials to further reduce waste.

2. Increases full-load shipments. Inconsistent, unreliable packaging can result in unpredictable transportation conditions while standard and consistent dimensions—as seen in reusable packaging—can help ensure a fully cubed-out truckload with every shipment. Reusable packaging also can be rightsized to use the most truck space possible.

Reusable packaging manufacturers are even introducing lightweight options to accommodate for more product weight. In addition to improved pack ratios, these are instrumental features.

3. Decreases product damage and loss. Durable packaging can help prevent customers from receiving a damaged product. And with secure and stable stackability, reusable packaging can maintain product integrity throughout the supply chain.

4. Improves packaging recycling. To prevent packaging from entering landfills, reusable packaging is recovered, recycled, and reprocessed into other useful packaging. The right packaging provider can engineer a reusable packaging management and recycling system to track packaging, maximize utilization, and properly recycle reusable packaging at the end of its useful life, increasing sustainable packaging usage throughout the entire supply chain.

By investing in innovative supply chain solutions that embrace circular economy principles, companies can ensure competitive advantage, future growth, and customer confidence.
JOIN US IN NASHVILLE IN JANUARY

JANUARY 26 - 28, 2020
OMNI NASHVILLE HOTEL - NASHVILLE, TENNESSEE

THE PREMIER AIR CARGO SHOW IN NORTH AMERICA, THIS YEAR OFFERING CONCURRENT SESSION TRACKS FOR OWNERSHIP AND COMPLIANCE.

FOR SESSION INFORMATION AND TO REGISTER VISIT AIRCARGOCONFERENCE.COM

AirCargo 2020 is proudly sponsored by:
Seeing Clearly: The Value of Visibility

Few parts of the enterprise have transformed more radically over the years than supply chain as companies struggle to navigate global sourcing, just-in-time delivery models, and unprecedented customer expectations for product availability and delivery speed.

Ironically, while companies are leveraging extended supply chain networks and heavy outsourcing to meet these challenges, these solutions create a significant new problem: lost visibility. Lost visibility into your supply chain means lost value. The good news is that the right telematics and related technologies can help maintain powerful visibility and control over even the most complex global supply chain networks.

Among the many impacts of the Amazon effect is heightened demand for consumer visibility into availability and shipping logistics, from the first mile to the last. Not surprisingly, businesses see value in getting the right supply chain visibility to meet those customer expectations and ensure efficiencies in their own operations.

The hurdles come in trying to actually implement in some tough supply chain use cases such as highly volatile, highly valuable pharmaceutical cargo that’s also environmentally sensitive.

Smart sensors and granular data mean we can provide real-time operational intelligence to not only reduce the risk of cargo theft and spoilage, but also document compliance with regulations and drive operational efficiencies that benefit everyone, from manufacturers and shippers to the end consumers.

CONNECTING SYSTEMS

For many, additional possibilities come to life when you realize that, rather than scrap all your existing, limited capabilities in favor of some brand new system, you can create new visibility by integrating and strategically augmenting many capabilities you already have.

For instance, nearly every tractor-trailer on the highway today is equipped with a telematics device to track location and driver behavior, a separate system to monitor container location, a third system for cargo temperature, and a security system to protect the cargo from theft or tampering. That’s a lot of duplication of systems and services for what remains silos of uncoordinated insight.

What if we instead choose to fold in point solutions and targeted capabilities together with larger “system of systems” integrations that create more sophisticated outcomes—like the difference between assisted braking and full autonomous drive?

That analogy is not random. Tesla took years of laying sensors, telematics, actuators, and other infrastructure into its vehicles—the cars were preemptively designed to operate and engage these sophisticated systems that wouldn’t be enabled for more than a year into the future.

That point in the future came when Tesla finally downloaded its first AutoPilot program to users who—literally overnight—were able to suddenly enable new capabilities from latent technology.

Now that we realize we’re not starting from scratch, how do we make this transition while keeping our business running? First, focus on the most flexible and scalable infrastructure or technology platform, and then capture the right data input and service capabilities for the business or use case as needed.

Think back to our tractor trailer example: We’re faced with having to pick the best system—perhaps see whose contract is up for renewal, or whose existing infrastructure is most interoperable—and weigh everything as a business decision with the best ROI. Then introduce the right applications, micro-services, and management systems that allow you to streamline all the data and touch points throughout your supply chain.
you could fill the gaps in your labor pool?

Break Free with Yale robotic lift trucks to automate a range of applications.
yale.com/robots
The truth is out there.

Technology tools offer mindbending ways to delight retailers and their customers.

And there’s no conspiracy about that.

By Merrill Douglas

To stand out in the market, a company needs more than great products at great prices. It also must deliver excellent customer service. Among other things, that means having products in stock when customers want them; making it easy to conduct transactions; offering detailed information about products; providing quick, convenient delivery; and keeping customers informed about the progress of their orders.
Will customer experience (CX) overtake price and product as the top brand differentiator? Which supply chain capabilities will be most important in delivering an enhanced CX? The charts reveal some key findings from “Focus on Customer Experience: Research on Supply Chain Priorities and Investments,” a survey commissioned by BluJay and conducted by Adelante SCM and the Council of Supply Chain Management Professionals.

Over the next five years, customer experience will overtake product and price as the main differentiator among brands, according to 61% of shippers and logistics service providers surveyed in 2019 by BluJay Solutions, Adelante SCM, and the Council of Supply Chain Management Professionals (see charts).

With that evolution in mind, companies are investing in technologies that enhance customer service. “That’s a new trend,” says Patrick Maley, chief marketing officer at BluJay, a supply chain software and services vendor based in Chelmsford, Massachusetts. “Typically, the reason for investment has always been raising productivity and lowering costs.”

**VISIBILITY AND ANALYTICS**

Capabilities that do most to produce a good customer experience, according to the survey, include: real-time visibility to orders, shipments, and inventory; time-definite deliveries; proactive notifications regarding orders and shipments; quick and easy returns; drop shipping; BI/analytics/machine learning; shop, order, track, inquire via mobile phone; other.

Over the next 5 years, customer experience will overtake price as the number 1 brand differentiator.
provide outstanding customer service is when a customer places an order. This is just as true in the B2B market as in B2C. Now that many B2B companies have added e-commerce channels, customers expect the same quality of service online as when they work with sales representatives.

“It’s about emulating the relationship and roles of the account rep, but doing so with the tools and technologies at your disposal,” says John Bruno, vice president of product management at e-commerce technology firm Elastic Path in Vancouver, British Columbia.

So, for instance, when an electrician logs into a distributor’s e-commerce site, the site should know him well enough to display only products relevant to electrical work, not equipment for plumbing or heating.

The site should also personalize pricing. If the merchant offers its biggest customers a 10% discount on all purchases, those buyers should see the discounted prices when they visit the site. If it offers a discount on only the 100 items a company buys routinely, the merchant should be able to tailor the prices displayed for just those items, without producing a separate online catalog for each customer.

A B2B e-commerce site could also streamline transactions for companies that don’t give all their employees the same purchasing authority. In the manual world, buyers would have to route purchase orders around the office for approvals. In the digital world, when a purchase required a signoff, the e-commerce platform could automatically notify the person with the right authority.

“The approver hits ‘Approve,’ and now you’re firing on all cylinders,” Bruno says.

A seller could also design its platform to offer a different customer experience to different buyers within one company. That could mean presenting a distinct face to customers on different continents. But other strategies are possible, too.

“If I’m U.S.-only but sell to a company that has three different brands, and they have three different purchasing departments, I might want to organize by those three brands rather than by a geographic area,” Bruno says.

The bottom line is customized service. “The ability to create different views of the catalog is where the rubber meets the road for B2B,” he adds.

**HOW IT’S DOING, WHERE IT’S BEEN**

Some visibility tools tell customers whether their orders are moving toward them on time. Others serve customers by helping to protect product integrity.

That’s the case with rfxcel, a software system that tracks products as they move through the supply chain. It also allows companies to trace the past movements of finished goods or components.

For example, a food processing company might use rfxcel’s technology to track individual lots of potatoes, carrots, and flour used to make soup. One day, a consumer calls the company to complain about what appears to be insect parts in a can of chowder.

“You can trace the soup all the way back through the supply chain,” says Herb Wong, vice president, marketing at rfxcel, based in Reno, Nevada. If the company discovers that a bag of flour was contaminated, it can use the track-and-trace technology to identify and recall every can of soup with flour from that bag, thus protecting retailers and consumers.

rfxcel also works in conjunction with Internet of Things (IoT) devices that measure temperature, humidity, or shock, or track location, to enhance customer service through good supply chain management.

Wong describes how this technology helped one manufacturer protect a temperature-sensitive pharmaceutical product that was accidentally routed through an airport with no proper holding facilities. Thanks to a GPS device, the shipper could see that the load was headed to the wrong location. The shipper then notified its third-party logistics provider.

“We showed them the log and, sure enough, the goods had diverted and no one knew,” Wong says. “Had it not been for a system that could independently verify this, those drugs might have been at risk for damage.”

Another time, rfxcel’s system showed a pallet load of pharmaceuticals sitting on an airport tarmac, rather than in temperature-controlled storage. “The shipper called the airport, and then watched in real time as the item moved off the tarmac into the storage facility,” Wong says.

**WE KNOW WHO YOU ARE**

B2C merchants deliver customer service through many more channels than they used to—not just in person or on the phone, but through interactive voice response and chatbots, online, through e-mail, or on social media. Often, data related to each interaction stays trapped in a single channel. So when, for example, a consumer calls a customer service center, the agent who responds might have no idea what the customer bought last week in the store or discussed yesterday with a chatbot.

Each time that consumer makes
Using LocatorX technology, retailers can help customers easily register products, receive online coupons, and tap into usage guidance in a variety of languages. LocatorX provides customer engagement capabilities that are self-aware of the product being scanned.

customer through add Manhattan help center delivery first, on interests a to they Manhattan and product a virtual contact, voice-based assistant.

Using customer variety all Inbound sale, Ideally In the sale, retailers says for this customer, says. They want. They want. They want.

To achieve this personalized service, some retailers are integrating their call center management systems, workforce management systems, and systems that manage customer transactions. With help from technology developers such as Manhattan Associates, merchants are also adding case management, creating a single record for all interactions with a customer, through any channel.

Ideally, retailers should make routine customer self-service as simple as a chat with a voice-based virtual assistant. “Have your associates trained in the software that brings all the information together,” says Marudur. “So when the customer does have a question and tries to reach out, associates have the answers at their fingertips and can get on it right away.”

Delivery often becomes a crucial component of customer service. Companies that sell smaller items may rely on conventional package delivery or courier services. Those that sell furniture or other large products need different solutions.

**BRILLIANT STRATEGY**

At Bob’s Discount Furniture, a chain with stores in 18 states across the United States, the home delivery solution is the online platform Brilliant Move. Based in the Boston area, Brilliant Move currently operates in five states, with plans to expand. Right now, customers at 13 of Bob’s outlet stores in the Northeast can use Brilliant Move to schedule transportation.

“This is a new service that was previously not offered to our customers,” says Pete Sorrentino, vice president of delivery operations and outbound logistics at Bob’s Discount Furniture, headquartered in Manchester, Connecticut. At outlets where Brilliant Move is not available, customers transport purchases themselves or make other private arrangements.

In each market where it operates, Brilliant Move has assembled a network of experienced moving companies to transport large items for customers, says company founder Jean Brilliant. When a customer at Bob’s or another participating store buys an item, the retailer directs them to an app to schedule a move. The customer specifies where to pick up and deliver the item, and when.

The software calculates a fee for each delivery, with revenues split between the moving company and Brilliant Move. The retailer pays nothing.

The customer receives notifications at various points in the delivery and can use the app to follow the driver’s progress. Drivers and customers can also call or text one another through the app.

“There has been a growing ‘ask’ for delivery service, especially in our urban and suburban outlet stores,” says Sorrentino. Brilliant Move helps Bob’s meet that need.
Besides making life easier for customers, Brilliant Move can give retailers new supply chain management options, says Brilliant. For instance, omnichannel merchants could use the platform to have products delivered from stores close to their customers, rather than from fulfillment centers. That reduces delivery time. “It should also help with reducing average inventory on hand,” Brilliant says. “It should help with better forecasting. And we see it also as a way of cutting down on shipment costs.”

**KNOW IT ALL**

When customers hunger for information about products offered in brick-and-mortar stores, LocatorX in Atlanta offers to satisfy their desire. The company helps manufacturers and other supply chain players mark products with Quick Response codes, or with tags that transmit data via near-field communications or Bluetooth technology. Scan one of those tags, and your phone reveals a storehouse of data about not just the product, but the individual unit.

For the consumer, that display can verify, for instance, that the designer briefcase in her hands is not a counterfeit, or that a moisturizing lotion was manufactured safely. “Consumers increasingly want to have visibility that they have a certified product,” says Pat Pickren, vice president of product at LocatorX.

A product’s “connect page” might also enhance the customer experience by displaying product instructions, or coupons for future purchases. And companies can tailor displays for individual consumers. For instance, “They can serve up information in a person’s own language,” says Billy Meadow, LocatorX’s founder and chief technology officer.

That easy access to information translates into better customer service. “If you want to know anything about a product, you simply point your phone and scan it,” Meadow says.

Besides linking consumers to abundant information, LocatorX’s technology can help companies monitor products—whether single units or pallet loads—as part of a supply chain management strategy. The technology might also help companies gain more insight into what customers want, by monitoring when, where, and why customers scan their products.

When customers scan bottles of barbecue sauce, for instance, do they typically use the connect page to see the ingredients or to find recipes? “That can help with product placement,” Meadow explains. “It can help with certain call-to-action campaigns.” And, like many other technology tools, it can help companies distinguish themselves by delivering the outstanding customer service that buyers crave.
Scaled 3PL Solutions Heal Pharma’s Supply Chain

A large pharma company teams up with Hub Group to achieve compliance with the best service at a reasonable cost.

Being entangled in complexity is typical of some companies’ supply chains. Companies in highly regulated sectors often bear the burden of managing increasingly complex, intricate supply chains while facing a greater level of scrutiny than other businesses. Fines can even be incurred for severe supply chain disruptions.

Hub Group professionals understand, and they regularly apply technologically advanced, scalable solutions to simplify these complexities.

The supply chain team for a large pharmaceutical company realized it needed a third-party logistics (3PL) provider when it was so tied up in the tedious process of assigning carriers for its large portfolio of products—each with a diverse set of compliance and customer requirements—that it couldn’t advance its supply chain strategy. The company sought to consolidate its carrier base and reduce the effort to manage its massive supply chain.

Upon learning of Hub Group’s outsourced 3PL services, the supply chain team saw how it could apply Hub Group’s tools and processes across its entire network to fulfill a simple, central objective: Achieve compliance with the best service at a reasonable cost.

Using optimization tactics, deep carrier relationships and creative thinking, Hub Group has simplified this complex network and continuously pursues even greater efficiencies.

**FOUR STEPS TO LOGISTICS SIMPLICITY**

1. First, Hub Group conducted a full analysis of the company’s outbound network. Its network included hundreds of customers and even more carriers, each with its own unique requirements and processes. The analysis identified portions of the network that were prime candidates for optimization and uncovered carrier payments that were significantly higher than Hub Group’s negotiated carrier contracts.

2. Hub Group then modeled every feasible scenario, sometimes in excess of 40 in the span of just a few weeks. Each scenario was accompanied by recommendations on how to achieve the perfect balance of the customer’s three core variables: compliance, service and cost.

3. Recognizing efficiency that could be achieved with a single point of contact, Hub Group inserted itself as the intermediary between the carrier network and the manufacturer. This change streamlined communication and delivered a single point of accountability for the outbound network while nimbly managing carrier compliance, performance and pricing.

4. Hub Group then applied its leading technology and internal business intelligence teams to develop a customized dashboard tying every point in the customer’s network to a central system. The dashboard provides a financial pulse of its network along with key insights to performance and compliance.

Hub Group is a world-class supply chain solutions provider that offers multi-modal transportation services, including intermodal, truck brokerage, dedicated and logistics services. Employees deliver innovative solutions to help customers better control supply chains and their costs.

**SUSTAINED, SCALABLE RESULTS**

With a focus on stability, Hub Group quickly engineered and executed its scalable solutions to preserve and support customer relationships. The scalability of Hub Group’s services was the highlight of the solution. As the customer identifies a new opportunity or a problematic segment of its supply chain, Hub Group works alongside its team, feeding it data, analysis and recommendations as needed.

Hub Group continues to independently monitor the supply chain, pinpointing inefficiencies in existing solutions, challenging processes and maintaining a collaborative approach to continuous improvement.

Visit www.hubgroup.com for more information.
END-TO-END VISIBILITY, DELIVERED.

Get up-to-the-second insights to boost your supply chain. Anytime. Anywhere.
Hub Group puts the power of industry-leading technology in your hands, enabling you to drive smarter business decisions.

hubgroup.com/visibility
HUNGER GAMES
Since it hit restaurants in January 2019, the Impossible Burger, which is made from plants but offers the taste and texture of beef, has been on a roll. When the company launched in Gelson’s Markets in southern California, the Impossible Burger zoomed to the top spot among packaged goods, outselling the next most popular product by a factor of six, the company reports.

Impossible Foods, the company behind the burger, took several steps to meet demand. Over the summer and fall, it added second and third production lines. It also expanded capacity through a co-manufacturing collaboration with global food provider OSI Group.

“OSI has installed equipment to make the Impossible Burger, and we’ll start seeing new capacity every week,” said Sheetal Shah, senior vice president of product and operations for Impossible Foods, in a July 2019 release.

The logistics and inventory management challenges that arise when a food product’s popularity zooms demand careful attention. Constant out-of-stocks can leave consumers not just frustrated, but amenable to poaching by competitors. “It can result in a long-term impact on the brand and the retailer,” says Daniel Triot, president of DHT Consulting.

Several tactics can help food companies anticipate and respond to the challenges that accompany demand spikes. These include using a product’s demand history, when one exists, to estimate future demand; leveraging analytics to identify signals of a spike; automating operations; and working closely with business partners.

To be sure, anticipating and responding to demand fluctuations for food and beverages comes with an inherent obstacle. “You can’t run a third shift to increase units available,” says Michelle Klieger, an agricultural economist and president of Stratagern Consulting.

The logistics and inventory management functions prompted by food demand
spikes often are made more difficult by gaps in consumption signals between retailers, distributors, and producers. For instance, Odyssey Logistics & Technology works with a producer of alcoholic beverages that had one product sell at almost double its forecasted levels. While the company’s larger retail clients typically possess the systems that will alert producers to demand changes so the producer can alter its food logistics operations accordingly, many smaller stores and restaurants don’t. “You lose control of the trigger for replenishment,” says Rick Ehrensaft, chief operating officer of Grand Worldwide Logistics Corporation, an Odyssey subsidiary.

**STUDY YOUR HISTORY**

That said, food and beverage organizations can adjust their inventory control and food logistics operations to capitalize on spikes in demand. A first step is leveraging any relevant historical information. A company launching a product similar to one it already sells, “can capture historical demand and use it to model demand with the new product,” says Jonathan Eaton, national supply chain leader with consulting firm Grant Thornton.

Each December, Just Born, the company behind Peeps, begins gearing up for its Easter rush, when demand for the candy triples, says Donna Burkit, director of customer service and logistics with the Bethlehem, Pennsylvania-based company. Burkit alerts Just Born’s 3PL partner to the upcoming peak periods, ensuring they’ll have the resources needed to cover additional shipments.

“Share as much information as possible on the number of loads and timing with your service partners,” she advises. Just Born also restricts customer pick-ups during peak time and adds temporary warehouse help.

After each season, Burkit and her team review their performance and identify any lessons learned. For instance, they began incenting some customers to make early commitments for their orders. “That helps us plan a certain portion of our Easter production, storage, and shipping more efficiently,” Burkit says.

**EXPECTING THE UNEXPECTED**

What about new products that lack relevant historical sales numbers, or demand increases that seemingly appear from out of the blue? Popeyes, a division of Restaurant Brands International, launched a chicken sandwich in August 2019. Soon after, a Twitter exchange with competitor Chick-fil-A helped propel demand for Popeye’s sandwich. It sold out within two weeks and remained out of stock until November.

To minimize the risk of out-of-stocks, the supply chain and marketing departments need to work closely together. “If the sales team that gets an item into Walmart isn’t communicating with operations, you’re walking into failure,” says Chris Kupillas, regional vice president with BlueGrace Logistics.

Both sides should have a solid understanding of expected sales volume, so those charged with inventory management can adjust their supply purchases and production schedules accordingly.

As the Popeyes example shows, gaining an understanding of expected sales increasingly requires the ability to leverage unstructured data, such as social media posts, which often offer clues to demand shifts. Artificial intelligence (AI) can scan volumes of unstructured data to find patterns. “AI is gold for supply chain managers,” says Ted Stank, professor of supply chain management and faculty director of the Global Supply Chain Institute at the University of Tennessee, Knoxville.

Green Rabbit, which handles fulfillment and delivery of e-commerce grocery items, uses predictive analysis tools to flag items spiking outside normal trend lines, says company founder Greg Balestrieri. Then, employees dig deeper. Is the spike a one-off, due to a single customer increasing its order, perhaps for a sales promotion? Or, are multiple customers placing larger orders? The varying drivers demand different responses to reduce the risk of both out-of-stocks and excess inventory.

**MAINTAINING CLOSE CONNECTIONS**

Producers should understand how quickly their suppliers and partners can boost production if needed. If they can’t, can the producer turn to other firms? Kupillas worked with one company that saw demand for its healthy snack food unexpectedly triple over a six-month time frame. To meet demand, the company shifted to a larger co-manufacturer.

“Outsource to companies that have scale and can grow, even if you don’t need all their capacity initially,” Kupillas advises.

Similarly, a producer can reserve the ability to add warehouse space — essentially, a “capacity insurance policy,”
Stank says. Like an insurance policy, retaining the option to add space comes at a cost. Food companies need to weigh the expense against the hit to customer loyalty and brand reputation if they can’t meet spiking customer demand.

Another option is to work with several partners and spread any increase in supply and production needs among them. This reduces the risk of bumping up against one partner’s capacity constraints.

Labor also can be a constraint. Does the company have the employees or contractors needed to handle a spike? “And if I don’t have the people, can I train new ones quickly?” asks Steve Beverly, senior vice president of operations for Penske Logistics’ West and Midwest regions.

Automation becomes critical when demand jumps. For instance, implementing an EDI system that electronically processes orders, eliminating the need to manually key them in, allows a company to more easily respond to jumps in order volume. “You can scale,” Kupillas says.

**JUST IN TIME?**

In inventory management, the focus should be on carrying safety stock of items that could be potential bottlenecks. These tend to be ingredients that help define a product or that can’t be substituted. For an energy bar, for instance, these might be specialty nuts or seasonal berries.

The idea of holding some safety stock may seem to run counter to a just-in-time (JIT) approach to inventory control, in which companies receive inventory only as it’s needed for production. This can reduce working capital needs and waste, while increasing efficiency.

However, some question the premise behind JIT. “Somewhere, there’s inventory,” Ehrensaft says. To react quickly to spiking sales, companies need “proximity inventory” that’s near the point of consumption, he adds.

Rather than just-in-time, a more effective approach to inventory management is “just enough,” Stank says. “This recognizes the probabilities of supply chain disruption.”

Another way to exercise close inventory control, while maintaining the ability to meet demand fluctuations, is to postpone some steps in production. Eaton provides an example: A company makes flavored carbonated water. All flavors use the same bottle. The company keeps bottles and flavoring at multiple locations, and then adds water once it has a clear idea of demand. If everyone is clamoring for berry-flavored water, the company can quickly create it and ship it out.

Timely, accurate responses to changing demand signals require communication and connectivity between business partners. “The supply chain between manufacturers and retailers should be considered as one,” Triot says. Trust is key, so partners can be confident the business information they share will be treated with care.

The partners also need to agree on common definitions. Triot provides an example: One partner may measure “out of stock” as zero inventory on hand while another views it as lost demand. Item location understanding, such as shelf, display or backroom, is also critical in measuring out of stock. For the data to effectively inform production and distribution, everyone needs the same understanding.

E-commerce often holds an advantage over traditional retail, as much reporting can happen in near-real time. To be sure, the initial information usually is just a starting point for addressing demand changes. “Often, you don’t know if you’re at the start of the mountain, halfway up it, or at the top,” Balestrieri says.

Shippers and their partners need to understand the drivers and their timing so they can tailor their food logistics and inventory control approaches.

**LOCATING WAREHOUSES AND DCs**

Stank notes that for the first 20 years of his career, most companies held inventory and products in centrally located warehouses. Today, inventory control approaches have changed, with more manufacturers keeping stock near consumers so they can meet tighter delivery times. This shift can also help producers react more quickly to jumps in demand.

New locations cost money. Food companies need to weigh these increased costs against the ability to more quickly meet demand.

Also until recently, risk management within many supply chain organizations tended to focus on preparing for supply disruptions. This remains a critical analysis, yet companies also benefit from assessing how spikes in demand could impact their inventory control and management functions. “Companies should consider how they’ll plan for unanticipated fluctuations in demand,” Stank adds.
Competition has never been tougher to obtain supply chain talent, forcing companies to rethink recruitment tactics.

11

Strategies to Recruit Supply Chain Talent

BY MIKE OGLE
Whether your company is pursuing entry-level or seasoned supply chain professionals, strong job candidates closely examine company brands and leadership development before coming on board. To help you attract the best and brightest business and engineering students pursuing undergraduate and graduate degrees, here are 11 best practices to integrate into your supply chain talent recruitment strategies.

1. **Apply Omnichannel Thinking.**
   Too many company recruiting strategies turn into reactive “fill this hole now” tasks. Forecasting supply and demand is important in supply chain management and logistics, but does not apply well to supply chain talent. Only a fraction of companies have dedicated resources that focus on building and managing supply chain talent plans and pipelines.

   “Companies heavily emphasize omnichannel supply chains, but don’t extend omnichannel thinking to recruiting practices,” notes Rodney Apple, founder of SCM Talent Group, a supply chain recruiting company.

   The omnichannel approach goes beyond traditional methods, such as setting up interview slots and exhibiting at career fairs, to truly connect with schools. Apple also recommends staying flexible by not treating everything in job descriptions as must-have capabilities. Traditional “required” and “preferred” classifications in job descriptions are valuable, but make sure “required” really is required and provide weights to “preferred” criteria.

2. **Give Your Website a Facelift to Reach New Talent.**
   Company websites with an “About” link and a generic “Jobs” link that roll together all jobs aren’t enough. Innovative companies have dedicated landing pages with direct links to student-focused sites. In addition to company information and positions, the best websites provide case study profiles of successful early career professionals talking about their experiences with the company, plus information about career and leadership building plans and resources. Build well-crafted, engaging stories about individuals and teams solving interesting problems.

3. **Develop Flexible Internships.**
   Internships provide students with opportunities to work with industry professionals and learn how companies operate; they also provide professionals with talented students to work on supporting tasks or projects. Initially, internships focused on the summer prior to graduation when students had already taken most of their supply chain-specific classes. Today, however, multiple internships per student are common, sometimes extending to the summers prior to the junior and senior years. Leading companies even offer internships to students before their sophomore year, and possibly provide additional work during the school year.

   Have a clear, but flexible internship plan. Provide students with challenging projects that test their ability to think critically with incomplete information. Work in teams and provide constructive feedback throughout the internship. Include broad exposure to the company and its seasoned professionals, and appoint a dedicated manager who understands and values internships.
Understand the Range of School Resources.

Industry often thinks first about connecting directly with students, sometimes viewing students earning degrees as if they are just products flowing out of the universities. Leading companies also focus on the teachers, researchers, administrators, and career services connections that are at the schools longer term and enable connections to students year after year.

Michigan State University’s (MSU) Department of Supply Chain Management has established dedicated roles to work closely with industry and connect companies to the right resources. They facilitate and collaborate on a variety of university-industry connections. MSU invested in a corporate-student relations director to serve as a liaison between companies, students, and faculty, note Judy Whipple, professor and faculty director, and Kelly Lynch, director, corporate, and student relations.

Unfortunately, many companies have not established similar roles that manage a well-planned set of relationships with targeted schools, resulting in weaker recruiting effectiveness.

Tap the Value of Boards and Councils.

Companies recruiting a wide range of majors shouldn’t overlook a valuable resource: advisory boards or councils of colleges of business or engineering. Supply chain departmental or program advisory boards and councils can also be of great value. These groups typically meet twice per year and learn about degree program curricula and directions. They also provide connections to student leaders and faculty advisors, and offer better opportunities when it comes to speaking, tours, and internships.

Participate in Career Fairs.

Career fairs are common on campuses and increasingly focus on specific types of colleges, departments, and degree programs. Companies can meet a wide range of students face-to-face by exhibiting. Develop a carefully crafted plan rather than just having a professional recruiter come to campus because that person may not have the skills needed for the speed dating and marketing aspects of career fairs.

Don’t just bring text-heavy general annual reports and corporate promotional information; materials should be visually engaging and interactive. Include direct website links to information on supply chain careers.

Follow-up after the event is also critical to maintain long-term relationships with degree programs. Include notes of appreciation and constructive feedback.

Elevate Brand Awareness for Companies and Students.

Well-known companies in the business world may have little to no brand awareness with students. These companies have to work harder to help students understand who they are, what they do, what they stand for (an increasingly strong factor), and what supply chain career opportunities they provide. Successful companies measure their level of brand awareness, develop student-centered websites, provide information sessions, and pursue speaking opportunities.

Information sessions are typically provided through the career services offices, but some schools, departments, programs, and student clubs facilitate such sessions. For example, a defense company recruiter reports great success in building its brand through sessions that last approximately 1.5 hours, making sure they ask and take questions since interaction is expected and valued.

Companies should also develop skills to research and evaluate the personal brands cultivated by students. “We educate students on branding themselves on LinkedIn and other social media, plus member companies come in to talk about personal brands,” says Donnie Williams, executive director, Supply Chain Management Research Center at the Sam M. Walton College of Business.

6:1

“For every graduate with supply chain skills there are 6 holes to be filled, and it could be as high as 9 to 1 in the future.”

– Jake Bar, CEO, BlueWorld Supply Chain Consulting
The Ivy College of Business supply chain management program is among the top in the nation. Even though we can tout multiple impressive rankings, there’s something special going on here. It’s our faculty. They are internationally-known, expert researchers who bring years of practical experience to the front of the classroom. Our faculty challenge students to solve supply chain problems for real organizations, which prepares them for the global business world.

The Ivy supply chain program has consistently ranked among the top 10 programs in the world for research, leaving no supply chain challenge too great for the Ivy College of Business.

» #5 in the world for supply chain management research productivity  
Transportation Journal (2018, Vol. 57 No. 1)

» #7 program in the world for empirical supply chain research  
2019 scmlist.com

» #23 program in the nation  
2020 U.S. News & World Report’s “Best College” undergraduate rankings
### Tie Into Student Clubs: Awareness Goes Both Ways.

Establish greater ties with student supply chain clubs because of their concentration of student leaders and volunteers. Innovative strategies for working with these clubs include educational presentations at chapter meetings and providing tours. Also highly valued are interactive programs providing case-like challenges, enabling companies to evaluate student reactions to challenging exercises.

### Make Your Message Consistent and Relatable.

Ensure your company message is consistent from start to finish—from the brochures and websites students first see to conversations with company representatives during the interviewing process. In an age of heavy website and social media use, top-performing companies are adding digitally aware recruitment strategies that emphasize attractive supply chain careers rather than simple job requirement postings.

### Weigh Hard Skills vs. Soft Skills.

Supply chain-related coursework is similar among schools due to accreditation requirements. Transcripts show courses and grades, so most companies assume that students receiving a set of sufficient grades have proven the hard skills.

Soft skills, however, are of greater interest to companies that want students who can think on their feet, develop solutions with teams of people, then clearly communicate those solutions.

“The recruiter’s focus has not changed; fit is always critical, as is teachability, willingness to learn, and communication,” says Karl Manrodt, professor of logistics at Georgia College. “It isn’t just about knowing tools. The ability to learn and adapt is critical.”

Glass manufacturer Libbey looks for a high level of curiosity and global awareness, but also at how well students deal with uncertainty and pursue conflict resolution to work well in teams focused on developing solutions, says Mike Bunge, director of global resources and materials.

Companies increasingly use thought-provoking questions and carefully crafted assessment tools to evaluate thought processes, interests, and fit with the company culture. Companies that can’t develop their own assessments can turn to third-party companies.

Some companies innovate by evaluating both soft and hard skills through information sessions or club presentations that break students into groups, give them a case, and have them present insights and proposed solutions, notes Toni Rhorer, director of career management for the W. P. Carey School of Business at Arizona State University. Company representatives get their own insights about student interaction and their problem-solving processes.

### Consider Research Motivations.

Set ground rules for how your research data and supply chain study results are used and when they can be available to the public. Faculty members pursuing or holding tenure rely on grants and projects that lead to publishing in research journals, which is often the top tenure evaluation criterion. Grant funding is valued, but not required, because researchers also value data sets (sanitized to protect company or customer information) that can be used both in research and teaching.
CLARKSON UNIVERSITY

Online MS in Supply Chain Management

Launching in June 2020

Clarkson’s online Master of Science in Supply Chain Management is designed to meet the need for well-trained professionals who plan and manage complex supply chain enterprises.

- New York’s first online MS in supply chain management.
- Designed for working professionals.
- Integrated learning opportunities, including synchronous learning components, in every class.
- Interaction with renowned faculty and industry experts.
- No residency requirements.

Apply Today
clarkson.edu/scm
busgrad@clarkson.edu / 315-268-6613
In THIS SECTION:
3PL — Education

ECHo GLOBAL LOGISTICS www.echo.com

Echo Global Logistics, Inc. (Nasdaq: ECHO) is a provider of technology-enabled transportation and supply chain management services. Echo maintains a proprietary, Web-based technology platform that compiles and analyzes data from its network of more than 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.

UTXL www.utxl.com

Whether you need a core transportation service provider or a resourceful backup relief valve, turn to UTXL. UTXL handles truckload and multiple stop shipments (consolidated LTL) between any points in North America, and can arrange service to or from any state with satellite and/or cellular equipped teams and single drivers for your van, reefer, flatbed, or oversize shipments. Shippers nationwide rely on UTXL for reliable service and economical prices; you can, too. Check out the website for all the details.

EDUCATION

CLARKSON UNIVERSITY www.clarkson.edu/graduate/supply-chain-management

Clarkson offers an online Master of Science in Supply Chain Management, as well as an online MBA with advanced certificate options in Supply Chain. These programs provide integrated learning opportunities for those interested in becoming proficient in effectively managing complex supply chains, and prepare them for a wide range of positions, including purchasing managers, supply managers, and directors of material management.

IOWA STATE UNIVERSITY, IVY COLLEGE OF BUSINESS www.ivybusiness.iastate.edu

The Ivy College of Business at Iowa State University has a robust Supply Chain Management program, offering multiple education paths for students. This department emerged in 2019 as a stand-alone Department of Supply Chain Management due to the growing demands of this expanding program. The supply chain program is highly ranked for its research productivity (#5 Transportation Journal Journal 2018, #7 Supply Chain Management Journal List, 2019) and its overall reputation (US News and World Report, 2019). Explore Ivy now.
North Carolina Ports has convenient locations in Wilmington and Morehead City, plus an inland port in Charlotte. Our customer-focused approach offers shippers excellent port communication and customized service. Customers experience the fastest turn times on the United States East Coast, with Wilmington featuring three neo-Panamax cranes and a new, 101,000-square-foot, on-terminal storage facility that can accommodate more customers than ever.

Phoenix Logistics listens carefully to your logistics needs and responds with innovative solutions. By implementing technology, materials handling equipment, and specialized personnel in a perfectly matched and ideally located facility, Phoenix provides customized service programs specifically fulfilling the requirements of each client. The company's seasoned management group is trained in handling and distributing various product lines. For more than 30 years, Phoenix has provided comprehensive, cost-effective inventory management and value-added service programs for most consumer product industries.

Since 1984, Syfan has provided customers with a competitive advantage through superior transportation and logistics services. Syfan consistently strives to meet and exceed customer expectations of service through timely communication and quality information. Leveraging its rich experience and dedicated team, Syfan's commitment is to provide you with on-time pickup and delivery—every time.

Reliability is everything. At WSI, that has been our approach to integrated logistics and supply chain solutions for over 50 years. Our promise of Condition, Count & Time ensures accurate, timely, and sound performance—every time. Recognized as one of the top 3PL providers in North America, WSI delivers custom solutions for warehousing/distribution, fulfillment, transportation, import/export, information technology, and customer support services. Depend on WSI for increased efficiency, reduced costs, and absolute reliability.
TEMPERATURE-CONTROLLED SHIPPING

ALLIANCE SHIPPERS INC. www.alliance.com
Delivering The Perfect Shipment® from pick up to destination. With operating facilities in the United States, Canada and Mexico, Alliance Shippers Inc. combines excellent customer care with state-of-the-art rail, highway, ocean and air transportation solutions. Additional services include warehousing, distribution, customs clearance, equipment/driver leasing and expedited transportation. For cost-effective logistic solutions tailored to your company’s exact needs, contact Alliance Shippers Inc.

CANADIAN PACIFIC www.cpr.ca
Canadian Pacific is a transcontinental railway in North America with direct links to eight major ports, including Vancouver and Montreal, providing customers a competitive rail service with access to key markets in every corner of the globe. CP is growing with its customers, offering a suite of freight transportation services, logistics solutions and supply chain expertise. Visit cpr.ca to see the rail advantages of CP.

HUB GROUP www.hubgroup.com
Hub’s extensive service network—built over many years—enables it to provide innovative transportation solutions that are versatile, flexible, and designed to deliver maximum efficiency. With this advantage, Hub Group is able to collaborate with customers daily to help them meet their transportation challenges. With intermodal, highway, and logistics transportation offerings, the Hub Network is your single source—coast to coast, border to border. Visit the website to learn what Hub can do for you.

LYNDEN www.lynden.com
Over land, on the water, in the air—or in any combination—Lynden has been helping customers solve transportation problems for almost a century. Operating in such challenging areas as Alaska, Western Canada and Russia, as well as other areas around the globe, Lynden has built a reputation of superior service to diverse industries.
IN THIS SECTION:
Temperature-Controlled Shipping – Trucking

TEMPERATURE-CONTROLLED SHIPPING

PHOENIX LOGISTICS
www.phoenix3pl.com

Phoenix Logistics listens carefully to your logistics needs and responds with innovative solutions. By implementing technology, materials handling equipment, and specialized personnel in a perfectly matched and ideally located facility, Phoenix provides customized service programs specifically fulfilling the requirements of each client. The company’s seasoned management group is trained in handling and distributing various product lines. For more than 30 years, Phoenix has provided comprehensive, cost-effective inventory management and value-added service programs for most consumer product industries.

RED CLASSIC
www.redclassic.com

Red Classic knows that getting things where they need to be—on time and cost efficiently—is what shippers need. A wholly-owned subsidiary of Coca-Cola Consolidated, Red Classic is committed to delivering the finest transportation solutions customized for your shipping needs. Add in a fleet maintenance division that services equipment needs throughout 80+ facilities, and you’ve got a comprehensive, reliable transportation solution—all under one roof.

RUAN
www.ruan.com

With Ruan, you can take advantage of door-to-door shipping solutions without the hassles and overhead associated with owning and operating your own fleet of trucks. We have more than 5,200 employees operating, servicing and coordinating some 3,400 power units and 5,600 trailers out of more than 100 locations throughout the continental United States. But you get more than just drivers and equipment—we become an extension of your team, advocating for your bottom line. Find out why the right partner can drive costs out of your supply chain—call 866-RUAN-NOW or visit our website—ruan.com.

TRUCKING

OLD DOMINION FREIGHT LINE
www.odfl.com

Old Dominion Freight Line is a less-than-truckload carrier providing complete nationwide service within the continental United States. Through its four product groups, OD-Domestic, OD-Expedited, OD-Global, and OD-Technology, the company offers an array of innovative products and services to, from, and between North America, Central America, South America, and the Far East. The company also offers a broad range of expedited and logistical services in both domestic and global markets.
DATA, DATA, DATA: HOW DO I HARNESS IT?
bit.ly/TransfixNov2019Wbnr
While every shipper understands the importance of data, supply chains can struggle to read and act on the insights, even if the information lives in-house. Data management may seem simple, but there are pitfalls to avoid. If shippers harness their data properly, the business can leverage metrics to optimize for reliable capacity and lower operational costs. In this webinar you’ll learn how data can identify reliable capacity and lower rates per mile, how to benchmark the data you already have, what data management pitfalls to avoid, and what data-driven actions to take for 2020.

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

Secure Your Bets With Restricted Party Screening
Offered by Cloud Logistics
Don’t go all in on a system that might confirm a false-positive status. In an era of heightened security, determining whether individuals, companies or organizations are restricted from conducting trade is essential. When it comes to your export privileges, why gamble? Deal yourself the best hand with the restricted party screening solution from Cloud Logistics; get your complimentary accuracy check today.

Improving Supply Chain Accuracy, Productivity, and Speed
Offered by Brother Mobile Solutions
Discover one of the smartest—and simplest—ways to speed productivity in the warehouse or plant. In today’s speed-of-light business environment, getting inventory out the door faster, tracking it better, and minimizing the cost of doing it all is what keeps you in the game. Explore the changing warehouse landscape and then find out how these next-gen barcode printing and labeling solutions can help supercharge your operation.
5 SIGNS YOU NEED A NEW TRAINING PROVIDER
Offered by Lion Technology

Training to handle, manage, and ship dangerous chemicals is not a rote exercise intended to “check a box.” When a mistake can lead to serious injury, death, evacuations, hospitalizations, highway closures, and lasting environmental contamination, personnel training must meet higher standards for quality, accuracy, and knowledge retention. Find out more in this free whitepaper.

GARTNER REPORT: HOW DO YOUR 3PL RELATIONSHIPS MEASURE UP?
Offered by GlobalTranz

Supply chain leaders responsible for logistics are always seeking to drive more value from their 3PL relationships. What they often lack is a relationship framework that encompasses the relationship types and benefits. This research, based on interviews with more than 50 global organizations and more than 100 inquiries on the topic of 3PL engagement and relationship management, sets out that framework and guides leaders on how to apply it.

THE ROI BEHIND FREIGHT VISIBILITY
Offered by Descartes

Download Descartes' free e-book to learn how to measure the value and ROI of freight visibility, plus identify areas of greatest payback in your distribution operations to reduce tracking and detention costs, minimize chargebacks, streamline inbound deliveries, and improve customer service.

REAL-TIME VISIBILITY
GUEST: Michelle McBride, Senior Product Manager, Transplace

E-commerce has irreversibly changed consumer expectations for everything from delivery times to real-time visibility. Carriers that best leverage that visibility data can drive an adaptive supply chain that ultimately provides the best customer experience. Transplace's Michelle McBride shares her thoughts on how to distill the right visibility information to keep your supply chain goals in sight.
> **PRODUCTS**

> Cold chain solutions provider **CSafe** launched the AcuTemp Plus Series, a temperature-controlled passive packaging solution. With vacuum insulated panels and single temperature phase change material, the reusable product provides reliable temperature performance with minimal components.

> Supply chain tracking solutions provider **Tive** unveiled the Tive Solo 5G tracker, a 5G-enabled device that can be single use or multi use. Also supporting 4G and 2G networks globally to eliminate coverage gaps, the Tive Solo 5G provides real-time visibility of in-transit shipments, tracking location and measuring temperature, humidity, shock, and light exposure.

> **SERVICES**

> Shippers and carriers can now leverage **Blulay Solutions’** new freight market index, a monthly report providing transportation market intelligence. The index looks into key rate, capacity, service, and performance trends by lane, equipment, and other factors, as well as delves into individual metrics.

> **Port Everglades** streamlined operating procedures to better serve cargo customers. A central warehouse is the focal point of an improved inventory control system to better track supplies and reduce costs.

> **Flexport** now offers dedicated space to its customers in a warehouse located in Vietnam, just outside of Ho Chi Minh City. The container freight station is designed to support shippers that source in the region, located at the hub of garment and footwear manufacturing in South Vietnam as well as in close proximity to inland container depots.

> **Kuehne + Nagel** opened an airfreight perishable hub in Auckland, New Zealand, with two rooms dedicated to the handling of pharmaceutical products. The facility is equipped with six cool rooms with adjustable temperature for perishable products and two freezer chambers.

> **Americold Realty Trust** started construction on an automated cold storage facility in the company’s hometown of Atlanta. Slated for completion by May 2021, the 24-million-cubic-foot Gateway facility will house
> Virgin Australia will add Japan to its cargo network in March 2020 with the launch of daily services between Brisbane and Tokyo-Haneda. Cargo space on the route will be marketed by Virgin Atlantic Cargo under its longstanding international long-haul sales and marketing agreement with Virgin Australia. The daily Airbus A330 flight will offer between 16.5 and 22 tons of cargo capacity. The new route, Virgin Australia’s first service to Tokyo, is expected to attract strong demand from both cargo customers and passengers.

frozen vegetables, potato products, and ready-to-eat meals, fulfilling customer orders in the Southeast.

> The Institute of Risk Management added a supply chain risk management certificate to its portfolio of qualifications. Introducing supply chain risk management concepts, the qualification covers the changing nature of supply chain risk in the face of globalized outsourcing, digital disruption, specialization, and just-in-time delivery.

> Sellers on the Etsy marketplace now have a solution for shipping large and bulky items with uShip’s full-service delivery option. The solution offers blanket-wrapped, room-of-choice delivery and tracking. Sellers also get instant shipping price estimates; transparent rates; insurance; fewer handoffs per shipment; and an account credit on every completed uShip transaction.

**TECHNOLOGY**

> Businesses can make label changes faster with NiceLabel’s label management system. The newly launched version 2 of its ABAP package allows organizations to digitize the labeling quality assurance process and reduce both labeling errors and shipping delays.

> DHL Global Forwarding, the air and ocean freight specialist of Deutsche Post DHL Group, now offers myDHLi Analytics, which lets cargo customers access and analyze their business data. The online service displays relevant details about invoices, volume, service quality, and customs activity via dashboards.

> Leveraging AI and IoT technologies, CargoSmart’s new Connected Reefer Solution intelligently identifies any deviation or disruption from the container and diagnoses whether it is a result caused by a normal or abnormal operation event. It features end-to-end information transparency, including enhanced reefer container pre-trip inspection.
support, real-time container status monitoring updates, and predictive cargo arrival status.

> Shippers can now get a high-level snapshot of their shipment clearance status, view how many entries are waiting to be cleared by customs, and identify any customs holds with a new dashboard from customs brokerage and trade compliance company Carmichael International Service. They can also generate more than 25 key performance indicators by entering a date range.

> Consumer packaged goods (CPG) retailers and marketplaces can now share

and obtain brand-verified product data from a new global solution called Verified by GS1. The platform makes it possible for CPG brand owners to consistently share a core set of attributes, including the product’s global trade item number, which uniquely identifies a product and links it to the brand owner, brand name, product description, product image URL, global product category, net content and unit of measure, and country of sale.

> Lufthansa Cargo digitalized its offer and booking process with smartBooking, a new digital interface. The application programming interface contains available routings, capacities, and prices and automatically executes relevant checks, letting shippers book an offer and confirm it immediately.

> One Network Enterprises, a provider of multi-party business networks for autonomous supply chain management, released the latest version of its platform for the healthcare industry. Hospitals, global procurement organizations, distributors, pharmaceutical and medical supply companies can leverage One Network’s Real-Time Value Network of more than 75,000 companies for increased collaboration and transparency.

> Lithium-ion-powered forklifts from Crown Equipment are now available for companies looking for alternative power sources for their forklift fleet. The V-Force Lithium-Ion Energy Storage System, which comes with most Crown Equipment electric forklifts, is integrated with the truck, allowing the truck’s display to show battery discharge levels and alert the operator before truck operation is stopped.

> Volvo FL and Volvo FE electric trucks for last-mile delivery debuted in selected markets within Europe. Sold by Volvo Trucks in Sweden, Norway, Germany, Switzerland, France, and the Netherlands, the Volvo FL has capacity for a gross vehicle weight (GVW) of nearly 18 tons, while the GVW of the Volvo FE is nearly 30 tons.

> Warehouse managers can gain insight into operations with materials handling company Rite-Hite’s new Opti-Vu platform, which taps into the data collection capabilities of Rite-Hite products via a secure wireless network to monitor the efficiency of warehouse assets such as forklifts and loading docks. The platform provides insights by applying analytics to correlate developing trends with historical data, helping predict potential problems and identify opportunities.

> Uber Technologies expanded its freight division into Canada. Uber Freight now
facilitates loads in Ontario and Quebec and across the border to Midwestern and Northeastern states.

> Yang Ming Marine Transport launched a China-Vietnam-Cambodia service, its first service directly linking China’s ports, Da Nang and Sihanoukville. The service also calls at Ningbo, Shanghai, Xiamen, Ho Chi Minh, and Hong Kong.

> Samskip launched a direct weekly service connecting Portugal and the UK, using its own vessel to sustain links between Tilbury, Lisbon, Leixões, and its multimodal hub port of Rotterdam. The Netherlands-based group’s 1,000-TEU containership provides a UK-Portugal transit time of five days.

> United Airlines introduced a seasonal three-times weekly South Africa service, which will run from mid-December 2019 through March 28, 2020. United Airlines partnered with Worldwide Flight Services as its cargo handling provider for the first-ever nonstop service by a U.S. carrier between New York/Newark and Cape Town, South Africa.

> South Korea’s SM Line will start serving the Port of Portland in January 2020, resuming a weekly container service at the port for the first time in nearly four years. The Port of Portland’s Terminal 6 will be added to SM Line’s current rotation from China and South Korea to the Pacific Northwest, including stops in Vancouver, British Columbia, and Seattle.
SAN ANTONIO, TX
NIT League Transportation Summit
nitl.org
Presented by the National Industrial Transportation League, the conference features panel discussions on issues affecting rail, ocean, and highway freight transportation.

CONFERENCES

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

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

JAN 26-28, 2020
NASHVILLE, TN
AirCargo 2020
aircargoconference.com
Presented by the Airforwarders Association, Airports Council International-North America, and the Air Expedited Motor Carriers Association, the conference focuses on streamlining operations and compliance practices.

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

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

FEB 25-27, 2020
LONDON, UK
Combat Support Week
bit.ly/combat_support_week
The annual military logistics conference offered by Defence IQ, a division of IQPC, addresses the challenges of maintaining the mobility of combat forces. It focuses on identifying cost-efficient solutions to modernizing operational capabilities.

MARCH 24, 2020
MACON, GA
Georgia Logistics Summit
galogisticssummit.com
Bringing together supply chain stakeholders and leaders in the state’s economic development community, the event offers insight into the state’s trucking industry.

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

SEMINARS & WORKSHOPS

APR 7-8, 2020
CAMBRIDGE, MA
Supply Chain Strategy and Management
bit.ly/MITsupplychainstrategy
MIT Sloan Executive Education’s spring course explores supply chain integration, technology sourcing, and strategic partnering.
If it’s more than 10, MyEZClaim Freight Claim Software can reduce your filing costs:
- Mine claim data to identify problem carriers or products
- Reduce filing time to just 15 minutes per claim
- Avoid missed deadlines with automated system alerts
- Cloud-based software as a Service (SaaS)

3PL Staffing Firm

Specializing in direct and contract hiring including:
- CEO’s, COO’s, CFO’s, CIO’s, CMO’s, CLO’s
- Vice Presidents / Directors
- Sales Managers
- Directors Of Business Development
- Solutions Engineers
- TMS/WMS/LMS Systems Implementation Managers
- Carrier Sourcing Managers
- Freight Brokerage / Branch Managers
- Facility Managers
- Pricing Managers
- IT Managers
- Trade Compliance Managers

Search Resources Inc.

“Building world class supply chain organizations one individual at a time.”

TranSolutions 480-473-2453 • TranSolutionsInc.com • Sales@MyEZClaim.com

The new year is fast approaching. Make sure you are armed with the latest information on the market leaders.

GET WITH THE PLANNER

The Logistics Planner is the premier supply chain and logistics resource, your guide to the market leaders – 3PLs, warehousing companies, technology providers, transportation providers, economic development companies, and more – that can help rationalize transportation and logistics costs, boost efficiency, and improve supply chain operations.

DON’T MISS IT! SUBSCRIBE TODAY!
inboundlogistics.com/subscribe
### 3PLs

<table>
<thead>
<tr>
<th>3PLs</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Echo Global Logistics</td>
<td>Cover 4</td>
</tr>
<tr>
<td><a href="http://www.echo.com">www.echo.com</a></td>
<td>800-354-7993</td>
</tr>
<tr>
<td>Lynden</td>
<td>pg. 3</td>
</tr>
<tr>
<td><a href="http://www.lynden.com">www.lynden.com</a></td>
<td>888-596-3361</td>
</tr>
<tr>
<td>Phoenix Logistics</td>
<td>pg. 24</td>
</tr>
<tr>
<td><a href="http://www.phoenix3pl.com">www.phoenix3pl.com</a></td>
<td>920-915-9476</td>
</tr>
<tr>
<td>RR Donnelley’s DLS Worldwide</td>
<td>pg. 13</td>
</tr>
<tr>
<td><a href="http://www.dls-ww.com">www.dls-ww.com</a></td>
<td>888-757-0291</td>
</tr>
<tr>
<td>Ruan</td>
<td>pg. 11</td>
</tr>
<tr>
<td><a href="http://www.ruan.com">www.ruan.com</a></td>
<td>866-782-6669</td>
</tr>
<tr>
<td>Syfan Logistics</td>
<td>pg. 22–23</td>
</tr>
<tr>
<td><a href="http://www.syfanlogistics.com">www.syfanlogistics.com</a></td>
<td>855-287-8485</td>
</tr>
<tr>
<td>UTXL</td>
<td>pg. 15</td>
</tr>
<tr>
<td><a href="http://www.utxl.com">www.utxl.com</a></td>
<td>816-891-7770</td>
</tr>
</tbody>
</table>

### Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AirCargo 2020</td>
<td>pg. 29</td>
</tr>
<tr>
<td><a href="http://www.aircargoconference.com">www.aircargoconference.com</a></td>
<td>703-361-5208</td>
</tr>
<tr>
<td>Modex 2020</td>
<td>pg. 7, 21</td>
</tr>
<tr>
<td><a href="http://www.modexshow.com">www.modexshow.com</a></td>
<td>704-676-1190</td>
</tr>
<tr>
<td>NIT League Transportation Summit</td>
<td>Cover 3</td>
</tr>
<tr>
<td><a href="http://www.nitl.org/events">www.nitl.org/events</a></td>
<td>703-524-5011</td>
</tr>
<tr>
<td>SMC³ Jump Start</td>
<td>pg. 27</td>
</tr>
<tr>
<td><a href="http://www.smc3jumpstart.com">www.smc3jumpstart.com</a></td>
<td>800-845-8090</td>
</tr>
</tbody>
</table>

### Freight Payment Services

<table>
<thead>
<tr>
<th>Provider</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TranSolutions</td>
<td>pg. 61</td>
</tr>
<tr>
<td><a href="http://www.transolutionsinc.com">www.transolutionsinc.com</a></td>
<td>480-473-2453</td>
</tr>
</tbody>
</table>

### Fuel Provider

<table>
<thead>
<tr>
<th>Provider</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Energy Fuels</td>
<td>pg. 37</td>
</tr>
<tr>
<td><a href="http://www.cleanenergyfuels.com">www.cleanenergyfuels.com</a></td>
<td>949-437-1000</td>
</tr>
</tbody>
</table>

### Career Development/Education

<table>
<thead>
<tr>
<th>Institution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarkson University</td>
<td>pg. 49</td>
</tr>
<tr>
<td><a href="http://www.clarkson.edu/scm">www.clarkson.edu/scm</a></td>
<td>315-268-6613</td>
</tr>
<tr>
<td>Iowa State University</td>
<td>pg. 47</td>
</tr>
<tr>
<td><a href="http://www.ivybusiness.iastate.edu">www.ivybusiness.iastate.edu</a></td>
<td>515-294-7188</td>
</tr>
<tr>
<td>JobsinLogistics.com</td>
<td>pg. 49</td>
</tr>
<tr>
<td><a href="http://www.jobsinlogistics.com">www.jobsinlogistics.com</a></td>
<td>877-562-7678</td>
</tr>
<tr>
<td>University of Texas at Dallas</td>
<td>pg. 49</td>
</tr>
<tr>
<td><a href="http://www.utdallas.edu">www.utdallas.edu</a></td>
<td>972-883-5889</td>
</tr>
</tbody>
</table>

### Intermodal

<table>
<thead>
<tr>
<th>Provider</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alliance Shippers</td>
<td>pg. 17</td>
</tr>
<tr>
<td><a href="http://www.alliance.com">www.alliance.com</a></td>
<td>800-222-0451</td>
</tr>
<tr>
<td>CP</td>
<td>Cover 2</td>
</tr>
<tr>
<td><a href="http://www.cpr.ca/chicago">www.cpr.ca/chicago</a></td>
<td>888-333-6370</td>
</tr>
<tr>
<td>Hub Group</td>
<td>pg. 39</td>
</tr>
<tr>
<td><a href="http://www.hubgroup.com">www.hubgroup.com</a></td>
<td>800-377-5833</td>
</tr>
</tbody>
</table>
Use our Resource Center and let the information you need find you.

Packaging
Absolute Packaging & Supply
pg. 59
www.thisbagisnotatoy.com 973-278-0202

ULINE
pg. 57
www.uline.com 800-295-5510

Printing and Labeling
Brother Mobile Solutions pg. 26
brothermobilesolutions.com 303-993-0182

Sustainability
EPA SmartWay pg. 8-9
www.epa.gov/smartway 734-214-4767

Trucking
Old Dominion Freight Line pg. 5
www.odfl.com 800-432-6335

Warehousing
WSI (Warehouse Specialists, LLC) 25
www.wsinc.com 920-831-3700

INDEX

<table>
<thead>
<tr>
<th>ADVERTISER</th>
<th>PAGE</th>
<th>ADVERTISER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Packaging &amp; Supply</td>
<td>59</td>
<td>Modex 2020</td>
<td>7, 21</td>
</tr>
<tr>
<td>AirCargo 2020</td>
<td>29</td>
<td>NIT League Transport Summit</td>
<td>Cover 3</td>
</tr>
<tr>
<td>Alliance Shippers</td>
<td>17</td>
<td>Old Dominion Freight Line</td>
<td>5</td>
</tr>
<tr>
<td>Brother Mobile Solutions</td>
<td>26</td>
<td>Phoenix Logistics</td>
<td>24</td>
</tr>
<tr>
<td>Clarkson University</td>
<td>49</td>
<td>RR Donnelley’s DLS Worldwide</td>
<td>13</td>
</tr>
<tr>
<td>Clean Energy Fuels</td>
<td>37</td>
<td>Ruan</td>
<td>11</td>
</tr>
<tr>
<td>CP</td>
<td>Cover 2</td>
<td>SMC³ Jump Start</td>
<td>27</td>
</tr>
<tr>
<td>Echo Global Logistics</td>
<td>Cover 4</td>
<td>Syfan Logistics</td>
<td>22-23</td>
</tr>
<tr>
<td>EPA SmartWay</td>
<td>8-9</td>
<td>TranSolutions</td>
<td>61</td>
</tr>
<tr>
<td>Hub Group</td>
<td>39</td>
<td>ULINE</td>
<td>57</td>
</tr>
<tr>
<td>Iowa State University</td>
<td>47</td>
<td>University of Texas at Dallas</td>
<td>49</td>
</tr>
<tr>
<td>JobsinLogistics.com</td>
<td>49</td>
<td>UTXL</td>
<td>15</td>
</tr>
<tr>
<td>Lynden</td>
<td>3</td>
<td>WSI (Warehouse Specialists, LLC)</td>
<td>25</td>
</tr>
</tbody>
</table>
SANTA SLAYS

Santa Claus is coming to town with 500 million presents and some 4 million miles to cover.

To reach 500M children who celebrate Christmas on December 25, Santa would have to deliver:

- 22M presents per hour, or
- 365,000 presents a minute, or
- 6,100 presents per second

By some estimates, Santa would have to travel more than 300x the speed of sound to reach 500M children.

In the United States, 65 million children expect a visit from Santa. The U.S. Postal Service delivered 28 million+ packages per day between Dec. 16-21, 2019.

Time to complete run in the United States under the cover of darkness: 15 hours 45 minutes

Santa would need approximately 400,000 trucks or 5,000 airplanes. Boeing 757-200

Sources: Paragon Software Systems, Eurosender, Go Supply Chain Consulting Ltd., The Atlantic, GoShip

Avant Garde Grotesque

Checking His List

Inbound Logistics • December 2019

There’s really just one reason to attend the 2020 NIT League Transportation Summit:
To Help You Succeed

The Summit will bring together leading freight transportation professionals for three days of focused learning, network building, and forward thinking. You’ll come away with information and insights you can apply right away and all year long.

**Tailored Content**
Designed by shippers with shippers in mind, the Summit offers highly targeted content and opportunities to build professional relationships and develop industry solutions. The Summit will feature—

- General sessions focused on rail, ocean, and highway freight transportation issues featuring government officials, economists, business analysts, and industry executives
- Interactive modal committee meetings (highway, ocean, and rail) that explore issues affecting freight transportation and efforts being taken by NITL to address them
- Receptions and activities that bring together stakeholders from across the industry

**A Convenient Location**
Shippers know the importance of transporting freight quickly and efficiently, so they value a conference location that’s accessible. San Antonio, with roughly 150 flights daily, fits the bill.

**Good Company**
The NIT League Transportation Summit attracts a “who’s who” of stakeholders in freight transportation, including AkzoNobel, Cargill, ExxonMobil, CSX, UPS, Occidental Chemical, CN, International Paper, Nestle Purina, Packaging Corporation of America, Maersk and others, plus officials from the Surface Transportation Board, the Federal Maritime Commission, and other federal agencies.

**Significant Savings**
Some first-time attendees at the 2020 Summit can receive 25% off the registration fee!

**REGISTER NOW!**
https://www.nitl.org/events/summit-registration/
Technology at your fingertips, experts at your side.

Online LTL shipping now easier than ever
◆ Cutting-edge, self-service portal
◆ Quote, book, ship, track, and pay faster than ever before
◆ Backed by intelligent pricing
◆ All load documents in one place
◆ Award-winning service and support

Learn more by visiting www.echo.com/echoship