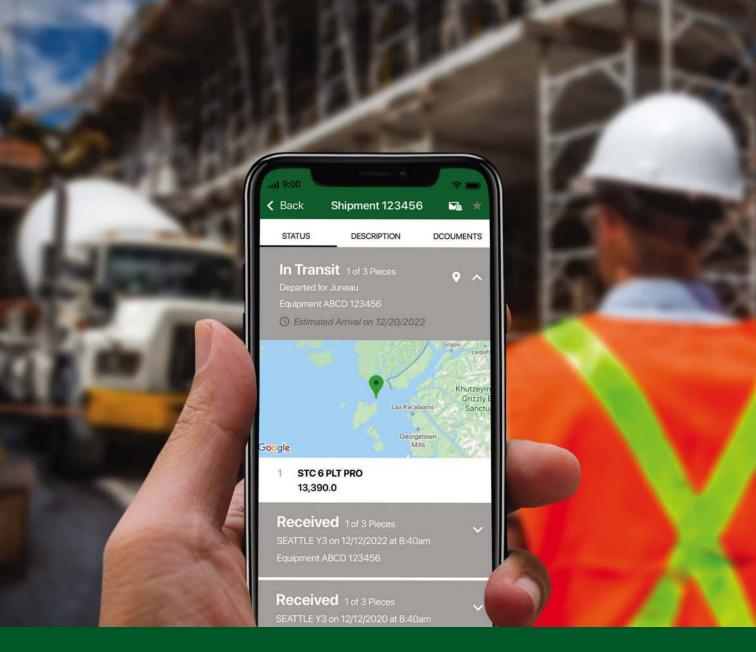
AUGUST 2022 inbound • SPECIAL REPORTS **POWERING LOGISTICS DEVELOPMENT BOOSTING PHARMA SUPPLY CHAINS FLORIDA RISING** a **THOMAS**™company FOR DEMAND-DRIVEN ENTERPRISES **ASSEMBLING AN** E-COMMERCE PLAN InaSnap

> WHITE GLOVE DELIVERIES: NO CHILD'S PLAY



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InfoSNACKS

BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION



CARGO SETS SAIL

While many ocean carriers are switching to alternative fuels to power their giant containerships, smaller businesses can skip the fuel altogether and opt for sailboats instead.

New Dawn Traders offers the green alternative for niche sectors with smaller cargo volumes. Goods that can be efficiently transported via sail include olive oil, rum, wine, coffee, and chocolate.

The company's sailboats are also historic. *Klevia*, a 1936 ketch built in Denmark, handled one recent shipment. New Dawn Traders also offers several classic wooden vessels that are powered exclusively by wind.

-autoevolution

Enough to feed the UK, Germany, France, and Italy for 1 year

The amount of money—
\$14 billion—India loses
every year from poor
warehouse management.
That totals more than
35% of the country's total
agricultural produce.

-see Vertical Focus, page 12



A ZEST FOR BREAKBULK

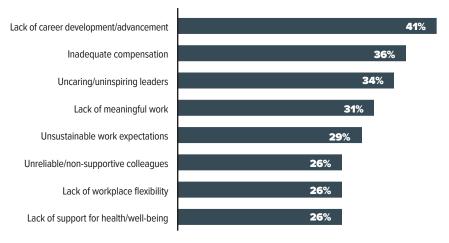
The M/V Baltic Erica recently unloaded approximately 3,300 pallets—3,500 tons—of fresh lemons from Argentina at the Port of Philadelphia. The lemons are the first ever to enter the United States under a new agreement between the U.S. Department of Agriculture and The National Service for Agrifood Health and Quality.

"The supply chain stuff is really tricky."

– Elon Musk

I QUIT! BECAUSE...

Most common reasons given for quitting previous job (April 2021-April 2022)



Source: McKinsey & Company. Based on a survey of 13,382 employees in the United States, Australia, Canada, India, Singapore and the UK

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FLORIDA RISING

The Sunshine State is strategically positioned for increased global trade, even as supply chains undergo dramatic changes. Here's how two of its ports are supporting Florida's ambitions and making bold moves.

FEATURES

WHITE-GLOVE DELIVERY: IT'S NOT CHILD'S PLAY

When consumers were sent home to work, big and bulky e-commerce orders took off, along with delivery expectations. The right combination of technology and strategy can help retailers meet them.

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PHARMA SUPPLY CHAINS GET TECHNOLOGY BOOSTER

Pharmaceutical and life sciences supply chains receive a healthy dose of innovation and automation solutions—boosting visibility. traceability, and productivity.



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THE BUILDING BLOCKS OF OMNICHANNEL **FULFILLMENT**

Here's how leading brands snap together their omnichannel mix to meet market needs and expectations while serving business goals.

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POWERING LOGISTICS DEVELOPMENT

What energizes logistics development? From access to infrastructure and proximity to a population center, to tax, energy, and land incentives, here are the driving forces behind site selection decisions and major investments.



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What's your best

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For Sachi Thompson, general manager of the global hardware division with Curvature, the greatest hires have come from giving out business cards to people hustling on the job. Her key to success is hiring the best talent to focus on critical areas of the business, resulting in a unique-and profitableleadership approach.

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CHECKINGIN

Democratizing Global E-Commerce?



Keith Biondo. Publisher

Many small and mid-size enterprises (SMEs) report friction due to inflation and COVID. One way to rise above those headwinds is to expand both consumer and business-to-business e-commerce sales.

But many SMEs don't have the spend or techno skills to form a winning strategy to compete with the e-commerce big players who dominate the market given their early start, size, and resources—financial and technological.

Enter entrepreneur Nandan Nilekani, the co-founder of Infosys, a global IT solutions provider on track to log \$16+ billion in sales this year. He knows a bit about how SMEs can develop winning strategies to face challenges. "I'm increasingly beginning to realize that the way I think about strategy is not whether it will be A or B, but whether you have built the flexibility to do A or B," he says.

Nilekani's flexibility approach came into play when he considered the plight of SMEs in his home country of India (initially) and helped him form a successful e-commerce strategy that competes with the two monster players there: Amazon and Walmart's Flipkart. Nilekani developed Open Network for Digital Commerce (ONDC), an e-commerce mall with many shops instead of just the two giants. The goal in India is in the millions.

How does it work? While shopping search engines such as Google Shopping offer users the ability to compare prices among online stores, results are usually limited to larger e-commerce companies with the budgets and technical knowhow to list products and supply data feeds from inventory systems.

Because ONDC functions as a set of standards, it will allow consumers to pick one of many platforms for shopping. Each platform will receive the same product, pricing, and availability information, based on the same set of standards. "ONDC aims mainly to tap millions of small businesses that often lack technological expertise," says All India Traders, a business group representing almost 80 million small businesses.

Amazon and Flipkart own 60% of India's \$55 billion e-commerce market. Adding millions of shops will triple that. Amazon India has no delivery arm, but by buying a stake in Ecom Express, an Indian end-to-end logistics provider, it will ride the coming growth curve.

The challenges are formidable. One obvious one is financial standardization. Another huge impediment is fulfillment and delivery reliability. Even without immediate success, the impact of the ONDC strategy will not be lost on today's e-commerce titans. Look for their coming flexibility to find some way to open their networks and infrastructure to more SME vendors, ushering in another explosion in global e-commerce activity.

Kith Boude



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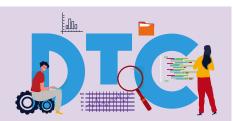
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GOODQUESTION Readers Weigh In

What's your best tip for retailers pivoting to direct-to-consumer (DTC) fulfillment?



Successful DTC fulfillment comes down to balancing customer acquisition cost, conversion rate, and average order value (AOV). AOV is critical—if it's too low, shipping costs will eat up your margins. Keep AOV up by bundling products and using shipping partners who offer flexible fulfillment options that scale with you.

-Aaron Galer SVP of Strategic Partners Arrive Logistics

KNOW YOUR AUDIENCE AND TAILOR YOUR MARKETING TO

HIGHLIGHT THEM. Everyone is offering e-commerce; make sure you stand out to your target audience. Know your competition. Research their sites and what ease-of-use features they have (or lack) that you can offer to appeal even more to your audience.

> -Brian Gaffney Supply Chain Specialist Natural Fiber Welding

ENSURE THE LAST-MILE CUSTOMER EXPERIENCE IS EXCEPTIONAL.

With the right technology, tools, and people, retailers can elevate the way they execute their delivery strategy by improving order visibility, communication, and inventory management.

CEO, PICKUP

Shift Gears

Recalibrate your processes and systems.

The biggest failures we see are when companies simply layer-on a DTC fulfillment strategy (whether through stores, DCs, or web-based point-ofsale system) to their current fulfillment. Most retailers have spent a lot of time and resources finely tuning their fulfillment but the change to direct customer fulfillment unbalances these systems, leaving angry customers, inventory overages, and shortages.

VP Pricing Solutions, antuit.ai, a Zebra Technologies company

Appreciate that DTC is quite different from store fulfillment. From receiving to shipping, there are material differences in process, timelines, and costs. Order placement timing, product included in an order, and speed of delivery are all decided by the customer—requiring flexible fulfillment operations with options to match the customer timing.

> -Laura Ritchey EVP and COO, Radial

DTC FULFILLMENT CAN PROVIDE MORE CONTROL OVER THE

PRODUCTS, and even packaging, that a retailer delivers, which is important amid heightened consumer demands. However, innovation requires accurate data—at the DNA level. By managing data proactively, companies can adjust to market conditions quickly.

> -Matthew Wright Founder and CEO, Specright

PROVIDE A RELIABLE AND CONSISTENT FULFILLMENT

EXPERIENCE that is on-par or better than their product/brand experience, while also managing a more challenging cost structure in parallel. Companies that neglect fulfillment experience do so at their own risk.

-Matt Comte

Operations Transformation Practice Leader, PwC

DON'T SKIMP ON RESOURCES

to develop online capabilities and customer data acquisition. Social media presence targets the right customers while a robust order management system affects accurate processing, fulfillment, and shipping. Understanding consumption patterns informs product portfolio, and inventory and returns management.

-Stanley Lim

Assistant Professor, Supply Chain Management Michigan State University

UNDERSTAND THE LANDSCAPE OF THE GOODS YOU'RE SHIPPING. The

regulations, packaging and labeling requirements, and transportation mode can vary depending on where and how goods are shipped and the quantity.

-Rhonda Jessop

Director, Global Learning, Labelmaster

GOODQUESTION

ESTABLISH A PROPER FULFILLMENT

PROCESS. Some questions to ask: Is your pick area set up to handle *each* pick vs. case pick? Is there a pack area for single unit orders vs. multi-unit orders? Ensure you have the right cycle counting cadence, so your pick slots meet your inventory accuracy levels, and your SKU availability is consistently available for your end users.

-Harold Baro

SVP and General Manager Simos Solutions

EMPOWER YOUR COMPANY WITH DATA FROM SUPPLIERS—and

have an automated system and the processes in place to act on it. This gives retailers real-time visibility into their supply chain so they can make informed decisions, reduce unnecessary costs, and streamline inventory management.

> -Archie Black CEO. SPS Commerce

ENHANCE SYNCHRONIZATION AND COORDINATION with logistics

providers, especially third-party logistics providers. Understand each and every custody exchange as products travel to consumers, as well as ensure all parties involved are aware of the environmental conditions surrounding them during the delivery and exchange process.

> -Jim Yarbrough Global Director of Supply Chain Solutions, BSI

ADOPT AND OPTIMIZE THE RIGHT

SOFTWARE to help automate DTC warehouse processes along with connected hardware such as barcode label printers. These solutions help direct-to-consumer fleets gain competitive differentiation, speed, and superior customer service.

-Brian Beans

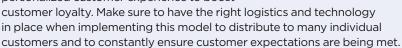
Senior Manager, Route & Transportation **Brother Mobile Solutions**

SPEED TO CUSTOMER IS CRITICAL

for DTC fulfillment to help differentiate the product. Forming strategic partnerships for fulfillment (often placing inventory closer to the end consumer) is key for customer satisfaction. Additionally, brands

Make It Personal

Moving to a DTC business model is a great opportunity to experiment and provide a personalized customer experience to boost



-Francisco Topp Product Manager, Cin7

Make a customer feel a connection to your brand even without a salesperson creating that experience. Consider personal notes, customized discounts, simple return policies, etc. Competitive advantage will go to the organizations that prioritize human connection in DTC.

-Whit Smith

Director of Brokerage Operations-Indianapolis, TA Services

Consumers expect personalized shipping experiences—like same-day delivery and having a sustainable option. Retailers must have a flexible supply chain involving multiple transit modes, inventory locations, and a technology solution to orchestrate in order to deliver on customers' expectations.

-Steve Denton

CEO, Ware2Go, a UPS Company

should implement a returns process that incorporates automation to prioritize efficiency and cost savings.

-Thys Visser

VP of Market Line Operations, GEODIS in Americas

GET A SOLID GRASP of your supply chain network design and how you can leverage existing components of your fulfillment network. Do not operate your direct-to-consumer business in a silo.

-Bryan Palma

Industry & Solutions Marketing Director, Kinaxis

PARTNER WITH 3PLs that have strong middle- and last-mile capabilities. They have the technology to allow retailers to manage inbound and existing inventory placement, as well as forecast inventory needs. Technology to manage the last mile helps extend the retailer's brand to the consumer's front door.

-Matt Huckeba

SVP, Corporate Strategy & Consulting Transportation Insight

Have a great answer to a good question?

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

What phrase or buzzword (think *shrinkflation*) would you create to describe a supply chain trend or development? How would you define it?

We'll publish some answers. Tell us at editorial@inboundlogistics.com or tweet us @ILMAGAZINE #ILGOODQUESTION



Keeping Your Digital Supply Chain Secure

Organizations that are most protected from cyberattacks are ones that understand what threats exist in the first place. This means having a good understanding of their entire supply chain as well as the data they are responsible for and where it is stored.

1 UNDERSTAND THE BIGGEST THREATS TO THE DIGITAL SUPPLY CHAIN, WHAT DATA YOU HOST AND WHERE IT IS.

While having a goal of protecting against all types of cyberattacks is a nice sentiment, homing in on your crown jewels and the biggest threats—such as phishing attempts and ransomware—will guide more targeted and effective security strategies.

2 KNOW THE RULES.
Understanding what regulations and security frameworks you need to comply with provides insight to what you need to manage and secure your digital supply chain.

FORMALIZE YOUR SECURITY PROGRAM.

Defining and formalizing your security program will not only help you demonstrate your compliance to customers and other stakeholders, but it also allows you to apply the same expectations to your vendors and business partners. As an organization, you are responsible for the security of your and your customer's data even if it is hosted by a third party. You are responsible for evaluating and assessing the security of your data across your digital supply chain.

4 BE MINDFUL OF THE DATA YOU STORE.

Holding on to gigabytes of data is no longer an option and it increases your risks significantly. In fact, the more unnecessary data stored, the more susceptible the supply chain is—and the more costly the cyberattack. Work with your business partners to understand the type of data they need and make sure that it is disposed of securely when it is no longer needed.

5 INSTILL A SECURITY-

Cybersecurity should be a concern to every member of the organization.

Offering regular training for employees and facilitating conversations around digital supply chain security are great ways to start fostering a security-first culture.

6 USE MULTI-FACTOR AUTHENTICATION.

Compliance shows why and how an organization

can protect itself, and the security tools and technology implemented are your first line of defense against cybercriminals. Make sure that multi-factor authentication (MFA) is turned on everywhere. As the supply chain and data increases, so too should the security measures.

7 PATCH AND BACK UP YOUR SYSTEMS.

Patch management is the process of distributing and applying updates to your software. Ask about patching requirements for your vendors as well as your systems and don't forget to backup your data and ask the same question to your vendors.

SIMPLEMENT ZERO-TRUST SECURITY.

In a zero-trust approach, an organization doesn't trust any users or networks from inside or outside the organization. Security initiatives can sometimes be painful to implement, but zero-trust alleviates many of these issues by creating awareness and more ownership for end users. From a practical standpoint, implementing biometric authentication or multi-factor authentication for all users is a key step to begin creating a zero-trust environment.

9 BLOCK UNSAFE WEBSITES & SERVICES.

Helping users stay safe on the web is another way to avoid malicious actors. Although whitelisting applications and services is ideal, for a quicker win, blacklist certain applications and block unsafe websites and services on any computer or device with access to sensitive data.

10 HAVE A DATA BREACH RESPONSE PLAN IN PLACE.

Hackers are increasingly sophisticated and relentless in their efforts — no network is entirely cyber-secure. Developing a response plan is essential so everyone is aware of the steps to take if a breach occurs, including notifying appropriate parties, talking to the media, fixing vulnerabilities and preventing additional data loss.

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SUSTAINABILITY DATA GOES DIGITAL

Tracking fresh produce shipments is becoming more eco-friendly. Consentio, a digital trading platform with customers across Europe and North America, is adding sustainability data to its offering. This allows produce traders to monitor carbon dioxide and water consumption data in their transactions.

Consentio's platform follows fresh produce transactions from grower to distributor to retailer. The new sustainability data, which will be displayed along with price and availability, comes from accredited government sources, the company says.

More sustainability features are on the way, "such as details of the grower and the produce journey from farm to fork," CEO and co-founder Benoit Vandevivere told *Perishable News*.

"The entire world of food production and supply is changing rapidly," he said. "Consumers want to know more about the food they eat, where it was produced and when, what the carbon impact has been during the food production, and much more.

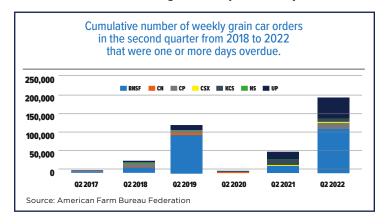
"Retailers are now looking for suppliers who can provide true and verifiable provenance with transparent supply chains, meaning some food producers are finding it harder to gain shelf space," Vandevivere notes. "It is our aim to place Consentio at the heart of this revolution, offering provable, transaction-based, transparent supply chains, accessible from all technologies."

GRAIN PAIN

As with many other sectors, transportation disruptions have hit the perishables industry in 2022. The American Farm Bureau Federation (AFBF) released its mid-year status update on transportation systems in the United States—and, as you might expect, the numbers are troublesome.

- Total grain rail cars loaded and billed dipped slightly, from 381,000 cars in Q1 to 373,000 cars in Q2.
- BNSF and Union Pacific (UP), which processed 64% of all grain rail cars in Q2, shipped 9% and 14% fewer grain rail cars than the same period last year, respectively.
- Between Q2 2021 and Q2 2022, the number of cumulative unfilled orders—the number of cars a shipper (such as a grain elevator) ordered but did not receive—jumped from 62,000 to 204,000, a 231% increase. Year-over-year, BNSF saw a jump of over 110,000 cumulative unfilled orders (+546%) and UP saw an increase of 33,000 (+154%). Comparing Q1 2022 and Q2 2022, there has been a 49% (66,000) increase in cumulative unfilled grain car orders one or more days overdue.
- Of the 204,000 cumulative unfilled grain car orders one or more days overdue, nearly 70% (or 140,000) were also 11 or more days overdue—a 348% increase from the second quarter last year and an 82% increase from last quarter.
- In Q1, bidders faced a nearly 500% increase in secondary railcar auction bids from the prior four-year average (between BNSF and UP).
- On what the AFBF calls "a marginally higher note," secondary market bids for shuttle service have cooled for deliveries to be made in August from highs for deliveries made in April.

"Rates remain volatile and well above average," the AFBF reports. "Shippers with flexibility in moving product may participate in the secondary market to take advantage of high bids for existing contracts, further contributing to delivery uncertainty."



VERTICALFOCUS

KEEPING MILK MOO-VING

Few products go bad quicker than milk. Yet many dairy supply chains are stuck in an analog, pen-and-paper legacy universe. One company, Milk Moovement, is working to change that, with cloud-based software that uses data to speed perishable deliveries.

Introduced in 2018, Milk Moovement helps dairy farmers and distribution partners track and route shipments in real time and access information about the quantity and quality of the milk being shipped. The company recently raised \$20 million in a Series A round to boost product development and help market the technology platform throughout North America.

Milk Moovement will use the funds to expand its engineering team in order to segment its site for different departments, such as logistics and transportation, processing, and payments. The company, which currently employs 55 people across Canada and the United States, plans to grow to 75 or 80 employees by the end of 2022.

Dairy cooperatives were the first users of the software, but in recent years, the company has moved into other industry areas, including dairy farmers and truckers. The software helps perishables producers by providing "frictionless access" to data, according to Robert Forsythe, CEO of Milk Moovement. "We don't create new data—the data's out there," he says. "It's about getting it in their hands faster so that they can make improvements."



AN EGG-CELLENT PARTNERSHIP

Happy Egg Co. is about to make more customers happy. Its freerange eggs will now be available in Florida, California, Nevada, Oregon, and Washington, thanks to a new partnership with Fresh Del Monte and Trinity Logistics, to supply and fulfill its orders across the United States.

With temperature-controlled warehouses throughout the country and a large truck fleet, Fresh Del Monte provides perishables shippers like Happy Egg with drayage, refrigerated warehouse services, refrigerated LTL distribution, last-mile delivery, cross-dock, ripening services, and truckload brokerage services. A partnership with Trinity Logistics enhances its time-sensitive freight delivery capabilities.

"We're always looking for ways to work with other companies and help them utilize our vast logistics network to provide high-quality products to the end consumer," says Mohammed Abbas, Fresh Del Monte's chief operating officer. Fresh Del Monte also owns Network Shipping, a global third-party shipping network, and Tricont Trucking and Tricont Logistics.



A FRESH START

The fresh meal market seems to be one bright spot in an otherwise challenging business climate. Investors have placed their bets on FreshRealm, a provider of fresh meals for retailers nationwide, to the tune of a \$200 million capital raise.

The market, valued at \$30 billion, remains strong as busy consumers continue to look for fresh and convenient prepared meals. FreshRealm says it is the only provider with a national platform for simple delivery of fresh, ready-to-cook, ready-to-heat and low-prep meal kits. The company supplies about 10,000 retail locations and more than one million direct-to-consumer customers, it says.

The company will use this latest capital infusion—on top of the \$32 million raised in 2021-to:

- Expand operational facilities nationwide to address growing retailer demand for fresh meals.
- Deliver more than 400 million meals to consumers nationwide.
- Expand production to service additional retail channels, including convenience and club stores.
- Access culinary expertise and proprietary consumer data to boost sophistication and customization in meal development for retail customers and end consumers.
- Improve equipment, facility technology, and production capacity to increase efficiency within its horizontally integrated operations model.
- Bolster supply chain security.
- Create new technology solutions to manage scale and complexity of meals and ingredients across its customer base and channels.

"As the retail fresh meals category continues to demonstrate compelling growth, this funding allows FreshRealm to bolster our existing end-toend platform that supports elevated private label and branded meal assortments and fresh meal destinations," says Michael Lippold, founder and CEO.

READERPROFILE as told to Karen Kroll

Do The Hustle



SACHI THOMPSON is general manager of the global hardware division with Curvature, a division of Park Place Technologies, a global data center and networking optimization firm.

RESPONSIBILITIES: Lead Curvature's global server, storage, and network hardware business, including running operations, sales, and executing the division's corporate strategy. **EXPERIENCE:** Executive vice president, global supply chain, Curvature; chief operating officer, Curvature (pre-merger with SMS); director of real estate and leasing, Ess-Tee Management; production director, Big Dogs Sportswear.

EDUCATION: B.A., History, University of California—Santa Barbara

In 2007, I joined Curvature as its 85th employee. We were at about \$87 million in revenue, and operating only in the United States. Originally, my role was the chief executive officer's right hand. I put myself anywhere the company needed me, because our growth was blasting off like a rocket ship.

Every six months or so, I'd take over a new responsibility. First was real estate, then supply chain, and then operations. I became chief operating officer in 2014. Under my direction, my focus was building facilities for the organization and becoming a global brand.

This expansion changed our supply chain considerably. I had to make sure we were ready to deliver the parts our customers needed to a service area that grew to more than 140 countries in 2016. The complexity changed from, "I can operate my production plants

between 8 a.m. and 5 p.m." to "I need 24/7 operations centers." This forced me to focus on global logistics and a global supply chain.

I gained my education in this space by going out and dealing with supply chain challenges and complex operational logistics issues. I'd bring in consultants, learn from them, and apply best practices to our business. Early in my career I learned that the key to success is hiring the best talent to focus on critical areas of the business.

Being the youngest of five siblings, with a single mother who was an immigrant from Japan, I was taught from an early age that education is a gift. Now, when I see opportunity for myself or others, I seize it. Some of my greatest hires have been out in the world where I see a person hustling on the job. I give them my card and say, 'I'd love to hire

I had to make sure we were ready to deliver the parts our customers needed to a service area that grew to more than 140 countries in 2016.

you in our operations center.' We can do a lot for employees who have that hustle, grit, and desire to be better.

I have had amazing opportunities that allowed me to develop a unique leadership approach. If I have a system or process that's not working or isn't scaling, I start to work with people at all levels to show me why it's not working. Then I take it down another level to the process or the widget as it's going through our plant, so I can see what's

READERPROFILE

really happening. I try to make complex problems simple and provide the best possible experience for my staff.

Amid the pandemic, we were able to provide our hospital clients with equipment that wasn't readily available from original equipment manufacturers. Because Curvature is a vendor-agnostic provider, we could give our clients various options, which, in turn, helped them save money.

There's a concern that pre-owned isn't the same quality as new, but we've been in this business for 30 years and know the quality of our offerings. It's nice when new customers say, "Not only did you help me get what I needed, but you saved our organization a considerable amount of money."

When you learn what you're supposed to do in this world and do it well, you feel like you've unlocked your purpose and it never feels like work. I'm fortunate that my work at this company is my purpose.

Sachi Thompson Answers the Big Questions

1 If you could travel anywhere, and time and money weren't constraints, where would you go?

One place on my bucket list is Greece. I'd also love to go to Croatia.

2If you could represent the United States in the Olympics, what sport would you choose?

Gymnastics. From when I was four years old until I was 10, I was in a gymnastics league. I competed at the Olympic pre-trials and pushed myself at a young age to achieve difficult things. While I didn't make it, I learned early on the value of rigor and training—four hours every night, six days a week—that helped me develop a strong work ethic.

3 If you had \$1 million to start a new business or philanthropic venture, how might you invest it?

I would build a company where my employees owned it with me. Every dollar of profit would go to something that solves real problems, like water or housing. We'd make an impact in communities all over the country.

CAN EVERYONE ON YOUR TEAM SOLVE THIS?

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

If not, they should be reading this.

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[IN FOCUS]

NOTED

The Supply Chain in Brief

> SEALED DEALS



• Brewing company Carlsberg Group selected Kinaxis' RapidResponse platform to create a harmonized planning process and improve

commercial agility. By using the platform, Carlsberg can glean process insights and improve supply chain decision-making for its portfolio of beer and other beverage brands.



• **Tubby Todd,** an e-commerce company providing body care products for babies,

selected **PFS** to manage its U.S. order fulfillment operations. From its Memphis-based campus, PFS provides fulfillment services including kitting, picking, packing, and shipping for Tubby Todd orders. PFS also manages Tubby Todd's direct-to-consumer transportation as well as the drop-ship program for its retail channel.

• To help its U.S. members transport their vehicles faster and more efficiently, the National Independent Automobile Dealers Association (NIADA) named omnichannel logistics platform ACERTUS its preferred vehicle logistics vendor. The ACERTUS platform gives NIADA dealers access to services to move, store, recondition, title, and home-deliver vehicles.



> GOOD WORKS

- **SOS Children's Villages International** is benefiting from a new partnership with **DHL Express**, **DHL Global Forwarding**, and **DHL Supply Chain**. The organizations are working together to help young people, ages 15 to 25, in the Philippines prepare for employment or entrepreneurship. Under the partnership, DHL employees will mentor youths as they transition to the working world.
- Carrier Logistics, a provider of freight management software for LTL fleets, recently donated to **Autism Speaks** in honor of Geoffrey Muessig, executive vice president and chief marketing officer at PITT OHIO. The donation was made as part of Carrier's golden anniversary celebration and will support various programs and research conducted by Autism Speaks.

> GROUNDBREAKING



- Cold-Link Logistics began construction on a \$60-million cold storage warehouse facility in the Southbridge Business Park in Sioux City, Iowa. The new warehouse, a 190,000-square-foot rail-served freezer building, is expected to employ 60 people when completed in 2023.
- Crow Holdings Development is building a 126-acre industrial park near the New Jersey Turnpike in Carteret, New Jersey. The project, which broke ground in June 2022, includes three buildings ranging in size from 335,000 to 480,000 square feet. They will feature 40-foot clear heights and together will offer 159 trailer parking spots, 174 dock doors, and 6 drive-in ramps.

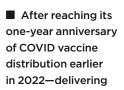
> IN MEMORIAM



• RJW Logistics Group executive Greg Forbis passed away after a oneyear battle with cancer. He had a lifelong career

in supply chain, including 30 years at Walmart and the past three years with RJW Logistics Group, where he developed and maintained relationships with clients and partners.

> MILESTONE





1 billion doses globally—**UPS** continues to keep vaccine distribution a top priority for its healthcare division.

The company is working with vaccine manufacturers to provide storage and ultra-low temperature freezers for a wide portfolio of new vaccines.



> M & A

■ Burris Logistics purchased

foodservice redistributor

R.W. Zant Company in order to help expand the foodservice redistribution capability of Burris company Honor Foods.

- Majestic Steel USA, a steel service center and processor of flat-rolled steel products, completed two acquisitions: Quicken Steel, a manufacturer of steel buildings and components, and transportation company **Mercury Transport.** The acquisitions support Majestic's strategy of supply chain reliability for customers and downstream value-add in steel manufacturing.
- KAG Logistics, a logistics provider serving the petroleum and renewable fuels industry, acquired American PetroLog, a provider of multimodal distribution services to the petrochemical industry.
- Global logistics provider **DB Schenker** acquired **USA Truck**, which maintains a U.S. and Mexico freight network.
- To provide ongoing support to Ukraine during the war, 3PL Logistics Plus acquired Concord-Trans, a Ukrainian freight forwarding and logistics company with locations in Kyiv and Odesa.

> RECOGNITION

• Barbara Melvin, president and CEO of South Carolina Ports, received the 2022 Woman of Courage Award. Melvin, the first woman to lead a top 10 U.S. operating container port, was selected for the award by the



College of Charleston School of Business and the Women for Women Summit. The Woman of Courage Award recognizes an inspirational, impactful, and courageous leader who has made significant contributions to their industry and community.

• Two veterans of the logistics industry are set to receive awards from the Containerization and Intermodal Institute in September 2022. Joseph S. Gregorio Sr., CEO and chairman of Pacific Crane Maintenance Company, will receive the 2022 Connie Award while Captain Lynn Korwatch will be honored with the Lifetime Achievement Award recognizing her 45-year maritime career.

> UP THE CHAIN

• Barbara Bergmeier is now executive director, industrial operations, for Jaguar Land **Rover.** In this newly created role, Bergmeier is responsible for leading Jaguar Land Rover's new industrial operations organization, with oversight for manufacturing, purchasing, and supply chain teams.



• Ray Nichols (pictured) was appointed chief business support officer and Chad Boardrow was named chief supply chain officer at Arcimoto, which makes ultraefficient electric vehicles. Nichols is responsible for expanding Arcimoto's footprint while Boardrow will work with supplier partners and the company's manufacturing team to keep supply chain operations running smoothly.

- Pace International, a provider of sustainable postharvest solutions and technologies for the fresh produce industry, named Luke Shepard as senior manager of global operations. Shepard will work on process and quality improvements, strategic sourcing and planning, logistics network optimization, and customerservice enhancements.
- Fashion brand PVH appointed David Savman as executive vice president and chief supply chain officer. Savman will be responsible for the global supply chain and sourcing strategy for PVH's global brands. He will join PVH in late 2022 from H&M Group, where he spent 19 years, most recently as head of global supply chain.
- HP named Ernest Nicolas as the leader of its worldwide supply chain organization. Nicolas will

oversee the company's supply chain, which delivers more than 100 million products to customers each year. He will also oversee social and environmental sustainability for HP.



[IN FOCUS]

TAKEAWAYS

Shaping the Future of the Global Supply Chain

\$317.17 BILLION

That's the estimated size of the chemical logistics market by 2026, according to The Business Research Company's Chemical Logistics Global Market Report 2022.

The figure represents a compound annual growth rate (CAGR) of 3.9% over the next 5 years. For 2022, the chemical logistics market size will grow to \$271.73 billion, up 7.9% from \$251.94 billion in 2021, the report predicts.





Supply Chains Out of Sync

There are some harsh words for the logistics and supply chain sector in the 33rd Annual State of Logistics Report, revealed recently at the National Press Club in Washington, D.C. U.S.-based supply chains are "out of sync," caused by struggles to adjust to short-term changes, the report claims.

The good news, though: the industry is discovering long-term solutions to those challenges.

The report, produced for the Council of Supply Chain Management Professionals (CSCMP) by global consulting firm Kearney and presented by Penske Logistics, is intended to look at the overall U.S. economy as seen through the lens of the logistics and supply chain sector.

One of the more telling statistics from the report involves U.S. business logistics costs, or USBLC. In 2021, USBLC rose 22.4% to \$1.85 trillion, which accounts for 8% of 2021's \$23 trillion GDP.

Other key findings:

- Business inventories dropped to near historic lows, but the costs associated to store, handle, and finance those items jumped by 25.9% in 2021, while transportation costs increased 21.7%. This has led to "uneven supply chains and inconsistent product availability for consumers (both in-person and online)," says CSCMP.
- Multi-shoring efforts are expected to increase. Companies are looking to move their
 operations closer to the United States so they can respond to changing market demands
 more swiftly.
- The pandemic continues to pose challenges to the supply chain, as disruptions further damage capacity.
- Last-mile delivery volume is trending up. E-commerce sales grew 10% in 2021 (to \$871 billion), accounting for 14% of U.S. retail sales.
- Trucking freight is a bright spot, with more volume and opportunities. Road freight expanded by 23.4%, to a robust \$831 billion spend, and accounted for the largest segment of the U.S. supply chain spend.





WAREHOUSE SPACE: CAN YOU

Need warehouse space? It should be slightly easier to come by into 2023. A recent Prologis report focused on Q2 2022 activity and predictions for 2023 expects a small increase in vacancies.

The reason: Demand will drop and supply chain movement will improve, which will get more products into the marketplace.

Here are some key numbers from the report:

- · Vacancy rates remained at an all-time nationwide low of 3.1% in Q2.
- Rates are expected to rise to 3.2% by the end of 2022.
- Rates should rise to 3.7% by the end of 2023.
- Warehouse rents jumped 16% in the first half of 2022, because demand remained high and rents rose in response to materials inflation, land shortages, and labor and supply chain issues.
- Capacity utilization rose to 85.6%, which seems to show that no excess space existed within facilities due to higher retail sales and restocking efforts.

Looking forward, deliveries should be able to meet demand by the end of 2022, Prologis predicts, and should even exceed demand over the next 18 months. That should give those looking for warehouse space more leverage negotiating leases.

Prologis estimates that 800 million additional square feet of space will be needed for current growth and future replenishment estimates.

The report also notes that wholesale and retail inventories have risen by 7% net over the past six months alone. Taking into account current and future replenishment efforts, the ratio of inventory to sales is expected to level off at 5% to 10%, which is higher than pre-pandemic numbers.



Consumers Go on an Online Spending Spree

Despite current worries about an economic downturn, consumers are still shopping—especially online. And retail logistics companies keep shipping products. As a result, the global retail logistics market is forecast to jump from \$231 billion USD in 2021 to \$622 billion USD by 2030. That computes to a 12% compound annual growth rate over that time.

That's the prediction made by Acumen Research and Consulting in its Retail Logistics Market, Share, Analysis Report and Region Forecast, 2022-2030 report. It credits the surge in e-commerce and global customers' increasing digital literacy for the boom in online sales. And as smartphones and internet access spread to more and more markets, online shopping will only continue to grow.

The report surveyed key market players such as APL Logistics, C.H. Robinson, A.P. Moller-Maersk, DSV, DHL, FedEx, Nippon Express, Kuehne + Nagel, UPS, Schneider, and XPO Logistics.

Behind the good news, though, is the pandemic's ongoing impact. The report contends that the pandemic has hurt the global economy in three ways:

- 1. It has damaged profitability.
- 2. It has directly harmed production and demand.
- 3. It has depleted capital and cash flows.

As a result, retail logistics companies are still struggling to regain their footing and learning, on the fly, how to meet customer behaviors that have changed because of the pandemic, says the report. Additionally, it notes that retailers are also dealing with a data shortage and declining revenues.

On the bright side, increased use of robotics and robotic process automation has greatly helped global retail logistics market value, and robotics will only become more important to the sector moving forward.

On top of that, the growth of big data analytics in retailing and, by extension, retail logistics operations, will help supply chain companies identify bottlenecks and streamline the flow of goods and resources.

TOP 5 SUPPLY CHAIN DISRUPTIONS

New data from Resilinc highlights the top drivers of supply chain disruptions for the first half of 2022. From January through June, Resilinc's EventWatchAl platform alerted its customers to an astounding 7,929 potential supply chain disruptions (a 46% YoY increase) with the life sciences, healthcare, hightech, and automotive industries being most impacted.

The top five reported disruptions include:

- 1. Factory fires
- 2. Mergers & acquisitions
- 3. Business sale
- 4. Leadership transition
- 5. Factory disruption

Of these disruptions, 54% were impactful enough to trigger the creation of a WarRoom (virtual platforms in the Resilinc dashboard where customers and their suppliers communicate and collaborate to assess and resolve disruptions).

Factory fires ranked as the top disruption for the first half of the year, with the number of fires up 131% YoY. This year is on track to have the most factory fires ever reported, a trend driven by regulatory and process execution gaps, as well as a skilled labor shortage in warehouses.

The data also reveals that disruptions due to geopolitical events, most notably the Russia-Ukraine war, were up 521% YoY. Sanctions and production shutdowns are creating unprecedented commodity and raw material shortages; these will likely continue through the end of the year.

Geographically, North America experienced the most disruptions, accounting for 40%+ of the total alerts issued in the first six months of this year.

Freight Is Fraught

The double-whammy of skyrocketing fuel prices and out-of-control inflation has put a hurt on the freight industry. So have flattening modal growth trajectories, seasonal factors, and softening demand.

So says the new edition of the Cowen/AFS Freight Index, which provides predictive pricing tools for such sectors as less-than-truckload (LTL), truckload (TL), and parcel shipping (separately focusing on express and ground).

Inflation is working as a double-edge sword: while pushing prices up, it also is limiting demand by slowing purchasing power, according to Tom Nightingale, CEO of AFS. Compared to a record-breaking Q1 in the previous report, the new report indicates that growth trends are more likely "to subside but not tumble," with the index remaining elevated in comparison to its 2018 baseline and annually.

"Businesses are shifting modes and re-optimizing carrier networks proactively to limit their exposure to higher pricing, but carriers are using fuel surcharges and other accessorials as subtle but effective tools to expand revenue," Nightingale adds.

Other takeaways:



Truckload rates should flatten in Q3, from 24.1% in Q2 to 26.5% in Q3, due to historical data and seasonal effects such as the end of produce season and manufacturers and retailers ramping up for the holidays.



Truckload miles per shipment were down 6.7%, from Q2 to Q3, caused by inventory build-up and port congestion, with demand softening. Q2 year-to-date cost-per-shipment was down 4.9%, and linehaul cost-per-shipment down 5.2% in Q2, but up 14.5% annually.



LTL average fuel surcharge jumped from 34% in Q1 to 47.6% in Q2, with fuel representing 20.7% of total cost-per-pound through June, well above the 13.4% rate in 2021.



LTL weight per shipment was down 4.4% sequentially, while cost-per-shipment rose 6.8%. LTL rate per pound will remain high in Q3, with annual growth continuing to slow, and the Q3 LTL index forecast at 54%, down from Q2's 54.8%.



Express parcel rates increased 7.9% from Q1 to Q2, the result of fuel surcharges, weight, service mix, and 2022 general rate increases. The Q3 express parcel freight index is expected to drop from Q2's all-time high of 5.5% to 2.2%. The Q3 ground parcel index is forecast at 25.7%, down from Q2's record of 27.7%.

The better-than-expected pricing trends data in the TL findings may be related to capacity coming out of the marketplace, which Cowen notes could be at a rate higher than expected. "That said, we are still cautious on TL pricing in Q4 2023 due to the macro-economic backdrop," says Jason Seidl, a Cowen analyst.

DO YOU USE KPIS EFFECTIVELY?

Most businesses today collect data to set and track key performance indicators, or KPIs. Logistics companies are no different. And with the industry in turmoil these days from the pandemic and global economic stressors, KPIs may be more important than ever.

But do supply chain executives truly understand and fully utilize the KPI numbers they are collecting?

Not as well as they would like to.

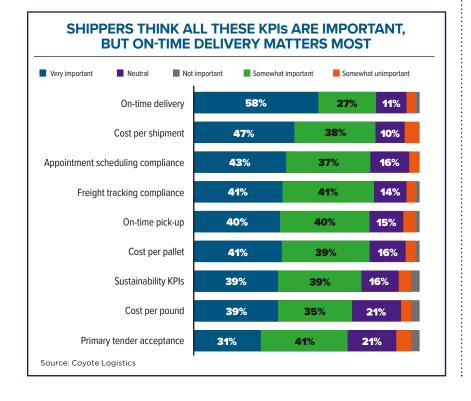
Coyote Logistics surveyed 997 shippers and 683 carriers, comprising a variety of business sizes across multiple industries, on their KPI data collection and usage. While 83% of shippers agree that KPIs are an essential part of the supply chain:

- 50% of businesses have a hard time gathering accurate data.
- Only 40% rate their company's ability to track supply chain metrics and KPIs as "advanced."
- Only 36% of shippers and 26% of carriers rate their company's ability to take action on the metrics and KPIs they track as "advanced."

On the bright side, just 8% of those surveyed considered their company a "novice" at KPI tracking and use.

Other findings:

- Shippers want all of their data in one place, but only 15% are using control tower technology that enables organizations to better understand, prioritize, and resolve critical issues in real time.
- 70% of shippers say that turning supply chain data into actionable insights is timeconsuming and challenging.





The Effects of Inflation on The Supply Chain

The past few years have brought unprecedented circumstances that are culminating in some significant supply chain challenges. You can safeguard against many of the challenges by partnering with a 3PL.

Most organizations face more supply chain challenges now than they did a year ago, research shows.

Increases in costs incur higher fees for supplies and services, affecting entire supply chains. And inflation exacerbates problems with port congestion and import containers, along with labor availability. Fuel prices also drive up transportation and freight costs that were already rising.

Other impacts include capacity constraints along with general rate or price increases, supply chain instability, lengthier lead times, delayed orders, and more issues with shipping containers.

Furthermore, inflation has increased the chances of a large bankruptcy in the trucking industry this year. As large trucking operations go bankrupt, there will be substantial issues with moving freight. As these events occur, transportation issues are likely to get worse, potentially bringing about another spike in inflation.

On an even bigger scale, the effects of inflation on the supply chain cause a ripple effect on the price of consumer goods. This inflation situation becomes cyclical with inflation causing supply chain costs to rise, which just begets more inflation and increasing prices for consumers. It's a vicious cycle that can impact the viability of your organization.

MANAGING THE IMPACTS OF INFLATION

Forecasting economic downturns is a key way of protecting your supply chain. Remember that inflation rates can increase at a slow but steady pace, eventually hitting your supply chain all at once. Long before inflation hits, you should develop a process for how your organization can react to the reduced purchasing power of the dollar.

An important countermeasure against inflation is to build up your capability for adapting to rising prices. How exactly



you do this will depend on several factors specific to your situation. One general tactic is to have alternatives for suppliers and sources of raw resources that can help you to navigate a sudden spike in prices.

Additionally, it's time for supply chain managers to take a closer look at contracts. We have been enjoying a period of very low inflation, which allowed some business leaders to become complacent with their cost structures. Now is a good time to assess, analyze, and target key elements of sales or external spend and see where adjustments can be made.

To an even larger degree, companies should focus on increasing their supply chain resilience. Resilient supply chains offer visibility, predictability, and flexibility over three time horizons: the short term (tactical), the mid term (operational), and the long term (strategic), according to a resilience test developed by MIT and Accenture.

A PARTNER IN MANAGING A NEW BUSINESS LANDSCAPE

Third-party logistics (3PL) solutions have become increasingly popular over the past few tumultuous years. A 3PL provider like Taylored Services offers solutions from warehousing and transportation to distribution and inventory management. This allows organizations to streamline their entire supply chain process, saving resources and limiting external contracts. Rather than reviewing several contracts and working with multiple contacts, companies using a 3PL

can work with a dedicated, single point of contact to determine the best solutions for their entire supply chain. 3PLs also help businesses save money by freeing up the time and resources associated with running their own logistics. Specifically, a 3PL can save you the following costs:

- Warehousing space. A 3PL provides the warehouse and the necessary team. You don't need to worry about the space or the associated costs.
- Utilities. Keeping a large warehouse requires energy, water, insurance, air conditioning, etc. By using a third party you can skip all of these bills.
- Employee costs. Picking, packing, shipping, and transporting are all necessary parts of doing business. You can save full-time employee salaries, benefits, etc.
- Courier costs. Expect couriers to raise prices in line with national inflation. However, these companies have strong ties to 3PL companies and often function as part of a larger deal, keeping rates low.

Inflation is going to affect many areas of business, including supply chain. Just how much your supply chain is impacted depends on several factors, but you can safeguard against many of the challenges by partnering with a 3PL provider.

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Pallet Recovery Keeps the Circular Supply Chain Moving

CHEP is committed to a share and reuse model for pallets that contributes to a regenerative supply chain. The provider increased its focus on pallet recovery—a vital step to ensuring goods continue moving throughout the supply chain and ultimately meet consumer demands.

At its core, CHEP, a global provider of share and reuse (or pooled) pallets, crates, and containers, is the backbone of the global supply chain, says Jim Congrove, the company's director of U.S. asset management.

To continue keeping goods moving across the globe after a tumultuous few years, CHEP increased its focus on pallet

recovery—a vital step to ensuring goods continue moving throughout the supply chain and ultimately meet consumer demands.

"Supply chains have learned from the chaos and uncertainty of the past few years, and they want peace of mind that pallets will be available when they need them," Congrove says. "When pallets aren't returned to CHEP, it's harder for us to be able to move inventory to where and when it's most needed."

ENCOURAGING RECOVERY

Pallet recovery has become an important topic, especially since the beginning of the pandemic, as the lumber and labor expenses of building new pallets and providing them where needed have soared.

To reduce the overall cost to the supply chain, CHEP pursues all avenues to recover its assets, including partnering with the recycling community. The company compensates nearly 1,800 pallet recyclers through its asset recovery program (ARP) for the return of CHEP pallets and increased the program compensation in March 2022 to encourage increased return rates.

Since adjusting compensation, CHEP has picked up more than 50 new recyclers and seen an increase in return volume from existing participants. On top of the ARP program, CHEP quickly increased its low-volume recovery fleet capacity, allowing it to more frequently collect directly from small and mid-sized retailers where returns commonly lag.



Lastly, the company expanded its asset protection team to deter unauthorized pallet resale and reuse. In just the past two months, the team identified and recovered nearly 100,000 CHEP pallets illegally sold to businesses across the country.

"Over the past year, we have increased our collection points by 24% and our pallet volume collections by 45%," Congrove says. "By collecting lower volumes at higher frequencies, we're able to help retailers keep their docks free of pallets. That space then can be used for their core business needs and pallets don't unsafely accumulate on the back docks."

PROACTIVE RETURNS

Even with the recent focus on pallet returns, companies can do more to keep the supply chain moving. For instance, CHEP encourages manufacturers to continue playing a proactive role in returns by working with their retailers on

improved processes, such as educating and partnering with retailers on the circular model.

Businesses that hold on to just a few pallets cause significant ripple effects for others in the pallet pool. "We don't want stock outs to be a reality," Congrove says.

"It may be tempting to say, 'I've only got 10 pallets, what's the big deal?' But

every pallet that isn't returned is another pallet that must be built using new materials—taking away the ability to get 10 recycled pallets back in the supply chain and reused by manufacturers, which also increases the total cost of goods," he says.

Working together on pallet recovery doesn't just help from a sustainability perspective, but it is also good for business continuity.

"When we look at one of the largest pain points our industry faces today—providing goods to consumers quickly—having pallets available to ship on demand will help the U.S. supply chain respond to ever-evolving consumer demands," says Congrove.

"If we all work together and take action, we can help eliminate this challenge while also reaching our shared goals to be planet positive," he says.



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KNOWLEDGEBase

Solving the Unique Challenges of Shipping Perishables

Cold chain shipping requires precision. The best temperature loggers collect and track shipment temperature and identify where and when temperature fluctuations occur.

hen it comes to cold chain shipping, the challenges associated with supply chain management are magnified because perishable products must be shipped in a carefully controlled environment—during both storage and shipment.

According to FAO Statistics, approximately 1/3 of all food products are lost or wasted during harvesting, packaging, transportation, or trade—often due to temperature non-compliance.

An effective loss prevention strategy, centered around cost-effectively tracking and collecting shipment temperature, is more important than ever. Let's review the most critical challenges that arise in cold chain logistics and how technology can ensure these shipments arrive on time and in full.

Challenges of Shipping Perishables

With products that move through the cold chain, stakeholders need insight into the temperature of shipments to address two potential failure points:

- Inventory management. Managing inventory is a complex—yet vital—objective for all retail companies. For those that ship and sell perishables, inventory management is even more challenging: these products have a limited shelf life, and must be restocked more frequently and in a more controlled manner.
- Increasing regulatory requirements.
 Regulations regarding perishables
 shipping are only growing stricter.
 Retailers, manufacturers, and logistics
 service providers must meet a range
 of regulatory requirements (such as



FSMA) regarding how those products are shipped, processed, and stored. These requirements often create a heavy burden for those shipping, receiving, or selling these products.

Why is Temperature Tracking Important?

Temperature tracking ensures complete transparency when shipping temperature-sensitive cargo. Did the product get too hot? Too cold? Should the customer reject the load before it hits store shelves?

The ability to track and analyze temperature data enables shippers and logistics service providers to ensure the safety and quality of deliveries. Although some spoilage can be identified upon arrival, without shipment temperature visibility, it can be difficult to keep compromised products from winding up in customers' hands.

The best temperature loggers collect and track shipment temperature and identify where and when the temperature has fallen outside of acceptable thresholds during transit—making it simple to ensure safety and quality.

Use Cases: Implementing Cost-Effective Temperature Logging Solutions

Modern technology solutions enable food shippers, manufacturers,

and logistics service providers to ensure the safety and quality of cold chain shipments.

Apotek (a subsidiary of Phoenix Group, the world's largest pharmaceutical company) has found a simple, cost-effective solution for transporting temperature-sensitive drugs using Tive Tag, a cloudenabled temperature logger. The Tive Tag is in the form of a thin, flexible shipping label, and half the cost of a conventional logger.

According to Petter Bojan Herlufsen, logistics at Apotek, "We're particularly pleased with the innovation and ease of the technology, as well as the support developing the system according to our wishes. It takes about 30 seconds to start and read a Tive Tag, saving both time and money."

HAVI Freight Management, a global strategic logistics provider for McDonald's, also simplifies and ensures the safety of its food transport using temperature logging technology. Ainars Dobulis, project manager at HAVI, stated, "Tive Tag's innovative cold chain solution fulfills McDonald's high requirements for food quality and customer safety."

•••••••

-By Jim Waters



Vice President, Global Marketing Tive sales@tive.com www.tive.com

For more information on how to optimize cold chain shipments using simple-to-use, costeffective temperature loggers, please visit <u>Tive.com/Tag</u>.





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Supply Chain Challenge?

SOLVED



Marmon Holdings Improves Performance with Managed Logistics Program

From developing processes to measure savings to creating a dashboard and reporting tools, Echo Global Logistics helped Marmon Holdings manage shipping in a more centralized way.

THE CHALLENGE

Marmon Holdings, Inc. traditionally operates in a decentralized manner, equipping the company's 100+ businesses with the resources needed to be successful and the autonomy to make their own decisions.

Marmon brings strength, support, stability, and investment to its teams around the world as well as opportunities to drive cost savings and improve service performance when and where it makes sense.

In 2019, Marmon leadership identified transportation procurement as an area where working together could be advantageous.

At the time, the functions across Marmon's transportation companies operated on their own with different buyers and strategies. Some managed shipping in-house while others used third parties.

"Marmon allowed the businesses to manage logistics independently because each is so different. But, as a company, we knew there were also many bigpicture advantages we could gain with more consistency. If we listened and understood the needs of each business, we felt a positive change was possible," says Jackson Jones, VP of Supply Chain and Procurement.

The team took a multi-faceted approach to the opportunity, and Echo Global Logistics' consultative approach helped craft the internal processes necessary to manage shipping in a more



centralized way. These tactics included creating a comprehensive dashboard and reporting tools, finding common ways of doing things, and developing processes to measure savings. It also included a plan to consolidate the portfolio of carrier partners.

THE SOLUTION

Looking back over two-plus years, Marmon has driven a 21% reduction in freight spend—exceeding initial expectations.

The challenge of bringing diverse and independent businesses together was not easy. Companies can be resistant to change, and that concern magnified when it came to switching transportation providers.

"Knowing change can be hard, we took things slow," adds Jones. "These types of transitions are stressful, and we did not want to put undue risk on the businesses' ability to operate. We also knew communication was key. The last few years have been hard on supply chains and we didn't want to add to that burden."

Equally important was an effort to identify managed logistics partners

they felt were up to the task. For this, Jones looked to Echo, a partner already supporting a few Marmon businesses.

"Echo's understanding of the Marmon organization was vital to this program's success. There was a lot at stake and naturally, some hesitancy. So, knowing we'd get Echo's full support and a well-planned implementation went a long way. As we talked to other 3PLs, we realized many simply didn't appreciate the full amount of work that would be needed to succeed," says Jones.

Marmon has brought more than 50 of its businesses into the program with Echo. And because its business is so dynamic, with new acquisitions and frequent change, there will likely be more.

"As we sit today, the program has been a success. Aside from the savings, we take pride in the fact 99% of the companies brought into this program would say it's working. Echo has grown to be one of Marmon's largest suppliers and we are grateful for the successful partnership," concludes Jones.



To learn more: info@echo.com 800-354-7993 echo.com

Supply Chain Challenge?

SOLVED



MagicLogic Provides Flexible Customized Cartonization Software for Augusta Sportswear

Augusta Sportswear—the company behind brands such as Holloway, High Five, and Russell Athletic—turned to MagicLogic for a load planning solution that packages orders dynamically and seamlessly.

Augusta Sportswear's story began in 1977 when the company was originally founded. It has since become a byword within the apparel industry for manufacturing high-quality sportswear. The company manufactures team uniforms, training gear, and fanwear.

August Sportswear is renowned for making sportswear in the widest range of colors, styles, and sizes. It encompasses well-known brands, including Holloway, High Five, Russell Athletic, Pacific Headwear, and CCM.

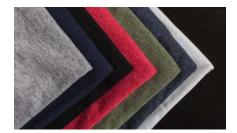
THE CHALLENGE

In 2016, Augusta Sportswear needed load planning software that worked as closely as possible with their homegrown applications. Their concern was whether the software would integrate well, be just as fast, and return excellent packaging results.

They also needed the software to be able to grow with the business, be flexible and stable enough to deal with the demands of daily shipping, and would meet their customers' needs. Ultimately, the choice came down to Augusta's requirements to package dynamically within their order processing.

THE SOLUTION

After identifying BlackBox as a possible option, Augusta Sportswear put it to the test. They used the software to load



cartons and run simulations of packaging, discovering it was a close fit to what was required but could be even better when all the available options were factored in. After discussing their requirements with the team at MagicLogic, they were confident they had made the right choice for their business.

MagicLogic worked closely with the team at Augusta Sportswear, ensuring the software integrated seamlessly with their existing processes. During this process, MagicLogic provided custom development work tailored precisely to meet Augusta Sportswear's requirements.

THE RESULTS

Since implementing the MagicLogic software, Augusta Sportswear discovered the BlackBox Cartonization software is very reliable and stable. They are impressed with BlackBox and its ability to get the job done, no matter the orders received. Flexibility remains a very important factor as the business continues to grow, and BlackBox is meeting the

needs of Augusta Sportswear customers and can easily cope with new packaging requirements. Using BlackBox has helped Augusta Sportswear provide more packaging options.

At the moment, Augusta Sportswear has yet to investigate all the features of BlackBox, but as the company continues to grow, it intends to review them to see what will make sense for their packaging requirements, and the MagicLogic team will be very happy to offer support in integrating new features.

MagicLogic asked Augusta Sportswear for their experience working with the team, and they replied: "The experience is top notch! They are very open, out-of-the-box thinkers, super collaborative, and patient with all we have worked on together. The support is there. The suggestions and best practices are there to ensure you get what you need. We are extremely pleased with the experience with MagicLogic and always happy to recommend them to anyone."



To learn more: sales@magiclogic.com 206-274-6248 www.magiclogic.com

THOUGHTLeaders

What Is a Freight Embargo and Why Do Carriers Set Them?



Brian Thompson
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www.smc3.com

For more information on the SMC³ CarrierConnect[®] XL solution for carriers, visit smc3.com/carrierconnect.htm

Embargoes are common in less-than-truckload (LTL) shipping. LTL temporary service outages are particularly relevant in today's carrier market, when demand for freight is at record highs and resources are still lean for many carriers.

What is an LTL freight embargo?

A freight embargo is when a carrier stops accepting loads from shippers. LTL embargoes can be set for a certain timeframe, geographic region, or even specific freight characteristics (i.e. maximum weight or shipment size) according to the carrier's decision.

Who decides when freight gets embargoed?

Embargoes are often set by carriers themselves. They can also be set by state and federal governments, but this is less common in American domestic freight.

Why do carriers set freight embargoes?

An LTL carrier might set an embargo on freight during peak shipping season or in case of bad weather conditions, natural disasters, or limited access to certain locations. Embargoes can also help carriers maintain better control over capacity and lessen strain by selectively refusing freight for a set time.

How long do freight embargoes last?

Embargoes can last days, weeks, or even months. For this reason, it is particularly important for carriers to have a solution that helps them communicate operational capabilities.

What do LTL embargoes mean for shippers?

If a carrier sets an embargo that affects a shipper's freight, shippers must wait until the carrier's embargo lifts or, more likely, they'll look for other carriers in the meantime. Visibility between carriers and shippers remains crucial so all parties can reallocate resources for higher-value activities.

Are freight embargoes always bad?

Not always—embargoes might seem counterintuitive for carriers, but they're not arbitrary.

Carriers often set embargoes on LTL freight to ease strain on their capacity. For example, when natural disasters disrupt the supply chain, carriers often experience a spike in demand as shippers look for new ways to transport freight. If a carrier knows it doesn't have the capacity to deliver that freight on time, the carrier might set an embargo on the freight affected by that natural disaster.

Carriers also set temporary service outages even when there's no immediate disaster or sudden demand spike. Sometimes, they're too busy to accept certain types of freight or freight from certain locations. Setting up a transit service alert for a certain length of time helps them catch up so they can predict their business, plan out capacity, and better serve their customer base more consistently.

Carriers can communicate embargoes to shippers through CarrierConnect® XL with custom messaging that explains terms and reasons for the embargo and offer alternatives, helping maintain symbiotic carrier/shipper relationships during an embargo.

www.smc3.com/carrierconnect.htm

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[INSIGHT]

ITMATTERS

by Andrew Butt
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How Strong Trading Relationships Help Win and Retain Customers

The most effective supply chains are built on a firm foundation of cooperation between suppliers and distributors. Strong trading relationships have a significant impact on just about every measure of performance: customer service, transportation and storage costs, risk, forecasting, lead times, and even product development.

The best way to ensure that your supply chain is capable of meeting an ever-expanding range of customer needs more effectively than your competitors is to make collaboration a top priority. By focusing on transparency, data sharing, and increasing the efficiency of joint operations, supply chain partners will attract and retain more customers than ever before.

Visibility is critical for today's supply chains. Retailers and distributors can use shared data for accurate demand forecasting, capacity planning, quality management, and order fulfillment. Robust data collection and analysis helps supply chain partners quickly adjust to changing market conditions and track other changes in consumer behavior, which allows them to orient operations and agreements around relevant insights.

Significant majorities of consumers expect ease, speed, and personalization, and supply chain partners will only be able to meet these demands if they work together.

Strive for continuous improvement in your trading relationships. Even healthy supply chain relationships can always be improved, which is why partners should constantly search for ways to improve the quality and accessibility of data, reduce costs and delivery times, eliminate waste, and manage risk.

Suppliers and distributors can build sustainable relationships by sharing information across all segments of the supply chain, bringing goals and strategies into alignment, and accounting for changing consumer demand and economic circumstances with a robust rebate management platform.

TRUST AND MUTUAL BENEFIT

Respondents to a 2020 Deloitte study agree that the two most important factors in supply chain collaboration are "trusted relationships with the other party" and "mutual benefit for you and the other party." Suppliers and distributors that don't prioritize collaboration will get left behind.

Use digital resources. Supply chains face unprecedented competitive pressures, but they also have powerful digital resources at their disposal to meet these challenges. However, while more than three-quarters of companies in the sector are increasing the use of technology in response to recent supply chain disruptions, a Bain survey finds that just 8% have "achieved their targeted business outcomes from investments in digital technology."

One of the most important digital tools for the maintenance of strong supply chain relationships is a data-driven rebate management platform. Rebates create incentives for suppliers and distributors to continue working together, as they bring projections about delivery schedules, consumer demand, and other variables into alignment with reality.

Supply chain partners need a shared digital platform that allows them to communicate, collaborate, and scrutinize the same data to get clarity on how rebates are calculated and what their agreements cover

By forging relationships around transparency, integrated operations, and data-driven flexibility, supply chain partners put themselves in a position to give customers top-notch service and outpace competitors.

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[INSIGHT]

RETAILRETHINK

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Order Management System+Online Store=The Best Customer Experience

A majority of buyers say they will abandon a brand after just one negative experience. Retailers must look at the entire purchasing process—from browsing and checkout through delivery and returns—as every interaction is crucial to developing a lifelong customer.

Here are some pre, during, and postpurchase solutions an order management system (OMS), working in tandem with a retailer's storefront, enables to create a seamless customer experience.

PRE-PURCHASE

Display accurate inventory. With an order management system, retailers have visibility into their inventory across every channel—Amazon or other third-party retailers, as well as their own e-commerce site. They can display certain percentages of inventory to different channels and leverage safety stock, so customers see exactly what is available where.

Offer preorders and backorders.
Gain momentum (and line up revenue) for a new product launch by accepting preorders and displaying estimated delivery dates on your site. Accept backorders for out-of-stock products and highlight on the storefront when products are expected to be back in stock, giving customers the information they need to make a purchasing decision.

DURING PURCHASE

Add high-converting checkout options for payment and delivery. One of the best ways to increase conversions is to give consumers options that work best for them. With an OMS, retailers can let consumers choose their most convenient delivery method or pickup location, select their delivery date, or even accept multiple ship-to addresses. It also allows retailers to accept consumers' preferred payment methods including credit, debit, and gift cards, e-gift cards, store credits, and buy now pay later options.

POST-PURCHASE

Provide fast fulfillment and frequent order updates. During the fulfillment process, customers expect fast fulfillment and to be notified every step of the way. That's why retailers looking to optimize their entire customer experience rely on a dedicated order management system that can automatically process direct-to-consumer orders—from orchestrating the most efficient fulfillment location

(for both the customer and retailer) to notifying customers of shipping, delivery, or any other order updates.

Create omnichannel experiences. A dedicated OMS enables retailers to create a buy anywhere, fulfill anywhere, return anywhere model. By setting up automated workflows in their OMS, retailers can enable customers to select the fulfillment option of their choice, while being confident that they have the technology in place to fulfill on that promise.

Make customer service interactions painless. An order management system empowers the customer service team with the data they need to easily look up orders to give credits or make line-item cancellations. Give customers the ability to change their minds on their fulfillment location with grace periods before orders are sent to be fulfilled.

Make returns and exchanges easy. Giving customers the ability to self-initiate returns puts the consumer in control while giving the retailer the opportunity to incentivize consumers to make additional purchases during the process.

By using a dedicated OMS in conjunction with an e-commerce storefront, retailers can be confident they are using the right tools to create the ideal shopping experience.







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SMARTMOVES

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Tips to Overcome Year-Round Labor Challenges

The logistics sector is expanding. The Logistics Managers' Index, which is calculated using a diffusion index in which any reading above 50 indicates that logistics is expanding, came in at 65 in June 2021 and a record-high reading of 76.2 in March 2022. Continued growth is shifting how companies approach hiring.

Continued growth as a result of e-commerce spending removes the normal post-holiday staffing "reset period" many businesses experienced prior to the pandemic.

Finding top talent is now a yearround challenge. Competition for the best workers may heat up as we get closer to the holiday season, when e-commerce is at its busiest. Failure to adjust to consistent demand jeopardizes a company's ability to capitalize on what could be a record year for consumer spending on e-commerce.

Now is the time to address the factors contributing to ongoing labor shortage challenges. Here's how.

1. Attract workers with competitive compensation and faster onboarding. Many companies offer wage increases or bonuses when it's time to staff up for the holiday season. Update this approach with increased demand in the earlier months.

Employers who offer wages in the top 50% of rates candidates are looking for have an easier time attracting high-performing workers and keeping up with their competitors.

Streamlining the onboarding process and getting new employees in the door as soon as possible is also crucial. Candidates are more likely to accept a job offer when they can start quickly.

2. Help employees add new skills. Workers increasingly look for employers who can offer more than a paycheck. They want to add new skills that can help them advance their careers.

When you don't invest in the future learning of your employees—or they do not feel like there are any opportunities available for advancement in your business—they will quit. According to LinkedIn, 94% of employees will stay with a company longer if it invests in helping them learn and develop new skills. People do not want to be in

"dead-end jobs," and presenting workers with opportunities to learn new skills can prevent that.

3. Improve retention through referral programs. In a competitive labor market, look beyond short-term remedies for staffing challenges. Logistics workers know they have options and will explore other opportunities they feel align better with their goals. Implementing an employee referral strategy will help you secure workers for the long term.

Companies that help employees add new skills have an easier time retaining workers. They also set the foundation for an effective referral program that turns workers into ambassadors for a company's job openings.

Creating an environment where experienced talent can amplify your hiring needs allows you to tap into a receptive audience—their friends and family. They may not have the referrer's experience, but they'll start their job with a positive outlook on your company.

Implementing a year-round staffing approach that focuses on better compensation, offers employees avenues to learn new skills, and includes employee referral programs will help companies meet demand and remain competitive.



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When consumers were sent home to work, big and bulky e-commerce orders took off, along with delivery expectations. The right combination of technology and strategy can help retailers meet them.

By Helen Mann



aying that e-commerce shipping has had an eventful two years would be an understatement.

The pandemic accelerated the shift toward online retail by five years, reports the 2020 IBM U.S. Retail Index. E-sales hit \$211.5 billion in the second quarter of 2020 alone, a 44.5% increase from the year prior, according to the U.S. Census Bureau.

There were notable fluctuations within that trend as well. Prior to 2020, e-commerce had mostly been the purview of small items, such as books or apparel. Once consumers started working from home, however, sales in those verticals gave way to larger, more complex purchases—furniture, home offices, exercise equipment, and appliances.

A 2021 uShip survey found that 64% of Americans purchased a "big and bulky" item online in 2020 (*see chart*); 73% of respondents bought these products at a higher frequency than they had before COVID, and 45% said they would continue to shop for large products online after the pandemic ended.

As online sales of large or expensive items grew, so did the challenges of steering these products through the final mile. Unlike smaller items, the "big and bulky" delivery experience played a key role in a consumer's decision to continue to shop with a merchant, according to uShip. More than 50% of respondents placed a premium on



Many 3PL providers, such as SEKO Logistics, offer white-glove deliveries of large and bulky items. Experienced drivers handle every step—including unloading, carrying goods to the desired room, assembling products, and cleaning up.

visibility, communication, and carrier professionalism in their decision to shop with a particular merchant.

The stakes are high for large and bulky deliveries so they need to be handled with white gloves.

SPECIAL DELIVERY

One hallmark of the pandemic was reduced foot traffic to brick-and-mortar outlets. E-commerce filled the sales vacuum, but it came at the price of brand anonymity. Delivery upgrades can keep consumers in touch with a brand, even when they are wary of setting foot in a physical store.

"White glove is an opportunity to offer amazing service beyond the warehouse," says Brian Bourke, chief growth officer at Chicago-based third-party logistics provider SEKO Logistics. "It's an extension of the in-store experience, something that consumers don't always get with e-commerce."

There's a lot riding on that encounter. In its *Last Mile Mandate Consumer Survey*, delivery management platform FarEye found that 85% of consumers won't patronize a retailer again after a bad delivery experience.

There are a few ways to manage brand representation: proactively communicate arrival times, maintain a pleasant demeanor, and answer all of a consumer's questions. These approaches contribute to a positive delivery experience. And if a product arrives damaged, the carrier could offer a repair and maintenance service.

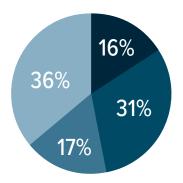
"Fixing a scratch or a dent can go a long way toward making the customer happy and preventing the loss of a sale," Bourke says.

HOW'D WE DO?

On a macro level, companies can measure delivery performance over time and find out where improvements need to be made. For example, GoShare, a last-mile platform that connects drivers with loads, lets consumers rate their experience on a 1-5 scale and provide written feedback.

"Our drivers consistently average scores around 4.9 out of 5," says Shaun Savage, GoShare CEO and co-founder. "Retailers appreciate access to this data because it ultimately helps them improve their efficiency over time."





Compared to prior years, how often, if at all, did you purchase large and bulky items (e.g. furniture, mattresses, exercise equipment) online during the COVID-19 outbreak?

- More often than before
- The same as before
- Less often than before
- Less often than before
- I never buy large or bulky items online

Source: uShip survey

Depending on the item being delivered, different levels of service might be required once a shipment reaches the front door. Baseline white-glove assistance typically involves entering the consumer's home, placing items in the room of choice, unpacking, and hauling away debris.

More recently, white glove has expanded to include product assembly, installation, or even providing a brief tutorial that explains how to use a new purchase—known as the "final inch" of delivery. This could involve, for example, wall-mounting a TV or installing home exercise equipment.

For certain retailers, these offerings are baked into the delivery process. But white-glove service can also be an upsell opportunity.

"It's easy to think that you won't need white-glove service if you order a bed online," says Shailu Satish, co-founder and chief operating officer of DispatchTrack, a last-mile optimization platform based in San Jose, California. "That is, until the bed arrives in one box outside your house, it's too heavy to move inside, and your bedroom is on the second floor."

WHITE GLOVE ON THE SPOT

In situations like those, it behooves companies to have an option to add white-glove service on the spot, Satish explains. DispatchTrack's customer communication software includes a field that lets drivers upgrade a delivery on-site. From there, DispatchTrack automatically updates the provider's ETA and charges the customer.

"This is a win for everybody," says Satish. "Customers receive the service they need, and it's additional revenue for the retailer and pay for the driver."

The trick is to offer optionality at different stages of a sale. For example, a high-end furniture manufacturer selling a \$15,000 dining room set might automatically include a delivery upgrade, which would be in line with the consumer's expectations.

On the other hand, a home improvement retailer who offers products

at a wide range of prices could offer a white-glove delivery option alongside free delivery at checkout, and let the consumer decide which one they want.

Just five years ago, communication in the last mile would typically have involved a phone call between the consumer and the delivery driver. Today, shoppers expect automated updates, push notifications, and text messages.

"The best way to communicate with a consumer used to involve picking up the phone," says Lance Dearborn, vice president of white-glove courier Need It Now Delivers, in Flushing, New York. "Now, if they get a call from a phone number they don't recognize, they're more likely to ignore it. Consumers don't want to talk to us."

Instead, Dearborn explains, shoppers have grown accustomed to the "Amazon mold", where they receive autogenerated updates that offer visibility into every shipping milestone. It's something that consumers at all levels are coming to

expect, but especially if they've ordered a complex or expensive item.

Take shipment scheduling. Whiteglove service used to mean that carriers would contact the consumer one or two days ahead of delivery, and plan to arrive any time between 8 a.m. and 5 p.m.

"The customer had to take a full day off from work to wait for a delivery, and sometimes the driver wouldn't show up," notes Carson Krieg, head of last mile industry solutions and strategy at project44, a visibility platform headquartered in Chicago.

Now, consumers who purchase whiteglove service gravitate toward self-service appointment scheduling with a narrow think: two hour—delivery window.

By keeping consumers up to date on shipment status, tracking technology reduces confusion and speeds delivery time. "The technology eliminates the need for the buyer to answer a call from a carrier they aren't familiar with," says Krieg.

MEETING IN THE MIDDLE

The final mile may be the most visible part of white-glove delivery, but retailers and manufacturers can take steps prior to it to ensure a successful end result. A primary consideration: avoiding damage in the middle mile.

One way to cut down on accidents is to minimize how often shipments are handled. For that reason, avoid sending palletized freight through a hub-and-spoke network or using an LTL carrier, recommends Carson Krieg, head of last-mile industry solutions and strategy at project44. There's too much propensity for damage when items have to be moved or reorganized.

"Forklifts could drive through the side of a couch," he says. "Situations like that create a lot of damage in a hand off from carrier A to carrier B."

Instead, shippers with enough density may benefit from booking dedicated truckload capacity and floor loading their freight. Once products arrive at the destination market, retailers could hand them off to a final-mile-only provider, or even choose to handle the last mile in-house. "It's an opportunity to resolve issues in the last mile," Krieg says. "Retailers are going upstream, and controlling their own destiny there."



Many retailers turn to third-party providers to ensure products are delivered quickly, safely, and on time. Need it Now Delivers, for example, provides delivery service as well as warehousing for final-mile deliveries for any size retailer in the United States or overseas.

There is one exception to the no-talking rule. In some circumstances, consumers need to provide specific instructions to the delivery driver, so they expect a mechanism to facilitate easy communication.

"The consumer may need to tell the driver about a last-minute change, or ask them to pull around to the back of a house," says Bourke. "Being able to call from a masked number, similar to a rideshare app, has become table stakes."

"EXTREMELY COMPLEX"

Tight delivery windows are well received by consumers, but a web of challenges are involved in trying to meet them, says Daniel Vanden Brink, global vice president of customer success at Locus, a last-mile logistics platform in Wilmington, Delaware.

Accommodating the estimated time of arrival means coordinating driver schedules with the consumer's selected delivery window, accounting for needed services, integrating with the order management system to ensure available logistics capacity, and providing visibility and a means to communicate with drivers. It also means scaling up to meet consumer demand.

"All of those things are extremely complex," notes Vanden Brink.

Having the right set of tools can help smooth out the complexities of white-glove delivery. For example, FarEye's platform matches workers with the needed skill set to a particular job. "A different set of personnel will deliver a dishwasher versus assembling a TV stand," says Jorge Lopera, vice president of global strategy at FarEye. "Without the right technology, you have to find workers who know how to do everything."

Companies can also use artificial intelligence-backed, cloud-based technology to optimize schedules. For instance, the Locus platform calculates maximally efficient routes, in part by predicting how long it will take to assemble or install the items being delivered.

The tailored consumer experience is more than a passing fad, asserts McKinsey & Co in its report, *The Future of Customer Experience: Personalized*, White Glove Service For All. If anything confirms that, it's Amazon's 2021 rollout of a white-glove test service for furniture deliveries.

The good news, according to McKinsey, is that needs-based service offerings can deepen consumer trust and loyalty and support retention, even to the point of increasing revenue.

To realize these gains, companies must anticipate and respond to consumers' needs. That will require them to foster true commitment to the customer experience, both in back-end and customer-facing roles.

Get it right, and your organization moves to the front of the pack.

WHITE GLOVE IN REVERSE

Most consumers are accustomed to returning small or low-value items that they bought online. When they need to return a large and bulky item, however, it's a different story.

"You can't just put a label on a lawn tractor and take it to UPS or FedEx," says Greg Boring, vice president of integrated sales at Kenco. "There are no built-out reverse logistics networks for those returns."

It's tricky, he explains, but shippers can enable a white-glove return process in a few ways.

To ensure a smooth returns process, retailers should first assess the value of the item in question, and decide what acceptable terms and conditions would look like. A consumer might be responsible for returning a \$500 grill, for example, while a delivery company might haul away a \$15,000 couch for free.

Shippers also shouldn't assume that the company they've enlisted to deliver a product will be prepared to pick it up. Returns, especially for big and bulky items, can sit in a distribution facility for weeks or months, waiting to be inspected. Not all logistics providers are equipped to handle that.

Finally, companies need to decide what to do with returned items. Boring cites examples of a high-end furniture manufacturer that sold returned products online at a discount, and an electronics retailer who preempted returns by providing a repair service.

The end result of streamlined returns for large items? Happy customers.









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THE BUILDING BLOCKS OF OMNICHAMEL FILLS IN THE STATE OF T

How leading brands snap together their omnichannel mix to meet market needs and expectations while serving business goals.

By Sandra Beckwith



-commerce growth, accelerated by the pandemic combined with organic changes in customer needs and expectations, has forced both business-to-consumer and business-to-business (B2B) brands to adjust their omnichannel mix.

Consumers are driving much of the change, with 82% of those in the United States noting that "convenience" is important when shopping for non-essential items, according to research by e-commerce fulfillment provider PFS. While convenience can take many forms, it often involves options such as buy online pickup in store or faster delivery than in the past.

Consumer expectations for selection and delivery speed carry over to the B2B side, as well. Business customers accustomed to getting same-day or next-day delivery in their personal lives, for example, have come to expect that from their business suppliers as well.

How are retailers adjusting their omnichannel mix to meet business goals and customer expectations? Here's how three brands built significant, lasting, and successful changes.

EXTREME CUSTOMER SERVICE: SAME-DAY DELIVERY

Gordon Food Service (GFS) has been "passionately committed" to its customers since 1897, so when it noticed an increasingly common problem with some of them, it looked for a solution.

As the largest family-operated broadline food distribution company in North America, GFS delivers to restaurants, healthcare institutions, and schools in the United States and Canada. The Michigan-based company also sells to restaurants and the general public

through more than 175 retail outlets in 12 midwest and northeast states.

While restaurant customers receive weekly product deliveries, they often run out of key ingredients they need to replace quickly, usually by sending someone to a supermarket or a GFS store. GFS saw this pain point as an opportunity to provide an even higher level of customer service by offering supplemental same-day and next-day van deliveries from its stores.

After piloting the deliver-from-store service on a small scale using existing,

but inadequate, systems for ordertaking and manually routing deliveries, the company knew it could deliver literally—on its same-day promise. Scaling the service presented challenges, but GFS now leverages its last-mile strategy as a competitive advantage in 104 of its stores.

The company's enhanced online order management system (OMS) has visibility into both store and warehouse inventory so it knows if an "I need it now" order is in stock at the closest store, or has to be delivered to the store from the warehouse the next morning.

Picking speed is important with in-stock orders because employees are competing with shoppers for products, so when there's an order to fill, the OMS announces the news through the store's public address system.

"If there's one loaf of bread left on the shelf, we need it for the online order or else we are confirming quantities we don't have," says Al Contreras, GFS customer innovation manager.

LAST ORDERED. FIRST LOADED

The OMS also eliminates the same-day delivery option every day at a configurable time, and removes that option sooner if the morning's orders max out van capacity. In addition to routing deliveries for the refrigerated vans according to customer locations, the FarEye delivery management platform integrated into the system determines van loading flow so the last order is loaded first.

To keep the focus on customer service, a store can instruct FarEye's routing software to split one van's load into two so there's no risk of a late delivery. "It takes more fuel, but I'd rather send two drivers out with half-full vans and get them to the customer on time than overload one and risk running late with any of them," Contreras notes.

That strategy has paid off. GFS sales increased 8.6% in 2021; the company credits the last-mile omnichannel strategy for 36% of that growth.

"It was the right thing to do for our customers and our business," says Contreras.



Food distribution company Gordon Food Service is able to deliver key ingredients to customers the same day they are ordered by fulfilling from its stores.

LARGE BRAND SELLS DIRECT TO SMALLEST RETAILERS

In India, fast-moving consumer goods (FMCG) normally move through more than one wholesale layer before they reach the shelves of the small mom-and-pop shops that sell about 80% of the category's products in that country.

Looking to simplify its supply chain, get better market data, and move closer to its end consumers, Hindustan Unilever (HUL), the country's largest FMCG manufacturer, created a business-to-business ordering platform for the region's smallest retailers in 2020.

More than 800,000 small retailers now use the Shikhar app, which allows them to bypass middlemen and place orders directly with the manufacturer for next-day delivery. It also provides access to inventory financing through a State Bank of India partnership. And, it generates data that both the manufacturer and retailers can use to refine business operations.

Allowing the mom-and-pop shops that dominate the Indian landscape to order directly, however, requires significant distribution center changes.

"Like all FMCG companies, small businesses usually supply full boxes to the big grocers and distributors," says Pieter Feenstra, CEO of Addverb EMEA, a global robotics company based out of India. "But the small mom-and-pop shops will not order a full box of shampoo—they



To better serve small retailers in India, HUL launched Samadhan, a tech-enabled direct-to-trade order fulfillment center that is fully integrated with its digital order capturing platform.

will more likely order three bottles. So some of the HUL distribution centers that supplied full boxes all of a sudden had to begin picking eaches."

ENTER SAMADHAN

As part of that shift, HUL piloted Samadhan, an innovative, direct-to-trade order fulfillment center in Chennai. Built adjacent to an existing facility that supplies large quantities of boxes to larger stores that include big box-type retailers, it is fully integrated with the manufacturer's digital order capturing platform.

By using Addverb robotics and software, the company can provide fast, reliable service to retail outlets through warehouse automation and optimized last-mile logistics.

Automation pulls full cases from the first warehouse to the second, where employees decant the merchandise into plastic crates from which they later pick individual orders. The system uses

a sophisticated conveyor traffic system for goods-to-person picking, storing completed orders, and moving the sealed crated orders in optimized route sequence to delivery trucks. Trucks pick up empty crates when delivering orders, returning them to Samadhan for reuse.

Because the pilot center uses doubledeep storage and retrieval and has optimized the picking process, it can operate on a smaller footprint than less automated facilities. Automation makes it possible to reduce the number of employees during a tight labor market.

With the recent addition of directto-consumer sales, which also require fast order fulfillment, HUL is exploring implementing the pilot model in other warehouse locations as well.

BEAUTY BRAND IMPLEMENTS MULTI-NODE FULFILLMENT

While many consumer brands struggled to maintain their customer base when stores closed during the pandemic and shoppers were forced to buy online, "nonessentials" selling on Amazon were especially hard hit.

"Amazon prioritized essentials like toilet paper and hand sanitizer in its distribution centers, resulting in delays and reductions in other product categories such as luxury or prestige beauty," says Kamran Iqbal, commerce strategist at e-commerce fulfillment provider PFS.

The solution for one of PFS's highend beauty brands was to leverage its presence on other existing online retail channels, including its own branded website. The challenge was to make sure its e-commerce operation could protect the brand's reputation for quality by handling the volume increase quickly and efficiently.



As brands and retailers rethink the function and structure of traditional stores, they turn to technology. RetailConnect, for example, is a cloud-based omnichannel solution that automates e-commerce fulfillment operations within brick-and-mortar locations, without interrupting ongoing store operations.

Working with PFS, the company implemented a multi-node fulfillment strategy that included adding two distribution centers and turning 10 branded brick-and-mortar stores into micro-fulfillment centers.

The fulfill-from-store plan started with non-mall locations that employees could access while stores were still closed to the public.

"Critical to our ability to support that strategy was that this company already used our order orchestration and order-to-cash platform," says Patrick Lowe, area vice president of business management for PFS. "Because we had the OMS connected to their IT infrastructure, front-end e-commerce platforms, and back-end ERP, we could open additional solutions quickly and agilely."

FROM TECHNOLOGY TO PROCESS

With the technology in place to access store inventory and route orders to stores, process came next. "We shipped them the same packaging supplies that we used in our warehouse management program," Lowe says.

The shift in omnichannel to incorporate store fulfillment—which remains in place post-pandemic—allowed the brand to avoid disappointing customers while also offering a new way to engage with them through curbside pickup and later, in-store pickup, as well.

There's an ancillary benefit to this pandemic-forced shift: It helps reduce the brand's carbon footprint, something that's increasingly important to customers.

Overnight and two-day shipping for premium and other brands often means the order travels first by air, then by ground. "One way to achieve sustainability is to reduce dependency on air shipments and the time it takes to move a package from point A to point B in any kind of vehicle," says Iqbal. "Leveraging this multi-node, dynamic fulfillment network is how some brands are trying to achieve their sustainability objectives."

It's a bonus benefit of the omnichannel mix adjustment for both the beauty brand and its customers.

RESHAPING OMNICHANNEL RETAIL

The rise of pickup services has given brick-and-mortar retailers a much stronger value proposition, bringing together the strengths of online and offline shopping to create more choice and flexibility for customers. Merely offering these services to online shoppers, however, is no longer enough. Retailers should look to boost the efficiency and quality of these services through enhanced training, technology and store designs.

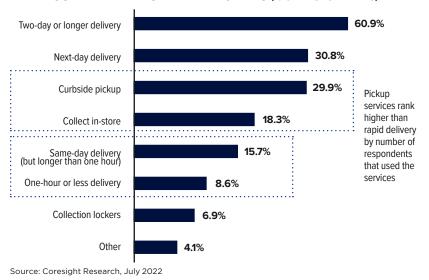
IMPLICATIONS FOR RETAILERS

- To better support pickup service, retailers need to optimize store layouts to offer better access for shoppers. Put pickup counters near the front door for easy and quick access and allocate dedicated fulfillment areas or parking spots for pickup near the store entrance.
- Retailers should look to promote their collection offerings over delivery in less dense, suburban and rural
 areas. As these services transfer the cost and responsibility of the last mile to the customers, it can lead
 to less margin squeeze than a delivery service, which is more suitable for urban locations.
- Retailers can highlight pickup as a more affordable alternative to home delivery, showcasing the savings
 associated with lower fees and no additional surcharges or tips, to retain online customers in the current
 inflationary environment.
- The jury is still out on pickup lockers as an investment for many U.S. retailers. However, locker service has the
 potential to be adopted on a greater scale due to the convenience and labor-cost benefits the format has over
 other last-mile options. As with logistics and fulfillment automation, retailers must weigh those advantages
 against the investments required.

IMPLICATIONS FOR TECHNOLOGY VENDORS

- Because consumers must engage with retail locations to access buy online pickup in store (BOPIS) and
 curbside pickup, these services provide unique opportunities to generate impulse consumption versus
 delivery. Technology vendors should offer a functionality that triggers push notifications to inform
 customers of in-store offers and deals and prompts them to add impulse items to their cart once they
 enter the geofence. To reduce complexity, retailers can feature a limited impulse assortment, allowing
 store associates to easily locate these additional items and pack them into customer bags as needed.
- Technology providers can add features that would help retailers identify customers who have experienced longer wait times and kick off proactive marketing campaigns to win them back.
- Coresight Think Tank, Coresight Research, July 2022

DELIVERY OR PICKUP METHODS ONLINE SHOPPERS HAVE USED IN THE PAST THREE MONTHS (% OF RESPONDENTS)



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Pharmaceutical and life sciences supply chains receive a healthy dose of innovation and automation solutions—boosting visibility, traceability, and productivity.

ntil recently, companies planning for resilience and business continuity tended to focus on relatively localized events, like a hurricane hitting the Gulf Coast of North America and disrupting traffic and power, or an Icelandic volcano erupting, forcing air traffic to reroute. Although the human and financial toll might extend for months, the events themselves typically conclude within hours or days.

No more. "The pandemic changed our thinking about how to manage resilience," says Steve Simco, head of logistics and distribution, North America, with Camelot Management Consultants. "It's the Great Depression of risk issues, and it's not going to leave peoples' minds for a while."

The pandemic's continued impact has been particularly pronounced in the pharmaceutical and life sciences logistics sector, where products are critical to life and health. Many products also are perishable, highly regulated, and require temperature-controlled and sanitized environments. "Life sciences supply chains require a unique level of accountability, visibility, and traceability," says Andrew Wang, director of healthcare and industrial with Locus Robotics.

In addition, skyrocketing freight costs have compelled pharmaceutical companies to better understand this expense, Simco says. That's a shift, given that freight costs historically have been a relatively small percentage of the price of pharmaceutical goods.

Together, these forces are helping to drive the U.S. pharmaceutical logistics market, which topped \$23 billion in 2021, and is forecast to reach a compound annual growth rate of 7.4% through 2030, according to Grandview Research. The increasing global production of COVID-19 vaccines and demand for over-the-counter medicines and supplements also are propelling the industry.

The expanding prevalence of biopharmaceutical products, which are made from living cells or organisms, is also shaping the pharmaceutical logistics market. Many offthese products require temperature controls. The global biopharmaceutical market, valued at \$28.7 billion in 2021, now accounts for 20% of the pharmaceutical industry, according to Straits Research.

SUPPLY CHAIN DISRUPTIONS INJECT INNOVATION

The factors that contributed to the recent disruptions are influencing which solutions companies are turning to in their attempts to improve their supply chains. One cause of the supply chain challenges has been an "inability to forecast extreme demand fluctuations," says Tim Vadney, a director with West Monroe, a digital services firm. The lack of accurate demand signals also prompts some companies to simply "buy heavy," he says. These larger purchases boost congestion at ports and distribution centers.

Although the pharmaceutical industry was an early adopter of enterprise resource planning (ERP) systems, these solutions generally don't include suppliers in the flow of transactions, which would help ensure all partners across a supply chain have a reasonably accurate handle on supply and demand.

To remedy this, some software providers are extending ERP functionality to companies' supply chain partners over the web.

Pharma Supply Chains Get Technology Booster



Supply chain monitoring pioneer Controlant has delivered more than 5.7 billion COVID-19 vaccine doses to 60,000+ destinations in 185 countries with a 99.99% success rate. Its automated visibility and tracking solutions use data from Internet-of-Things-enabled loggers.

"You have planning that feeds to purchasing, that feeds to demand, and then to an API (active pharmaceutical ingredient) supplier," Vadney says.

This flow of information offers buyers better visibility and more data they can use to decide whether to accept or reject, for instance, changes in materials or work order completion dates. Similarly, pharmaceutical companies are investing more in planning technology, such as software that incorporates algorithms to more accurately forecast supply and demand.

GREATER FOCUS ON AGILITY, VISIBILITY, RESILIENCE, SAFETY

The recent upheavals have also heightened focus on improving an organization's supply chain agility and responsiveness. "Those conversations have moved front and center," says Pankit Bhalodia, managing director, healthcare and life sciences, with West Monroe.

More pharmaceutical supply chains have begun transitioning away from a reliance on spreadsheets. As they do, they're investing in the infrastructure and training needed to more effectively manage risks and compliance.

"This is a huge uplift from where

things have been," Bhalodia says.

Another area of focus is visibility. "It's not enough to know your supplier has safety stock," says Vishal Bhandari, partner in the health practice of global consulting firm Kearney. "Companies also need to know how the products will get to their operations."

Pharmaceutical companies are investing in more robust inventory management strategies and real-time tracking, as well as stronger risk management for their upstream supply base, including beyond their immediate suppliers.

Efficiency and safety also are driving investments. "We're starting to see larger investments by healthcare companies focused on improving supply chain and logistics efficiency and safety, and reducing human error," Wang says.

While many healthcare and pharmaceutical companies had been investing in automation on the pharma side—for instance, in pill dispensing solutions—they're now investing in their supply chains. These investments also are a tactic for managing through a tight labor market.

Not all changes are focused on technology. More companies are rethinking their manufacturing and supply chain networks. In part, that's due to governmental regulations that are encouraging greater onshore production of critical medicines. "Both the United States and the European Union are advancing regulations on this front," Bhandari says.

The goal is to reduce dependence on China. Concerns about cost, as well as a desire to develop domestic production capabilities, thus boosting supply chain resilience, also are behind this push.

STEADY SUPPLY CHAIN IMPROVEMENT

The raw material shortages, port congestion, reduced flights, border closures, and other disruptions to the pharmaceutical supply chain due to COVID are less severe and less widespread, says Adalheidur Palmadottir, vice president of business development with Controlant, a leader in solutions that provide real-time supply chain visibility.

"Furthermore, measures put in place to counteract COVID-driven disruptions are gaining traction," she adds. "These include the development and uptake of new, smarter technologies in the pharmaceutical supply chain, from sourcing and production to last-mile delivery."

In addition, technological advances enable more reliable and traceable logistics, with significantly less leeway for human error. "Technology is reducing human handling across the whole sector, making for a more predictable, dependable cold chain," Palmadottir says.

Many companies also are assessing and evaluating the lessons they learned during the pandemic to determine which are worth maintaining. "Companies that had to scramble for two years to keep the supply chain operating are now trying to figure out what to take forward," Vadney says.

As a result, the condition of the supply chain now, versus 12 months ago, is vastly different. "We expect to keep moving toward greater digitalization in the coming year," Palmadottir says.

"Achieving this will require action, including greater collaboration among suppliers, manufacturers, logistics service providers (LSPs), carriers, governments, and healthcare facilities."

Resilience is key, given ongoing challenges, including the need to adapt to the emerging post-COVID supply chain ecosystem, and to be in a constant state of readiness for continued disruptions, such as outbreaks of new COVID variants.

CONTROLANT: PROVIDING VALUABLE INFORMATION IN REAL TIME

Controlant has been a pioneer of real-time supply chain monitoring for 15 years. The company's automated visibility and tracking solutions use data from IoT-enabled loggers, which track a product's location and condition throughout its journey. "So far, we have successfully delivered over 5.7 billion

COVID-19 vaccine doses to over 60,000 destinations in 185 countries with a 99.99% success rate," Palmadottir says.

"Our logger technology is groundbreaking, but the value in Controlant's solution comes from turning real-time aggregated data into actionable insights," says Palmadottir. "This is what gives pharmaceutical supply chain managers the power to make strategic decisions that strengthen their supply chain. The logger is a means to an end, providing valuable information in real time."

Conventional loggers store information that can only be accessed post-shipment. Controlant's solutions alert stakeholders to any quality issue—as the problem occurs. This enables them to mitigate any negative impact and prevent costly waste.

"We coined the term 'cold chain as a service," Palmadottir says. "We help customers automate their business processes and optimize communication through technology to make their operations significantly more secure, reliable, and cost-effective."

Controlant's clients can review data retrospectively too, analyzing the information to optimize transportation modes, routes, or providers, or to compare the effectiveness of different packaging methods, among other things. The resulting insights help safeguard product integrity and reduce waste.

PRODUCTS DELIVERED SAFELY

Every year, up to 35% of the world's vaccines degrade due to temperature excursions. "Of the millions of vaccine deliveries that Controlant has monitored, this degradation is less than 1%," Palmadottir says. Knowing that close to 100% of products will safely reach their destination has implications a long way upstream, as companies that need to fill orders are no longer compelled to



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Rapidly deploy visibility



Receive high-precision, real-time data



Pharma Supply Chains Get Technology Booster

over-produce, consequently reducing waste and manufacturing costs.

Controlant's pay-per-use solutions can easily be scaled up or down, Palmadottir says. They can be integrated with a company's ERP or other software system to streamline communications and provide a single source of truth. The loggers also can be recalibrated and reused, cutting down on supply chain waste.

The increasing population is straining global logistics and the supply chain as a whole. "Greater and greater demand means sourcing more raw materials, constantly ramping up production, and moving and delivering more products to more destinations," Palmadottir says.

That's prompting an increasing premium on space and time.

"The days of loggers that need manual inspection are numbered," Palmadottir adds. "Controlant is working on a solution that goes even further toward addressing this challenge, as well as getting us one step closer to true end-to-end monitoring."

LOCUS ROBOTICS:POWERFUL AUTOMATION

Locus Robotics, based in Wilmington, Massachusetts, develops powerful autonomous mobile robots (AMRs). Known as LocusBots, they are designed for on-time healthcare fulfillment. Its experience in this sector is deep and expanding—it has tripled just in the past year—and clients include many top healthcare companies, Wang says.

"We're experienced, proven, and a leader in providing AMRs to the healthcare supply chain sector," he adds.

The Locus solution is customized for each client, which can include healthcare, medical device, and pharmaceutical companies, as well as hospitals and distributors.

By deploying robots in their distribution and warehouse operations, pharmaceutical and life sciences companies can alleviate labor challenges and ensure on-time shipping. The robots' accuracy and ability to



Locus Robotics provides powerful autonomous mobile robots (AMRs) for on-time healthcare fulfillment. Known as LocusBots, they can drive productivity gains of 200 or 300%.

capture and validate serial and lot numbers mean the right products get to the right patients at the right time.

Locus solutions also maintain product traceability and enable compliance with serialization requirements. In order to bring current and new associates up to speed quickly, training on the solution typically takes just minutes.

LocusBots improve healthcare fulfillment in several ways. By optimizing material movement, they can drive productivity gains of 200 or 300%, without increasing the number of workers or the size of workspace.

"We increase pick and put-away efficiencies," Wang adds.

Real-time data alerts supply chain professionals to changes in volumes, allowing the organization to efficiently scale the solution up or down to meet demand fluctuations. The robots themselves can easily be moved across multiple sites, and can shift between picking approaches, including batch and discrete order picking. They also can work with a variety of containers and totes.

The acquisition of Waypoint Robotics in September 2021 enhanced Locus's ability to move larger, heavier loads, as well as smaller ones, Wang says. Waypoint's Vector and Max robots

are powerful, industrial strength, and designed for the warehouse and materials handling industry.

Waypoint's solutions, now part of Locus Robotics, also are interoperable with Locus AMRs.

INCREASING PRODUCTIVITY

A number of healthcare companies have benefited from implementing Locus AMRs.

One healthcare distribution center, for example, implemented six robots within an 18,000-square-foot life sciences center, integrating it with the company's warehouse management system. The productivity increase was so pronounced that the center boosted its AMR population to 56 robots working across 99,000 square feet. Locus implemented this larger solution within 90 days.

With the AMRs, the center was able to process more than double the volume of orders it had been handling previously, with no change in headcount. Productivity rates now top 150 units per hour. On top of that, cycle time was cut in half. This ensures products move quickly to their destinations.

"We help customers meet their service level agreements," Wang says. "And we make sure healthcare professionals have the supplies they need."

Improving Healthcare Fulfillment with **Traceability and Inventory Accuracy**

Pharmaceutical and healthcare distributors can now pick, pack, and ship products accurately, efficiently, and in a timely manner with Locus Robotics' solutions.



Andrew Wand Director of Healthcare and Industrial Locus Robotics

How does Locus Robotics help the pharmaceutical and healthcare industry with traceability and serialization?

As pharmaceutical and healthcare customers are picking or even putting away different medicines and medical supplies, they're able to capture a lot or serial number with our warehouse management system integration.

With Locus, the picker can compare what they're picking or putting away with what's on the screen to make sure it's the right lot number or the right serial number for track and trace and serialization.

Thanks to this technology, our quality score increases their quality as it allows them to catch any discrepancies right away during the pick. At the same time, that lot and serial number are kept in their system.

How does Locus Robotics help the pharmaceutical and healthcare industry with inventory accuracy and business continuity?

The Locus solution helps the pharmaceutical and healthcare industry with inventory tracking because our software prompts the associate on exactly



what to pick and then asks them to confirm that they have picked the right lot and/or serial number from the right location, so that helps with tracking their inventory.

This same process works in the reverse for putaway, as the associate is prompted on the exact lot, serial number, and location to place the item. For business continuity, companies that use Locus increase their productivity and operate efficiently.

With the current labor challenges, all industries are having trouble finding and hiring new workers. When you bring on autonomous mobile robots (AMRs) to work alongside your current human workers, your company is able to continue operating normally even without bringing on new people.

Why do leading healthcare distributors choose Locus Robotics and how is Locus helping them with their challenges?

One leading healthcare distributor was struggling with labor challenges, and knew that accuracy and timing were vital, because people's lives literally depend on pharmaceuticals and medical supplies getting delivered to patients in a timely manner.

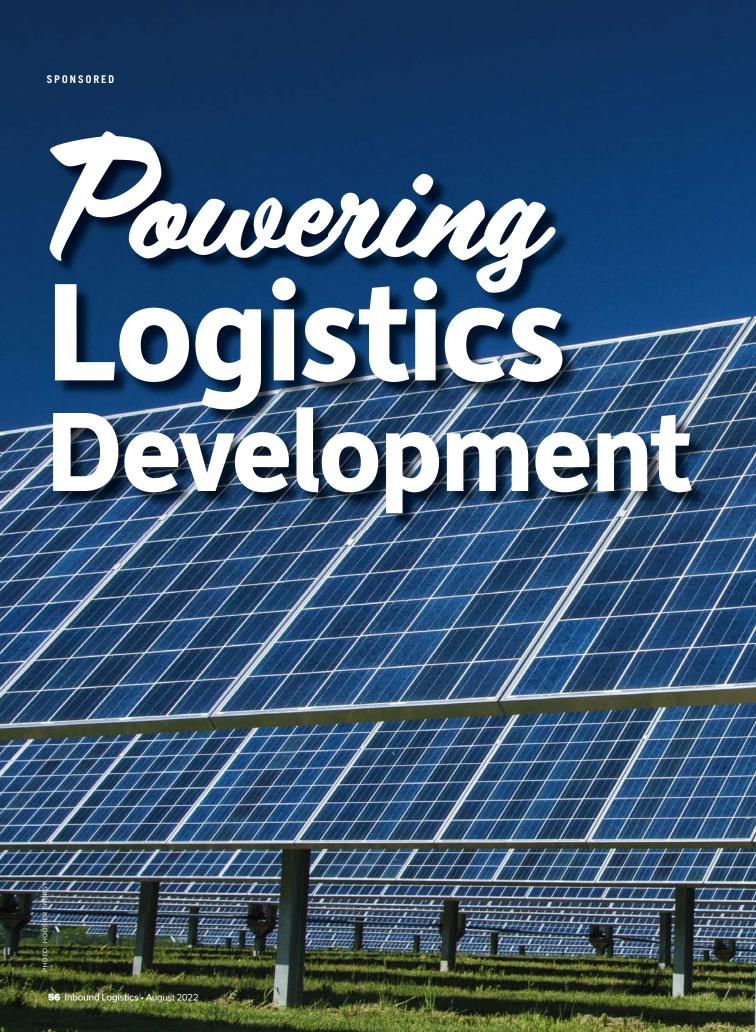
They chose Locus Robotics for their facility, and found the AMRs to be easy to plug into their operation. The distributor went overnight from having their associates push around heavy carts to instead having the robots transport material throughout the facility.

At this distributor, Locus deployed AMRs along with a suite of actionable reporting tools and dashboards. This installation included a systems integration with the WMS and network, a solution design of the facility and workflow, and the implementation of the robots including navigation and pick testing.

Thanks to Locus Robotics, the team tripled their pick productivity and significantly decreased their cycle times, resulting in faster fulfillment of client orders. The Locus Solution allows them to pick, pack, and ship products on time and improve their overall processes.

The facility has seen improvements in all areas of their business, including safety, quality, cost, and service. There has been a massive improvement in their operation across multiple metrics.

Learn more about how Locus Robotics improves healthcare fulfillment. www.locusrobotics.com







usinesses considering where to expand or move their operations evaluate myriad factors. Among the top considerations, says Jeremy Sowders, economic development manager with Hoosier Energy Economic Development, are access to a skilled workforce; proximity to a population center and customer base; easy access to infrastructure like interstate highways or ports, so the company can move goods efficiently; and a location that can meet the needs of the company. In some cases, tax and other incentives influence their decisions.

Incentives can play a role in closing deals, but typically aren't the first consideration. "The most important site selection question is finding the right place for a facility to operate," says Michelle Comerford, project director and industrial and supply chain practice leader with Biggins Lacy Shapiro & Company, specialists in site selection.

Once a company has narrowed its options and decided on a handful of places that should work, it assesses the initial and ongoing costs. That's generally where incentives come into play, Comerford says. For instance, a company may check into any offsets available to help cover the cost of needed infrastructure upgrades.

CHANGING DISTRIBUTION NETWORKS

Over the past two years, nearly threequarters of supply chain leaders adjusted the size and number of locations within their supply chain networks, a recent Gartner survey finds. "In a fragmented world, global firms have been making changes to their heavily cost-optimized, one-size-fits all networks, and now favor a mix of global, regional, or local elements," states Kamala Raman, vice president with Gartner's supply chain practice.

This "once-in-a-generation shift" of many companies' manufacturing footprint is a result of the shutdowns and disruptions the pandemic caused. To protect against future supply chain disruptions, "we see a shift to more regional production, all in line with a mindset of 'make local, for local," Comerford says.

Customer demands for speedier access to goods are also driving these changes. "Companies have to bring

more production and inventory closer to customers," says Gregg Wassmansdorf, senior managing director of global strategy and consulting with Newmark, a global real estate services firm. Wassmansdorf also chairs the board of directors for the Site Selectors Guild, a global organization of the world's foremost location strategy and site selection consultants.

Along with customers, companies want to be close to workers, Sowders says. Yet even as many companies look for access to population centers, they also need affordable properties. In trying to balance these often conflicting goals and hit "the sweet spot," some consider properties just outside a metro area. "While this was already happening, the pandemic accelerated the shift," he adds.

Higher transportation costs and the truck driver shortage also are impacting distribution network locations, Newmark research shows. "Firms looking to control costs and appeal to a broader-based potential labor pool may expand the number of warehouse/distribution points along the supply chain," according to the firm.

INDUSTRY TYPES IMPACT INCENTIVES

In general, economic incentives have been more prevalent in manufacturing and technology rather than distribution activities. These sectors are generally known for offering jobs that pay well and require highly skilled workers. "Incentives are a tool for economic developers to incent growth that's considered desirable for a local area or region," Wassmansdorf says.

Many tax and property incentives are calculated and awarded based on the investment level, the number of jobs a

business is expected to create, and the multiplier effect the investment and jobs likely will have on the community, Sowders says. Typically, the greater the number of higher-wage jobs created and the larger the capital investment, the greater the incentive.

The jobs that warehouses and distribution centers tend to create historically haven't been seen as highly skilled or offering the types of higherwage positions that more technical operations often do, Wassmansdorf says.

However, that's starting to change as more distribution operations implement technology. The global warehouse automation market is forecast to grow at a compound annual rate of 15%, hitting \$41 billion in 2027, LogisticsIQ reports.

SUSTAINABILITY GROWS IN IMPORTANCE

The expression "greening the supply chain" has been around a long time. Now, however, more companies are responding to the challenges posed by climate change, Wassmansdorf says.

Among other steps, they are connecting with their utilities to evaluate renewable energy sources and trying to cut physical waste from production processes. "Many companies are making more focused efforts to figure out how to de-carbonize the global footprint of manufacturing and supply chain operations," he says.

While sustainability might not lead the site selection process, "it's definitely on the list," Comerford says. When companies pick final locations, those that can provide more support to help them meet sustainability goals might gain an edge, she adds. That's particularly true if the company sells to consumers, or operates in the sustainability market in some way.

Similarly, more agencies that award incentives are seeking companies that focus on environmental, social, and governance (ESG) initiatives. "This can influence how discretionary incentives are awarded and how companies comply with incentive program performance requirements," Wassmansdorf says.



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Sowders says he sees a growing number of communities using incentives to attract electric vehicle manufacturers. These incentives might include agreements to build the infrastructure—including roads, sewers, and water systems to the sites—in addition to tax breaks.

TIGHT LABOR MARKET HAS MIXED IMPACT ON INCENTIVES

With many employees continuing to work remotely, numerous central business districts are struggling. The national office vacancy rate neared 18% in the second quarter of 2022, up from about 13% in 2019, according to Cushman Wakefield.

In one sense, this trend doesn't impact most supply chain jobs. As Wassmansdorf notes, "products still need to be made

STEPS TO TAKE When Considering Incentives

Companies should consider these actions when deciding if and how to leverage incentives, says Jeremy Sowders, economic development manager with Hoosier Energy Economic Development:

- Identify your most important location criteria. Is it an abundant workforce? Or do you need a large footprint for your operation? Your answers should inform your search.
- Once you have a good idea of the geographic locations that will work, contact the state economic development corporation or utility. Most can help identify sites and incentive opportunities.
- If you look at multiple states or even multiple countries, consider engaging one of the many consultants who understand incentives. "They can help cut through a lot of the uncertainty and murkiness so you can make an apples-to-apples comparison," says Sowders.

and transported, and that requires employees to be on site."

However, the tight job market is prompting more supply chain and logistics companies to implement automation and robotics. As they do, the workers they bring on board need to have higher literacy and numeracy skills and be trained to work effectively in a robotic environment, Wassmansdorf says. This change may also make these projects more attractive to those awarding incentives.

The currently tight labor market can also work against companies, however, as it prompts some economic development agencies to ask if they even need to award incentives.

"If the primary goal is to create jobs, and there aren't enough people to fill jobs, there's a fundamental question, about the need for incentives," Comerford says.

Still, many of the jobs now available offer high wages and require skilled employees—exactly the types of jobs many communities want to attract. The upshot? "We see many states and areas continue to be aggressive when it makes sense for them," Comerford says. "But, they can be selective in what they'll be aggressive for."

HOOSIER ENERGY: ASSISTING NEW AND EXPANDING BUSINESSES

Hoosier Energy's Economic Development team serves 59 counties across central and southern Indiana and southeastern Illinois, and prides itself on its ability to help companies that are new or expanding their operations to do business in the region. One of its target industries is logistics.

The team possesses expertise in site location, economic impact analyses, property tax studies, local and state incentives, and planning and zoning, among other skills. The group is part of Hoosier Energy, a nonprofit generation and transmission cooperative serving 18 local member cooperatives.

Indiana—the Hoosier state boasts numerous qualities attractive to transportation and logistics organizations. It's first in pass-through highways, fourth in total freight railroads, and fifth in total tons shipped outbound by truck. It's home to the second-largest FedEx hub around the globe and the sixth largest cargo airport in the country.

The Hoosier Energy region has 1.4 times as many residents working in transportation and logistics as the national average. More than 120,000 truck drivers live within a 100-mile radius of Hoosier Energy's headquarters in central Indiana.

The state boasts three international-level ports:

- The Port of Indiana–Burns Harbor connects the midwestern United States to the Atlantic Ocean through two inland waterways.
- The Jeffersonville Port offers access to the Gulf of Mexico through the Ohio and Mississippi rivers.
- The Port of Indiana-Mount Vernon is one of the largest inland ports in the country. It's 153 miles from the confluence of the Ohio and Mississippi Rivers and connects the Ohio River Valley with the Gulf of Mexico.

FOCUSING ON RENEWABLE ENERGY

Hoosier Energy's Economic Development Rider (EDR) is modeled like a property tax abatement but applies to electricity rates. It phases in over the organization's first six years, starting at 30%, and steadily dropping to 5%, for an overall savings of about 17.5%, Sowders says. To qualify, organizations need a minimum monthly demand and must meet job creation and/or capital investment criteria.

Hoosier Energy has long focused on sustainability and renewable energy. It operates 10 utility-scale solar sites, along with a range of other sources of renewable energy.

As a nonprofit cooperative, Hoosier Energy can work with speed and flexibility to assist new and expanding businesses.

"We're usually a little smaller and a little more nimble and more local than investor-owned utilities," Sowders says. "We know people by name."

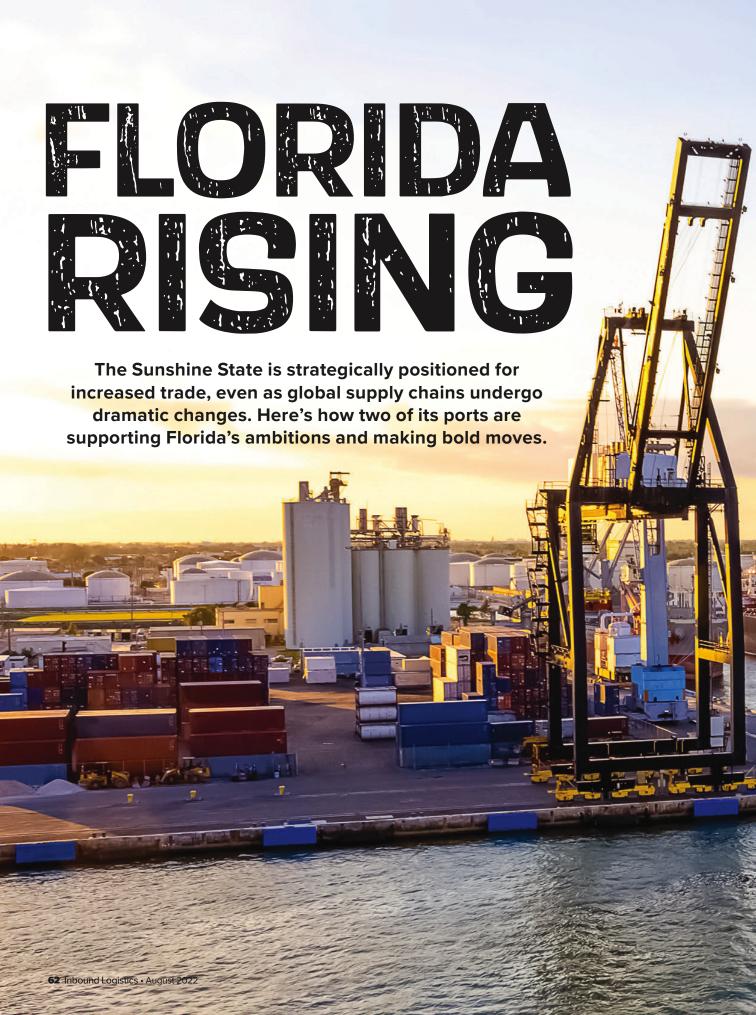


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hat is it about Florida that makes the state an ideal spot to plant or expand a business? In terms of both logistics and economic development, Florida is consistently on the sunny side of the street.

And the state forecast is not about to change.

The Florida Chamber Foundation's recently released *Florida Trade & Logistics* 2030 *Study* indicates the Sunshine State's leadership in trade, logistics, and export-oriented manufacturing is on course to increase even as global supply chains undergo dramatic changes.

"Florida has the perfect location given new trading routes, available capacity to move more goods, make more goods, and multiply these impacts throughout the economy," says Florida Chamber of Commerce President and CEO Mark Wilson.

Strategies to expand manufacturing, logistics, trade, and rural economic growth align with Gov. Ron DeSantis' goal to establish Florida as the 10th largest global economy by 2030, Wilson says. The state currently ranks number 15, up from 17 five years ago.

STRATEGIC LOCATION

"Florida has long benefited from a strategic location close to the intersection of north/south and east/west trade lanes, a large number of seaports and airports, world-class research universities and technical colleges, and a large consuming population of both residents and visitors," Wilson points out.

"Florida maintains a dominant share of U.S. trade with Latin American and Caribbean nations, has experienced significant growth in e-commerce and distribution, and is a recognized global leader in specific manufacturing industries like aerospace and food and beverage," he adds.

State officials and business leaders have even greater ambitions. "As global supply chains change, Florida plans to be a big winner," Wilson says. The state has made significant strategic investments in its workforce and infrastructure over the past decade, expanding capacity at its seaports and airports and proactively building its talent pipeline.

As a result, Wilson says, several Florida ports were able to accommodate port volume increases of 10% or more during 2021's global supply chain disruptions. Meanwhile, Miami International Airport has become one of the world's busiest freight airports, surpassing those in France, Japan, and Singapore.

The state's business profile is built on a foundation of solid statistics:

- 5 deep-water ports
- · 20 commercial airports
- 3 spaceports and 8 launch sites
- 21 foreign trade zones
- 37 consulates-general

- More than 1 million trade, logistics, and manufacturing jobs in 2020.
- More than 52,000 trade, logistics, and manufacturing businesses in 2020.
- Nearly \$57 billion in manufacturing gross domestic product (GDP) in 2020.
- Average annual manufacturing wages of \$66,738 in 2020.
- 912 million tons of freight valued at more than \$1.1 trillion moving on Florida's freight system in 2019.
- \$94 billion in destination imports and \$56 billion in origin exports in 2021.

Although the strength of Florida's economy is widely known, the basis of that strength is not well understood, Wilson notes

"Many people—both domestically and internationally—see Florida as a place to play," he says. "But they don't always immediately think of Florida as a place to work or innovate, despite our highly competitive business climate and strong record of job creation."

Business leaders plan to better connect perception to reality through robust marketing, branding, and promotion efforts both in the United States and abroad, from participation in roundtables with businesses in the Southeast United States to expanded trade missions in Latin America and the Caribbean.

RURAL AND INLAND FOCUS

One of the state's strategies is to expand logistics and manufacturing activities in rural and inland Florida. This is consistent with a goal previously set by the Florida Chamber Foundation to double rural counties' share of Florida GDP by 2030, Wilson says.

Inland Florida has unique opportunities not experienced by rural areas in other states because of Florida's high rate of population growth and because nearly all parts of Florida are located within two hours of a major urban area, Wilson notes.

Florida's rural and inland areas offer available land for warehouses, distribution centers, and manufacturing activities that often cannot be found in developed urban areas, as well as access to business and consumer markets in Florida and elsewhere.

In April 2022, the Ocala Metro area alone had 5 million square feet of industrial space under construction, with another 7 million square feet approved and 4 million in the pipeline, reflecting the high demand for inland Florida market space.

In addition, Wilson says, Florida's agricultural and forestry sectors can continue to grow to meet both local and global demand.

Continually ranked one of the best states for job creation, Florida is committed to keeping regulatory red tape and



business taxes low, Wilson says. He cites that mindset, along with a growing economy and zero personal state income tax, for making the state one of the best places anywhere to do business.

A GROWING POPULATION

With \$1.29 trillion GDP, Florida ranks number 4 in state GDP and number 1 for business startups. The state's top-quality education, budding infrastructure, fiscal stability, and great quality of life combine to explain why Florida—which already is home to 22 million people—gains approximately 1,000 new residents every day.

"We expect approximately 3.5 million new residents and 50 million more annual visitors by 2030, which represents a huge market potential for consumers and the workforce," Wilson says, adding that more than half of all U.S. growth through 2030 is anticipated to occur in the country's southern regions.

"Florida offers efficient connections to many of these domestic markets with available freight capacity on its roads, railroads, seaports, and airports," he says.

In addition, Florida is a gateway to emerging markets in the Americas and for international trade moving through the Panama Canal. The state's ports are some of the nation's closest to ports in Latin America, the Caribbean, and Africa, positioning Florida to be competitive in meeting the demand of the rapid economic growth expected for these regions.

Port Tampa Bay

Factoring prominently in Florida's strategic advantages as an ideal launch pad to reach export customers and receive imported goods is the Port of Tampa, otherwise known as Port Tampa Bay.

"The Tampa Bay region is seeing significant activity from companies that are choosing to set up their manufacturing or distribution activities here and benefit from the logistics cost savings of our location at the intersection of the major east-west and north-south trade lanes," explains Raul Alfonso, Port



Port Tampa Bay has emerged as Florida's new supply chain solution for container cargo. Port Tampa Bay has recently added capacity, with more expansion underway.

Tampa Bay's executive vice president and chief commercial officer.

Alfonso says companies seeking out the region for their operations include expanded global container services serving trade with Asia via the expanded Panama Canal, as well as Latin America and Mexico.

"Port Tampa Bay and the Central Florida region have abundant land available to support this expansion," he says. "Companies can also enjoy the benefits of operating under the Foreign Trade Zone managed by the port, as well as savings from the lack of state income tax."

The Tampa/Orlando I-4 Corridor is home to the largest concentration of distribution centers in Florida, which allows for multiple round-trip deliveries per day from Port Tampa Bay, compared to the traditional routes via congested out-of-state ports. Alfonso says attractive northbound backhaul trucking rates extend the port's reach to customers beyond Florida throughout the Southeast. Expansion now underway includes adding more storage and berth capacity, additional cranes, a new gate complex, and transloading facilities.

"Port Tampa Bay stands ready to welcome new business and serve as a supply chain alternative and solution," Alfonso says, adding that Port Tampa Bay's container volume has increased by nearly 30% over the past year. "Our port has easily accommodated this growth by staying ahead of the curve thanks to our terminal build-out program and working closely with our terminal operator partner Ports America," he says.

RAPIDLY EXPANDING CAPACITY

To stay ahead of the curve and avoid congestion and delays, Port Tampa Bay has been aggressively expanding capacity in partnership with Ports America, recently adding more paved storage and beginning construction of the new gate complex. Alfonso says additional container gantry cranes are expected later in 2022, both of which will be operational by early 2023.

Port Tampa Bay's breakbulk volume is up 131% for the first six months of the fiscal year. This includes a 110% increase in steel, and a 180% increase in lumber.

Port Logistics Refrigerated Services (PLRS) provides terminal and stevedoring for refrigerated cargo in a new state-of-the-art 135,000-square-foot cold storage warehouse, 148 reefer plugs, and fumigation services, as well as an adjacent berth served by two dedicated mobile harbor cranes. Since Port Tampa



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DISTRIBUTION -

HUB

- No congestion
- Tampa/Orlando I-4 Corridor: 400 million SF of distribution center space
- E-commerce, consumer goods, perishables and building materials
- One of the hottest industrial real estate markets in the U.S.
- Expanded terminal capacity with plenty of room for growth
- Multiple round-trip truck deliveries per day from Port to distribution centers
- New and expanded container services with Central America, Mexico and Asia





Bay is the closest port to Florida's hub for the grocery and food and beverage sector, the new PLRS cold storage facility will bring overall annual terminal capacity to 1 million TEUs.

"Our port is incredibly grateful for the support of Gov. Ron DeSantis and the Florida Department of Transportation, which helped Florida's seaports secure \$250 million in stimulus relief to offset the impact of the COVID-19 pandemic," Alfonso says, adding that Port Tampa Bay received \$20 million of those funds.

Port Everglades

Also significant among the economic development and logistics advantages of Florida is Port Everglades.

Business diversity and a strong commitment to customer service distinguish Port Everglades from most U.S. seaports. With its proximity to the popular Caribbean, Port Everglades is the third-busiest cruise homeport in the world. It is a leading container port in Florida and among the most active cargo ports nationally.

Port Everglades is also South Florida's main seaport for receiving energy products, including gasoline and jet fuel. Port customers benefit from direct highway access, an international

airport within two miles, state-of-the-art Foreign Trade Zone warehousing, and a 43-acre international and domestic intermodal container transfer facility that makes it possible for cargo shipped to Port Everglades to reach Atlanta and Charlotte within two days and 70% of the U.S. population in four days.

"It can be a bit of a balancing act, but Port Everglades operates like a well-oiled machine due to our dedicated workforce and a commitment to making our port a diversified global leader for cruise, cargo, and energy," says Jonathan Daniels, Port Everglades chief executive and port director. "Our mission is to be number-one in everything we do, and we recognize that true partnerships with our customers will get us there."

An epicenter for international trade, the port is positioned in one of the world's largest consumer regions, including a combined 110 million residents and seasonal visitors within an 80-mile radius. In fact, Port Everglades is the U.S. gateway for trade with Latin America, moving 13% of all U.S./Latin American trade.

The port's diversified cargo mix includes containers, refrigerated cargo (4th for imports in the United States), new and used automobiles and trucks,

dry bulk, breakbulk, project, roll on/roll off (RO/RO), and liquid bulk.

The Port Everglades International Logistics Center (ILC), developed in 2020 through a public-private partnership with Center Point Port Everglades LLC, has efficient, contemporary warehousing within two buildings on 16.66 acres of port property.

The ILC contains warehouse, refrigerated warehouse and office space, and cross-docking facilities to support services available to shippers using Port Everglades. The entire logistics center is designated as a Foreign Trade Zone.

INTERCONNECTED AND IN DEMAND

Typically, Port Everglades hosts nearly 4 million passengers annually sailing Caribbean, South American, and Transatlantic itineraries offered by a variety of cruise lines and one daily ferry service. Guests enjoy the port's proximity to three international airports including the rapidly growing Fort Lauderdale-Hollywood International Airport (FLL) less than two miles away.

Always striving to modernize its facilities to maximize productivity, Port Everglades follows an aggressive, comprehensive Master/Vision Plan that is updated every 2-4 years to reanalyze market trends, changes in the cruise, cargo shipping, and energy industries, local planning initiatives, and evolving technology. This in-depth analysis provides a projective and substantiated market-driven and environmentally sound phased roadmap for guiding cost-feasible capital investments.

A Broward County department, Port Everglades does not rely on local tax dollars for operations. The total value of economic activity related to Port Everglades exceeds \$30 billion. More than 206,000 Florida jobs are impacted by the port, including 7,000 people who work for companies providing direct services.

With such strategic advantages and focus on continual growth, Florida no doubt will continue its rise up the ladder of the world's strongest economies through 2030 and beyond.



Broward County's Port Everglades is a leading container port in Florida and among the most active cargo ports nationally. Port Everglades is also South Florida's main seaport for receiving energy products, including gasoline and jet fuel.



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Ease Logistics is a non-asset-based global transportation provider. Through our growing network of over 7,000 carriers, we utilize a variety of transportation modes including full truckload, less-than-truckload, over-dimensional, air charter, and intermodal (rail). Established on a dynamic business model focusing on the shipper and carrier, Ease's expanding customer base includes anything from small business to Fortune 500 companies. Providing the highest quality of customer service 24/7/365 has resulted in one of the fastest growing companies in the United States.





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Holman Logistics offers both multi-client and dedicated warehousing and distribution services across the United States. The 3PL is an expert plant support service provider to CPG and durable goods manufacturers, working collaboratively with customers to help facilitate production inside manufacturer-owned plants, mills, and facilities at all levels of the manufacturing process. Holman Logistics also offers a broad array of transportation services including truckload, LTL, expedited same-day delivery, sorting, and shuttle services.

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Performance Team (PT) is an industry-leading third-party logistics company with nearly 30 years of experience in warehousing, distribution, consolidation and transportation. PT has 12 domestic hubs (and nearly 7 million square feet of space) strategically located near major ports, interstate highways, and intermodal rail lines, allowing us to provide the retail and manufacturing industries with flexible B2B and B2C solutions for the movement, handling, and distribution of goods. PT also offers a full suite of retail, wholesale, e-commerce, and omnichannel distribution and transportation services.

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The leadership at RedStone Logistics has extensive experience managing large and complex supply chains around the world. We've designed RedStone to bring our expertise and experience to you as an extension of your logistics department. Whether your supply chain is simple or complex, we have the talent to make your operation run more effectively, and at a lower cost. Consider RedStone Logistics as an extension of your logistics department. Put the power of experience to work for you—the power of RedStone Logistics.





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SYFAN LOGISTICS • syfanlogistics.com

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





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3PLs - E-Commerce

3PLs



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E-COMMERCE



ECHO GLOBAL LOGISTICS • www.echo.com

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

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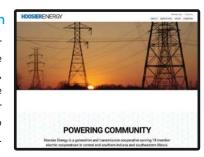
SYMBIA LOGISTICS · www.symbia.com

As a privately held family business with over 150 years of combined experience, the Symbia Logistics team has provided facility-based supply chain support to a variety of industries including sporting goods, apparel, dry grocery, health and beauty, aerospace, chemical, industrial goods, kitting, and direct-to-consumer fulfillment services. The Symbia executive team has been developing customized solutions and processes for logistics clients since 1989. We consistently exceed customer expectations and establish long-term partnerships.

ECONOMIC DEVELOPMENT

HOOSIER ENERGY • www.hoosierenergy.com

Hoosier Energy is a generation and transmission cooperative providing electric power to 17 member electric distribution cooperatives in central and southern Indiana and one member cooperative in Illinois. Based in Bloomington, Ind., Hoosier Energy operates coal, natural gas, and renewable energy power plants and delivers power through a 1,450-mile transmission network. Hoosier Energy is a Touchstone Energy Cooperative, one member of a nationwide alliance of electric co-ops providing high standards of service according to four core values: integrity, accountability, innovation, and commitment to community.



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Ocean - Ports

OCEAN



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PALLETS

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CHEP issues, collects, conditions, and reissues more than 300 million pallets and containers from a global network of service centers, helping manufacturers and growers transport their products to distributors and retailers. Combining superior technology, decades of experience, and an unmatched asset base, CHEP handles pallet and container supply chain logistics for customers in the consumer goods, produce, meat, home improvement, beverage, raw materials, petro-chemical, and automotive industries.





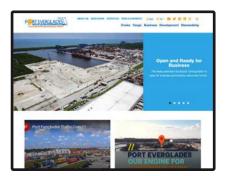
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PORTS

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Nobody moves cargo in and out faster than Port Everglades. The port is part of a thriving global transportation network that counts among its attributes a favorable location less than one mile from the Atlantic Shipping Lane, direct access to multimodal inland links through Florida's interstate and highway systems, and an FEC rail hub within two miles. Across the street is Fort Lauderdale Airport, one of the fastest-growing airports in the nation. Visit the website for more details.



IN THIS SECTION:

Ports - Retail Logistics





PORT OF NEW YORK & NEW JERSEY • www.panynj.gov

The Port of New York and New Jersey is the largest port on the East Coast and gateway to one of the most concentrated and affluent consumer markets in North America. With access to more than 134 million consumers within 250 miles of the Port-our network of terminals, rail and roadways ensures that cargo moves efficiently, cost effectively and in a way that is environmentally sustainable.

PORT OF TAMPA · www.porttb.com

Port Tampa Bay has emerged as Florida's new supply chain solution for container cargo. Port Tampa Bay has recently added capacity, with more expansion underway, and stands ready to welcome new business, offering significant savings in inland delivery costs versus other gateways. The addition of direct Asia container services in the last few years, and more recently new and expanded services with Mexico and Central America, have provided a giant leap forward in serving Florida's largest and fastest-growing market, the Tampa/Orlando I-4 Corridor.



REAL ESTATE



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Saddle Creek is an omnichannel supply chain solutions company providing a variety of integrated logistics services, including omnichannel fulfillment, warehousing and transportation. Our custom solutions leverage advanced operational methods and sophisticated technologies to help retailers, manufacturers and ecommerce companies get products where they need to be quickly, cost-effectively and seamlessly. For more information, visit www.sclogistics.com.





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IN THIS SECTION:

Robotics - Trucking



ROBOTICS



LOCUS ROBOTICS . locusrobotics.com

Locus Robotics' innovative autonomous mobile robots make it easy to optimize your warehouse operation, and respond to e-commerce volume growth and seasonal peaks while giving you control over your labor costs. LocusBots operate safely alongside people, making them more efficient and effective compared to traditional order fulfillment systems. Workers are able to fulfill more orders with less labor without the need to reconfigure or disrupt your warehouse.

SUPPLY CHAIN VISIBILITY

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TRUCKING



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PODCAST



David Ross

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Offered by Inbound Logistics

As businesses look for the right mix of strategies and investments to keep their supply chains on track, how can they better assess where to focus their efforts? After all, a piece of technology that works for one company won't necessarily work for another. Can it be as simple as finding the right partners to work toward a common goal? David Ross, chief strategy officer for Ascent Global Logistics, discusses where the industry is headed.

.....

bit.ly/Ascnt822Pod

WHITEPAPERS



MERGING TECHNOLOGY & TALENT

Offered by Ryder

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bit.ly/Ryder722SCI



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BRIDGING THE LTL EXPERTISE GAP: ONLINE LEARNING EVOLVES

Offered by SMC³

Sometimes it takes a commercial business to step back and identify a need for educational resources. For those beginning a career in freight management, there are a dozen or more respected logistics or supply chain management educational courses. But, there has been a notable gap in LTL educational resources to bring newcomers up to a competitive level of excellence or enable industry veterans to expand their knowledge base.

bit.ly/smc422SC

SUPPLYCHAINInsights

WHITEPAPERS

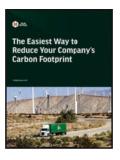


THE FIRST MILE: THE INS AND OUTS OF DRAYAGE

Offered by Prosponsive Logistics

Drayage is an important component in logistics and supply chain—in fact, it accounts for a significant part of the \$50 billion port logistics market. However, there is a surprising amount of inefficiencies and lost opportunities at ports, due to the lack of focus on drayage. Dive into drayage and see exactly how it could impact your bottom line.

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THE EASIEST WAY TO **REDUCE YOUR COMPANY'S CARBON FOOTPRINT**

Offered by Hub Group

The bar for sustainability is continually being raised for businesses—are you equipped to meet your stakeholders' demands? Find out how supply chain offers one of the most impactful methods for reducing your emissions and how Hub Group can offer the expertise, plans and visibility to keep you ahead of the curve.

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ARE YOU PREPARED TO MEET CUSTOMER DEMAND FOR SUSTAINABILITY?

Offered by Inbound Logistics

As customers, investors, and regulators demand sustainability initiatives from companies, supply chain and logistics partners are responding with tools and services designed to meet these goals. Discover 75 green supply chain partners, how to choose a freight bill audit and payment provider, ways retailers can take a bite out of grocery shortage challenges, and more in the June edition of Inbound Logistics.

bit.ly/ILDjune22

PODCAST



Yuriy Ostapyak

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WAR IN UKRAINE: HOW ONE 3PL NAVIGATES THE ULTIMATE DISRUPTION

Offered by Inbound Logistics

Moving out of the pandemic is one thing, but how would your business respond if it then moved into a war zone? What balance of technology, communications, and partnerships are crucial to keep your supply chain going in that kind of conflict? Yuriy Ostapyak, a Ukrainian-born U.S citizen and director of global operations for Logistics Plus, shares his perspective on the war in Ukraine and how Logistics Plus continues to operate and support Ukrainian refugees.

bit.ly/LgPls822Pod

[IN FOCUS]

SPOTLIGHT

Materials Handling Solutions

> Geek+ RoboShuttle 8:

Able to handle a variety of totes, cartons, or boxes, the RoboShuttle 8 from Geek+ is an autonomous mobile robot (AMR) system that enables super-dense storage and can reach shelves as high as 26 feet. With payloads up to 529 pounds, the goods-toperson system supports micro-fulfillment. Equipped with a depth camera and other sensors, it uses QR code-based navigation to



> Wildeck Delta VRC: The Delta Vertical Reciprocating Conveyor (VRC) from Wildeck moves materials from one elevation to another safely and reliably. It can transfer materials to a mezzanine, rack storage system with catwalks, or an upper floor level. Featuring a side-mount motor for easier maintenance, it has no overhead mechanicals, allowing for a lower ceiling clearance.





> Qimarox Pallet Lift ProRunner MK10: This heavy-duty vertical conveyor lifter from Qimarox can handle loads up to 4,400 pounds and can be used for pallets, racks, large cartons for appliances, vertical farming trays, and other heavy loads. Conveyor manufacturer Ultimation—which recently became part of the Qimarox System Partner network for the Americas—offers the Qimarox ProRunner MK10 lifter to move heavy loads that would otherwise require the design and build of a custom automation solution.

> MHS HC-Loop Double Cell: The HC-Loop Double Cell cross-belt sorter from MHS is designed to sort both small and large items with up to 99.99% accuracy, offering a throughput of up to 4,500 packages per hour. It uses sections of two cross-belt cells that can either work simultaneously to handle a single large item or independently to handle two smaller items such as flyers, polybags, and shoe boxes.





> Yale Three-Wheel Stand-Up Forklift: Featuring a tight turning radius, the three-wheel stand-up electric lift truck from Yale is engineered to efficiently move products in and out of tight spaces in warehousing and retail environments, such as loading bays. Its design provides more usable floor space and eliminates up to 65% of shock and vibration transmitted to the operator, helping to reduce fatigue and boost productivity.

SPOTLIGHT

> LightSort Gaylord Rack: The new automation solution from Engineering Innovation is ideal for large-scale sorting and delivery operations such as parcel returns or high-quantity intake sorting. It can sort to a variety of large containers, including gaylords and other pallet-sized options. Utilizing the LightSort Technology platform, the system can integrate into existing business logic and is powered by a touchscreen controller.



> Hyster Narrow Aisle **Reach Truck:** The Hyster reach truck is designed for high-density warehousing operations, offering a 3,000-4,500-pound capacity range and deep reach capabilities. The mast opening and lowered reach mechanism provide forward visibility through the mast of the forks and load when picking at height. This design also helps improve aisle visibility while traveling forward.





> Tompkins tSort3D: The new modular system from Tompkins Robotics is suited for e-commerce fulfillment and other fulfillment flows such as store replenishment and reverse logistics. The system can scale to accommodate sites as small as the backroom of a retail store and up to large distribution centers. To provide real-time updates to an operator, the system can continuously track items, orders, and order status.

> Interroll Light Conveyor Platform (LCP):

The new plug-and-play conveyor platform from Interroll enables enterprises to implement scalable belt conveyor sections in order to meet automation requirements for material flow. The modular system can be planned and assembled using Interroll's Layouter tool on a PC. The LCP is designed to transport smaller conveyed goods, as well as boxes or polybags.



[IN FOCUS]

BRIEF

New Services and Solutions

>PRODUCTS



> ORBIS introduced its **Automated Reusable Optimized Solutions** (AROS) product line designed for integration into automated systems to facilitate the transfer, storage, and organization of merchandise. Launching as part of the AROS line is the ML6545-325 (pictured), a handheld container which offers a large cubic density and can interface with highspeed systems. Dividers can be added to allow multiple SKUs to be packed in the same tote.

> Secop GmbH. a

manufacturer of medical refrigeration compressors, unveiled the MP2UVULTM, a compressor designed for mobile refrigeration systems that require extreme low temperatures to transport biomaterials such as mRNAbased vaccines for COVID-19 and Ebola. Secop's new compressor supports temperatures ranging from -94 degrees to -122 degrees Fahrenheit, regardless of outside temperatures. The compressor operates on battery and solar power.



> Lufthansa Cargo opened a fine arts warehouse facility at the Frankfurt Hub in Germany. Offering safe storage of high-value fine arts of all kinds during airfreight transportation, the ARTcube features a ventilation system that enables targeted temperature control. Vertical window strips on the facade allow natural lighting, which is optimized by a supporting lighting system.



> Cortec's EcoShield
Heat Sealable Paper is a
packaging product coated
with a water-based adhesive
coating, which forms
seams when the paper is
heated with coated sides
together. Offering a nonhazardous and repulpable
coating, the EcoShield
Heat Sealable Paper can be
disposed and reprocessed
through standard recycling
procedures.

>SERVICES



> RJW Logistics Group, a provider of retail logistics solutions, acquired its ninth warehouse in the greater Chicagoland area. The new 667,000-square-foot building in Romeoville, Illinois, can receive an estimated 60,000 pallets and ship more than 65 million cases annually. Through this facility, the company will serve 200 CPG customers and create

approximately 400 new iobs in the Romeoville area.

> Shanghai-based cross-border e-commerce joint venture **Gebrüder Weiss Express China** aims to more than triple its service volume to 25 million parcels in 2022 compared to 2021. It now offers last-mile-delivery services in the United States, the European Union, the United Kingdom, Canada, Australia, New Zealand, and Israel.

> **Dayton Freight Lines**, a provider of regional lessthan-truckload (LTL) transportation services, opened a facility in Kingsport, Tennessee.



Located near I-81 and I-26, the 24-door facility provides direct service to the Bristol, Johnson City, and Kingsport communities.

- > DHL Freight, a provider of road transport services in Europe, inaugurated a new terminal in Erlensee, a town in Germany's Rhine-Main Metropolitan Region. The new transshipment facility near Frankfurt am Main includes a cross-dock terminal and a warehouse for specialty chemicals.
- > TForce Logistics, an operating company of TFI International, expanded its dedicated last-mile delivery capacity in Toronto with the opening of its fourth facility in the greater metropolitan area. The 8,140-square-foot distribution center gives TForce Logistics the ability to provide next-day delivery service down the Highway 401 corridor from Hamilton, Ontario, to Niagara Falls.

Yaskawa's industrial robotic arm for connecting and disconnecting trailer lines.

- > Railinc unveiled the TransmetriQ Rail Management System, which enables shippers to better manage their freight rail operations. Providing shipment tracking and estimated time of arrival services, the product combines customized. near-real-time data with functionality such as electronic billing.
- > Extensiv (formerly 3PL Central) launched a directory of pre-vetted fulfillment partners to make finding a 3PL easier. The site is available for free at www.extensiv.com and links brands with 3PLs to help with pick, pack, and fulfillment services for e-commerce, including those that can meet specialized requirements.



> Sunset Transportation, a women-owned 3PL, was awarded Customs-Trade Partnership Against Terrorism (C-TPAT) certification. This indicates Sunset follows and maintains written procedures, protocols, and best practices that comply with C-TPAT recommendations and criteria, and can provide elevated security levels and protect cargo that crosses northbound into the United States from criminal activity.

>TECHNOLOGY

> Outrider released its next-generation autonomy kit for yard automation. Supporting over-the-air software updates and fieldswappable units, the latest kit includes the NVIDIA DRIVE autonomous vehicle platform for perception system processing; Ouster's high-resolution lidar sensors for perception; and





INBRIEF



> J.B. Hunt Transport Services

accelerated international cargo movement from Asia with a long-term, multi-vessel service agreement with Swire Shipping. Under the agreement, J.B. Hunt will have ongoing cargo shipping opportunities available from the Shenzhen, Qingdao, and Shanghai markets in China to ports in California and the Pacific Northwest.

- > FedEx and supply chain visibility company FourKites started a strategic alliance to provide businesses with real-time visibility capabilities to help solve supply chain challenges. FedEx and FourKites are collaborating to bring visibility into multimodal and multi-carrier operations through a new, end-to-end supply chain intelligence platform called FourKites X.
- > **Teleroute,** a European freight exchange community for road transport, released *TelerouteRecommends*, Europe's first freight AI recommendation engine.
- It provides a real-time and continuous feed of new routes and loads that are available and will be of most interest to its freight exchange members, from an efficiency and profit standpoint. The AI engine analyzes data from historical usage of the platform to discover patterns.
- > Descartes Systems Group released enhancements to its global trade intelligence solution suite. The enhancements help companies accelerate international business growth while maintaining compliance with global trade regulations, including

- new sanctions and export controls imposed on Russia and Belarus resulting from the conflict in Ukraine.
- > Global enterprises can eliminate blind spots across their supply chains and enable data-driven decisions for shipments in transit with CalAmp's new partnership with **Bristlecone**, a provider of AI-powered applications. The partnership will develop joint solutions that leverage Bristlecone's AI and analytics expertise and real-time data from CalAmp's supply chain visibility sensors, edge computing devices, and CalAmpTelematics Cloud.
- > ShipBob, an omnifulfillment platform, launched its Merchant Plus solution, a standalone warehouse management system (WMS) for merchants that have their own warehouse in the United States. The solution includes access to ShipBob's carrier infrastructure, support team, and fulfillment experts.
- > **DHL Global Forwarding,** the international freight specialist division of

specialist division of Deutsche Post DHL Group, unveiled new features and updates to its digital customer platform *myDHLi*,

> Arvato Supply Chain Solutions is

expanding its warehouse in Dorsten, Germany. Expected to be completed in September, the expansion will increase processing speed at the site. Its shuttle system will have a capacity of approximately 130,000 totes, each divisible into a maximum of eight compartments, and with a potential storage and retrieval capacity of up to 6,800 totes per hour.







> Rhenus Logistics introduced a carbon-neutral air consolidation service from Frankfurt, Germany, to São Paulo, Brazil. Rhenus will offset the total emissions from the trade lane through a third-party company to achieve carbon neutrality which is verified and audited according to internationally accepted standards such as Gold Standards (GS) or verified carbon standard (VCS). Customers will then be able to download the certification of carbon-neutral activity.

which helps shippers increase the efficiency of their logistics operations. Users can calculate the estimated time of arrival of their ocean freight more accurately. In addition, the platform provides functionality to calculate and analyze shippers' carbon footprint.

- > **Dematic,** a subsidiary of intralogistics provider KION Group, is migrating its offerings to Google Cloud and introducing artificial intelligence and machine learning technologies to improve customers' supply chain execution.
- > **Loftware**, a software company providing enterprise labeling and artwork management solutions, released Loftware Spectrum 4.6, the latest version of its cloud-based enterprise labeling solution. Customers can now drive printer device types from one digital solution.
- > Foodservice operators can now receive comprehensive distributor data with the new machine learning file monitoring system for Spend Insights from perishables network iTradeNetwork. The automated solution analyzes and interprets incoming distributor data, detects anomalies based on volume and history, flags files requiring additional follow-up, and provides a scorecard for all distribution centers providing data to foodservice operators.
- > Locus, a technology company tackling lastmile logistics challenges, debuted its orderto-delivery dispatch management platform. The solution helps enterprises manage last-mile fulfillment on a single platform, with optimization algorithms and workflow automation increasing visibility and supporting more efficient dispatch planning,

- scheduling, routing, and carrier management.
- > A. Blair Enterprises, a provider of yard management services, now offers SPOT ON, a proprietary software package that is designed to eliminate demurrage and the need for costly yard checks. The service provides accurate locations, digital dispatching of trailer or container movements, time at the dock and in the yard, and customized detailed reports on demand.
- > **Shipwell** released a load optimization feature built directly into its transportation management system (TMS). The new feature helps customers reduce the time it takes to plan and route shipments, the costs associated with moving them, and the carbon emissions produced by the carriers hauling them. It leverages a proprietary algorithm to assess each individual order's details.

>TRANSPORTATION

- > Maryland's **Helen Delich Bentley Port of** Baltimore was added to a container service with the **Mediterranean Shipping** Company (MSC) that will include port visits between Asia and the Panama Canal as well as the United States and the Suez Canal. The MSC Santana service now includes port calls in Baltimore and Boston, as well as Da Chan Bay Port in China.
- > Bahri Line, a new business unit under Bahri Logistics, extended its liner service to Jakarta, Indonesia, after signing a contract with equipment and engine maker Caterpillar. Bahri Line now offers direct service from the Mediterranean, the Middle East, and India to Jakarta. The company will also offer direct service to the United States from the Southeast Asian city.

CALENDAR

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parcelforum.com

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SEPT 18-20, 2022 CHICAGO, IL

ASCM Connect Annual Conference

www.ascm.org/conference

Delving into trending supply chain topics and offering educational sessions, the Association for Supply Chain Management conference provides attendees with supply chain solutions and networking opportunities. Global supply chain experts share their insights on sustainability, planning, procurement, talent, and leadership, as well as diversity, equity, and inclusion.

SEPT 18-21, 2022 NASHVILLE, TN

CSCMP Edge 2022

www.cscmpedge.org

The Council of Supply Chain Management Professionals conference and exhibition provides more than 100 sessions spanning the end-to-end supply chain, giving attendees the opportunity to curate their own agendas. The event also lets participants view demonstrations, equipment, systems, and technologies that provide cutting-edge solutions to supply chain challenges.

SEPT 27-29, 2022 HOUSTON, TX

Breakbulk Americas

americas.breakbulk.com

Breakbulk Americas draws Houston's oil and gas stakeholders as well as industry professionals from the United States, Canada, Mexico, Central and South Americas, and those from around the world interested in projects throughout the region. The event explores current challenges and effective strategies in the project cargo industry.

SEPT 29-30, 2022 BOSTON, MA

LogiPharma

logipharmaus.wbresearch.com

Experts in life sciences and healthcare supply chain, logistics, distribution, planning, IT, quality, and sourcing share emerging best practices in this event. Join more than 200 global supply chain leaders in pharma, biotech, and medtech, and transform your supply chain organization to thrive in the new normal. Deep-dive panels, fireside chats, and interactive sessions let attendees benchmark their current strategy.

OCT 7-8, 2022 VIRTUAL

Supply Chain Digitalization 2022

supplychain-conference.com

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Conference creates
opportunities to boost
profitability and sharpen
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in supply chain transformation.
The conference brings together
the supply chain, transportation,
and logistics sectors to explore
winning strategies. Topics
include emerging digitalization
technologies and leveraging
digitalization to optimize
processes and reduce costs.

OCT 17-20, 202: ORLANDO, FL

Gartner IT Symposium/Xpo 2022

www.gartner.com/en/conferences/ na/symposium-us

The Gartner IT Symposium/Xpo 2022 conference addresses the strategic needs and supply chain imperatives of chief information officers and their teams. Gain insights on the future direction of technology, best practices to validate IT strategies, and real-world examples on how to execute on key initiatives.

NOV 8-10, 2022 MIAMI, FL

Air Cargo Forum + transport logistic Americas

www.aircargoforum.org

This event combines the air cargo forum with the supply chain event transport logistic Americas. Attendees get insights from industry experts in air cargo, transportation, logistics, and supply chain. Cargo shippers from the United States, North and South America, as well as other major markets, are expected to attend this showcase of innovative solutions.

JAN 30 - FEB 1, 2023 LAS VEGAS, NV

Manifest 2023

manife.st

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FEB 7-9, 2023 LAS VEGAS, NV

19th Annual RLA Conference & Expo

rla.org/event/203

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Association event brings together
reverse logistics professionals
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and networking opportunities.
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and retailer roundtable, and a
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FEB 19-22, 2023 ORLANDO, FL

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bit.ly/LINK2023_RILA

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THE **SPEAKERS**



Redefining the Collar Blue Monday | 9/19 | 8:00am - 9:15am

Mandy Rennehan Blue-Collar CEO & Founder Freshco, Inc.



Changing the Landscape of Waste Tuesday | 9/20 | 8:00am - 9:15am

Tom Szaky Founder & CEO TerraCycle













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OCEAN/MARITIME

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America): Provides end-to-end multimodal transportation and comprehensive logistics solutions. na.coscoshipping.com • 201-422-0500

Evergreen Shipping Agency (America)

Corp.: Offers one of the largest intermodal networks in the U.S., including worldwide ocean shipping and inland transportation services. www.evergreen-shipping.us 201-761-3000

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BIG BUILDS

With these infrastructure and supply chain projects the largest of their type in the world—it's go big or go home.



The Danyang-Kunshan Grand Bridge

Jiangsu Province, China Length: 102.4 miles Cost: \$8.5 billion



The Port of Shanghai

Shanghai, China

Size: 1,397.5 square miles

Cost: > \$12 billion

Largest Retail Department Store

Shinsegae Centum City Department Store

Shinsegae Centum City, South Korea Size: 3.16 million square feet

Cost: \$1.1 billion

Largest Single-Terminal Airport

Beijing Daxing International Airport

Beijing, China

Size: 7.5 million square feet

Cost: \$11 billion

Largest Warehouse and Distribution CenterBoeing Everett Factory

Washington, United States

Size: 4.3 million square feet

Cost: \$1 billion













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