

SPECIAL REPORTS

**GEORGIA:
LOGISTICS FUELS
GROWTH**

**E-COMMERCE
ENABLED**

MARCH 2021

inbound logistics

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Info SNACKS

BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION



Getting In Line, Not Online

Consumers are setting expectations for in-store experiences as they begin to plan for reduced social distancing measures. That's pushing retailers to configure technology strategies for physical stores.

16%

of American consumers say they would spend more in brick-and-mortar stores that used tech to improve the customer experience.

31%

of consumers say they would like sales associates to use mobile devices that allow them to purchase items on the sales floor instead of at the cash register.

24%

say checking inventory availability and pricing via these devices would provide a better in-store experience.

62%

of consumers say they expect safety features—COVID-contact tracing, device ID, and hand sanitizer stations—to remain in-store after the pandemic.

SOURCE: FROM BRICKS TO CLICKS: STATE OF MOBILITY IN RETAIL 2021 REPORT, SOTI

Who Needs GPS?

Tel Aviv-based startup Sightec has developed software—called NavSight—that can be used with any off-the-shelf drone equipped with a camera. The software turns cameras into smart affordable sensors that enable the drone to “see and understand its surroundings” like a human pilot. NavSight uses video processing technology to help the drone identify its location in real time.

“We give drones the ability to get from point A to point B safely,” says Roy Shmuel, CEO, Sightec. “There is no available solution today for players globally.”

Elon is working on that.



PHOTO: DROR BEN DAVID, MATRIX



PAPER CHASE

“On average, every shipment in the supply chain requires around 200 documents shared between as many as 28 organizations, from terminals and forwarders to shipping companies and customs. For a global forwarder, it can amount to thousands of spreadsheets, Word documents, PDFs, and images moving between entities each day. The lack of a single system to corral the chaos between stakeholders throughout the supply chain makes the task of leveraging data seem impossible.”

—NIKOLAUS SIEVERS, VICE PRESIDENT OF GLOBAL CUSTOMER SUCCESS, SLYNC.IO

IF I COULD SAVE TIME IN A BOTTLENECK

ATRI's annual bottleneck analysis allows transportation analysts and planners to conduct performance benchmarking and identify influential factors contributing to congestion and the requisite consequences on freight mobility.

2021 TOP TRUCK BOTTLENECKS BY THE NUMBERS



Average peak hour truck speed
43.0 mph
up 33.9% year-over-year



Top 100 bottlenecks with
average truck speed <45mph

29

Number of states with at least
one top 100 bottleneck

SOURCE: ATRI'S TOP TRUCK BOTTLENECK ANALYSIS

TOP 10 MOST CONGESTED CITIES

1. Fort Lee, NJ
2. Cincinnati, OH
3. Atlanta, GA (North)
4. Atlanta (West)
5. Houston, TX
6. Chicago, IL
7. Chattanooga, TN
8. St. Louis, MO
9. Rye, NY
10. San Bernardino, CA

CONTENTS

MARCH 2021 | VOL. 41 | NO. 3

36

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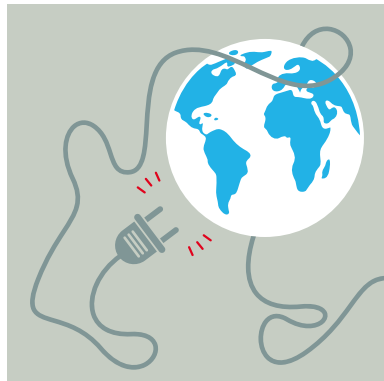
As e-commerce growth continues to explode, new technology revolutionizes order fulfillment and last-mile delivery strategies to help shippers keep pace.



42

IMPORTS & EXPORTS: AN INSIDER'S GUIDE TO GETTING IT RIGHT

From building strong internal processes to smart automation strategies, experts share nine insider tips to ensure seamless cross-border commerce.



50

GLOBAL LOGISTICS REBOOT: A NEW BEGINNING

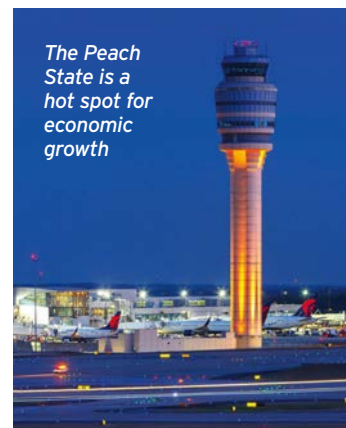
The global logistics sector stands ready to face a brave new world after withstanding volatile product flows during the pandemic.

*Tips on all aspects of
importing and exporting*

55

GLOBAL TRADE MANAGEMENT GUIDE 2021

Global trade management systems are more critical than ever as supply chains manage ongoing disruption. These leading solutions can help keep your global operations on an even keel.



60

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GEORGIA: WHERE LOGISTICS FUELS GROWTH

The state's solid logistics infrastructure keeps supply chains moving efficiently and safely.



ABOUT THE COVER

Aerial view of the Pier 400 Container Terminal at the Port of Los Angeles.

Photo courtesy of Port of Los Angeles.

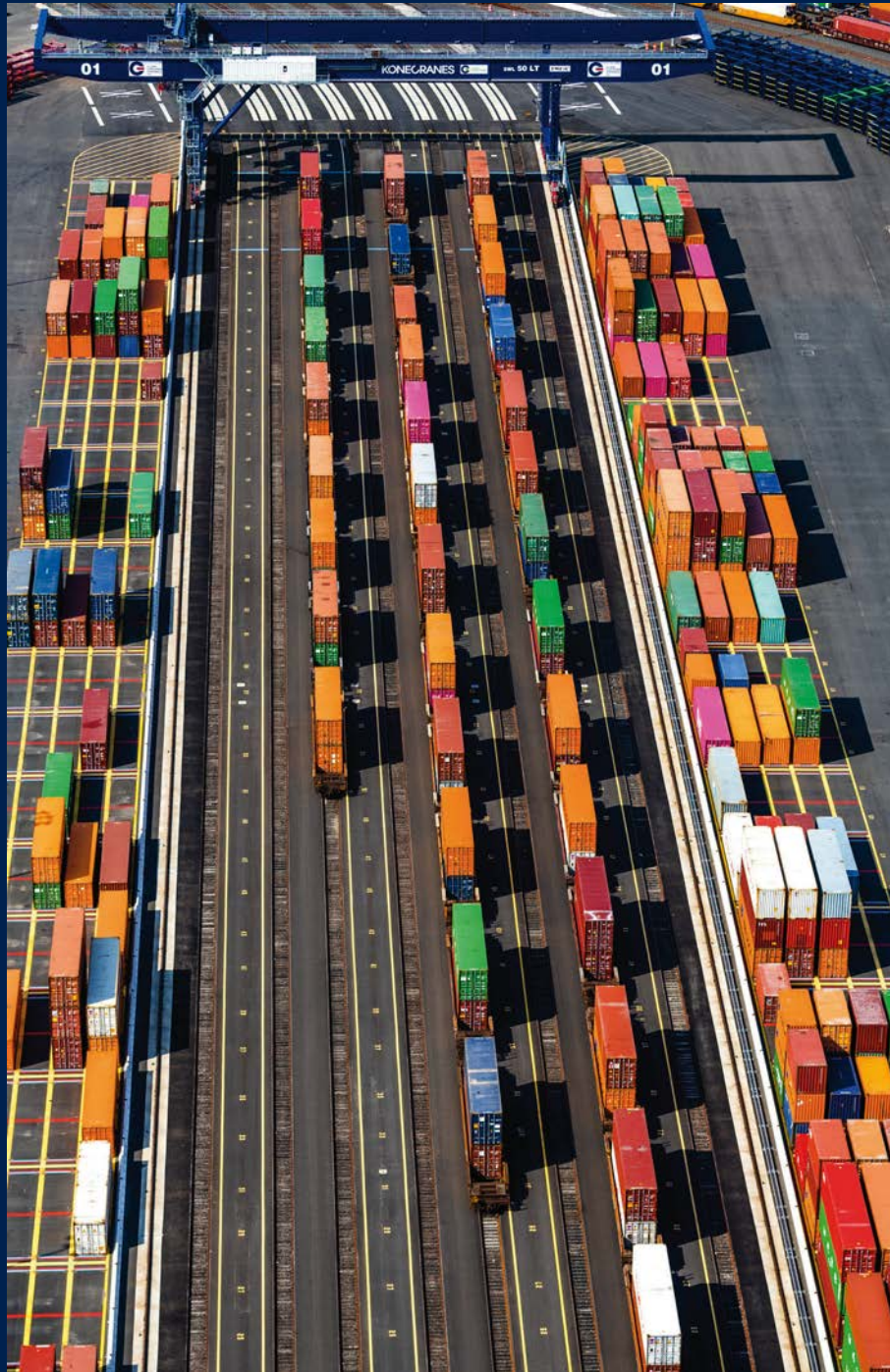


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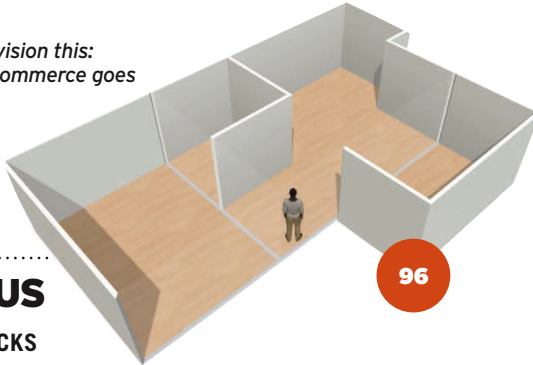
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AUTHORITY
NY NJ**

The Port is a facility of
The Port Authority of NY & NJ

CONTENTS

MARCH 2021 | VOL. 41 | NO. 3

Envision this:
E-commerce goes
3D



96

INFOCUS

1 INFO SNACKS

16 VERTICAL FOCUS: HEALTHCARE

20 NOTED

22 TAKEAWAYS

86 PRODUCT SPOTLIGHT: TRACKING SOLUTIONS

88 IN BRIEF

96 LAST MILE

E-commerce enters a new dimension

SPONSORED THOUGHT LEADERS

The role of WMS and MES in empowering warehouse resiliency...26

WMS must-haves: Adaptability, scalability for efficiency and profit...27

SPONSORED SOLVED

Cross-dock delivers new level of efficiency for leading retailer...28

30 COVID RECOVERY

Meat importer carves out success

32 LEAN SUPPLY CHAIN

Omnichannel delivers, but at what cost?

34 SUPPLY CHAIN SECURITY

Can your supply chain withstand the unexpected?

INFO

78 SUPPLY CHAIN INSIGHTS

80 WEB_CITE CITY

92 CALENDAR

94 RESOURCE CENTER

95 SUPPLY CHAIN SOLUTIONS

GOOD QUESTION

What's your best importing or exporting advice?

10

INPRACTICE

18 READER PROFILE

Sandeep Dalvie, global supply chain director at titanium technology business The Chemours Company, manages digital transformation not only with a focus on evolving tools, but also cultural change to help both employees and customers understand how their roles will evolve along the way.

75 TOOLKIT

Craft distillers like Montanya are limited to distributing their spirits in select states only. The Spirit Hub platform helps craft spirit makers sell directly to consumers while staying compliant with liquor distribution regulations across the country.

INSIGHT

8 CHECKING IN

The president's 2021 trade policy

10 GOOD QUESTION

What's your best importing or exporting advice?

12 DIALOG

14 10 TIPS

Boosting supply chain visibility

Thermal printer
prevents product
tracking fails



88

22



Next-generation
delivery vehicles
en route



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MORE NEWS ONLINE



RECOVERY STARTS WITH HYGIENE COMPLIANCE

Hygiene has moved to the forefront of recovery strategies to help ensure employee safety, especially for manufacturers. These tips can help your company forge ahead as safely as possible.

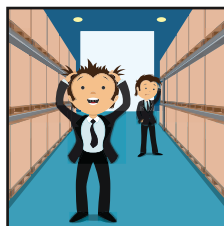
bit.ly/StartWithHygiene



4 WAYS TO SUPPORT DESKLESS WORKERS

Many logistics leaders are managing unprecedented restructuring by moving forward with digital transformation, but they often overlook one important aspect: how to best support deskless workers. Here are four ways to integrate them into your digital strategy.

bit.ly/DesklessWorkers



HOW TO IDENTIFY SUPPLY CHAIN BLIND SPOTS

Business disruption isn't the only thing that can bring supply chains to a halt. Time-wasting manual processes and a lack of collaboration could be weakening your operations behind the scenes. Here's how to address the blind spots in your supply chain.

bit.ly/FindBlindSpots

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An aerial photograph of a port. At the top, a large cargo ship is docked, its deck filled with stacks of colorful shipping containers. A prominent white wake from the ship cuts through the dark water, extending down the center of the frame. On the left side, several blue gantry cranes are visible, with the word 'WILMINGTON' partially legible on one of them. The overall scene is captured from a high angle, looking down at the port's operations.

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CHECKING IN

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Keith Biondo, Publisher

The President's 2021 Trade Policy

The Biden Administration's new trade policy report is filled with laudable goals such as beating COVID-19, American family relief, and the Build Back Better initiative. But should these goals be the basis of U.S. trade policy or negotiating position with other countries? Do our economic competitors enter into trade negotiations with the United States with similar globalist goals or are their goals self-interested national economic ones?

Here's an example of a U.S. trade policy targeted toward changing the world instead of a single-minded focus on protecting American economic interests—U.S. workers, manufacturers, and others who've had a rough time of late.

"The President's trade agenda will restore U.S. global leadership on critical matters like combating exploitative labor conditions, corruption, and discrimination against women and minorities around the world," says the report. These are important initiatives. But there are ways to accomplish them without introducing trade goals misaligned with U.S. domestic economic interests.

Tariffs and sanctions work, but our new trade policy doesn't emphasize them because they run counter to another goal in the trade policy: crowdsourcing cooperation from friends and allies around the world. Recent history reminds us that before the pandemic, few countries aided the United States in efforts to establish more reciprocity with our trade partner China. "The Biden Administration will coordinate with friends and allies to pressure the Chinese government to end its unfair trade practices and to hold China accountable," notes the report.

Putting teeth in trade talks sometimes requires unilateral actions, especially if our "friends and allies" have economic, political, and security interests that do not align with those of the United States. Relying on others in this regard is a return to the inadequate trade policy of the past. Same old, same old.

Another item in the trade agenda that takes the focus off meeting the needs of American workers is a review of existing trade programs and "their contribution to equitable economic development (of other countries), including whether they reduce wage gaps, increase worker unionization, and promote safe workplaces."

One way that has been done in the past is to offer cash grants. The other is to give other countries unfettered access to U.S. markets in exchange for "equitable" policies. As we have seen in recent decades, offering special trade access to our market for progress on nation-building "goals" directly competes with U.S. workers and, while helping others, takes the focus off who we should help first.

Don't get me wrong. The 2021 Trade Policy Agenda contains some good elements. But given global economic stress, and specifically the needs of U.S. workers and companies, is taking the focus off directly protecting those interests the best approach? Read the document here: bit.ly/tradepplan21 and let me know your take.

Keith Biondo



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GOODQUESTION

Readers Weigh In

What's your best importing or exporting advice?

Have a *plan* to export your product.



People

Can someone from your team drive this program?



Capacity

Do you have enough capacity to meet the market's demands?



Packaging

Is there a legal requirement for labeling, or does the label need to be translated?



Knowledge

Know your customer and market.

—**Bryan Blalock**
Chief Operating Officer
Container Maintenance
Corporation

When establishing a compliance program, it's easy to get overwhelmed with what you have left to do. **Take a moment to remember where you have been** and how much you have accomplished. Progress takes time; every step forward is a step in the right direction.

—**Michelle Frennier**
Director, Solution Consulting
BluJay Solutions

The best advice I received around exporting and importing is **sometimes it's best to stick with the tried-and-true technologies**, such as barcoding.

Barcode technology is 69 years old, but it's capable of creating a single digital environment to generate more efficiencies when it's integrated with ERP, and it provides improved inventory visibility and accuracy while reducing costs.

This is not an argument against new, emerging technologies; it is a reminder for organizations to investigate all available options to make their operations more efficient. Barcoding is a great example of "old-fashioned" tech that remains a reliable, staple tool in warehouse and inventory management.

—**Scott Deakins**
COO, Deacom

Only promise the customer what you know you can do well. This advice not only ensures the quality of service you can offer, but is also a gold standard to safeguarding your customer base during uncertain times.

—**Eduardo Rey**
Managing Director, Air & Sea Logistics
Dachser Peru

The best advice I've ever received is the simplest: **Always adhere to and comply with import and export trade regulations.** Some shippers have historically won business by using non-compliant, "creative" ways to import or export goods. Ultimately, these shippers have lost the business and their reputation in those markets.

—**Ronald Kleijwegt**
VP Global Sales & Managing Director,
EMEA, Blume Global

As a management trainee at APL (now a CMA CGM subsidiary), I was told to **anticipate and plan for things going wrong** because they always will. Pay attention to cargo loading and delivery; they are critical and complicated parts of the journey.

Focus on the three most important elements for successful shipping execution: 1) planning, 2) planning, 3) planning.

—**Greg Tuthill**
CCO, SeaCube Containers

Compliance that operates at a granular level pays dividends. To be able to focus on raw productivity, compliance should be automated with technology. Digital workplace platforms that create training, communication, and task audit trails help enterprises manage compliance efficiently, boosting productivity.

—**Steven Kramer**
CEO, WorkJam

Identify and leverage strong partners who know the daily challenges of this business. From origin pickup to customs and duties to drayage, the import logistics process is extremely complicated. Identifying the correct partners and freight forwarders can turn a very complicated process into a task that feels almost effortless.

—**Sean Mueller**
VP of Business Development
Symbia Logistics

As we face 2021 after an especially turbulent year, my best advice is to **plan in advance and plan for delays.** The variables we regularly face for international in-transit shipments are

[INSIGHT]

DIALOG

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Wild salmon lunch bowl with @ILMagazine's
11 Supply Chain Predictions for 2021

Re. Good Question: Do you expect a resurgence in reshoring to the United States? Why or why not?

bit.ly/reshoringGQ

President Biden's order to review foreign supply chains is indicative of a wider shift to reshoring, sparked by the pandemic. However, reshoring is not a silver bullet that solves all supply chain challenges—and the success of reshoring strategies will be dependent on the resources the United States can cultivate. With the United States lacking in rare earth minerals like cobalt—used in the batteries for electric vehicles—reliance on other nations is inevitable,

at least in the short term. We may see growing impetus being placed on the reuse, recycling, and recovery of key materials, catalyzing the growth of the circular economy.

One key thing the pandemic has shown us is our globalized business environment can be severely disrupted by events on the other side of the world. Our supply chains are much more dynamic than they were in years gone by, and with that new risks need to be factored into continuity plans.

—Colin Elkins

Vice President, Manufacturing, IFS



Re. Checking In, January 2021: A Valid Question

bit.ly/why_IL

This provides clarity on how the *Inbound Logistics* name actually came about and why it shouldn't be seen as "limiting."

Peter Anderson, MBA

Account Manager, Logistics,
Hyster-Yale Group

This puts forth some benefits and values of demand-driven logistics, which can include motivating siloed enterprise functions to work together, putting customers at the center of the process and recognizing their value, and reducing resources and dollars tied up in inventory and supporting infrastructure. Always an ongoing process!

P.J. Kowalski

Account Executive, Mainfreight Americas

Re. 11 Supply Chain Predictions for 2021

bit.ly/11_SC_predictions

Here are my 5 V's for 2021:

Vaccines. Vaccines will act as the drumbeat for global supply. The international supply chain of everything but vaccines will be impacted by airfreight capacity crunches. Significant capacity constraints across the supply chain—exacerbated by impacts of Brexit in Europe and port congestion in China and the United States—will continue.

Volume and Variability. As volume return will not be linear and will favor certain sectors over others, organizations will need to monitor and adjust demand and supply plans to chase volumes while mitigating continued instability within the ocean freight market.

Variety. There could have been no better accelerator for our digital engagement and creativity than COVID-19. A variety of solutions pre- and post-COVID in the technology space offers new possibilities in areas such as blockchain maturity, AI integration for digital networks, more IoT devices, maturing of robotic process automation, and wider connectivity solutions for supply chains.

Veracity (conformity to facts). Winning organizations in 2021 will see veracity as the watchword evaluating demand as it is sensed, reacting based on data, and selecting from the myriad technologies/solutions that can deliver the maximum combined supply chain value.

—Neil Wheeldon

Vice President Solutions, BDP International

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10 TIPS

Boosting Supply Chain Visibility

With the explosion of e-commerce delivery demands and shifts in supply chain practices, visibility is more important than ever. Here are tips to help you understand your end-to-end supply chain and optimize your business.

1 THINK ABOUT THE APPROPRIATE LEVEL OF VISIBILITY.

At its most basic level, supply chain visibility refers to tracking the movement of products once they're shipped as well as any "stopping points" on the way to final delivery. Other levels of visibility might consider tracking from supplier to manufacturer to buyer, or capturing the full supply chain from raw material to product end-of-life. Based on your product(s) and business need, you can understand what level of visibility will be most relevant to you.

2 DETERMINE WHERE THE PAIN POINTS ARE.

Do you have difficulty with sourcing from suppliers? Inventory and order fulfillment? By identifying your most problematic areas, you can define the tools and information needed to measure performance, solve issues, and drive improvement.

3 CONSIDER BUSINESS PLANS AND PRIORITIES.

Develop your roadmap to optimal visibility by understanding where your business is headed. Be sure your planning takes into account the desired future state.

4 DEVELOP A PLAN FOR VISIBILITY.

Without an element of comprehensive visibility defined by your business needs, businesses will

struggle. To appropriately plan, understand your technology constraints and requirements as well as available resources. Once you put a plan in place, coordinate between automated systems and manual operations, consider risks and proactive mitigation techniques, and escalate visibility and execution.

5 ADDRESS THE EFFECT ON YOUR CASH FLOW.

Businesses felt unprecedented cash flow headaches in 2020. Proper supply chain visibility can help alleviate many problems and provide a competitive edge. Use the information to

create visibility into payment accuracy and timeliness and assist with critical financial forecasting and transparency into any errors so you can proactively resolve them.

6 MAKE INFORMED DECISIONS.

Complex networks and the ever-changing market mean that live visibility is paramount. Many visibility platforms provide a unified, single source of data that updates in real time. This software is often AI-enabled and will work to learn from your business, predict future outcomes, and design executable plans of action.

7 EXECUTE EFFICIENTLY.

Ensure your organization is prepared to execute on trends and opportunities. Have the right resources and motivations in place to turn these plans into a reality.

8 EXTEND VISIBILITY TO CUSTOMERS.

Real-time visibility can give organizations a leg up on meeting ever-expanding customer expectations. Visibility lets internal logistics teams better manage issues proactively and ensure goods are delivered efficiently. Keep customers in the loop from dispatch to delivery seamlessly and improve overall customer service.

9 USE VISIBILITY AS A PROFIT CENTER.

Visibility requires an upfront investment in software and other automation technology, as well as time. Invest with the understanding that having this visibility will reap financial rewards.

10 REEVALUATE SOFTWARE AND TECHNOLOGY REGULARLY.

To remain best-in-class, work actively to stay up to date on new technology that can expand or supplement visibility. This could include updated software and technology, or other areas of automation to improve operations and processes.

SOURCE: MATT HUCKEBA, COO, SPEND MANAGEMENT EXPERTS

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—Susan DeVore, CEO of Premier, a healthcare performance improvement company



VACCINES PREPARE FOR LIFTOFF

Ghana is the first country in the world to use drones to deliver the COVID-19 vaccine to healthcare facilities. COVAX, an initiative led by UNICEF, shipped 600,000 doses of the AstraZeneca/Oxford vaccine from its facility in India to Ghana, using Zipline’s national drone delivery service. The goal is to deliver at least 2 billion doses to low- and middle-income countries by the end of 2021.

Drone delivery ensures rapid, equitable access to the vaccine for the 12 million people in Ghana living outside cities. UPS transfers the vaccines to the distribution center and provides ground delivery to the government’s regional cold stores. Once the vaccines arrive at the distribution center at Mpanya, they are flown to healthcare facilities in the region.

Zipline’s distribution center — part fulfillment warehouse and part drone airport — is equipped to deliver more than two tons of temperature-controlled medicine weekly.

DOMESTIC PRODUCTION IS THE BEST MEDICINE

In April 2020, prices of 3M N95 masks rose 6,136% as demand spiked. Shortages could have been worse if not for the tens of thousands of makers and manufacturers that pivoted to create supplies, says a Harvard Business Review report.

Here’s how domestic production can create stronger healthcare supply chains before the next crisis, the report says:

Respond to aid in a coordinated way.

Overwhelmed hospital staff responded to an influx of calls offering help by setting up electronic mailboxes or posting needs on their websites. Needs shifted so fast that items in short supply one week were overflowing the next.

Hospitals and healthcare facilities will benefit from a single point of contact for coordinating with

alternative manufacturers and personal protective equipment (PPE) donors.

Curate and vet equipment designs.

Without FDA approval, new designs from inexperienced suppliers could be ineffective. Open Source Medical Supplies, founded by makers and doctors, created a library listing 195 open-source designs for PPE and medical devices. This eliminates the need for suppliers to create customized designs and enables them to produce effective items faster.

Identify alternative suppliers early.

Manufacturers producing critical supplies often weren’t on the radar for hospitals. Forming relationships now and adding firms to approved vendor lists will help healthcare facilities pivot quickly during a crisis.

For example, Maryland Made to Save Lives’ database



lists manufacturers in the state by area of expertise, allowing healthcare facilities to find alternate suppliers.

Perform drills to test supply availability.

Preparing for large-scale supplier disruption should be incorporated into disaster drills. While it’s common for hospitals to hold emergency preparedness drills, they often don’t involve suppliers.

Many smaller facilities, such as nursing homes and community clinics, don’t hold drills but should start.

Cut red tape for billing and payment.

During a crisis, rigorous invoicing processes can be a liability. Allowing local facilities and managers greater discretion in billing can enable faster response. One potential approach is a discretionary fund. Another is a public rapid-response fund.

DATA-SHARING IS CARING

Moderna and IBM are partnering to explore artificial intelligence, blockchain, and hybrid cloud technologies that foster near-real-time tracking of vaccine administration. The initiative aims to accelerate secure information sharing between governments, healthcare providers, life science organizations, and individuals.

Initial work will focus on exploring IBM capabilities in the United States, including solutions that provide end-to-end traceability to address potential disruptions. The solutions enable governments and healthcare providers to quickly and securely share data regarding individual vaccine batches as they travel from manufacturing facilities to administration sites.

One of IBM’s blockchain-based solutions, called Digital Health Pass, helps individuals maintain control of their personal health information and share it securely. Organizations can use it to verify health credentials for employees, customers, and travelers based on certain criteria, such as test results, vaccination records, and temperature checks.



“PACKAGING OR INSERT ISSUES ACCOUNT FOR 13% OF ALL PHARMA RECALLS.”

—Chris Harvey, SVP of Client Services, Stericycle



PATCHING UP TRANSPARENCY

Digital solutions can improve healthcare supply chain transparency and ease future disruption in these three ways, says a report from Labnews.co.uk:

- 1 Easing shortages.** Medical workers report facing order quantity restrictions for PPE, forcing them to use makeshift supplies in-house. Platforms such as GetUsPPE.org can help match available PPE with the locations that need it most. In approximately two weeks, the tool sent 83,136 PPE items to 135 U.S. healthcare facilities.
- 2 Streamlining appointments.** Even in initial vaccine rollouts, many areas experienced appointment no-shows and shortages that delayed second doses. QliqSOFT launched a chatbot that alerts patients when vaccines are available and when they're due for a second dose. The chatbot also provides transportation options, making it easier for patients to reach vaccination sites.
- 3 Replenishing supplies.** Online platforms make it easier for people to refill prescriptions, which can help improve patient outcomes. During the pandemic, many pharmacies waived prescription refill limits, using online interfaces to implement blocks when people tried to refill prescriptions with more than a specific amount of stock remaining. This helped patients get more of their medication, while offering distributors the transparency to prevent unnecessary stockpiling and unexpected shortages.

MORE THAN 50% OF HOSPITALS HAVE DELAYED THERAPIES OR CHANGED PATIENT CARE DUE TO A DRUG SHORTAGE.

—American Hospital Association 2019 Report

TOSSING OUT PAPER PROBLEMS

Paper inserts containing dosing and technical information are legally required inside every box of medicine. If the information is incorrect or out of date, it can cause recalls that disrupt the entire drug supply chain.

Drug company Novartis came up with a blockchain solution that provides patients with digital versions of the inserts that can be updated in real time, which speeds up packaging lines and reduces the number of recalls.

Patients download an app and scan a 2D matrix, similar to a QR code, on the outside of the drug package. The scan recognizes the manufacturer and sends a request for up-to-date digital information for the drug. The technology uses random identifiers so patients don't need to worry if their personal health information is secure.

Novartis started a public-private partnership with the EU to move forward with the project, named PharmaLedger, in collaboration with experts in the pharma and technology sectors.

Now with 29 partners and \$22.1 million in funding, Novartis and Merck are both testing the blockchain solution as a secure way for different entities to communicate without revealing confidential information.



HOW LOW CAN YOU GO?

A new reusable ultra-low temperature shipping box, developed by Softbox, is helping Pfizer distribute its COVID-19 vaccines, and provides safe storage at administration sites.

The box maintains the required low temperatures for the mRNA vaccines during shipping for at least 10 days when left unopened. Based on current guidelines, the box can be opened twice per day for up to three minutes at a time. This allows clinicians at administration sites to access the vials required for each day's vaccine clinic without exposing the remaining vaccines.



The box's high-performance insulation materials, in conjunction with dry ice, ensure long-term temperature control. Through a process called "re-icing," the dry ice can be replenished to ensure maximum thermal protection of the vaccines, which can be stored for up to 30 days or more.

READERPROFILE *as told to Karen Kroll*

Sandeep Dalvie: In His Element



SANDEEP DALVIE is global supply chain director of the titanium technologies business with The Chemours Company.

RESPONSIBILITIES: Manage end-to-end supply chain execution; optimize production; implement digital strategy.

EXPERIENCE: VP, supply chain management, Universal Instruments; EVP, MDC Vacuum Products; ERP systems technology consulting manager, BDO; functional analyst, PeopleSoft; manufacturing and process development manager, BIO-RAD Laboratories.

EDUCATION: B.S., chemical engineering in India; M.S. and Ph.D., chemical engineering, Clarkson University.

A key initiative I'm overseeing in Chemours' titanium technologies business is the digital transformation. This requires understanding how introducing new technology will impact our supply chain activity and the cultural change needed as a result.

One goal is to provide all management levels in our supply chain with concise information that enables each manager to make optimal decisions in an efficient way. Another goal is consistency so that each region sees the same set of data and understands how to interpret it. Our decisions become consistent, across all supply chains.

This transformation requires working with third parties to gain information. For example, if we can track a shipment using Internet of Things (IoT) technology and apply predictive or artificial intelligence to identify when a ship will reach the port, based on weather and sailing conditions, we can correct for likely delays.

KEEP IT CLEAN

We also are looking at how we can integrate systems between customers and Chemours to have clean exchanges of data. Then we can pull forecast information from customers' systems and provide more reliable product availability forecasts so we're adding value.

Also part of this transformation is e-commerce. In the chemical industry, most transactions are

business-to-business and e-commerce isn't common. We were one of the first to have an e-commerce portal that allows for self-service. Customers can look up information and place orders.

Our digital transformation requires understanding how new technology will impact supply chain activity and the cultural change needed as a result.

MANAGING CHANGE

With change comes uncertainty. Part of my job as a leader is to focus not only on the tools that are changing, but also on the culture. People need to be ready for the change and see how their roles will evolve. So, an employee who previously entered orders may now solve customers' problems. Helping employees make this change is critical.

We also have to make sure our customer base is willing to change. Sometimes they're unsure about moving to a portal and wonder if they'll remain relevant.

We implemented these changes in a phased approach, constantly looking for input. Customers still can pick up the phone and chat with their counterparts at Chemours. But we also show how the portal makes them more efficient and allows them to access information at their convenience.

This is part of the cultural transformation in our industry—helping people understand that technology is a way to grow the business and add value.

We continually assess whether we've considered the voice of the customer as we've designed the solution, so we're creating something of value, we're customer centered, and we ensure both our Ti-Pure Flex and Ti-Pure value stabilization options meet the needs and expectations of each customer.

Phase one of our digital transformation is complete. Our portal is being used across the globe, in different countries and for different products, and providing a range of information customers need, such as material data safety sheets. We are close to launching tracking and tracing. It's a continuous improvement journey.

It is a different journey than I anticipated. When I was completing my Ph.D. in chemical engineering, my goal was to be a research scientist. I started in research and development with BIO-RAD Labs. When we completed our first product, I was part of the group to scale it into manufacturing.

I found manufacturing challenging, fast paced, and exciting. I settled in operations and supply chain and really enjoy it. ■

Sandeep Dalvie Answers the Big Questions

1 If you had a super power, what would it be?

Looking into the future. That would prepare you to understand what's going to happen.

2 What advice would you give your 18-year-old self?

Do not worry. Things are going to be fine. Continue working hard, and as you work hard, success will follow. Don't dream of the success, because success is elusive. It is what you do every day that matters.

3 What are three things you check when you wake up each morning?

The first thing I check is the emails that came in overnight, to understand what I need to respond to immediately. The second is the weather: What kind of day are we looking at? Then, I'll take a quick peek to see if friends have added anything new and interesting in WhatsApp.

GLOBAL LOGISTICS SOLUTIONS

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- SHIPPERS RISK COVERAGE SERVICES

[IN FOCUS]

NOTED

The Supply Chain in Brief

> SEALED DEALS

• Lifestyle products and services company Urban Outfitters selected **TGW** to design and implement an automation solution for its new fulfillment center in Kansas City, Kansas. TGW's FlashPick system uses the smart robot Revolution, which picks orders automatically and ensures the next phase of picking is being addressed. FlashPick allows Urban Outfitters to use the horsepower or "engine" to pick orders discreetly.



• Los Angeles-based online watch retailer **Watch Gang** invested in **SnapFulfil's** cloud-based warehouse management system after moving to a 10,000-square-foot warehouse. The retailer can now handle thousands of shipments and subscription orders in days rather than weeks. SnapFulfil managed the entire process remotely, while complying with all COVID-19 restrictions.

• **Rolf C. Hagen**, a global pet product manufacturer and distributor, is deploying **Tecsys'** SaaS software across its multinational warehouse and distribution infrastructure. The platform unifies disparate data silos and complex operations in North America and Europe, stitching together the company's planning, execution, and delivery capabilities end to end.

> GREEN SEEDS

Cellulose fiber startup **Spinnova** is building a plant in Finland to make a sustainable textile fiber from wood and waste. It aims to reach commercial production capacity by the end of 2022. Spinnova's technology enables the production of textile fiber without using dissolvents that are harmful to the environment.



Sustainability-focused shoemaker **Allbirds** made a \$2-million investment in Natural Fiber Welding to bring a vegan leather replacement option to customers. Natural Fiber Welding's products include a tough cotton fiber made using the company's proprietary processing technology and a plant-based leather substitute.

Schneider Electric initiated an enhanced global supply chain decarbonization service to help organizations address the significant emissions volume contained in their value chains. The company also committed to reduce carbon emissions from its top 1,000 suppliers' operations by 50% by 2025.

> SHOVEL READY

Supermarket chain **Aldi** broke ground on a distribution center near the Port of Mobile in Loxley, Alabama. The 570,660-square-foot divisional headquarters and distribution center will service more than 100 stores in Southern Alabama, Mississippi, Louisiana, and the Florida panhandle.

Amazon is opening a 20,000-square-foot last-mile delivery station in the Long Island City neighborhood of Queens in New York City. The e-tailer has opened, or will open by 2022, at least eight other delivery stations in the city.

Phoenix-based mattress producer **Brooklyn Bedding** plans to build a 648,165-square-foot manufacturing facility and new headquarters in Glendale, Arizona, by December 2021.

> M&A



■ Transportation and logistics provider **cargo-partner** acquired Dutch logistics company **Transcargo**.

■ **Fastfrate Group**, an asset-based trucking and intermodal company, acquired **ASL Distribution Services**, a transportation, warehousing, and final-mile service provider.

■ Global supply chain services provider **Geodis** acquired **Pekaes**, a transportation and logistics services provider.

■ Global logistics provider **Kuehne+Nagel** acquired **Apex International**, a freight forwarder serving Asia.

■ **Transportation Insight**, a North American logistics solutions provider, acquired **Transaver Global Services**, a provider of managed transportation and freight audit services in the United States and Canada.

> RECOGNITION

Logistics provider **ArcBest** has been recognized as one of America's **Best Large Employers** for 2021. Forbes and Statista selected the list through an independent survey of more than 50,000 U.S. employees who rated their willingness to recommend their employers to friends and family.

Memphis-based third-party logistics provider **Cornerstone Systems** was named a **2021 USA Top Workplace** by Energage for putting its people first. Survey results showed Cornerstone employees said they felt appreciated and fulfilled.

> GOOD WORKS

• **Averitt Express** associates volunteered more than 5,000 hours of community service in 2020. They helped 118 organizations with food and toy drives, disaster relief, mask sewing and donations, cleanups, and blood donations. Averitt's executive team matched dollars for hours with a donation of \$53,420 to Averitt Cares for Kids.

• **Fleet Advantage**, a trucking business analytics, equipment financing, and cost management provider, donated \$15,000 through their Kids Around the Corner foundation to Arc Broward, a South Florida organization dedicated to advancing and enriching the lives of people with special needs and developmental disabilities.

> UP THE CHAIN

Pelican Products, a portfolio company of private equity investment firm Behrman Capital, named **Jeffrey Goldberg** as vice president of worldwide supply chain. Goldberg is responsible for supply chain strategy as well as overseeing supplier quality and supply management. Goldberg previously held senior operations positions in the automotive, electronics, consumer goods, and medical device industries with Remington Outdoor, Smith & Nephew, and Linvatec.



Evans Distribution Systems, a third-party logistics provider, named **Dawn Harthun** as its new director of international solutions. Harthun will oversee international sales, solutions development, and account management. She brings to Evans her extensive experience in operations, international supply chain, and U.S. trade compliance with Maersk, UPS Freight Solutions, and HoMedics.

Pete Suerken was named the new president and chief executive officer for **Wendy's Quality Supply Chain Cooperative**, a purchasing cooperative in the fast-food restaurant industry. As a senior leader in global supply chain and business operations, Suerken brings experience in sourcing, procurement, distribution, commodity management, and business transformation operations for large corporations.

[IN FOCUS]

TAKEAWAYS

Shaping the Future of the Global Supply Chain



50 Orders in 6 Minutes

Kroger continues to invest in its digital business. By opening America's first automated warehouse with digital and robotic capabilities in Monroe, Ohio, the supermarket chain can assemble a 50-item order in just six minutes. Comparatively, a Kroger employee takes 30 to 45 minutes to pick items from various areas of the store.

The \$55-million, 335,000-square-foot fulfillment center, called a "shed," is the first of 20 automated warehouse and distribution facilities to come from a partnership between Kroger and Ocado, a dedicated online grocery retailer based in the United Kingdom.

An Ocado shed helps grocers achieve a higher quality of order fulfillment compared to the in-store experience, which may find a grocer short on an item or out of it altogether. Ocado is working on similar partnerships with several grocery companies worldwide.

Sixty million households shop with Kroger each year. In 2020, the grocer had more than 1.3 billion customer interactions across its digital modalities, a 30% increase from 2019. Kroger plans to open additional Ocado sheds in 2021.

Air Cargo Cruises Back

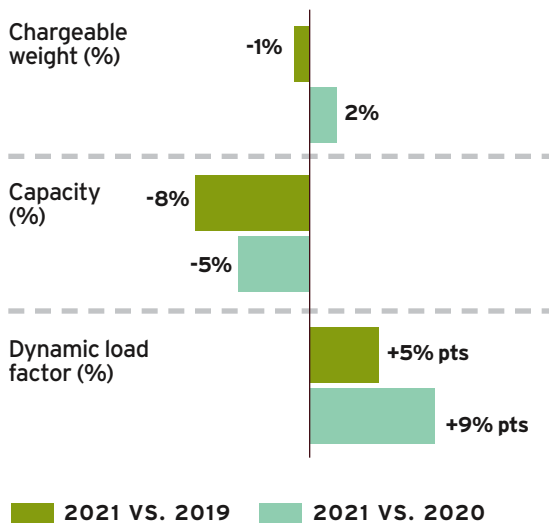
The global air cargo market has nearly recovered to post-COVID-19 volume levels within 10 months, according to airline performance data from CLIVE Data Services and TAC Index.

For the four weeks of February 2021, chargeable weight was just 1% compared to February 2019 and was 2% ahead of the same month in 2020. Capacity in February 2021 was down 8% and 5% versus 2019 and 2020, respectively, while the dynamic load factor—calculated based on the volume and weight perspectives of cargo flown and capacity available—was up 5% in February 2019 and up 9% in February 2020, the research says.

The overall dynamic load factor of 69% was at the same level as January 2021 while month-over-month volumes climbed 7%, despite February being three days shorter than January, as capacity rose 5% over January. February 2021 saw the largest drop in yield compared to the past two years during the four weeks around Chinese New Year. The volume, capacity, and load factors continue to be reflected in higher prices.

SOURCE: CLIVE DATA SERVICES

FEBRUARY GLOBAL AIR CARGO VALUES



USPS STEPS UP ITS FLEET GAME

The U.S. Postal Service (USPS) invested in the most significant modernization of its fleet in three decades. It recently awarded a 10-year contract to Oshkosh Defense to manufacture a new generation of U.S.-built delivery vehicles as part of a multi-billion-dollar effort to replace the entire fleet.

The new vehicles will be equipped with either fuel-efficient internal combustion engines or battery electric powertrains. Oshkosh Defense will assemble 50,000 to 165,000 of the next-generation delivery vehicles (NGDVs) in the next 10 years.

The NGDVs will include AC and heating, improved ergonomics, and advanced technology such as 360-degree cameras. They will also have increased capacity to accommodate higher package volumes resulting from e-commerce growth.

The U.S. Postal Service's next-generation delivery vehicles will appear on carrier routes in 2023.

SOURCE: USPS

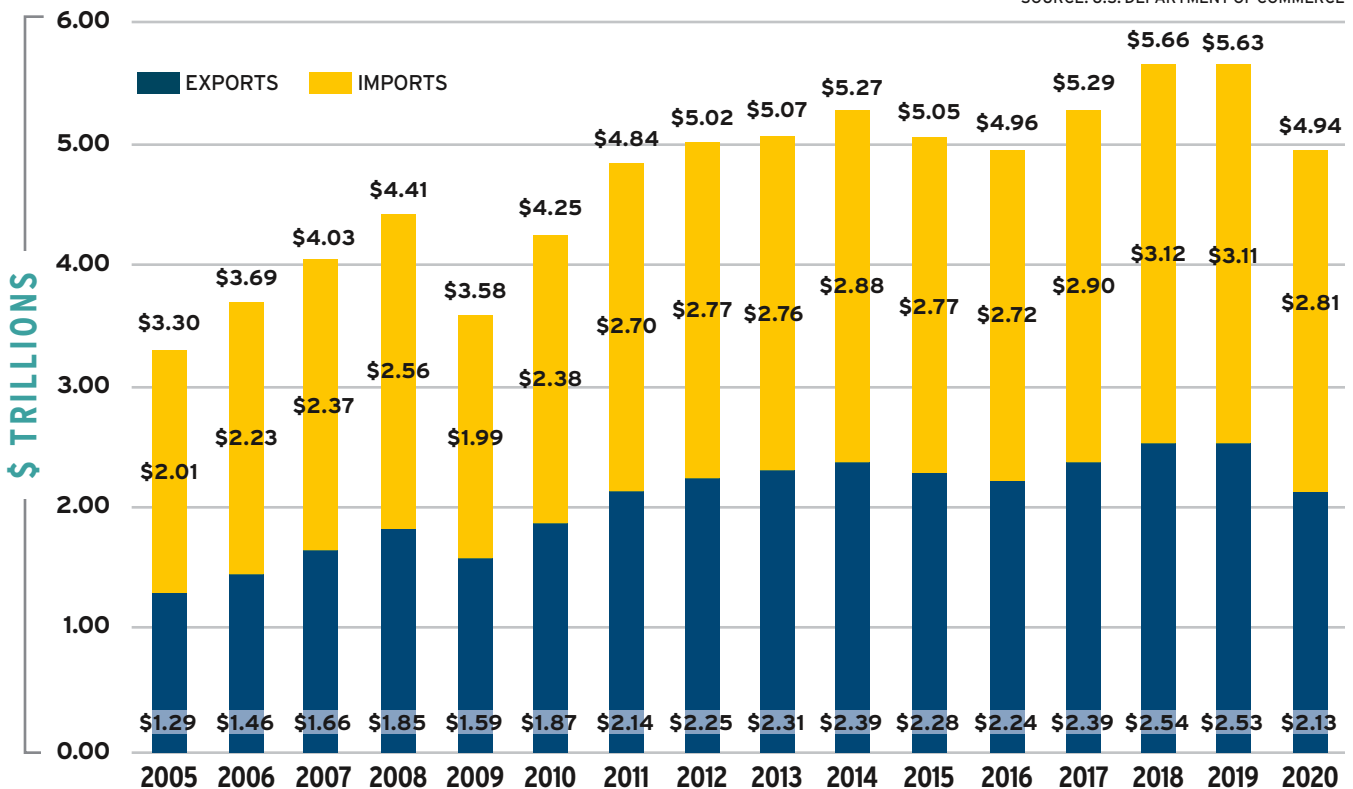


U.S. Trade Ups and Downs

Exports and imports of goods and services in the United States decreased 12.3% to \$4.9 trillion in 2020, the largest nominal decrease since 2009, according to data from the U.S. Department of Commerce. Exports decreased by 15.7% while imports decreased by 9.5%. Total trade decreased as well, representing 23.6% of gross domestic product in 2020, down from 26.3% in 2019, the data says.

VALUE OF U.S. GOODS & SERVICES TRADE

SOURCE: U.S. DEPARTMENT OF COMMERCE



TAKEAWAYS



SITES SET ON MULTI-USE LOGISTICS

Companies looking for last-mile services close to consumers are focusing on multi-use logistics sites, according to research from JLL Capital Markets.

Multi-use logistics facilities are typically 20,000- to 100,000-square-foot multi-tenant industrial buildings in densely populated locations. The buildings often contain distribution, flex showroom, industrial showroom, warehouse, and manufacturing space, and have a diversified local tenant base.

Population centers have grown around these old properties, making them almost irreplaceable, JLL says. Compounded by reshoring and e-commerce adoption trends, the growing demand for these smaller, multi-tenant assets has significantly dropped vacancy rates nationwide.

The Art of the Steal

With pandemic-induced lockdowns, e-commerce surges, and transportation restrictions in 2020, cargo theft shifted to new commodities and locations (*see chart*), says a BSI and TT Club report.

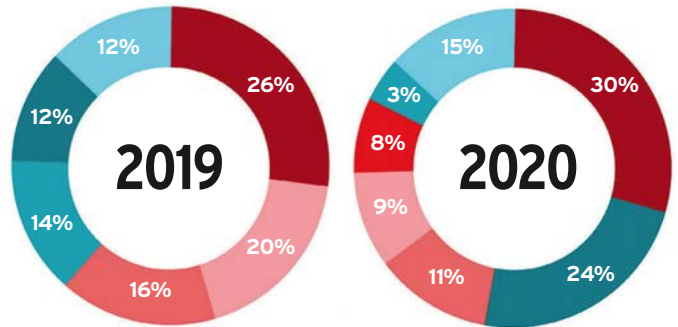
New trends include the food and beverage sector experiencing the most theft, as well as an uptick in theft from facilities compared to 2019.

In the year ahead, shippers should watch for new cargo threats related to vaccine distribution. Bottlenecks at ports and warehouses due to e-commerce surges, and other effects of the pandemic, will only increase opportunities for cargo crime to occur, the report says.

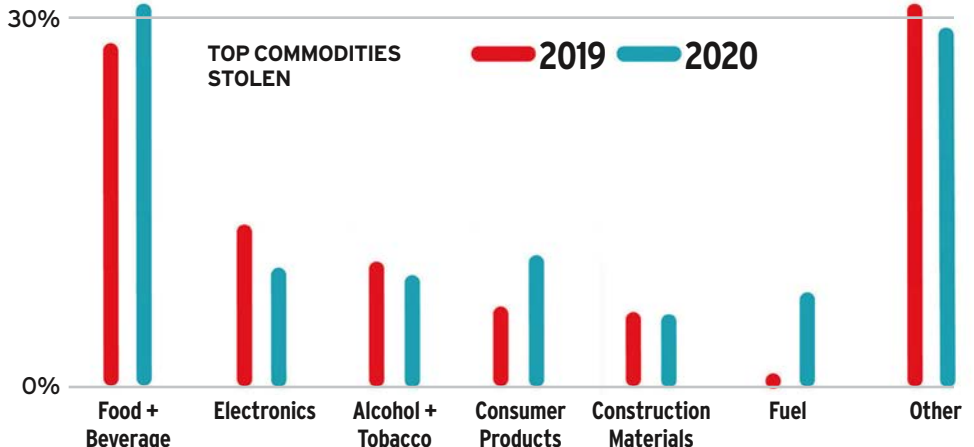
CHART SOURCE: BSI

CARGO THEFT TYPES

- Hijacking
- Theft of container/trailer
- Theft of vehicle
- Theft from vehicle
- Theft from facility
- Slash and grab
- Other



MODALITIES OF THEFT





TAKEAWAYS

Trucking Transformation

Truckers have transformed the previously laborious process of delivering a package with innovations such as capacity-as-a-service, and automated driver assist. Now, 64% of truck executives responding to an IBM survey say their future success depends on digitally reinventing themselves. This is what trucking will look like in 2030, the report says:

\$99.2 BILLION

The truck-as-a-service market will exceed this number.

1 BILLION

Lines of code needed for a fully autonomous vehicle.

100 TRILLION

The universe of sensors will reach this number.

80% OF COMMERCIAL VEHICLES

will be connected.

15 CONNECTED DEVICES

Number of devices every person will own.

70% GROWTH

in global freight volumes.

21.4% TO 14.2 BILLION TONS

Growth of truck freight tonnage in the United States between 2019 and 2030.

\$465 BILLION

of annual revenue will likely shift from sales to services by 2030.

\$118 BILLION

will likely be spent to continuously re-skill employees by 2030.

48% OF EXECUTIVES

say personalized customer experiences, enabled by technology, will be an important competitive differentiation.

DRIVER SAFETY

Vehicle features that promote driver safety will continue to be a top priority.

AI STRATEGY: YOUR MOVE

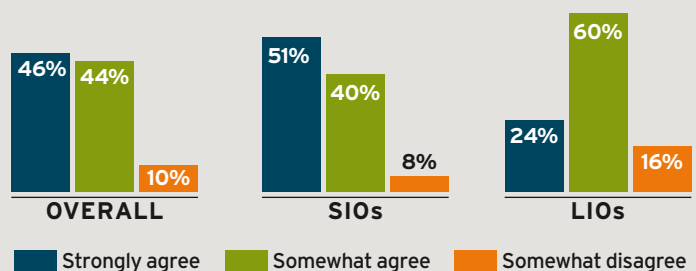
Artificial intelligence (AI) spending shows no signs of slowing, with 82% of decision-makers saying they're very likely to increase their AI investment or capabilities in the next two years, says a report from Modzy. Decision-makers should consider the following factors in their AI strategy, the report says:

- Recognize the value.** About 66% of decision-makers surveyed say they experience significant value from their AI systems. Just 2% say they experience little or no value. While 88% of companies significantly impacted by at least one AI technology are extremely or very likely to increase investments, only 52% of low-impact organizations say the same.
- Big data is a roadblock.** The most common way companies use and benefit from AI is by analyzing large data sets. However, 49% say their organizations lack important data inputs and 42% are missing a clear strategy for accessing data. Data accessibility and preparation are key in overcoming these challenges.
- Lack of explainability and trust.** Cultural challenges are pervasive, with 64% of decision-makers reporting their employees do not trust or understand AI. Decision-makers must identify ways to build trust among groups with differing levels of technical understanding and evaluate tradeoffs between explainability and accuracy to manage risks and promote trust.
- Security threats are increasing.** About 72% of organizations report experiencing security breaches or threats to their AI systems. This suggests many haven't updated their security protocols in response to emerging threats. Anticipating ongoing security challenges, 90% of decision-makers say strong security features are a top priority when evaluating AI technologies.
- Outsourcing is cost-effective.** Expense is seen as the biggest barrier to implementation. About 90% of respondents say it's more cost-effective to rely on external companies than building an internal team (*see chart*). Rather than competing for scarce talent, organizations can leverage vendor expertise to empower their teams to build and manage solutions.

BUY VS. BUILD

Is implementing AI with an external company more cost-effective than building an internal team?

SIOs = significantly impacted organizations
LIOs = low-impact organizations



SOURCE: MODZY

THOUGHT LEADERS

The Role of WMS and MES in Empowering Warehouse Resiliency



Doug Mefford

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www.generixgroup.com/en-na

Doug Mefford has more than 25 years of experience in the supply chain industry, from inventory control to operational leadership within an omnichannel distribution operation.

Q: *What recent trends have emphasized the importance of warehousing resiliency?*

A: Fluctuations in demand patterns and methods of purchase require warehouses to adjust and adapt their order fulfillment workflows within their WMS. In many cases a warehouse operation is set up for 1 or 2 flows such as case pick, bulk pallet pick, or each pick. With the change in demand, particularly in retail for consumer goods, there is a need to be flexible and employ new fulfillment strategies.

Having a WMS solution which enables the needed flexibility is key to responding to these changes. From variable allocation strategies to mixed demand consolidation needs, the warehouse management system can be a valuable tool to achieve resilience in the face of these changes.

COVID has accelerated online purchasing by roughly 5 years in just one year. With “buy online pick up in store” increasing significantly, there is a need for mixed order type picking for single customer as well as store replenishment coupled with the ability to consolidate the demand for efficient delivery of mixed demands to the same destination.

Additionally, the changes in delivery timelines to “next day” and in some cases “same day” require a measure of resilience to respond to the impacts on processing. Employing smaller waves or moving towards fully waveless processing has been increasingly popular. These changes require a warehouse management system that is flexible and configurable.

Q: *How can manufacturers adjust to the accelerated demands of e-commerce fulfillment?*

A: Not all manufacturers will be impacted by these changes in demand as they continue to supply their products through existing wholesale channels. However, the manufacturers that are considering selling direct-to-consumer will encounter many necessary changes to be made.

For instance, inventory will have to be available to supply existing wholesale demand while also supporting each quantity demand for consumer orders. Leveraging a warehouse management solution with an embedded manufacturing execution system (MES) will allow for more flexibility to address the variable channel fulfillment.

Solochain WMS includes an embedded MES and therefore provides the necessary inventory management, track-and-trace capabilities needed in manufacturing, and provides the flexibility required to execute the fulfillment of both wholesale and consumer orders.

Generix Group North America provides a series of solutions within our Supply Chain Hub product suite to create efficiencies across an entire supply chain. Since 1990, we have successfully addressed the challenges of building complex, multistage supply chains for customers around the world.

WMS Must-Haves: Adaptability, Scalability for Efficiency and Profit

Q: *What do you consider to be the primary commercial advantages of a contemporary WMS?*

A: The DNA of a WMS should be adaptable, fast, affordable, and scalable to offer a low entry point into the warehouse versus Tier 1 solutions, while at the same time providing a platform that expands exponentially according to the client's requirements.

Q: *With a WMS you must be able to build fast and efficient ways to accommodate changes in client requirements or adapt to changing environments. What is your point of view?*

A: A WMS must be designed to allow clients the "keys to the car" so to speak, where they can extend the functionality of their WMS without custom coding. Thus, clients can extend according to their requirements without time-consuming plans or make process modifications essentially on the fly.

The actual benefit of a WMS must be the rapid initial implementation and then in the case of 3PLs adding new clients is a fraction of the expected cost.

Modules as proprietary WCS tightly integrated with the WMS as well as an advanced module for interfacing have to be designed to work as universal connection tools to allow for integration into virtually any automation, ERP, or e-commerce shopping carts with little configuration by the client resources and not necessarily the WMS vendor's development team.

Q: *What tools should a WMS own to gain insights on performance and activity?*

A: Warehouse intelligence is of utmost importance providing analytics that actively monitor performance and activity through WMS related KPIs, visualizations, and measures.

It is essential to provide both historical and trending data to the management team, as well as dashboards on real-time productivity, activity, and work content to the floor. The mantra will be if we capture it in the system, the customer can manage and display in dashboard formats the progress and performance of the operation as it happens.

The true benefit of this real-time visibility is measured in the increase in performance of the operation by 20% per hour, as well as actively balancing the requirement of labor from a day-to-day basis.

Having the ability to know that on a given day, your performance in picking would be 50 lines per hour, and at 2:20 pm you have 1,150 lines left, you would require an additional 23 hours of picking or call in 10 people on picking.

You could then adjust your labor as required during the final 2.5 hours of the day or send home unnecessary labor to save money and time.

Mantis offers all the aforementioned, together with many more modules and systems to create the most appropriate logistics solution for your enterprise.

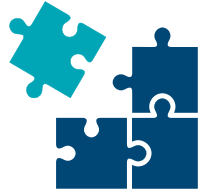


Lee Rector

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Mantis Americas
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678-784-4015**

Supply Chain Challenge?

SOLVED



Cross Dock Delivers New Level of Efficiency for Leading Retailer

Leveraging its network of cross dock locations, Hub Group optimized a top retailer's supply chain, reducing its transportation spend, streamlining inbound operations, and shortening transit times.

THE CHALLENGE

When it comes to optimizing your supply chain network, there's no silver bullet. Refining network operations requires thorough analysis, a well-thought-out strategy, and resources such as innovative technology and established business relationships.

Considering the vast number of purchase orders accruing by the minute, one of the nation's leading retailers sought to reduce their transportation spend, condense inbound loads to their fulfillment centers, and shorten overall transit for their less-than-truckload (LTL) freight. Fortunately, Hub Group's capabilities were the answer they'd been looking for.

THE SOLUTION

After conducting a network analysis, Hub Group executed a series of enhancements to the retailer's supply chain. The solution started with introducing a new, strategic carrier mix to service the company, leveraging industry-leading buying power to source the right carriers at the right time. This solution allowed Hub Group to deliver reduced rates and increased on-time service for the retailer.

Second, Hub Group's strategy aimed to streamline the retailer's vendor network by positioning inventory to execute consolidation opportunities. One of the major headaches with inbound shipments coming into a distribution



center is the dock congestion that occurs. Multiple LTL carriers arriving at the dock not only impact the speed of shipments but with more product handling involved, your freight runs the risk of being damaged or mishandled. Subsequently, both of these factors can drastically impact a company's bottom line. This was a looming problem for the retailer, but fortunately, Hub Group's cross dock solutions gave a smoother, more timely dock process.

Hub Group leveraged its intricate network of cross dock locations throughout the United States to streamline the retailer's global vendor network. Performing this operation for the retailer's fulfillment centers in the Northeast, Midwest, and Central regions, Hub Group lessened transit times for more than 400,000 shipments and consolidated products from multiple vendors, condensing the amount of inbound freight to the retailer's fulfillment centers.

Aside from a network analysis pinpointing focus areas and strategies that streamlined the retailer's inbound

operations, Hub Group's innovative resources served to be invaluable as well. Through our leading transportation management system (TMS), dashboard analytics, and a dedicated account management team, Hub Group increased the retailer's overall visibility to their vast network.

The dedicated team produces weekly scorecards with key performance indicators (KPIs) crucial to the company. Hub Group also manages compliance for the retailer's 7,800+ vendors. This 24/7 monitoring coupled with industry-leading technology allows the team to be agile to the organization's ever-changing needs and requests, including varying EDI mapping and a vigorous peak season.

You don't become one of the nation's leading retailers without having time-sensitive solutions in place. When this retailer chose to work with Hub Group, they leveraged a dynamic service provider that could produce out-of-the-box results for their rapidly growing supply chain.



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[INSIGHT]

COVIDRECOVERY

by *Justin Marx*

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Meat Importer Carves Out Success

The meat supply chain starts at the farm gate and goes to the dinner table, making several sea, land, and air freight connections until it arrives at a local distributor, which serves either the retail or food service (restaurant) markets, but typically not both.

This bifurcated supply chain also must keep product refrigerated or frozen and transport goods to the end user without delay due to shelf-life constraints. No link can be overlooked, lest it become that dreaded weakest link.

Since our company imports and distributes to each level of the supply chain, including the last mile, we have visibility into each link. In 2020, COVID taught us a lot about how to manage our supply chain in 2021.

DIVERSIFY SHIPPING METHODS

I often wonder whether maintaining three distribution channels is too complex: LTL freight to distributors; our own delivery vehicles to restaurants and retail from our distribution centers; and FedEx to online customers. But that complexity helped us capture opportunities that made a difference.

When restaurants stopped buying specialty cuts, we were poised to FedEx those goods to consumers' homes. To keep drivers employed in Q2, we did home deliveries using our sprinter vans. When our distributor customers couldn't take full pallets, we shipped smaller.

I never thought of supply chain diversity as an aim, but we'll lean heavily on it as we navigate the remainder of the pandemic.

LOOK DIFFERENTLY AT DATA ANALYTICS

Demand planning is a challenge in stable times because we must order 2-3 months ahead of product landing in the United States and the perishability clock starts ticking before product is on the water. Since our customers seldom provide forecasts or commitments, that gap can feel like an eternity during volatile periods.

Our weekly containers from Silver Fern Farms in New Zealand, for example, contain premium grass-fed beef with a 120-day shelf life. We typically receive it about two-fifths through its shelf life, leaving enough time for the product to spend a week or two each in our cold storage and that of our distributors and their customers.

If we order heavy, we have to freeze product and sell at a lower price. If we order light, we miss opportunities that can't affordably be remedied via air freight.

Initially we expected 2021 buying to be impossible due to the unreliability

of 2020 data. But because 2020 data fit neatly into the quarterly calendar for our industry, it was actually very useful.

Most of Q1 was pre-COVID, making it a "normal" quarter. Q2 saw a restaurant lockdown and retail and online surge. Q3 was characterized by lifted restrictions and outdoor dining possibilities. Q4 was a return to partial lockdown at what was hopefully peak COVID.

By looking differently at the analytics, we saw that 2020 gave us a range that will help us narrow demand planning and improve timing for shipments in 2021.

RELATIONSHIPS AND COMMUNICATION

The seeds of good communication and strong relationships take long nurturing to germinate and fruit. A key supplier, Silver Fern Farms, made sure that their logistics companies prioritized our shipments and used their global supply chain experience to help us foresee delays and adapt ordering.

They did so because for more than a decade we've collaboratively built their brand in the United States. At the customer level, good communication helped clarify some opacity in our crystal balls and adjust our supply chain to their needs.

On that journey from farm to dinner table, our history of collaboration and communication bore fruit when it was most important. ■



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ACQUIRED THE US OPERATIONS OF TOLL GLOBAL LOGISTICS

Taylorred Services, a national leader in distribution, fulfillment, e-commerce, and warehousing has acquired the U.S. operations of Toll Global Logistics.

This addition triples the company's footprint in key distribution metros while simultaneously bolstering Taylorred's position as a top 3PL provider.

"We pride ourselves on being growth-oriented, performance-driven, and customer-focused. Our mission is to serve our customers by leveraging our logistics expertise, continued investment in technology, and a network of strategically located facilities to bring down our customers' costs and shorten their delivery times in this rapidly escalating direct to consumer retail environment."

- Jim DeVeau
President and CEO



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[INSIGHT]

LEANSUPPLYCHAIN

by Paul A. Myerson

Instructor, Management and Decision Sciences, Monmouth University, and author of books on Lean and the Supply Chain for McGraw-Hill, Pearson, and Productivity Press
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Omnichannel Delivers, But at What Cost?

Amazon, the most successful e-commerce company of all, gained a competitive advantage through its two-day free delivery for Prime customers. Many other pure e-tailers and brick-and-mortar retailers moving to omnichannel retail—where customers engage with companies in a variety of ways, including in a physical store, or via websites and mobile apps—have followed suit to some degree.

Amazon's dirty little secret, however, was that it was losing billions each year (\$7.2 billion in 2016). The reason you didn't hear more about it was that profits from the Amazon Web Services business more than offset the losses.

Since that time, Amazon and other e-tailers and omnichannel retailers have struggled to adjust to this new world. Amazon is experimenting with drones, a private fleet of planes and food delivery trucks, as well as Amazon Logistics, where independents sign up to buy their own vans and deliver Amazon products.

As a result of focusing on these costs, Amazon is reducing per-package and per-order transportation expenses every quarter of every year.

Non-Amazon omnichannel retailers who can't buy their own fleet of planes or vans have had to turn to other options, such as minimum

order sizes for free shipping, curbside/in-store/locker pickups, and even having employees drop off orders on their way home.

REDUCING FULFILLMENT COSTS

It has been estimated that up to 18 cents out of every dollar generated online goes to fulfillment costs (shipping and handling), driving e-commerce and omnichannel retailers alike to reduce fulfillment costs in a variety of ways.

Walmart, for example, charges \$5.99 for shipping and handling on orders of less than \$35. Because shipping alone averages \$2.99-\$3.99, that is about the minimum a retailer can charge and break even. This charge varies based on each order's size, weight, and distance.

Last-mile delivery is a critical part of an organization's transportation network, as it can make up 28% of a

shipment's total cost. Ways to reduce last-mile delivery costs include offering a range of shipping options, dropping off packages at access points such as lockers, limiting distance, and changing/optimizing box sizes.

Before delivering orders, you have to process them. Fulfillment, which technically includes delivery, as well as receiving and processing of orders, is another area of focus.

Twenty-five years ago, it took 5 days to process an order for shipment from a warehouse. Today, orders typically are processed and shipped within 24 hours, sometimes same day.

To gain a competitive advantage in fulfillment, consider and understand your true fulfillment costs per order, necessary metrics and benchmarks (costs, productivity, service), picking and slotting efficiency, employee turnover, management experience and level of training/education, use of technology, outsourcing, facility size, location and functionality (i.e., e-commerce only or a blend with retail replenishment).

In the long term, the e-commerce and omnichannel retail winners will be those who master fulfillment and last-mile operations and costs. ■



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[INSIGHT]

SCSECURITY

by David Jarmon

Vice President, Cybersecurity & DevSecOps, Gray Analytics, Inc.
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Can Your Supply Chain Withstand the Unexpected?

Today's supply chain is vast, expanding to every corner of the globe. With this expansion, the threat has increased significantly due to the larger attack surface. Add to that a global pandemic and the need to protect the supply chain has never been more important.

Traditional threats, such as cyber effects, remain and are becoming more sophisticated. Natural disasters have always been a supply chain threat, however, insert COVID-19 and the game changed. All consumers felt the pain.

How do we defend such a dynamic threat to the backbone of how we consume goods and services? Here are tips to achieve a secure and available supply chain.

Determine the information that is the foundation of your company's success. If lost, what information would disrupt your ability to generate revenue?

Once you answer the question, back up this data. Ensure you have onsite and offsite backups and a plan to reconstitute your systems if required. Data backups and restoration procedures serve as an effective first line of defense against both cyberattacks and natural disasters.

Know your internal supply chain. If you're reading this, it's likely you require some form of good or service to be successful. Know who is vital

to your supply chain and look for acceptable alternatives.

From a cyber perspective, it's beneficial to ask suppliers about their cyber hygiene and practices. To the extent possible, do business with companies able to survive a cyber contested event without impacting your business.

For natural disasters, find acceptable suppliers around different parts of the globe that are widely dispersed. You may incur shipping delays, but you'll maintain essential forward momentum.

Secure your systems. Basic cyber hygiene goes a long way in protecting your information and ensuring availability of your networks.

Multi-factor authentication, least privilege, antivirus software, patch management, and boundary defense are not difficult to implement and often deter adversaries from persistently trying to gain access to your systems. Numerous government and industry standards, such as SANS and NIST, can be used as guidelines.

Consider third-party cyber assessments. There's no shortage of companies that can quickly assess your cyber hygiene and recommend how to improve your cyber posture. Set aside the money to have these assessments performed annually. It's cheaper to stay ahead than to recoup lost revenue.

Conduct cyber training with your employees. Your first line of defense will always be your employees. At a minimum, conduct annual, mandatory cyber awareness training.

Purchase cyber training online or conduct it in person. Look for a reputable company that ensures the training is informative and interactive, and holds attendees' attention.

Plan for the worst. Develop a disaster recovery plan anticipating cyber incidents, natural disasters, political events, and global pandemics. The most important aspect of a disaster recovery plan is to exercise it annually. Conduct a tabletop exercise with scripted scenarios and practice your reactions to help identify any gaps in your plan.

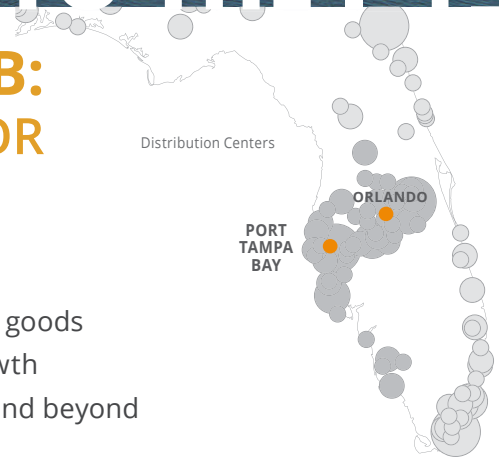
Do your part and dedicate the resources needed to ensure your supply chain is as secure and available as practical. In the end, it's cheaper to prepare than to recover. ■



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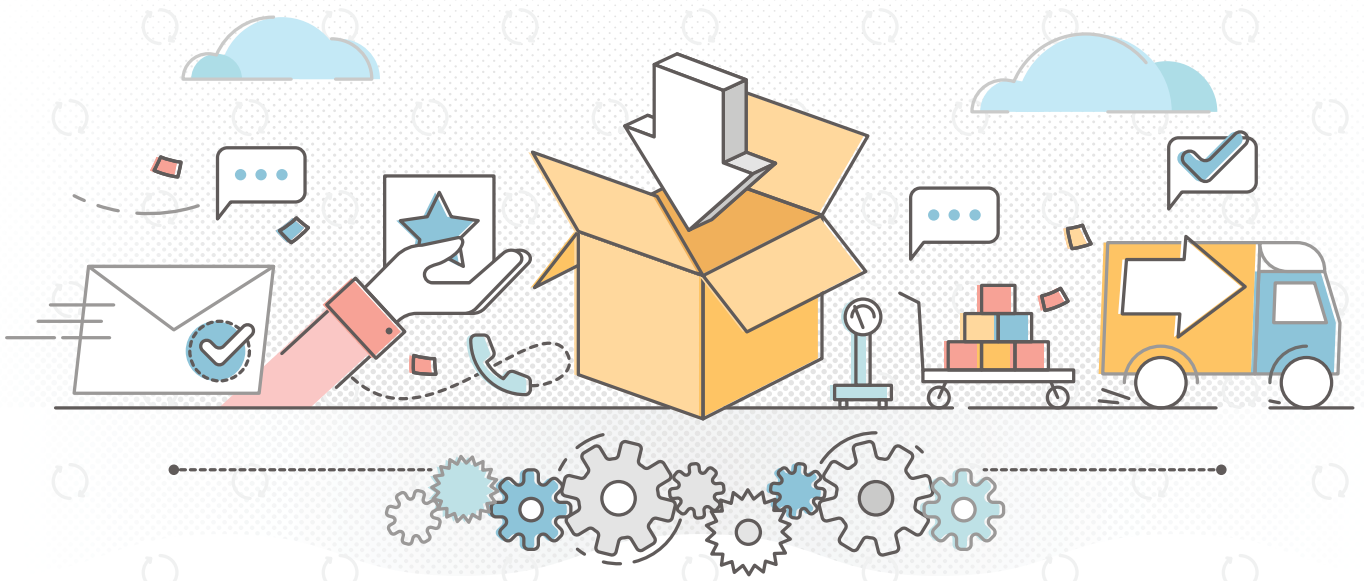


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E-Commerce ENABLED

To survive—and thrive—in today’s accelerated e-commerce environment, companies are reworking fulfillment strategies and supply chain networks. These providers offer scalable solutions.

It’s not surprising many companies are reworking their e-commerce operations, fulfillment processes, and supply chain networks. While traditional retail sales declined in 2020, e-commerce orders for U.S. and Canadian retailers more than doubled, rising 129%, says Raziel Bravo, vice president, strategic management office with GEODIS in Americas, a leading supply chain management provider.

For example, the pandemic transformed grocery e-commerce. About 35% of U.S. households now buy food and beverage products online, an approximately tenfold increase from 2019, according to L.E.K. Consulting. Without the pandemic, this growth likely would have taken three to five years to achieve. And while millennials and members of Gen Z previously accounted for the bulk of e-commerce shoppers, traditional brick-and-mortar shoppers and the older generation have also shifted to online purchasing.

These shifts show no sign of stopping. In 2021, estimates the National Retail Federation, online sales will grow by 18 to 23%, to total between \$1.14 and \$1.19 trillion.

Another challenge for many U.S. companies is how warehouses typically cluster in commercial areas that can reach much of the population within a two-day drive. While that can cut delivery times, all compete for the same shrinking labor pool. “Warehouse operators have to find, attract, and keep talent,” says Karen Leavitt, chief marketing officer with Locus Robotics, a robotics firm focused on e-commerce fulfillment.

A daunting challenge before the pandemic, labor retention has become even more so, now that workers must remain socially distanced while on the job. Companies need to use their employees as efficiently—yet safely—as possible.

Together, these macro trends are forcing all businesses—but particularly retailers, consumer brands, and e-commerce firms—to revamp supply chain operations to drive productivity, flexibility, visibility, efficiency, and agility.

“To be competitive, retailers need to be able to provide products when, where, and how consumers want,” says Scott Shaw, senior consultant and consumer products supply chain practice lead with Clarkston Consulting, which provides management and technology consulting services.

Accomplishing this often requires a departure in thinking. Many traditional consumer products supply chains are well-equipped to move pallets and cases from suppliers to distribution centers and then to retail stores.

However, “in an omnichannel world, the line between distribution centers and retail locations begins to blur,” Shaw adds. Distribution centers now ship both to stores and to end consumers, while brick-and-mortar stores are packing and staging customer orders for delivery or curbside pickup. Retailers need systems that work across all channels.

Visibility and flexibility have become key supply chain attributes. “The question is not if there will be disruptions in demand and supply, but rather when they will occur,” Shaw says. Visibility allows organizations to detect disruptions, while flexibility enables them to act to mitigate the impact.



By supporting retailers and other enterprises with e-commerce sites, GEODIS can shorten the click-to-delivery timeline, reaching more than 95% of U.S. customers within one or two days.

Technology can help companies meet these challenges and compete in today's omnichannel environment. The solutions likely to play key roles include artificial intelligence and machine learning, which can help companies anticipate the channel and geography through which different orders will come so they can better prepare for them, says Suketu Gandhi, a partner and global digital supply chain leader with Kearney.

MOVING INFORMATION

While the Internet of Things (IoT) provides supply chain visibility, connecting technologies, such as cloud computing and application programming interfaces (API), enable the efficient movement of information. That's key, given the largest retailers process millions of orders per day.

Warehouse automation and speed-to-value order processing and fulfillment

will be key as supply chains adapt to meet evolving e-commerce demands, Bravo says. For instance, robotics can improve accuracy, efficiency, and cost-competitiveness, while accommodating the speed with which online orders need to be processed and delivered. Robotics technology, including automated guided vehicles, goods-to-person robotics picking, and automated racking and shelving solutions, boosts efficiency and cost-competitiveness.

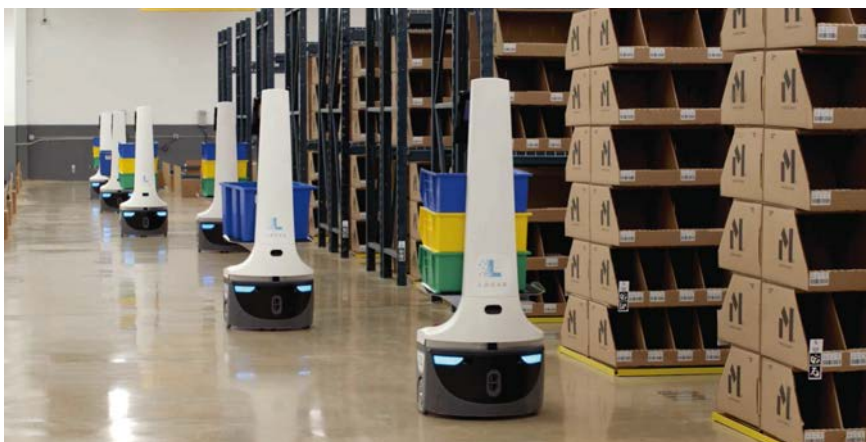
Trying to determine which technology solution will be best suited for this new and changing environment can be overwhelming. And that can make it tempting to wait for a “perfect” solution, Leavitt notes. However, continuing advances in technology make such a goal elusive.

The optimal solution is “one that can deliver value immediately, while also improving over time,” Leavitt says. For instance, robots can often double (or better) productivity from the outset. The software incorporated within robots—which are about 80% software—enable them to continually incorporate what they've learned so they can be even more effective.

“You gain an immediate jump in productivity as well as nimbleness and flexibility,” Leavitt says. “You're not locked into an unchanging system.”

Any technology solution also should offer business intelligence. “With intelligence, you can understand how to take action to improve operations in real time,” Leavitt says.

In addition to implementing



Locus Robotics offers a Robot-as-a-Service model that allows warehouses to deploy automation at a reasonable price, providing the flexibility to meet e-commerce demands.

technological solutions, many companies will need to adjust their operations to succeed in the fast-changing e-commerce environment.

This can be seen in the growing trend to use urban micro-fulfillment centers to address challenges with last-mile delivery, Bravo says. These centers, which often can be developed by reconfiguring areas within existing stores, help cut transportation costs and increase efficiencies of same-day orders in densely populated metropolitan areas.

And while machines previously handled about 30 to 40% of supply chain decisions, industry professionals will turn to machines for help with about two-thirds of decisions moving forward, Gandhi says.

That's particularly true when the decisions involve predictions, such as the number of packages that will need to be delivered over the next week. "There's no way you can scale the number of people who can do this and be efficient," he says.

The following providers offer technology solutions that can help companies succeed in the rapidly changing e-commerce landscape.

LINKING SUPPLY CHAIN FACETS

In 1904, Émile Calberon founded a rail freight company in Le Havre, France, that transported luggage and packages by passenger train to Rouens and Paris. The company then delivered the packages from the train station to end customers.

Through hard work, growth, and acquisitions, that company, today known as GEODIS, operates multiple lines of business in 120 countries. It can help companies thrive in the rapidly changing e-commerce and omnichannel environment.

"GEODIS helps companies deliver growth, optimization, and management across various supply chain segments," Bravo says.

The company's global network offers expansive resources, state-of-the-art innovation, and premium service to companies in consumer goods,



By tracking and tracing e-commerce shipments and gaining transparency, retailers can make informed decisions quickly.

retail, high tech, and other industries. GEODIS's global network and expansive offerings in air, ocean, and land allow the company to link multiple facets of its customers' supply chains.

These capabilities are becoming ever more critical. As Bravo notes, customers' purchase histories traditionally drove inventory planning. But with the growth in e-commerce, retailers need to leverage a just-in-time approach to inventory management that spans multiple distribution channels to ensure the right product is in the right place at the right time.

They also need to track and trace shipments, strategically manage inventory, and gain transparency so management can make smart decisions more quickly.

The GEODIS portfolio of technology and services offers supply chain managers the tools that allow them to navigate this change. It can provide customers a real-time view of inventory and enables them to manage orders across multiple sales channels. GEODIS also can determine the most appropriate fulfillment model, delivery method, and returns options.

By integrating complex operational systems from multiple supply chain modes into one streamlined view, this visibility can provide valuable insight, alerting managers to the processes that are working and those that aren't. Companies can use this insight to take steps to improve operations.

As COVID-19 changed consumer behavior, GEODIS flexed its operations to help companies similarly shift focus

from brick-and-mortar to e-commerce sales. GEODIS e-Commerce Logistics services drastically shorten the click-to-delivery timeline, reaching more than 95% of U.S. customers within one or two days. This can reduce a company's cost-to-serve by up to 15%.

ENHANCING PARCEL OPERATIONS

Until recently, companies looking for parcel service often focused on securing the lowest cost available through one provider. As e-commerce continues to grow, brands are taking a more strategic approach to parcel transportation, Bravo notes. They're shifting to multi-carrier solutions to ensure they'll have the capacity to expeditiously move products to end consumers.

GEODIS's expansive network of international parcel providers allows a multitude of options to identify the best small parcel provider in real time. If one parcel provider is unable to meet volume needs, GEODIS can swiftly switch to another, based on current capacity and shipping needs.

Another service, GEODIS MyParcel, is a cross-border, small parcel shipping service from anywhere in the United States to 27 European countries. It offers guaranteed delivery in four to six days.

GEODIS's new digital platform, City Delivery, allows retailers to deliver goods directly to consumers from the closest retail store by combining delivery networks of traditional carriers and private individuals, supporting retailer requirements for omnichannel fulfillment.

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As e-commerce growth continues, new technology will revolutionize order fulfillment and last-mile delivery.

“During COVID-19, our agile and scalable approach allowed us to provide reliable, transparent, and cost-effective solutions, enabling brands to rapidly adapt to customers’ needs,” Bravo says.

As e-commerce growth continues, new technology will revolutionize last-mile delivery and order fulfillment, particularly in the urban areas. “GEODIS plans to lead, continue to innovate, and address growing customer demands,” she adds.

QUICK-DEPLOYING BOTS BRING VALUE

The founders of Locus Robotics, based in Wilmington, Massachusetts, were early adopters of robotics technology to improve warehouse productivity in their own warehouses. With 30-plus years of warehouse distribution experience behind them, Locus founders and engineers quickly discovered what robots are capable of doing—and what they’re not.

“Robots are cool, but cool doesn’t pay the bills,” Leavitt notes. Instead, Locus has focused on engineering robots that first provide value, and also are cool. Indeed, aided by LocusBots, warehouse workers can pick two to three times as many items as they were previously.

To accomplish this, the team at Locus Robotics draws on its deep knowledge of warehouse operations and in-depth experience in warehouse automation development and evolution.

Until recently, warehouse operators looking for technology solutions that would boost productivity typically had to invest in large-scale and expensive

grid-based automation systems that would take months to plan and deploy. Locus’s intelligent automation effectively meets the needs of today’s changing and challenging e-commerce fulfillment operations without requiring a massive capital investment, nor months-long installation schedules.

“We can go into any warehouse, whether greenfield or existing, even if they’re shipping tens of thousands of units a day, and deploy within about four weeks,” Leavitt says. Operations don’t need to shut down and the infrastructure can remain largely as is.

Locus offers a Robot-as-a-Service (RaaS) purchase model that allows warehouses to add automation to their operation at a reasonable price and quickly gives them the flexibility to meet volatile demand spikes. If a company is experiencing an influx in volume they can simply rent more bots and then just as easily send them back when volume stabilizes.

“This flexibility to easily scale up or down is key, as the business environment is not predictable,” Leavitt says.

Once they are on site, LocusBots collaboratively work with warehouse associates to increase picking productivity and better manage demand growth. The key is Locus’s unique multi-bot approach to picking: Workers pick higher rates by staying within zones while a fleet of robots travels between pick destinations and the packing station. Because workers are more efficient, many companies can manage several times more volume from within the same footprint, Leavitt says.

Typically, as the volume of merchandise increases, so does the likelihood of congestion. Robots, however, are adept at maneuvering in tight spaces. “They can move more volume through a warehouse, limiting the need for additional space,” Leavitt says.

SUPPORTING LONG-TERM GROWTH

These capabilities often allow companies to postpone—at times, indefinitely—the need to invest in a larger facility to handle e-commerce growth, Leavitt says.

Robots are particularly well suited for companies that process at least about 5,000 units daily, although they can work in operations processing many times that.

“Robots also love complexity,” Leavitt says. The more stock-keeping units a company has and the greater the variety of orders and product profiles, the more benefit a company can expect from its robots, she adds.

The dashboards Locus robots populate with information on real-time operations allow workers and managers to identify areas of both productivity and congestion down to the minute. Management can determine which areas need additional workers or robots and act accordingly.

This information helps management make intelligent decisions around, for instance, slotting. “If a dashboard indicates sustained congestion in a specific aisle, the manager may redistribute inventory to alleviate it,” Leavitt says.

Many traditional automation systems required clients to purchase upgrades to gain access to security enhancements and other updates. In contrast, Locus automatically issues updates, new functionalities like put-away capabilities, and improvements—say, optimizing the way robots navigate tight quarters—through the cloud.

“We constantly use what the system is learning to help it become smarter and help warehouse operations become more productive,” Leavitt says. “Then we distribute these enhancements to our customers so they can better compete and thrive.” ■

B2B materials supplier prepares for a fast-growth future with a fleet of mobile robots




Many companies integrating robotics seek to add them to their current warehouse layout to keep the workflow moving seamlessly. Material Bank, a B2B materials supplier, saw an opportunity to build their entire business model and warehouse around the robotic solution from the very start for even more gains.

There was a specific need to find a technology that can scale as the company grows, with plans to build a facility six times larger than their 74,000ft² facility within the following 2 years.

Locus initially deployed a multi-bot solution of 10 bots that were fully up-and-running in just 14 weeks, picking up to 8 orders at a time on each robot.

Founder and CEO Adam Sandow said, “My team thought I was crazy to start with robots. Typically, you bring in robots to gain additional efficiencies. Instead, I wanted to find the right robotics partner and then build around the right robotic technology to have maximum efficiency.”

Locus Multi-Bot Solution

		
Deployed LocusBots	Weeks for Implementation	Container configurations

Disruption is just the beginning

In just the first 7 months since go-live, Material Bank grew to over 11,000 users in the design industry, growing 30% each month with thousands on a waitlist.

Two years since the successful deployment, Material Bank tripled the amount of robots to 45 with plans to top 100+ in early 2021. They also quadrupled the number of SKUs and grew revenues by 300%. LocusBots initially processed 100,000 units per month and are now processing 3 times that amount.

Results

- 200% increase in picking robots
- 100+ Bots planned for early 2021
- 200% increase in units picked monthly
- 300% increase in inventory
- Expanding to include Putaway



Tote configurations chosen for B2B materials picking

Multi-Tote Induction
for picking multiple orders at the same time

Seven Bin Sizes
to support various sizes of orders and product types

B2B materials supplier

- 74,000ft² facility
- 1,000,000 inventory
- Highly diverse materials + sizes

The solution has also evolved to meet Material Bank’s changing inventory. LocusBots are now utilizing 7 unique tote configurations.

“Speed and accuracy are critical for us to meet customer demand especially with a guaranteed next day delivery by 10:30am” shares Sr. Director of Fulfillment and Logistics Mike Nowell. “Locus delivers a flexible solution to support our ever growing and changing business model which makes them a leader in the industry. They easily stand out above the rest as a great business and solutions partner.” Reach the Locus team at info@locusrobotics.com or (844) 562-8700 today to review your plans for improving productivity. For more case studies, visit locusrobotics.com.





IMPORTS &

EXPORTS

AN INSIDER'S GUIDE TO GETTING IT RIGHT

Experts share best practices to ensure your
cross-border commerce success.

BY MERRILL DOUGLAS

Shipping across international borders is a complex enterprise, ripe for mistakes that can cost time and money. And while you can get help from many resources and service providers, it's still your company's job to get the details right.

"It's the responsibility of the importer of record, or the exporter's U.S. Principal Party in Interest, to be knowledgeable about the process, as well as about the compliance regulations," says Kevin Doucette, director of North American trade policy and compliance at logistics services provider C.H. Robinson in Eden Prairie, Minnesota.

Luckily, Doucette and other experts have valuable insights to share on all aspects of importing and exporting—from meeting tariff obligations to complying with regulations to reducing costs. Here's some advice you can put to work in your own operation.

1 USE INCOTERMS TO YOUR ADVANTAGE

Incoterms define the roles of buyer and seller (*see sidebar*). Importers should choose terms that give them ownership right at the door of the overseas factory, recommends Jason Totah, president of Odyssey International Services, Kent, Washington.

When the vendor is responsible for moving product from factory to port of origin, it bundles the cost of transportation into the sale price. So the invoice might show, for example, that the

product costs \$1.10 per unit rather than \$1. That practice increases the tab when the shipment clears U.S. Customs.

"You technically pay duty on those 10 cents embedded in the cost," Totah says. But when the buyer hires transportation from the factory to the port, U.S. Customs bases duty calculations on just the \$1 per-unit price.

2 LEVERAGE PROGRAMS THAT REDUCE TARIFFS

Sourcing from countries that have special trade agreements with the United States could save money—if you understand the product's origins, so you know which rules apply.

"Just because you buy a product from Germany doesn't mean it's not made in China," says Elvis Morales, manager of trade compliance at Henry Schein, a medical and dental supplies distributor.

Even when a product is made in a country with good tariff opportunities, it might not qualify if the manufacturer imported some of its components. Also, a product that meets the bar for tariff advantages today might not qualify tomorrow—for instance, if your supplier starts to buy materials in another country.

"Gaining a tariff advantage requires not only the initial vetting, but also having appropriate controls in place with the foreign supplier," says Doucette.

Some programs reduce taxes in specific situations. For example, the Craft Beverage Modernization and Tax Reform Act (CBMA) lets eligible

companies that import small quantities of wine, spirits, or beer pay a lower tax rate than they would on higher-volume shipments.

Elenteny Imports, which provides door-to-door services for U.S.-based alcoholic beverage importers, has helped clients save money by filing for rebates on past shipments of this type, or applying the reduced rate to new shipments.

You have to be proactive to gain this benefit. "A customs broker will not automatically do that for you unless you ask," says Alexi Cashen, CEO at New York-based Elenteny.

3 GET SMART ABOUT ROUTING

A change in logistics strategy can sometimes yield tariff savings. Donald Hoffman, president of Harmony Logistics Group in Oakdale, New York, and chairman of the Long Island Import Export Association (LIIEA), tells of a company that used to move product from Morocco to France for repackaging, and then ship it to the United States.

"We advised the company to direct-ship their product from Morocco and take advantage of the Morocco Free Trade Agreement to come in duty-free," he says. "It saved quite a bit of money."

Conversely, if you add a new country to your route, keep an eye on possible compliance implications. Nowadays, that's an issue for some importers trying to avoid congestion at the Ports of Los Angeles and Long Beach.



Technology helps automate some of the complexity surrounding cross-border shipping. Freight forwarder Nuvocargo, for instance, offers a single dashboard to track cross-border shipments from end to end.



“Some organizations are rerouting goods to Canada,” says Gary Barraco, senior director of product marketing at E2open, which operates a digital platform for supply trade management and global trade.

Although the shipment will merely pass through Canada en route to the United States, the importer must prepare documentation for entry into Canada. “Whenever there are changes, always look to see if there’s a trade compliance implication,” Barraco advises.

4 PAY ATTENTION TO DESIGN

Just as a product’s origin can influence tariff obligations, so can its design. Modifications could put a product in a different category in the Harmonized Tariff Schedule (HTS), which U.S. Customs uses to determine what duties you owe.

“Whether a jacket is lined or not lined, or has zippers or stitches, could impact the tariff,” says Totah. In some cases, it might cost less in tariffs to import components and assemble them in the United States than to import the finished product.

Odyssey International Services works with some of its clients to design products with HTS classifications in mind, making decisions that yield lower tariffs.

5 CREATE A FORMAL OPERATION, RUN BY AN EXPERT

Whether you import, export, or both, one of the most crucial things to do is develop a formal program to manage those functions, with written policies and processes, says Morales.

Ideally, a company that imports or exports significant volumes will put a staff member in charge of meeting all applicable tax and regulatory obligations, even when the company also uses a customs broker or other provider.

“A service provider is facilitating transactions for you, but ultimately the U.S. government would look at you if there are mistakes,” says Doucette.

Mistakes can be costly, whether you misclassify a product for tariff purposes, fail to file a declaration for a regulatory

UNDERSTANDING THE ROLE OF INCOTERMS 2020

Incoterms® were first published in 1936 and are intended to reduce or remove uncertainties that may arise from different interpretations of the rules in different countries. They show where risk passes between buyer and seller, allocate transport costs, and clearly define the responsibilities for export and customs clearance.

Since inception, they’ve been updated multiple times—including the recent update, Incoterms 2020.

While helpful, many companies are unfamiliar with or don’t understand Incoterms. For example, a small retailer in Oregon utilized Incoterms when purchasing product from a mid-sized manufacturer in Paris. No one in the U.S. company spoke French while their Paris business partners knew only a bit of broken English. What could have been a large problem was quickly rectified by using Incoterms 2020 since it’s available in 29 languages, including French.

“FCA Incoterms 2020 Paris, France” was added to the contract, and the deal was made, with responsibilities of both the seller and buyer clearly defined in their native language.

Per the rule, the French manufacturer (seller) assumed the costs and risks through export clearance and onto the pre-carriage collecting vehicle. Then the U.S. retailer (buyer) took on the risk and responsibility for the freight through destination, including customs clearance in the United States. Through Incoterms, both buyer and seller understood their obligations in the transaction, which led to a favorable outcome.

PLAYING BY THE RULES

It’s important to note that using an Incoterm rule in a sales contract without a complete understanding of what is expected from both parties can delay the transaction or cause worse problems.

To paint the picture, let’s say a U.S. manufacturer wants to get into the Brazilian market. The sales department agrees to “DDP Incoterm 2020 São Paulo, Brazil” with its new business partner in São Paulo. Under this Incoterm rule, the U.S. manufacturer is the importer of record into Brazil, responsible for exporting from the United States and importing into Brazil, and paying all duty, taxes, and customs charges.

Unfortunately, both parties agreed to an Incoterm that cannot be successfully executed. According to customs regulations in Brazil, this small U.S. manufacturer cannot be the importer of record. When the product arrives at the Port of São Paulo, Brazilian customs seizes the goods for inaccurate documentation.

This is just one example of the many violations that occur when companies don’t understand how to consistently and correctly use Incoterms in trade. While the rules can facilitate good trading practices, lack of knowledge in the meanings and responsibilities behind the rules is a concern.

When companies incorporate Incoterms 2020, it’s vital their logistics, procurement, tax, finance, and sales teams understand the rationale behind the rules and what steps to take to ensure a successful product journey from seller to buyer.

Education and training can be successful methods for helping employees understand the intricacies of global trade. If your company uses Incoterms or plans to start with Incoterms 2020, make sure your employees understand the requirements of both buyer and seller in each of the 11 rules. When used correctly, these rules can help your business achieve optimum success in international trade.

—Jeff Simpson, Manager of Trade Policy, C.H. Robinson

agency, or export a product to a person on the U.S. government's denied parties list.

Still, service providers can offer invaluable assistance. "They have subject matter experts you can call upon for mentoring and advice," Doucette says.

6 EDUCATE YOURSELF AND DO YOUR HOMEWORK

Companies working to build internal expertise can find a wealth of free information on sites operated by U.S. agencies such as Customs and Border Protection (CBP) and the Department of Commerce.

Importers need to learn not only about tariff compliance, but also about requirements imposed on certain products by partner government agencies such as the Department of Agriculture and the Food and Drug Administration. Exporters must comply with regulations from the Department of Commerce, the State Department, and the Treasury Department.

"Your due diligence process is key on exports, because certain reviews of products, people, and locations need to be conducted per transaction," says Morales. The U.S. government prohibits exports of certain products to

certain recipients, or to any recipients in certain countries.

Besides finding resources online, you can boost your knowledge by joining a local trade organization, says Morales, who serves as regulatory compliance director at LIIEA.

"LIIEA, for example, offers industry knowledge from people who are in the thick of it," he says. "You get access to officials who are knowledgeable about government policies and the issues impacting the industry."

7 UNDERSTAND REQUIREMENTS ON BOTH SIDES OF THE BORDER

U.S. regulations aren't the only ones that U.S.-based importers and exporters have to understand. When you arrange transportation from one country to another, you must know the rules on both sides.

"There are different regulations in terms of time frames, hours of service, and ways that you can load freight into certain types of equipment," says Antonio Echevarria, director of sales at Nuvocargo, a New York-based company that operates a digital platform for managing cross-border trade between Mexico, the United States and Canada.

For example, a U.S. company that exports to Mexico needs a government-authorized trading partner south of the border. "Not every company in Mexico can legally import cargo," Echevarria says.

U.S. exporters also must be careful about where in Mexico they plan to ship. "Big cities with awesome industrial parks have all the infrastructure ready to receive any kind of cargo," Echevarria says. But in some less-developed areas, tractor-trailers need special permits.

"A 53-footer won't be able to go through certain kinds of roads in Mexico without those permits," he adds.

8 MONITOR RULE, TARIFF, AND STATUS CHANGES

Just as you need to keep an eye on overseas suppliers in case they make changes that affect your tariff obligations, you also have to watch for changes in tariffs themselves, in government regulations, and in the status of customers. For example, consider what happened when the U.K. officially left the European Union (EU) at the end of 2020.

"For Brexit, we had about 6 million updates," says Barraco at E2open, whose platform includes a global database of tariffs and trade regulations. "We had to

INS AND OUTS OF EXCHANGE RATES AND INSURANCE

Although many import/export best practices involve tariffs and trade regulation, other aspects of global trade also call for special attention.

Take foreign exchange. When you buy product overseas, how can you get the best value for your U.S. dollars? Sometimes a partner can help.

For example, Elenteny Imports, which provides freight forwarding and customs brokerage for U.S.-based importers of

alcoholic beverages, also buys and sells wine itself.

"The quantity of foreign supplier payments we make has consolidated to the point where Elenteny Imports gets highly competitive rates on currency exchange," says CEO Alexi Cashen.

When Elenteny manages freight for an importer, it can also handle payments to the customer's overseas suppliers, providing the same advantageous exchange rates.

Insurance is another important concern, since legal liability for product damage varies from country to country.

"In the United States, the Department of Transportation requires carriers to have insurance for their customers, and the minimum is US\$100,000," says Antonio Echevarria, director of sales at Nuvocargo, which operates a digital platform for managing cross-border trade in



North America. But in Mexico, a carrier transporting a 34,000-lb. shipment is liable for only about US\$1,500.

"To have peace of mind," he says, "insure your cargo for both sides of the border."

take the U.K. out of the EU, reestablish all the new EU relationships, and then create all the new U.K. regulations.”

Exporters that screen customers to make sure they’re not denied parties under U.S. law must watch for any changes in a customer’s status. Since it might not be feasible to screen every customer each time it sends a new purchase order, it pays to take a risk-based approach.

“For example, if you sell machinery and accessories, you obviously want tighter controls and to screen with greater frequency,” Morales says. But if you sell gauze pads and toothbrushes to a hospital, then you probably don’t need to screen that customer with every sale.

9 COLLABORATE, INTEGRATE, AUTOMATE

Import and export operations run best when they collaborate with sales, marketing, transportation, and other parts of the company that touch on international trade.

“If you have a sales or procurement system that hasn’t been reviewed by the regulatory team or trade compliance professional, then you don’t know where the gaps are in your organization,” Morales says. Those gaps can produce gaffes—inbound product that reaches Customs without required documentation, for example, or an overseas sale that runs afoul of U.S.-imposed sanctions.

To stay compliant, a company should integrate the rules from its import/export manual into its enterprise resource planning (ERP) or other operational systems. “The policies and procedures alone don’t mean much if you can’t back that into the workflow of everyone else within the organization,” Morales says.

Along with integrating internal systems, companies can find many other opportunities to automate import and export processes, removing manual labor and the chance of human error. One example is E2open’s new easy classification functionality.

E2open offers courses through its Global Trade Academy where shippers can learn to assign tariff classifications

IMPORTERS NEED TO LEARN NOT ONLY ABOUT TARIFF COMPLIANCE, BUT ALSO ABOUT REQUIREMENTS IMPOSED ON CERTAIN PRODUCTS BY PARTNER GOVERNMENT AGENCIES.



Experts advise importers/exporters to get familiar with applicable global commerce laws and regulations and work together with the U.S. Customs Office of Trade to ensure that goods entering the U.S. marketplace are genuine, safe, and lawfully sourced.

manually, looking up product categories in a huge book and working their way through decision trees to choose the correct code. But with artificial intelligence-driven automation tools, users can classify products based on natural language input, speeding the process and reducing errors.

“The user says, ‘I have shoes,’ and the system asks, ‘Men’s, women’s or children’s?’” Barraco says. “Then it starts a decision tree to help you find the harmonized system classification to

accurately classify the product.”

With the right HS code, E2open’s trade content database can be used to provide the requirements for exporting the product from Country A to Country B.

While importing and exporting are rarely simple, when you build strong internal processes, work with expert service providers, and take advantage of automation, you vastly increase the chance of getting product across borders cost-effectively and trouble-free. ■

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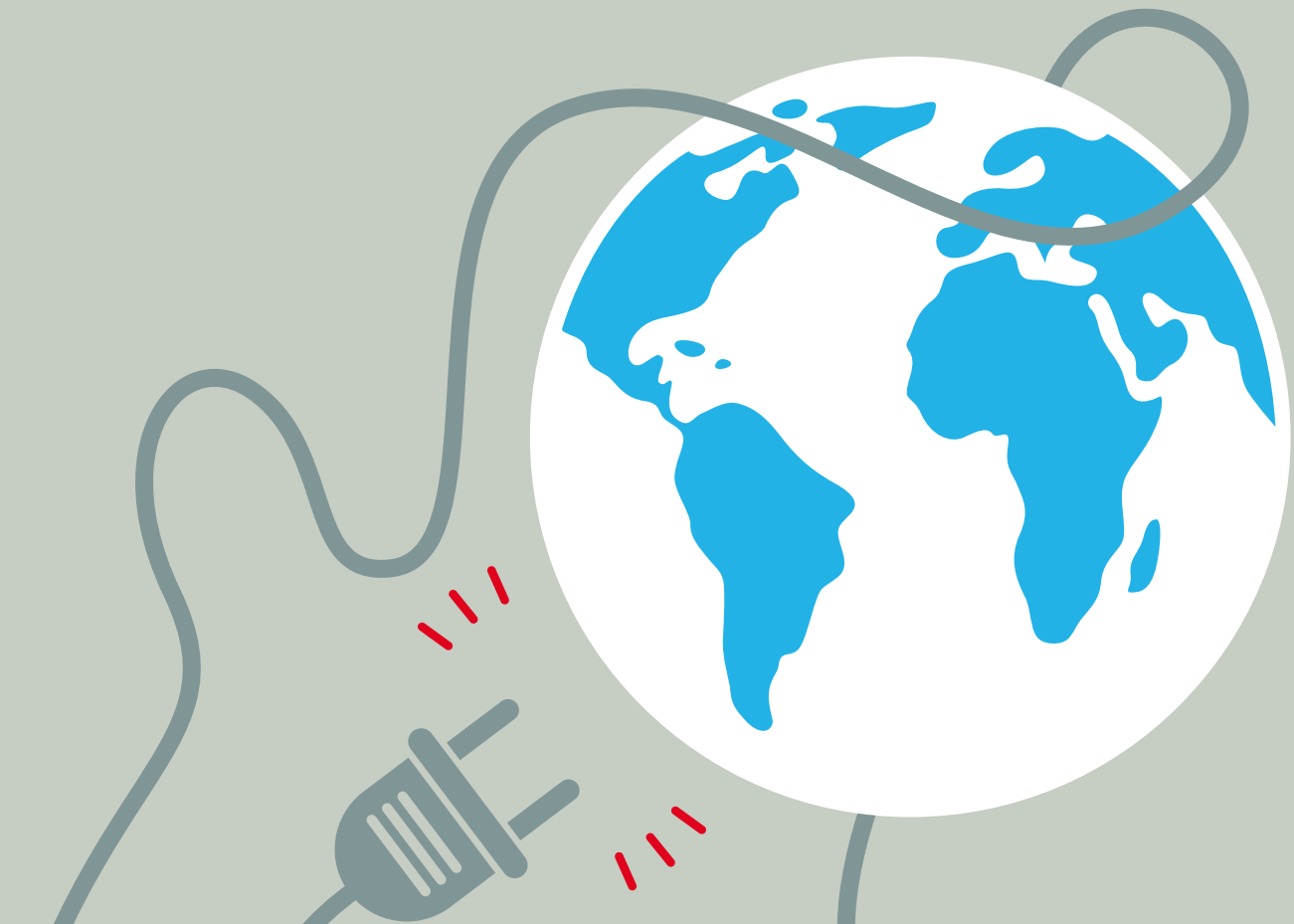
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GLOBAL LOGISTICS **REBOOT**

A New Beginning

Global logistics moves to “the next normal” after an upheaval in product flows over the past year.

BY KAREN KROLL

After a year overtaken by the pandemic, many of us long for a return to normal, or at least a shift to a new normal.

The global logistics sector, however, can't count on a return to normal, whether new, old, or otherwise. Instead, it faces a new beginning.

"Companies will need to replace linear, point-to-point supply chains with real-time digital networks," says Jim Tompkins, founder and chair of consulting firm Tompkins International. These networks will need to integrate planning and execution to reduce lead times and transportation costs and boost customer satisfaction.

The upheaval in product flows over the past year, mostly driven by the pandemic, is behind this new logistics world. For many companies, demand plummeted in the first few months of the pandemic, only to come roaring back later in 2020.

"The result was enormous imbalances in conveyances like containers, unreliable shipping lead times, escalating freight rates, and increasing uncertainties in global trade," says Hau Lee, professor at the graduate school of business at Stanford University.

More than three-quarters of those responding to a July 2020 Institute of Supply Management (ISM) survey indicated lead times for inputs from China had been extended. For products from Europe, 83% reported longer lead times.

Industry observers say these imbalances will only gradually abate over 2021. One reason? It will be some time before the sudden drop in passenger flights—they were off by 66% in 2020, according to IATA—reverses. Many of these flights also transport cargo.

REDUNDANCY, RESILIENCE, AGILITY

The upheaval wrought by the pandemic highlighted how companies that had been approaching their supply chains strategically were better able to navigate disruption, says Ricardo Ernst, professor of global business, operations,

and global logistics at Georgetown University. Moving forward, the supply chain function will play a more strategic role at many organizations.

To remain relevant and successful, supply chains will need to place a higher priority on resilience, redundancy, and agility. Cost and efficiency will remain critical, but they no longer will be the only focus. "It's an important shift in how companies assess supply chains," Ernst says.

Nearly 90% of supply chain professionals responding to a recent Gartner survey say their organizations plan to invest in supply chain resiliency (see chart below). Resilience, according to Gartner, is the ability to adapt to structural changes by modifying supply chain strategies, products, and technologies.

A similar number of respondents to the Gartner survey indicate they also plan to invest in agility within the next two years. Paul Dittman, assistant department head of supply chain with

the University of Tennessee at Knoxville, identifies three elements to supply chain agility: physical, digital, and process agility.

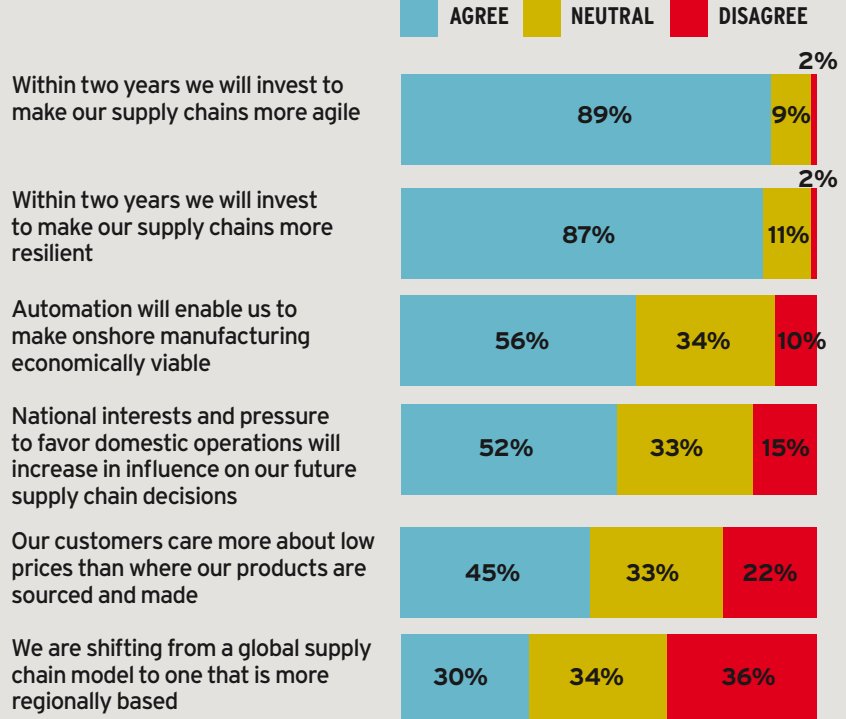
Physical agility could include, for instance, contingency capacity to meet demand surges. Digital agility looks at technology that can provide visibility and automation. And process agility would include functions like supplier management.

ASK "WHAT IF?"

How can organizations boost resilience? They do it "by taking an intelligent, comprehensive look when deciding where to source parts, and asking 'what if,'" says Bobby Bono, partner and industrial manufacturing practice leader with PwC.

For instance, what if the country in which suppliers are located, or the transportation system there, shuts down? "This will change the calculations on supply chains in both the short and long term," Bono says.

HOW COMPANIES ARE RESPONDING TO A DISRUPTED WORLD



SOURCE: 2020 GARTNER FUTURE OF SUPPLY CHAIN SURVEY

To increase redundancy, some organizations are holding more buffer inventory. Others are building extra capacity in production, and some are increasing the number of suppliers.

“The diversification of the supply base can result in reshoring or multi-sourcing or building a regional supply chain,” Lee adds.

Opinions are divided on the degree to which companies actually will shift to regional and thus shorter supply chains. The companies that make this shift will need to contend with numerous obstacles.

Many customers are more swayed by low pricing than by domestic sourcing and production, particularly in industries with intense price competition, such as retail and fashion. Some U.S.-based manufacturers considering reshoring production would need to reestablish manufacturing capabilities that no longer exist in the country.

When evaluating supply sources outside China, companies also need to consider both the size of the Chinese market, at about 1.4 billion, and the growing Asian middle class. The global middle class will swell to 4.9 billion

people by 2030, from 1.8 billion in 2009, the OECD estimates. Two-thirds are expected to reside in Asia, up from 28% in 2009. The largest share will call China home. Many organizations will benefit by maintaining a manufacturing presence in this region.

Despite these concerns, the pandemic does appear to be accelerating a shift in manufacturing away from China, a trend that began even before coronavirus became a household word. Manufacturing imports from China dropped in 2019, reversing the previous trend, according to the Kearney Reshoring Index.

At the same time, imports from other Asian low-cost countries jumped by \$31 billion. Most of the products that were part of this shift had been impacted by tariffs imposed on Chinese goods, Kearney noted.

One way to reduce the customs duties levied on many Chinese products coming into the United States, and mitigate the risk that comes with keeping production mostly within a single country, is through a “China Plus One” strategy, Lee says. That is, companies importing goods from China

also partner with a supplier located in another country.

Two countries likely to benefit from companies’ move to add supply sources outside China are Mexico and Vietnam, Lee says. While both countries saw manufacturing downturns in 2020, they had largely rebounded by year end, according to Trading Economics.

REGIONALIZATION AND RESHORING

As they develop a new approach to globalization, companies need to recalibrate expectations, reevaluate priorities, and consider anew what they expect from each region.

In the past, for instance, companies often viewed Asia as their base for manufacturing and Latin America as a source of raw materials. Now, however, companies may crunch the numbers and realize it makes sense to shift some manufacturing to Mexico, given its proximity to the North American market.

“Most companies are doing ‘controlled reshoring,’” Lee says. This could mean that critical, lower-volume products are reshored, while products produced in larger, stable volumes remain offshore to capture economies of scale. Or it might

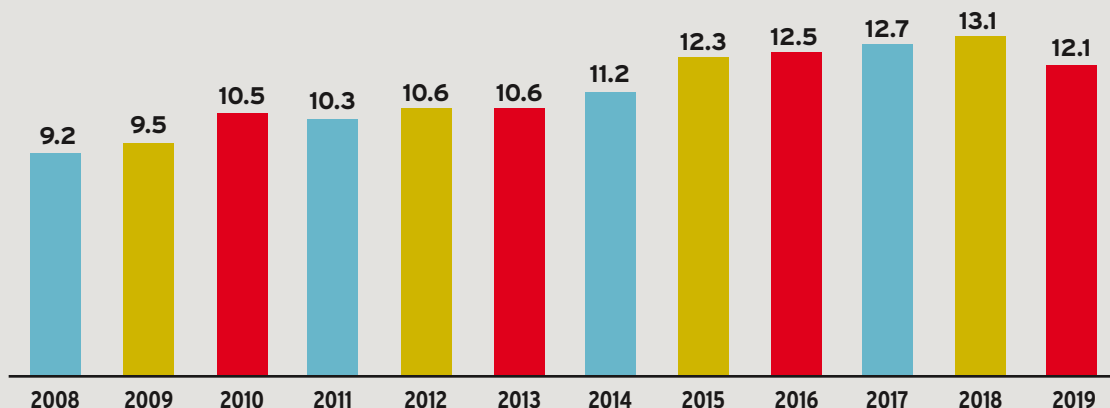
**US MANUFACTURING IMPORT RATIO (MIR)
= TOTAL MANUFACTURED GOODS IMPORTS**

As % of domestic manufacturing gross output (% 2008-2009)

U.S. manufacturing’s ability to hold its ground as imports sharply declined resulted in a manufacturing import ratio (MIR) of 12.1%, according to a Kearney report. That means the U.S. market imported 12.1 cents worth of offshore production from Asian low-cost countries (LCCs) for every \$1 of domestic manufacturing gross output.

Import Countries

- Bangladesh
- Cambodia
- China
- Hong Kong
- India
- Indonesia
- Malaysia
- Pakistan
- Philippines
- Singapore
- Sri Lanka
- Taiwan
- Thailand
- Vietnam



SOURCE: US INTERNATIONAL TRADE COMMISSION, US DEPT OF COMMERCE BUREAU OF ECONOMIC ANALYSIS

mean a domestic site builds products while they're in the launch phase and demand is uncertain. Production then would shift to an offshore site once demand is larger and steadier.

"Smart use of multiple sites is the best way to go forward," he adds.

EMBRACE E-COMMERCE

Also straining supply chains over the past year has been the tsunami of customers shifting their business online. While this trend had been underway already, the pandemic accelerated it by several years.

It's not just domestic online sales that are growing. Online cross-border transactions are set to jump by 24% in 2020, according to The Paypers, a Dutch source of news on global payments. Cross-border e-commerce orders, which often involve small orders that require many processing steps, tend to be more complex than even domestic e-commerce orders.

The jump in e-commerce, along with the shrinking availability of labor, is accelerating companies' move to digitization and automation. Automation and mobile robotics can help process the "eaches" that characterize e-commerce orders.

However, robotics and automation won't be a panacea just yet. Many solutions today can handle only one or a few steps in the production process.

In apparel manufacturing, for instance, it's possible to automate fabric production, cutting, and sewing. A bottleneck appears, however, when it's time to flatten the fabric to feed it into the sewing machine, which remains a mostly manual process. Where advancements are speedier and more comprehensive, companies will have more choices in designing their global supply chains.

Similarly, blockchain has the potential to streamline financial flows and provide a full record for tracing and tracking. However, gaining all its benefits requires an extensive supply network. Many companies across multiple industries still need to work on developing these.

A CHANGING ROSTER OF COUNTRIES

It's not just supply chains that are changing. The countries many companies evaluate when deciding where to locate operations or search for suppliers continues to evolve as well. The following are some of the countries currently identified as potential partners.

Cambodia



One of the signatories to the Regional Comprehensive Economic Partnership (RCEP), Cambodia's economy is expected to grow by 4% in 2021, after contracting by an estimated 2% in 2020, because of the pandemic, the World Bank says.

China



China appears poised to remain a significant supply source. And given its population of 1.4 billion, it likely will form a sizable market for some companies, says Hau Lee of Stanford University.

India



Like China, the size of India's consumer market—about 1.37 billion people—is enticing. In February 2021, Tesla announced it would establish an electric vehicle manufacturing plant in Karnataka, India.

Mexico



Mexico likely will see an increase in manufacturing, says Tompkins of Tompkins International, although he doesn't expect it to significantly impact where manufacturing is done. In 2020, foreign direct investment into Mexico dropped by less than 10%, compared to the 37% drop experienced throughout Latin America and the Caribbean, Santander Bank reports.

Vietnam



Vietnam is one of the few countries not expected to experience a recession because of the pandemic, the World Bank says. To be sure, growth has slowed. Before the pandemic, annual GDP growth averaged about 6 to 7%; that's expected to drop to 2.8% for 2020.

MONITOR TRADE AGREEMENTS

Several recently inked trade agreements may eventually alter product flows in various parts of the globe. The Regional Comprehensive Economic Partnership (RCEP), signed in late 2020 by the 15 members of the Association of Southeast Asian nations and five partners, will connect about 30% of the world's people and output (*see chart*).

The agreement is expected to boost

the efficiency of many Asian economies, linking their strengths in technology, manufacturing, agriculture and natural resources, ASEAN said.

Across the Indian Ocean, the African Continental Free Trade Area agreement (AfCFTA) went into effect on Jan. 1, 2021. It links the countries across Africa, eliminates 90% of tariffs, and creates a single market across the continent. Together, the countries boast

an estimated 1.3 billion people and a combined gross domestic product of \$3.4 trillion.

Much work remains in building infrastructure and developing a customs workforce across the African continent, among other initiatives. As progress in these areas proceeds, it's hoped the agreement will bolster the competitiveness of African industry.

SUSTAINABILITY AND SOCIAL ISSUES

Interest in environmental, social and governance (ESG) practices, which has been growing, gained further momentum over the past year. "Organizations are taking a strong stand," notes Bob Hawkey, director, operations transformation with consulting firm Grant Thornton, with more companies including ESG requirements in their supplier contracts.

In part, their action is a response to investor interest. The 425 institutional investors from across the globe who responded to a 2020 survey by Blackrock, an asset management firm, say they plan to increase the level of sustainable assets under management from 18% in 2020 to an average of 37% by 2025.

RCEP AND CPTPP MEMBERS

Numbers present 2018 GDP in trillions of US dollars

RCEP (15)

CPTPP (11)

- Chile **\$0.3**
- Peru **\$0.2**
- Canada **\$1.7**
- Mexico **\$1.2**

- Australia **\$1.4**
- Brunei **\$0.01**
- Japan **\$5.0**
- Malaysia **\$0.4**
- New Zealand **\$0.2**
- Singapore **\$0.4**
- Vietnam **\$0.2**

- China **\$13.6**
- Cambodia **\$0.02**
- Indonesia **\$1.0**
- Lao **\$0.02**
- Myanmar **\$0.07**
- Philippines **\$0.3**
- South Korea **\$1.6**
- Thailand **\$0.5**

Recent trade agreements, such as The Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), may eventually alter global product flows. The agreements cover trade in goods and services, investment, and economic and technical cooperation, and create new rules for e-commerce, intellectual property, government procurement, competition, and small and mid-sized enterprises.

The August 2020 port explosion in Beirut, Lebanon, which killed more than 200 people, also highlighted the critical role of ESG, and the need for transparency and accountability on shipped goods. Going forward, "businesses will need to demonstrate that their supply chains are fit-for-purpose and 'clean,'" says Matthew Margetts, director of sales and marketing with Smarter Technologies, an IoT company.

The supplier-customer relationship will change yet in another way, Lee says. Suppliers will be more than just sources of materials and products.

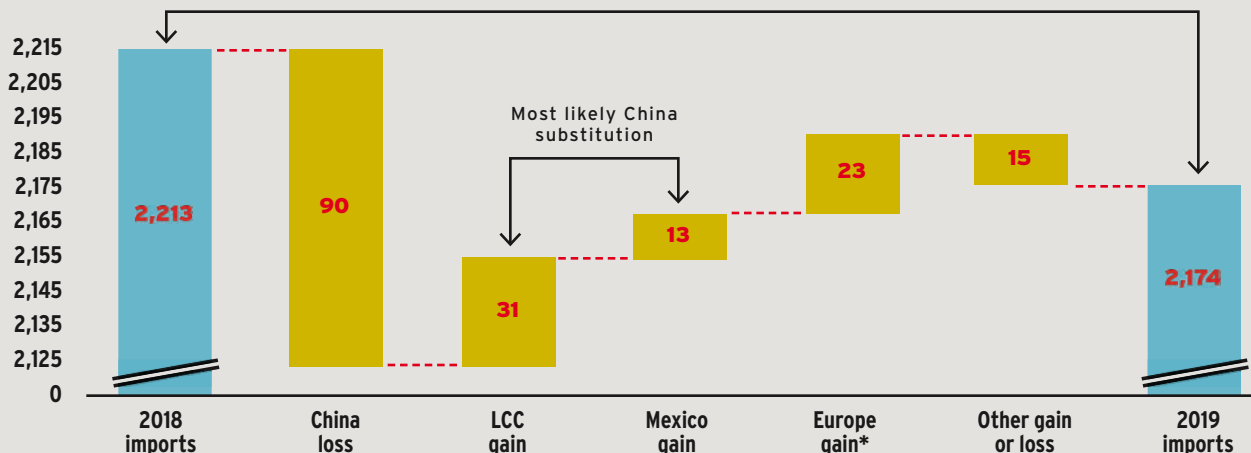
Many employees with suppliers that have implemented mature manufacturing have also mastered the skills and expertise needed to improve manufacturing processes and product design.

As a result, supplier bases will be "not just the source of materials and products, but also the source of innovations," Lee says.

Even as the world changes, the ability of companies to gain a competitive edge by leveraging the innovative power of their suppliers and supply chains remains. ■

U.S. MANUFACTURING IMPORT MIX CHANGE (Real \$ billion, 2018-2019)

Trade policies appear to be changing trade dynamics among and between the various countries exporting manufactured goods to the US, according to Kearney's analysis. From 2018 to 2019, U.S. manufacturing imports from China declined by 17%, a total drop of roughly \$90 billion. However, US manufacturing imports from other Asian LCC countries increased by \$31 billion in 2019. Similarly, manufacturing imports from Mexico rose \$13 billion. While manufacturing imports to the United States from China have declined, those from other Asian low-cost countries and Mexico have grown.



LCC=low-cost country. *Most likely due to increase in demand for European-specific imports (for example, luxury cars)

SOURCE: US INTERNATIONAL TRADE COMMISSION, US DEPT OF COMMERCE BUREAU OF ECONOMIC ANALYSIS

GLOBAL TRADE MANAGEMENT GUIDE



Global trade management (GTM) systems became even more important when supply chains were disrupted in 2020. By connecting sourcing and logistics, GTM systems help make global trade transparent, efficient, and cost effective.

Here are some leading GTM vendors and solutions that can help keep your global supply chain on an even keel.

3rdwave

Toronto, Canada
3rdwave.co

Solution: 3rdwave GTM

Platform: Cloud based

Description: A fully automated, integrated solution that delivers full visibility of a product from its international origins, across its transportation life cycle, through automated customs management, to final delivery. Supports freight contracting, automated customs management, pier control, and product management.

Functionality: Event management, compliance content, analytics and reporting

Acuitive Solutions

Charlotte, NC
www.acuitivesolutions.com

Solutions: Global TMS

Platform: Cloud based

Description: Provides cloud-based control over inbound supply chains including samples, production orders, DC bypass, store transfers, and ship from store e-commerce fulfillment.

Functionality: Transportation management, expedited approval, airfreight quotes, freight audit, global shipping execution

Aptean

Alpharetta, GA
aptean.com/products/tradebeam-gtm

Solution: TradeBeam

Platform: Cloud based

Description: Streamlines global trade operations, enhances supply chain visibility and manages compliance with changing global regulations. Support for restricted party screening, export license determination, duty rate retrieval, and classification.

Functionality: Supplier screening, export licenses and compliance, global trade data and content, integrated audit and reporting trail

BluJay Solutions

Holland, MI
blujaysolutions.com

Solution: Augmented Global Trade

Platform: Cloud based

Description: A multi-tenant SaaS platform that automates the end-to-end customs and compliance requirements for international trade. Streamlines workflow, decreases risk, and accelerates efficiency for international trade operations.

Functionality: Command center, customs management, global trade item master, smart classification

Centrade

Mendota Heights, MN
centrade.io

Solution: Centrade

Platform: Cloud based

Description: A networked business platform designed to transform the global supply chains of emerging and middle market enterprises into unified, collaborative networks in the cloud. Enables visibility, responsiveness, and performance throughout the delivery life cycle.

Functionality: Event management, compliance content, analytics and reporting

ClearTrack Information Network

Brentwood, TN
cleartrack.com

Solution: Clarity GTM

Platform: Hosted on the vendor's website, cloud based

Description: A global trading network and specialized software modules. Enables global sourcing; management of product quality, safety, and supplier compliance; source to delivery logistics, purchase order, and item visibility; and ocean and domestic freight sourcing and spend management.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting

Descartes Systems Group

Waterloo, Ontario
descartes.com

Solution: Descartes Datamyne

Platform: Cloud based

Description: Import/export trade database that covers the commerce of 230 markets across five continents. Delivers deep insight on the global movement of goods and is used by a range of companies, such as port authorities, manufacturers, retailers, commodity brokers, and transportation and logistics service providers.

Functionality: Compliance content, analytics and reporting, FTZ

Duane Customs & Freight Compliance Solutions

Santos, São Paulo, Brazil
duanesolutions.com

Solution: Customs & Freight

Platform: Hosted on the vendor's website

Description: Customized compliance services for customs releases, freight forwarding, sourcing, and event management.

Functionality: Supplier management, transportation management, event management, compliance content

E2open

Austin, TX
e2open.com

Solution: Global Trade Management

Platform: Cloud based

Description: A suite of global trade management intelligent applications helps companies achieve their goals by providing a consolidated supply chain platform to efficiently plan, execute, and administer global trade. E2open's scalable platform is backed by a comprehensive database of regulations and business rules, covering 98% of world trade.

Functionality: Supplier management, transportation management, booking functionality, compliance content, analytics and reporting, FTZ

eCustoms

Buffalo, NY
ecustoms.com

Solutions: Export Documentation Manager

Platform: Cloud based

Description: Helps users create export documentation and perform essential compliance activities, including restricted party screening, license determination, and Automated Export System (AES) submissions and filings.

Functionality: Export documentation, compliance activities, AES submissions

Elemica

Philadelphia, PA
elemica.com

Solution: Move Suite

Platform: Cloud based

Description: Global carrier network that digitally connects carriers and other key logistics partners.

Functionality: Instant alerts, performance data, enhanced visibility, automated freight invoicing, delivery time coordination

enVista

Carmel, IN
envistacorp.com

Solution: MyShipInfo

Platform: Licensed to user (installed locally), hosted on the vendor's website, or cloud based

Description: Accepts transportation spend and manifest files from disparate systems through data import tools, providing a single view of global freight spend. Provides shipment visibility, carrier performance monitoring, management reporting, currency, invoice auditing, and VAT visibility across all modes through global freight audit and payment solutions.

Functionality: Transportation management, compliance content, analytics and reporting

Freightos

Miami Beach, FL
freightos.com

Solution: Freightos Enterprise

Platform: Cloud based

Description: Provides instant rate benchmarking and lookups from

contract rates, as well as live market comparisons. Helps support scalable operations across global logistics providers and internal employees with freight quote request workflows and management. Provides real-time ocean freight data with the only daily, data-backed ocean container index.

Functionality: Supplier management, booking functionality, analytics and reporting

Freight Management Inc. (FMI)

Anaheim, CA
freightmgmt.com

Solution: Global audit, rates and tracing

Platform: Cloud based

Description: Creates efficiencies and streamlines the entire global trade life cycle. Maximizes visibility, captures and monitors key performance indicators, and provides custom/ongoing reporting, which lead to more efficient operations. Effective and forensically provided freight costing audits tied with transportation cost accrual solutions improve operational efficiencies.

Functionality: Transportation management, booking functionality, compliance content, analytics and reporting

Freightgate

Fountain Valley, CA
freightgate.com

Solution: Freightgate Cloud Solutions

Platform: Cloud based

Description: Helps global shippers, forwarders, and carriers effectively manage complex supply chain information flows by perfecting their logistics processes. Freightgate's multimodal zero-touch dispatch,

100% vertically integrated global visibility, and advanced compliance solutions enable companies to manage compliance and automate millions of rates, shipments, and schedules while reducing cost and cycle times.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

Infor

New York, NY
infor.com

Solution: Supply Chain Management

Platform: Licensed to user (installed locally) or cloud based

Description: Delivers real-time supply chain orchestration by digitally transforming end-to-end supply chain processes and connecting companies to their supply chain partners. Offers a single view of orders, shipments, and inventory, allowing companies to gain real-time visibility to improve velocity and agility.

Functionality: Supplier management, transportation management, analytics and reporting

LOG-NET

Tinton Falls, NJ
log-net.com

Solution: LOG-NET

Platform: Hosted on the vendor's website, cloud based

Description: End-to-end capabilities from supplier management and shipment execution to compliance filings.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

Longbow Advantage

Charlotte, NC
longbowadvantage.com

Solution: Rebus

Platform: Cloud based

Description: Provides real-time visibility into distribution networks and supply chain performance analytics. Connects to supply chain execution systems, harmonizes data in a single database for speed and scalability, and unites WMS, LMS, and TMS data into a single platform.

Functionality: Analytics, reporting

Magaya

Miami, FL
magaya.com

Solution: ACELYNK

Platform: Cloud based

Description: This ACE-certified ABI solution is focused on compliance,

security, and technology. It is built to accommodate businesses from small to enterprise-level.

Functionality: Filing ISF, entry summary, cargo release, 7512s (InBond), e214s (FTZ), drawback, reconciliation, AES, eManifest

Navigate

Mendota Heights, MN
navigate.com

Solution: Emerald Forward, Emerald ShipLens, Emerald TradeKey, Emerald Orderchain

Platform: Cloud based

Description: From global freight booking and shipment visibility to analytics and final delivery, Navigate Emerald tools and specialized cloud-based applications provide sophisticated capabilities that transform global supply chains into a unified, collaborative network.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

nVision Global Technology Solutions

McDonough, GA
nvisionglobal.com

Solution: IMPACT TMS

Platform: Hosted on the vendor's website, cloud based

Description: Provides end-to-end visibility and management of global shipments from creation through delivery. Supplier order management, shipment execution, contract management, freight audit and payment through self-invoicing business rules, track and trace, and BI Analytics. IMPACT TMS is global, multimodal, multi-language, and multi-currency.

Functionality: Supplier and transportation management, booking functionality, event management, analytics, reporting

Oracle

Austin, TX
oracle.com

Solution: Oracle Global Trade Management

Platform: Cloud based

Description: Solutions that enable companies of all sizes to centrally manage regulatory trade compliance and customs documentation, and streamline business processes related to cross-border trade.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

Precision Software (QAD)

Downers Grove, IL
precisionsoftware.com

Solution: Global Trade Management

Platform: Licensed to user (installed locally) or cloud based

Description: Automates documentation production and customs reporting, helping companies adhere to regulatory requirements and reduce hidden costs.

Functionality: Transportation management, compliance content, analytics and reporting

QuestaWeb

Clark, NJ
questaweb.com

Solution: Global Trade Management Software

Platform: Licensed to user (installed locally) or cloud based

Description: QuestaWeb's solution, now part of Descartes Systems Group, helps shippers manage the entire foreign trade zone process to minimize duties, fees, and taxes while remaining compliant with regulations. Facilitates timely and compliant movement of goods from origin to destination, across borders, anywhere in the world.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

SAP

Newtown Square, PA
sap.com

Solution: Global Trade Services

Platform: Licensed to user (installed locally) or cloud based

Description: Centrally manages global trade and offers a single repository for all compliance master data and content. SAP's Global Trade Services application speeds customs clearance, reducing unnecessary delays. Minimizes fines and penalties from trade compliance violations.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

SEKO Logistics

Itasca, IL
sekologistics.com

Solution: MySEKO

Platform: Hosted on the vendor's website, cloud based

Description: Provides access to all of SEKO's global logistics and management tools in one portal, from booking international shipments to running custom reports. Enables full international tracking, with detailed visibility of shipment progress. Features global search capability, order management visibility, multi-language support, and efficient load planning.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

Transporeon Group

Fort Washington, PA
transporeon.com

Solution: Transporeon and TIcontract

Platform: Cloud based

Description: Provides end-to-end visibility by simplifying complicated carrier connections. Global collaborative shipment execution platform built for supply chain communication and freight assignment. Enhances communication with partners by bringing logistics-specific information into the transportation management process.

Functionality: Transportation management, booking functionality, analytics and reporting

TransportGistics

Mt. Sinai, NY
transportgistics.com

Solution: TGI-gTMS

Platform: Cloud based

Description: Facilitates transportation procurement workflows, from bid request through pricing management to accurate payment and closure. Offers shipment tracking and purchase order tracking. Provides landed cost pricing calculations, comparisons, and what-ifs. Supports decision-making through visual analytics, dashboards, and KPIs.

Functionality: Supplier management, transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

Transportation Insight

Hickory, NC
transportationinsight.com

Solution: Insight TMS

Platform: Cloud based

Description: Provides transparency into international supply chains. Provides visibility into shipments from point of origin to port of entry, helping to manage record-keeping and transition freight seamlessly from international to domestic shipment.

Functionality: Transportation management, booking functionality, event management, compliance content, analytics and reporting, FTZ

Georgia's solid logistics infrastructure keeps supply chains moving efficiently and safely regardless of business disruption and national economic stress. These logistics providers and trade partners lead the way.

GEORGIA WHERE LOGISTICS FUELS GROWTH

The 10th-busiest U.S. airport for total air freight tonnage, Georgia's Hartsfield-Jackson Atlanta International Airport serves nine of the top 10 cargo airlines in the world.

Despite the struggles of the national economy in a year many business leaders may want to forget, Georgia's logistics engine continued to hum in 2020, illuminating the state's assets and infrastructure.

That message emerges from a detailed report conducted as a collaborative effort between the Georgia Center of Innovation for Logistics, Metro Atlanta Chamber of Commerce, and Hickory Ridge Group LLC.

Titled "Georgia Leading the Way: The Logistics Workforce for the Future," the report characterizes Georgia's supply chain and logistics sector as a powerful force for continued rapid economic growth.

The pandemic shined a spotlight on the critical nature of the sector, and the experiences of many of Georgia's leading logistics services providers bear that out. As the nation learned, truck drivers and warehouse employees revealed themselves to be everyday heroes, making sure essential goods reached their destinations. And Georgia, long at the front and center of American logistics, showed that it has more than its fair share of such heroes.

The performance of Georgia's logistics leaders in a time of crisis should come as no surprise. After all, Georgia's prime location, along with its outstanding infrastructure and workforce, positions it as an industry leader and home to many

of the most successful logistics providers in the world.

"The logistics industry has been and continues to be a dependable and substantial source of economic activity, growth, and employment in the state, driving Georgia's economy forward," the joint report states. "Further, Georgia's logistics benefits urban and highly developed parts of the state while also providing the means for rural areas to diversify their economic base, reducing local economic vulnerability."

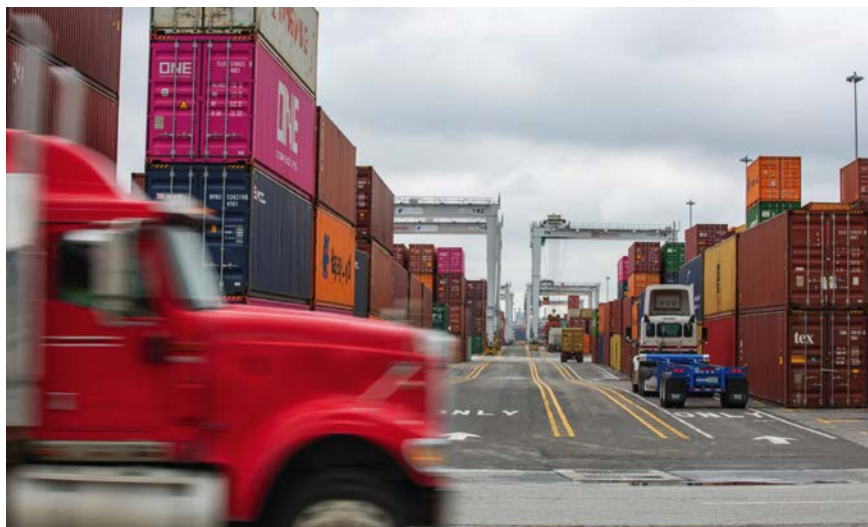
In analyzing the logistics sector in Georgia, industries that move and store cargo, along with their supporting services and operations, were taken into account and provided a compelling picture of vitality:

- **Hartsfield-Jackson Atlanta**

International Airport is a major world port for air cargo. The airport is the 10th-busiest U.S. airport for total air freight tonnage, and nine of the top 10 cargo airlines in the world operate there. The airport has international service within North America and to South America, Central America, Europe, Africa, and Asia.

As an international gateway to the United States, Hartsfield-Jackson ranks seventh in international passenger traffic. The airport is a major hub for travel in the southeastern region of the country.

- **The Port of Savannah** is home to the largest single container terminal in North America, and is the fastest-growing and third-busiest container port in the United States.



At Georgia Ports, deepwater terminals in Savannah and Brunswick ensure the continuous flow of goods to and from global destinations.

- **The Port of Brunswick** is the No. 1 terminal in the nation for new automobile imports. Seven of the most prominent multinational automobile manufacturers and 18 leading automobile trucking line companies maintain offices at its Colonel Island Terminal.

- Inland ports serve as additional indispensable assets. **The Appalachian Regional Port** and the **Northeast Georgia Inland Port**, to be completed in 2023, boost the use of rail cargo transportation, reducing congestion on Georgia's highways and lowering transportation costs for companies moving supplies within the state.

- Georgia is served by both Eastern

U.S. Class I railroads, **CSX and Norfolk Southern**, along with 24 short-line railroads. These rail providers travel on 5,000 miles of track, moving nearly 200 million tons of cargo each year.

Georgia's railroads work hand-in-hand with its seaports, and the \$126.7-million Mason Mega Rail Terminal Project now underway will improve the efficiency of both.

• **Six U.S. interstates**—1,200 miles of highway—connect shippers to 80% of the country in two days or less of driving time.

Innovation promises to fuel even more logistics success in Georgia. “The increased growth and economic impact of logistics efforts in Georgia, in addition to the challenges faced by businesses nowadays regarding demand uncertainty, provide a promising future for people working in the areas of logistics, big data, and supply chain analytics as there is a clear need for innovation,” the report states.

“The logistics and supply chain sector carries a valuable weight for Georgia's growth and future projections,” the report concludes.

Calling Georgia “an influential state for the logistics industry,” the report says, “the demand for logistics has continued to grow throughout the years as the state's economic growth highly depends on this sector, benefiting not only urban but also rural areas. Georgia's logistics and supply chain sector outpaces many other sectors in the state with regards to economic growth and stability.”

NAVIGATING CHANGE

The COVID-19 pandemic has taught organizations of all types—from businesses to schools to governments to healthcare facilities—all manner of lessons about adaptation and change.

SMC³, a leading provider of logistics intelligence solutions for North America, has remained fully operational throughout the health crisis.

Among other things, the company—which maintains its headquarters in the Atlanta suburb of Peachtree City—has experienced the value of speed.

“Fortunately, the company was able to quickly and seamlessly transition to a remote work environment, utilizing new technologies, and we have remained available to continue to serve our customers and the industry at large,” says Brian Thompson, chief commercial officer of SMC³.

For the first time, Thompson says, the supply chain sector witnessed firsthand how the optimal mix of digital tools could help companies seamlessly navigate market volatility—increasing

that supply chain companies face is connecting their disparate technologies together to drive deeper synergies across their entire business.

SMC³ excels at solving such difficult challenges, says Thompson. “The company's consultative solutions deliver the technology framework to help shippers, logistics providers, and carriers get the most out of their TMS and technology platforms—including rating and quoting, provider selection, bid procurement, and freight selection



“Coming through the challenges of 2020 with modest growth was a major accomplishment for Georgia's ports and our partners through the private logistics community. With unmatched terminal operations, superior road and rail connections, and reliable third-party service providers, there are no better-run ports in the nation.”

• **Georgia Governor Brian Kemp**

efficiency, reducing dwell times, and allowing carriers, shippers, and end customers to all have the end-to-end visibility they need.

DRIVING DEEPER SYNERGIES

“Now, as the pandemic subsides, this shouldn't be where the digital transformation story ends,” he says. “Overnight, technology implementations adapted to provide short-term solutions, but many of these came in the form of quick fixes and point solutions. For their users, these disconnected tools left some efficiency and productivity gains on the table in favor of quicker implementations.”

The next step, he says, is to take the lessons learned over the past year to review existing technology, identify remaining blind spots, and install integrations to create more powerful, end-to-end technology solutions.

In other words, the new challenge

across the entire shipping lifecycle,” he explains.

Thompson says SMC³ will remain at the forefront of innovation as Georgia's role in logistics evolves. “A number of logistics companies are headquartered in Atlanta and throughout the state, with major players like Nestle and Amazon also in the process of building additional facilities in Georgia,” he says. “This migration to the logistics hub of the Southeast will only continue.”

A NEED NOT A WANT

Because of the pandemic, complete shipment visibility is no longer a want but a need.

SMC³'s complete suite of LTL APIs (application programming interfaces) allows freight transportation stakeholders to digitize the entire shipment lifecycle from quote to delivery, enabling an agile supply chain.

Also, in its support of the logistics



SMC³ LTL ONLINE EDUCATION



100% ONLINE

INTERACTIVE



ENGAGING

CAREER-FOCUSED



The first of its kind in the industry, SMC³ online education provides a flexible learning experience with both professional certification and noncertification paths for the transportation professional on the go.

Register for an exclusive LTL203: Carrier Pricing & Costing session featuring live industry experts starting April 15!



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sector, SMC³ offers educational services through semi-annual conferences and online, on-demand coursework focused on LTL training. It is also the first program in the industry to offer a path to LTL certification.

“There’s a void in the industry for education,” Thompson says, “and it is SMC³’s mission to fill that gap by providing intensive, thoughtful educational experiences to teach the next generation of supply chain leaders how the industry functions.”

PARTNERS IN PROGRESS

In the world of logistics, remaining at the cutting edge is not a solo journey. You stay at the front of the pack by relying on partners who help and support you all along the way.

In Georgia, a primary partner in progress is the government. “The state works hard to attract and keep businesses,” says Steve Syfan, executive vice president of Syfan Logistics, a full-scale, asset-based logistics management company and a well-recognized logistics leader in the Peach State.

“Georgia’s pro-business efforts have brought a wide variety of top domestic and international companies to the state—which is beneficial to the logistics industry,” Syfan says.

Georgia is adding two inland ports (for a total of three) to connect directly to Savannah’s deepwater port. One of the new inland ports will be located in Gainesville, where Syfan is based, some 55 miles north of Atlanta on I-85. The inland ports will connect by rail to Savannah and will greatly improve the ease and efficiency of shipping in the state.

“The state of Georgia has all the pieces in place to remain a key player in the evolving logistics marketplace,” Syfan adds. “With a major international airport in Atlanta, deepwater ports in Savannah and Brunswick, interstate highways connecting major cities, an expansive state highway system, and extensive rail system, the state is positioned well to have a prominent role in the country’s logistics marketplace.”

Syfan says his company answered the



From its Georgia headquarters, Syfan Logistics, an asset-based logistics management company, provides a range of services, including over-the-road and expedited transport, third-party logistics, and project management.

pandemic’s challenges by remaining steadfast to its core principles of care and concern for each shipment and by enhancing safety protocols.

“We’ve worked diligently to keep our team, drivers, and customers safe,” he says. “We modified protocols for human contact at our office and with our customers—shippers and receivers—while still reaching out safely every way possible to maintain our sales relationships that have made us successful partners.”

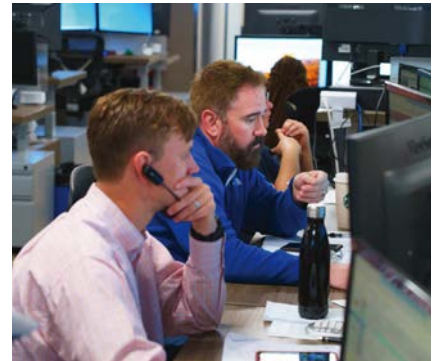
Early in the pandemic, Syfan Logistics started an initiative to keep its drivers in their trucks whenever possible during pick-up or drop-off to reduce the potential for spreading the virus.

The company also established a Critical Express Team with one of its key shipping partners to be ready to respond around the clock to emergency shipping needs.

WHAT’S ON THE MENU?

Syfan Logistics offers a full menu of services for customers, including over-the-road transport, expedited, third-party logistics, power only, yard management support, freight management services, and project management.

“We work to find creative ways to



serve our customers,” Syfan says. “With increased demand for shipping in the past year, we are blessed to grow our team by more than 60% recently.

“We have continued to hire and are finding very qualified people to fill the demands from our customers,” he adds. “We have invested in technology that provides better internal performance metrics, better communication, and greater visibility, transparency, to all of our customers.”

Syfan is decidedly bullish on the future of logistics in Georgia and Syfan Logistics’ place in it.

“The inland port here in Gainesville will help reduce traffic through Atlanta and to Savannah; however it will be both good and difficult for our community with an estimated increase of 300-400 trucks on I-985 per day,” he says. “With the right amount of added infrastructure of overpasses and elimination of side streets for safety, it can be a big plus for our community.”

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REMAINING NIMBLE

Logic dictates unpredictable situations require unpredictable solutions. Yet it is at times of sudden change that experience often counts most. When the pandemic struck, experience proved to be a competitive advantage for Atlanta Bonded Warehouse (ABW), the Southeast's longtime leading provider of temperature-controlled warehousing and LTL/TL transportation services.

The 73-year-old company called on well-established relationships with customers, employees, and partners to weather the pandemic and develop solutions for any problems that emerged. "We came out just fine," says Hal Justice, ABW's vice president of sales and operations.

Logistics challenges brought about by the pandemic required nimbleness, particularly in April and May 2020 when there was an "incredible volume of outbound movement," Justice says, as retailers responded to massive demand.

The company's proximity to Georgia's interstate network and the Port of Savannah served it well through the crisis. While the pressure has begun to ease, the port continues to be "absolutely slammed" with volume, Justice says.

"The port is going gangbusters," he says, adding that a worldwide container shortage has posed additional challenges.

For ABW, however, increased volume represents business as usual. "We had a record year in co-packing," Justice says. "But actually we've been up about 25% each year for the past five years."

The result of the company's familiarity with ever-increasing demand is that ABW didn't miss a beat during even the worst days of the pandemic.

Looking forward, Justice says he sees nothing that will interfere with continued steady growth in Georgia. He notes labor demands require constant innovation and automation so that people power can be applied to challenges requiring skills more than muscle.

"We want our people to add value rather than perform routine tasks," Justice says.

FROM CONFECTION TO PERFECTION

Since its inception in 1948, ABW has offered multi-client/public warehousing services to its customers. Originally founded to serve the confectionery industry, ABW now provides distribution for a number of food and food-compatible products.

The company also has extensive experience operating contract facilities. ABW has received numerous awards for operational excellence.

In the realm of value-added, freight consolidation, and cross-docking services, the company offers consolidated order picking for bulk pool shipments, labeling, repacking, and co-packing.

ABW distributes to every major retailer on a scheduled weekly basis for the Southeast, Southwest, Midwest, and Great Plains to the Rocky Mountains.



PHOTO: GEORGIA PORTS AUTHORITY/JEREMY POLSTON

The inland terminal Appalachian Regional Port in Murray County, Georgia, was a bright spot for the Georgia Ports Authority in 2020. It handled 59,000 TEUs, up 73% from 2019 as more shippers move cargo by rail, then use shorter truck routes to nearby destinations.



GEORGIA
PORTS



MASON
MEGARAIL

...ON A WHOLE NEW SCALE

OPERATIONAL IN

2020

DOUBLES GPA RAIL CAPACITY TO

1 MILLION CONTAINER LIFTS PER YEAR

EXTENDS REACH TO

AMERICAN MIDWEST

CUTS TRANSIT TIMES BY 24 HOURS

MASONMEGARAIL.COM

ABW's main metro Atlanta campus is in Kennesaw, convenient to major interstate highways and served by CSX rail. The company takes full advantage of Georgia's logistics assets, which Justice says extend from having the fourth-largest container port in the United States to an interstate system that radiates from Atlanta to cover every major Southeastern market to a workforce well trained in materials movement.

Justice is upbeat on Georgia's place in the logistics landscape and ABW's sweet spot in metropolitan Atlanta. "Metro Atlanta will continue to be a very desirable location," he says. "The port will continue to grow, and we see nothing that will slow any of that down."

FULL SPEED AHEAD

Prominent among the essential keys to the resilience and strength of the Georgia logistics infrastructure is the Georgia Ports Authority (GPA), whose mission is "to empower entrepreneurs, strengthen industries, sustain communities, and fortify families by relentlessly striving to accelerate global commerce."

The organization is committed to maintaining the state's competitive edge through development of leading-edge technology, marketing, and operations to move cargo faster. In addition, the GPA works to identify what must be done today to sustain growth, performance, and security for tomorrow.

"Part of our job at Georgia's ports is to not only stay ahead of the growth curve, but also to identify and focus on new market opportunities," says Griff Lynch, executive director.

Testimony to that commitment is found in the fact that GPA moved more than 4.68 million twenty-foot equivalent (TEU) container units in 2020, up more than 1.8% over its 2019 total of 4.59 million. Total cargo crossing all docks in 2020 reached 38.4 million tons.

Coming through the challenges of 2020 with modest growth was "a major accomplishment for Georgia's ports and our partners through the private logistics community," says Georgia Gov. Brian Kemp. "With unmatched



Atlanta Bonded Warehouse, a leading provider of temperature-controlled warehousing and LTL/TL transportation, offers value-added services including co-packing, consolidated order picking for bulk pool shipments, labeling, and repacking.

terminal operations, superior road and rail connections, and reliable third-party service providers, there are no better run ports in the nation."

The Port of Savannah achieved its busiest December in 2020, moving 447,525 TEUs, an increase of 24% compared to December 2019. Total cargo crossing all docks reached 3.33 million tons in December, up 12.5%. Rail volumes for the month grew 16.4%, or approximately 10,900 TEUs, for a total of 77,230.

"Savannah's capacity to take on additional trade as well as its diversified cargo portfolio—including e-commerce and strong export markets—helped to drive business gains," says Lynch.

"Additionally, a housing boom has translated into strong demand for

furniture, appliances, and other home goods crossing our docks," he says. "We remain optimistic that the conditions for growth will continue."

GLOBAL CONNECTIONS

During a time when manufacturers around the world were shuttering plants, Georgia exports held steady over the 2020 calendar year, at 2.3 million TEUs. Food, forest products, cotton, clay, automotive goods, and chemicals led export container volumes. The Port of Savannah maintained a near-even trade balance of 51% import and 49% export, rare for the industry.

"Efficient global connections make export goods more competitive on international markets, and as our 37 weekly vessel calls show, shipping

Our name is local but our service knows no boundaries



For more than 60 years, the mission of **Atlanta Bonded Warehouse** and **Colonial Cartage** has remained constant:

to provide best-in-class integrated warehousing, transportation, and co-packaging services to the food, pharmaceutical, and related CPG industries. Our goal is nothing short of total customer satisfaction.





“As the pandemic subsides, this shouldn’t be where the digital transformation story ends. The next step is to take the lessons learned to review existing technology, identify remaining blind spots, and install integrations to create more powerful, end-to-end technology solutions.”

• **Brian Thompson, Chief Commercial Officer, SMC³**

lines are drawn to ports with balanced trade,” says GP Board Chairman Will McKnight. “By supporting small businesses and major industries, our terminals are key to attracting and retaining good jobs for Georgians.”

Another bright spot for 2020 was the Appalachian Regional Port (ARP), which handled 59,000 TEUs in 2020, up by 25,000 or 73% from the previous year. “More customers are seeing the benefit

of moving cargo by rail to the ARP, then using shorter truck routes to nearby portions of Georgia, Tennessee, and Alabama,” Lynch says.

“Even during the pandemic, we’ve seen successes such as expanding trade with Memphis customers,” McKnight says. “As a major intermodal center, Memphis is a key market for expansion of Savannah’s rail service.”

Georgia’s deepwater ports and inland

barge terminals support nearly 500,000 jobs throughout the state annually and contribute \$29 billion in income, \$122 billion in revenue, and \$3.4 billion in state and local taxes to Georgia’s economy.

SORTING IT OUT

Georgia’s logistics assets extend to solutions designed to sort out the myriad billing and accounting processes related to shipping.

Based in McDonough, Georgia, some 30 miles from Atlanta, nVision Global Technology Solutions offers a multitude of solutions for shippers around the globe.

The company specializes in providing global freight invoice audit, payment, and transportation spend management services for customers worldwide. It partners with multinational corporations to reduce their overall costs by providing a global, single outsourced solution to efficiently process, audit, and pay all transportation-related invoices.



A partnership of trust and transparency.

At Syfan, our commitment to shippers remains steadfast and true. The demands of COVID have created a shortage of carriers and tight capacity that have strained partnerships with some shippers – but not Syfan Logistics. Throughout the challenges of the past year, Syfan has not wavered from standing by its customers and continuing to provide drama-free service.

Because when we make a promise, we deliver.

Since its founding in 1992, the company has become a leading expert in managing invoices for all transportation modes and services throughout the world, in any currency and in most languages.

Its Sarbanes-Oxley-compliant solutions allow organizations to access nVision Global's broad experience and technology that have taken the company from a regional freight audit and payment service provider to its current role as the leading global provider of invoice audit, payment, and transportation spend management services.

"Our customers have come to rely on our prompt and accurate freight audit and payment services, as well as our leading-edge transportation spend management analytical tools to help them manage their overall transportation costs," says Keith Snaveley, senior vice president, global sales and marketing.

Services include freight invoice audits,

transportation management, business intelligence, contract management, claims management, and benchmarking.

"As a global freight audit, payment, and logistics information management services provider, nVision Global relies heavily on Georgia's large IT and logistics talent pool to strengthen our core offerings, allowing us to provide leading-edge products and services to our global customer base," says Snaveley. "nVision Global as well as our customers benefit greatly from Georgia's vast logistics hub, which allows nVision Global a truly global solution."

The company has developed a service for customers who don't necessarily want a full-scale TMS or freight audit solution, but are interested in storing their negotiated pricing rates in a secure location and being able to rate shop potential shipments against these rates.

The solution is available to customers who wish to maintain their rates

themselves, or as a managed service, whereby they send their rates to nVision Global, which formats and loads them into a secure database.

Once these rates are loaded, they are available to customers for rate shop purposes, as well as downloading for personal storage. Rates are available only to those associates to whom the customer provides access, ensuring rates are 100% secure.

Benefits of nVision Global's Contract Management service are wide-ranging and different for each customer. Some customers utilize this service as only a secure location to store their pricing rates for easy retrieval, while others use it as a means to determine the proper transportation provider for all their shipments.

nVision processes \$6.1 billion in invoices per year—yet another testimony to the range and volume of Georgia's vast impact in the world of logistics. ■

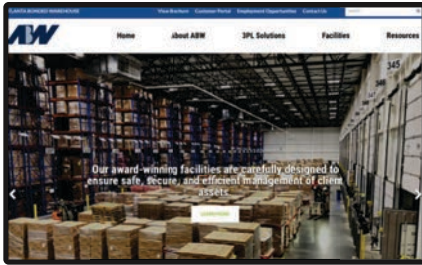


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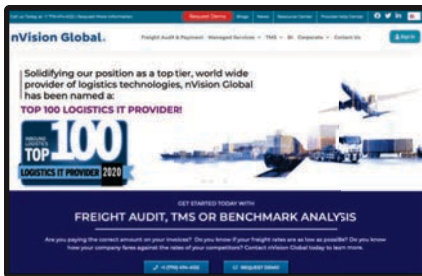
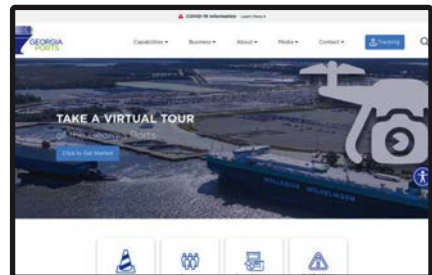


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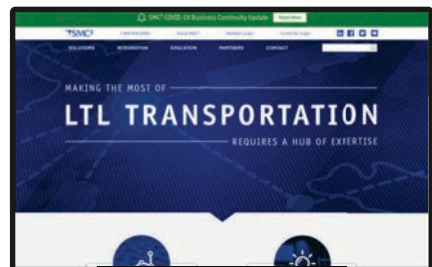


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IT TOOLKIT

Getting Into the Spirits

THE PROVIDER

Chicago-based Spirit Hub connects the makers of uncommon craft spirits directly with consumers. Spirit Hub is America's only legally compliant, online craft spirits retailer lawfully authorized to deliver straight to the customer's door.

THE CUSTOMERS

Spirit Hub works with about 250 craft distilleries across the United States.

by *Karen Kroll*

Craft distillers like Montanya Distillers—which produces rum from its base in Crested Butte, Colorado, where the high altitude and cool temperatures allow for flavorful aging—typically have been limited to distributing products within their own state, or perhaps a few surrounding ones. If they venture farther afield, they risk falling out of compliance with the myriad regulations governing liquor distribution across the United States.

While Montanya has grown about 22% annually, “we’ve been a relatively small fish in a sea of big fish,” says Karen Hoskin, the company’s founder.

Spirit Hub is changing that by using the internet to connect makers of craft spirits with those looking for them, while ensuring all remain in compliance with regulations. “We pride ourselves on delivering craft spirits from independent distilleries directly to consumers’ homes,” says Michael Weiss, founder and CEO with the Chicago-based company.

DO IT YOURSELF WMS

When his search for a warehouse management system (WMS) that could accommodate the thousands of liquor regulations in place across the United States proved fruitless, Weiss decided to build his own. Spirit Hub’s solution offers traditional WMS functions, such as inventory management and order processing and fulfillment, while also enabling compliance with liquor laws.

The technology is key to the company’s ability to operate and expand to new markets.

Distillers of craft spirits, as defined by the American Craft Spirits Association, are those that produce less than 750,000 gallons annually, and provide transparency regarding their ingredients. Owners-operators must hold more than a 75% equity stake in the company and retain operational control.

Spirit Hub currently works with about 250 craft distilleries across the country. According to its website, it is America’s only legally compliant, online craft spirits retailer lawfully authorized to deliver spirits straight to customers’ doors. As of late 2020, Spirit Hub was making deliveries to residents of Nebraska, New Hampshire, North Dakota, and Illinois. It plans to roll out to more states over the next few years, Weiss says.

While craft spirits are the reason consumers head to the Spirit Hub website, logistics is key. “We look

at our business as a technology and logistics company first, as a content delivery model second, and as a spirits e-commerce business third,” Weiss says.

The business starts with the supply chain. The company operates a “dark retail store” from which it distributes products, but customers must go through the website to purchase products.

CASEBOOK STUDY

That’s the Spirit

THE CHALLENGE

Spirit Hub needed to find or create a warehouse management system that can execute typical WMS functions and also ensure compliance with regulations and licensing requirements governing liquor distribution.

THE SOLUTION

- Build a WMS solution internally.

THE RESULTS

- Its WMS allows Spirit Hub to accomplish its goal of connecting craft distilleries with consumers in an expanding number of states, while remaining compliant with regulations.
- The WMS also is attracting interest from companies outside the liquor industry.

NEXT STEPS

- Continue to add features such as reviews to the WMS.
- Expand to more states.
- Potentially make the solution available to other companies.



In hunting for a WMS, Weiss and his team considered whether to “build, buy or partner,” and conducted multiple demos and held numerous discussions to determine their answer. They found the cost of customizing a ready-made solution to Spirit Hub’s needs was “astronomical,” Weiss says, in comparison to building it themselves.

In large part, that’s because of the mix of liquor laws blanketing the country. While some online operators use off-the-shelf solutions and ship products wherever their contracts allow, they often operate in a legal gray zone, Weiss says.

A TAXING SITUATION

In addition, few solutions could manage the taxes on spirits as well as on the other products Spirit Hub offers, such as glassware. Similarly, few enabled a direct-ship model in which, for instance, Spirit Hub might ship products from Illinois to another state where it agreed to pay that state an amount per bottle or a percentage of revenue.

“I had to build a customized solution to cater to my business needs and operate in regulatory compliance,” Weiss says.

In addition, by building the solution, Spirit Hub would own it. “We’d have the ability to be agile and manipulate the solution to our core business needs in real time,” Weiss says. That allows Spirit Hub to leverage its WMS to power the company’s growth.

A first step to creating the WMS was defining the business and identifying exactly what Spirit Hub was trying to do.

“Define what it is that you’re trying to build before you write even one line of code,” Weiss advises, adding that otherwise, you head down a spiral that leads nowhere. His overarching goal was to be able to follow the life cycle of a bottle from production to customer.

The team at Spirit Hub also looked at different operational requirements. For example, the ability to handle the multiplicity of tax codes and licensing requirements was key and has become a differentiating point. “Nobody does that in this industry,” Weiss says.

In addition, each product on the Spirit Hub website has a different life span and temperature requirements that have to be considered.

One experience highlighted the



Manifest Distilling is downtown Jacksonville’s only full-scale organic distillery, located in the heart of the Sports District. In addition to in-store sales, the company reaches customers through the Spirit Hub online marketplace.

importance of this. On a hot summer day before the company went live, the corks popped out of about 180 bottles that weren't kept in air conditioning and had overheated. An expensive afternoon, but it made clear the need to regulate the temperature within the space to keep products protected. It also confirmed the WMS needed to track the life of each bottle, Weiss says.

The system was up and running within about eight months, providing a foundation on which the business could operate. The team has done "a phenomenal job" of delivering the solution the business requires to grow and scale, Weiss says.

A GOLD STANDARD

Building a WMS required a significant investment. Spirit Hub employs a core team of experienced developers and engineers. Among them is Weiss's business partner and co-founder John Osborne, who sits on the board of a large technology company. The chief operating officer, Brian Feener, holds a wealth of knowledge in the retail sector gained through stints at a national liquor retailer and other firms.

The investment Spirit Hub made in its WMS is paying off in multiple ways. Spirit Hub offers "a curated, cultivated experience," Hoskin of Montanya says. That puts it at the forefront of the ways in which customers will find alcoholic beverages in the future. "We see enormous potential for growth," she adds.

"Because we built a better solution, it has become the gold standard in the industry," Weiss says, adding that multiple governments have confirmed the solution meets their requirements.

The success of the system has even prompted large organizations from outside the spirits industry to review it, Weiss says. Eventually, the company may make the solution available to other companies who could leverage it

to enhance their own businesses. "It's a pivot, but we'll still operate our core business," he adds.

I'LL DRINK TO THAT

Online alcohol sales overall skyrocketed during the pandemic. Nearly half—44%—of online shoppers for alcohol began shopping online for liquor only in 2020, an IWSR survey finds.



The Spirit Hub online marketplace allows consumers to shop for thousands of hard-to-find craft spirits from independent distilleries such as Montanya Distillers, which produces craft rum made with Louisiana sugarcane and snowmelt water from the Rockies.

Conversely, sales of craft liquors plummeted by about 41%, according to a study by the Distilled Spirits Council of the United States. Spirit Hub has helped some craft distilleries counter this trend.

Because Manifest Distilling, an organic distillery based in Jacksonville, Florida, already was working with Spirit Hub before the pandemic prompted widespread stay-at-home orders, it was easier to transition to online sales, says David Cohen, owner and founder.

Prior to the pandemic, about 65% of Manifest's sales ultimately came from on-premise accounts, such as bars and

restaurants. Now, about 65% go through distributors to off-premise accounts, like Spirit Hub.

"Having off-premise sales channels established before April 2020 made the transition easier," Cohen says.

The Spirit Hub system continues to evolve. Weiss says he's planning to deploy new technology solutions that will change how customers shop and the way they'll fulfill orders.

For instance, many customers are looking for loyalty programs, product reviews, tasting notes, and other merchandising capabilities. Because these capabilities can boost sales, they also help distilleries and distributors.

"We have the ability to ultimately represent these distilleries in a bigger way than they've ever been presented to a customer," Weiss says.

By the second half of 2021, Spirit Hub expects to add about 250 distilleries. Weiss and his team also are examining ways to increase the number of stock-keeping units (SKUs) each distillery offers through the site, up from the current 5.6 SKUs. One way is by advising their distillery partners on new spirits likely to appeal to customers.

Also in 2021, Spirit Hub will expand its physical footprint to add dark stores in states where this is required, with a goal of hitting all major markets across the United States by 2025. The company will start with states that operate on a three-tier model: products move from producers to importers or distributors and then to retailers. After that, Spirit Hub will focus on states where the government runs much of liquor distribution through municipal liquor stores, Weiss says.

As Spirit Hub grows, its WMS will remain key. "Spirit Hub's proprietary WMS technology is the operational backbone of our business," Weiss says. "From tracking inventory to fulfilling customer orders, the WMS is the hub that helps us not only maintain our success but grow our customer base and easily identify areas where we can improve." ■

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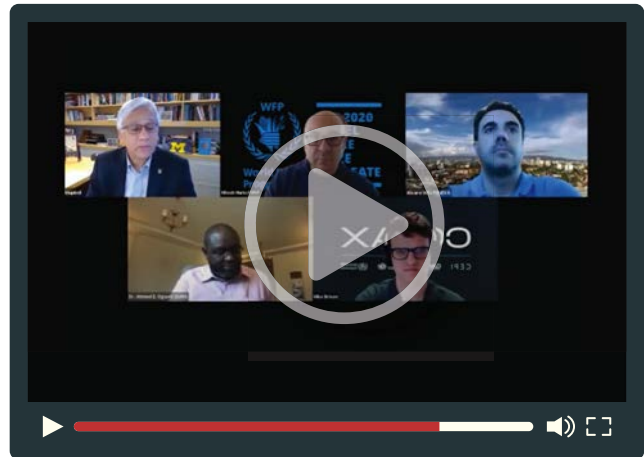
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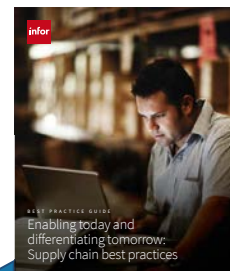
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podcast



Peter Zalinski

How Printer Innovations Aid Efficiency and Compliance

GUEST: Peter Zalinski, Director of Partner Solutions, Barcoding

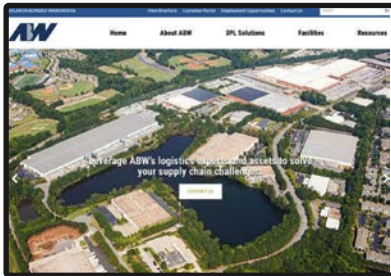
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3PL

3PL

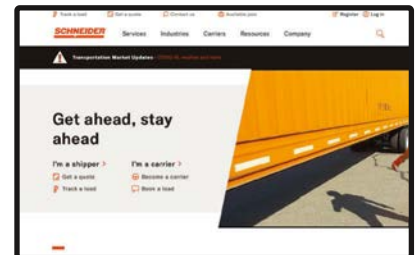


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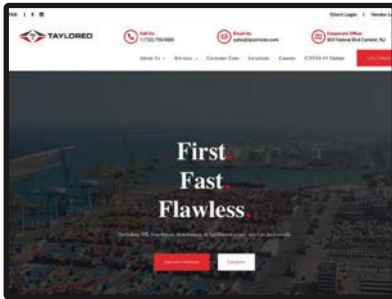
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3PL - Education

3PL



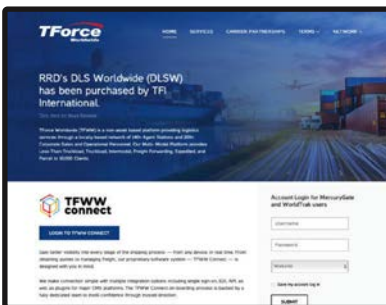
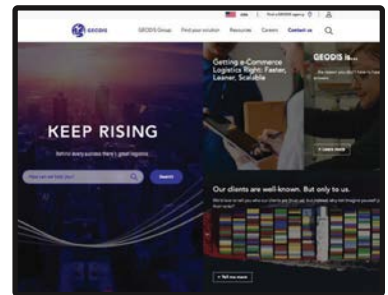
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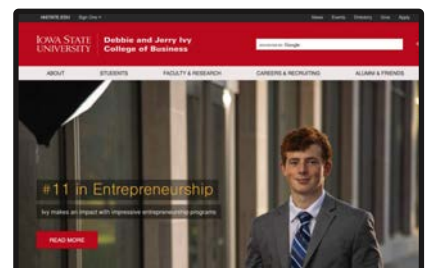
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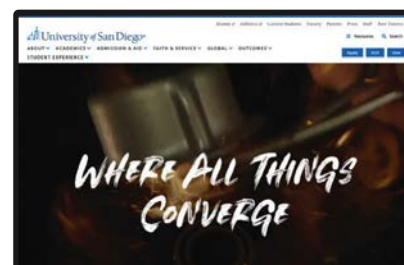


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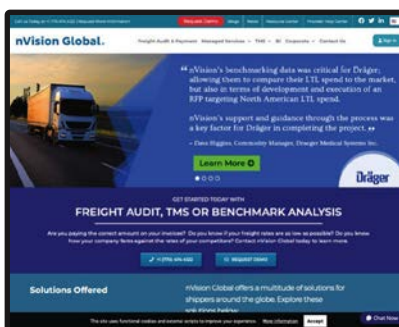
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GLOBAL LOGISTICS

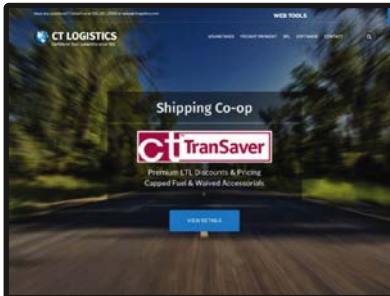
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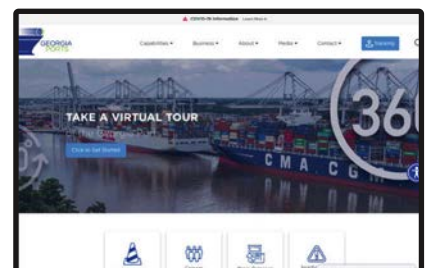


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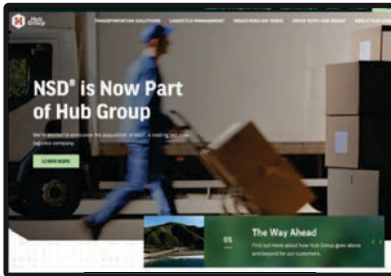
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GLOBAL LOGISTICS

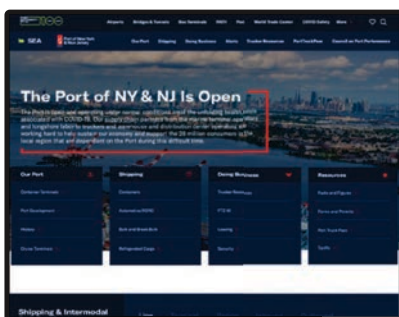


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Hub's extensive service network—built over many years—enables it to provide innovative transportation solutions that are versatile, flexible, and designed to deliver maximum efficiency. With this advantage, Hub Group is able to collaborate with customers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

LYNDEN • www.lynden.com

Over land, on the water, in the air—or in any combination—Lynden has been helping customers solve transportation problems for almost a century. Operating in such challenging areas as Alaska, Western Canada and Russia, as well as other areas around the globe, Lynden has built a reputation of superior service to diverse industries.

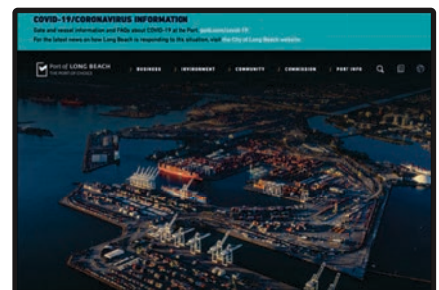


PORT AUTHORITY OF NY & NJ • www.portnynj.com

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 ensure that cargo moves efficiently, cost effectively and in a way that is environmentally sustainable.

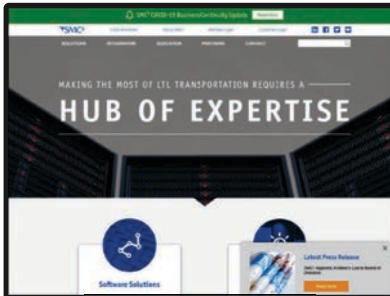
PORT OF LONG BEACH • www.polb.com

The Port of Long Beach is one of the world's busiest seaports, a leading gateway for trade between the United States and Asia. During the next 10 to 15 years, the Port of Long Beach plans to create at least four container terminals of more than 300 acres each, and to build at least one other large terminal. The new terminals will have dockside rail facilities, which allow cargo to be transferred directly between ships and trains. Such transfers speed deliveries between Long Beach and markets nationwide. For more information on the advantages and services offered by the Port of Long Beach, visit www.polb.com.



IN THIS SECTION: Logistics IT - Site Selection

LOGISTICS IT



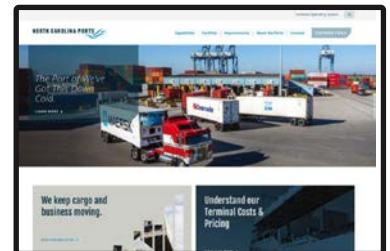
SMC³ • www.smc3.com

SMC³—the leading provider of freight transportation technology data and solutions—delivers the only integrated suite of intelligent technology data solutions geared toward the less than truckload and truckload industries. As a leader in both transportation software innovation and supply chain education, more than 5,000 North American shippers, carriers, logistics service providers and freight-payment companies rely on SMC³'s sophisticated LTL base rates, content, and expert bidding tools to make the best business decisions, achieve higher returns on their transportation investments, and meet the dynamic demands of the market.

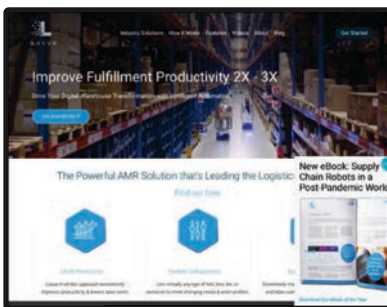
RETAIL LOGISTICS

NORTH CAROLINA STATE PORT AUTHORITY • www.ncports.com

North Carolina Ports offers port locations in Wilmington and Morehead City, along with a rail hub at Charlotte Inland Port. Our customer-focused approach means shippers receive excellent communication and customized service. Our customers experience the fastest turn times on the East Coast. And our expanding storage capabilities allow us to accommodate more customers than ever.



ROBOTICS



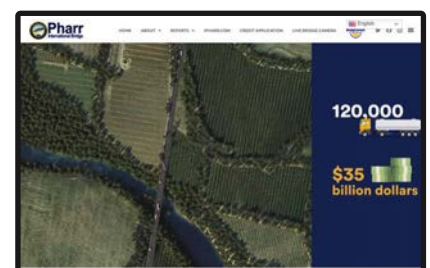
LOCUS ROBOTICS • locusrobotics.com

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.

SITE SELECTION

PHARR BRIDGE • www.pharrbridge.com

The Pharr-Reynosa International Bridge serves as one of the most important ports of entry for the U.S.-Mexico border. It handles both commercial and passenger-operated vehicles and crosses about 175,000 vehicles monthly. The Pharr International Bridge is also the only commercial bridge crossing in Hidalgo County, and is the number two bridge in the country for crossing of fruits and vegetables. The Pharr International Bridge connects US Hwy. 281/ I-69W to the City of Reynosa, Tamaulipas, the fastest growing city in Mexico.



[IN FOCUS]

SPOTLIGHT

Tracking Solutions

> **HasciSE Backhand Scanner:** This lightweight wearable device from ACD Group integrates a 2D scanner into the housing. Supporting fast product tracking, the configurable infrared proximity sensor, scan button, and hand strap finger switch trigger the scanning function. The scanner can be combined with mobile workstations for easy asset tracking throughout warehouses.



> **LT Series Mobile Powered Laptop Cart:** Designed for asset tracking, on-demand label printing/scanning, cycle counting, and other warehouse applications, the new cart from Newcastle Systems increases worker productivity by eliminating walking back and forth to and from a laptop or printer. With a compact footprint—20.5 inches wide and deep—it lets workers navigate narrow aisles and tight spaces.



> **Globe Tracker:** This low-cost, recyclable tag can be used to monitor pallets and cargo as they travel inside logistics assets across the globe. Integrating the LoRaWAN protocol, the in-cargo sensor tag uses a proprietary geospatial algorithm to effectively “roam” globally while remaining compliant with local regulatory agencies. IoT tracking solutions provider Globe Tracker, battery technology company Neosen Energy, and semiconductor supplier Semtech developed the asset tag.

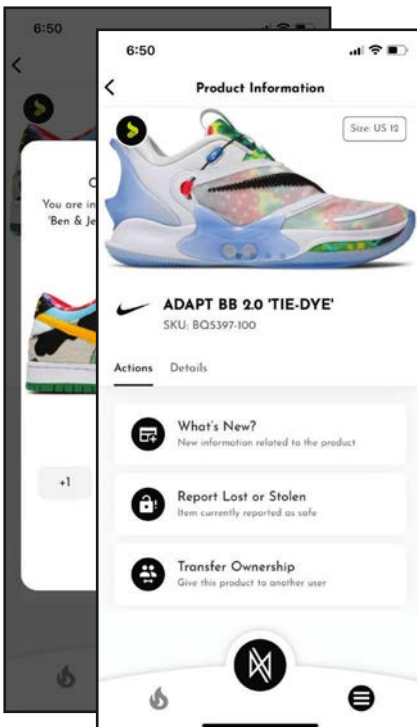
> **Ferrowave Flag:** The new RFID on-metal label from Confidex has a read range of approximately 30 feet to support item-level asset and part tracking. It can be easily attached to challenging metallic parts and is suitable for automotive parts tracking. While it works on all surfaces, the label is optimized for metal and can adhere to curved surfaces.



> **Tive Solo 5G Non Lithium-Ion Tracker:** The non-lithium GPS tracker provides real-time visibility into the location, temperature, humidity, shock, and light of goods in transit, at the item level, from end to end. The Tive Solo 5G can be used as a single-use tracker, making it suitable for last-mile deliveries where collecting and returning trackers pose a challenge. Tive's software detects when shipment segments start and stop, enabling detailed insights and analysis.

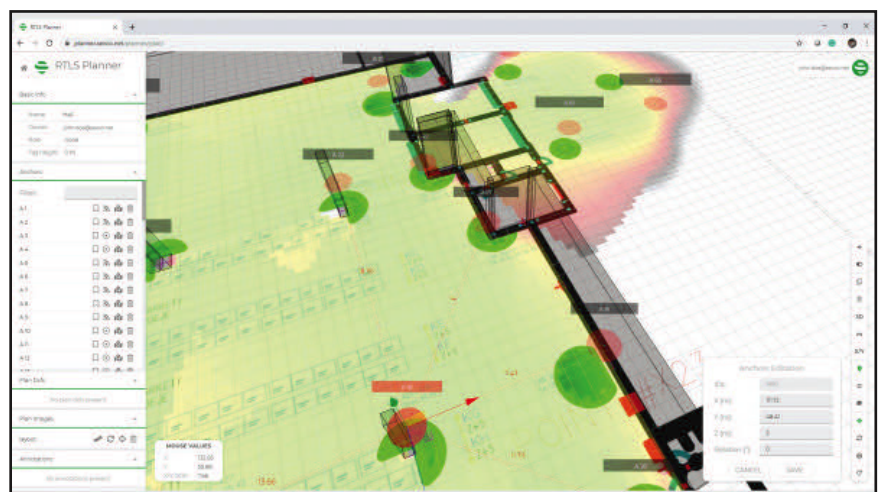


> **INFINITE App:** The new INFINITE iOS application from blockchain-powered SUKU uses a discrete NFC tag that is designed to remain concealed inside a sneaker's toe to provide a tamper-proof digital authenticity title. It functions as a physical-to-digital bridge, linked to a digital title based on enterprise-grade distributed ledger Hedera Hashgraph that enables secure ownership transfers, authenticity record lookup, and lost/stolen product reporting.



> **CL6NX Plus:** This thermal printer from SATO can print text and barcodes on ultra-high frequency tags/labels and encode data in their embedded chips at the same time. It can check RFID chips prior to encoding to verify their readiness to use and prevent failures in product tracking. Compatible with specialty RFID labels/tags, it supports the encoding of tags used with metals.

> **RTLS Planner:** To streamline the inventory planning process, the real-time location system (RTLS) planner software from Sewio Networks lets enterprises design a scalable IoT indoor tracking project. RTLS Planner helps to streamline and optimize the design of RTLS projects by instantly finding the best location for ultra-wideband anchors—the location signal receivers. This ensures the needed accuracy and reliability while keeping project costs low.



[IN FOCUS]

INBRIEF

New Services and Solutions



> **Combilift's** new Aisle Master-Order Picker is a stand-on electric-powered unit that combines the features of an articulated forklift and an order picker for warehousing applications, including narrow-aisle operation, truck-to-rack handling, bulk picking, and item order picking. A main feature is the step-through operator compartment; its low floor height of 11 inches enables single-step access from both sides of the truck.

>TECHNOLOGY

> Computer vision company **Fizyr** introduced a plug-and-play modular software product that integrates with warehousing equipment, including industrial robots, to pick products in various applications, including single item picking, parcel handling, depalletizing, and truck unloading. Fizyr features Ensenso 3D cameras and high-performance GigE uEye cameras from IDS, which provide optimal object information.

> Logistics managers can improve the timeliness of bookings, accuracy of shipments, and collaboration with vendors through **Flexport** Order Management (OM). Within the Flexport Platform, Flexport OM boosts collaboration between consignees and suppliers through order-level messaging, automatic reminders, and built-in approval flows. SKU and unit cost data associated with a purchase order are automatically linked with any bookings and shipments.

> To better serve shippers of all sizes, transportation solutions provider **Transfix** entered into new TMS integration partnerships with logistics software providers FreightPOP, project44,

Recon Logistics, SwanLeap, and UROUTE. Through the API integrations, shippers can accelerate complex, time-consuming workflows and gain visibility and access to fair market rates and capacity in real time.

> Companies can now search and find loads from **Uber Freight's** network directly in the AscendTMS software platform from **InMotion Global**. The integration between Uber Freight and AscendTMS provides access to Uber Freight loads, optimized for reduced deadhead and minimal wait times.

> 3PL **Kenco Logistics** launched Kenco STARR, a transportation management system for small to mid-sized shippers. With Kenco STARR, shippers can automate tendering, tracking, and invoice settlement. In addition, users can leverage pre-qualified carriers to reduce freight costs.

> Retailers now have a fully automated order fulfillment solution with the integration between **Kindred's** SORT robot technology and **S&H Systems'** materials handling and software product portfolio. The integrated solution allows enterprises to scale operations, optimizing throughput and fulfillment accuracy.

> **Logistics Plus** embedded a new business intelligence tool called MyFreightTrends in its cloud-based eShipPlus transportation management system. The tool provides detailed dashboards and analytics on users' North American freight shipping, including a lane analysis report with network velocity metrics and a summary report with total LTL and FTL spend by mode and by carrier.

> **APL Logistics** launched a visibility and reporting platform called Logistics SuperSuite Plus (LSS+). The order management solution provides end-to-end supply chain integration with tools to connect supply chain stakeholders. LSS+ offers vendor collaboration, shipment planning, visibility and reporting, and analytics.

> **TRANSPORTATION**

> **CMA CGM** launched the Flamingo Express weekly service between Fort Lauderdale, the U.S. Virgin Islands, the Bahamas, St. Martin, and Haiti with links to Asia and Europe. Selecting Port Everglades and its marine terminal partner Florida International Terminal, the new CMA CGM service made its first call in Fort Lauderdale in February 2020.

> **Transfesa Logistics** added an international rail connection in Dourges, south of Lille, in France. Unloading



> **GEODIS** expanded its specialist project logistics service. Renamed from GEODIS Industrial Projects to GEODIS Project Logistics, the service now extends beyond the industrial segment, integrating the company's aid and relief business as well as its marine logistics teams.

containers originating from Spain, the service operates mixed, multi-product trains, with its first stop in France, as well as transports merchandise that continues later on to other routes to various European countries.

> To boost airfreight transport options out of Europe, **Dachser USA**, a subsidiary of Dachser, expanded its dedicated Frankfurt-Chicago air cargo service by adding a weekday flight to complement its weekend schedule. The new route is operated by American Airlines with B777/PAX freighters and runs every Wednesday from Frankfurt to Chicago.

> **Yang Ming Marine Transport** established a subsidiary with NAXCO Group in France

> The updated TOUGHBOOK 33 from **Panasonic System Solutions** provides enhanced connectivity for warehouse workers, with the ability to connect to private LTE CBRS networks, up to 2.8x faster Wi-Fi 6, and 2x faster Bluetooth 5.1. The latest TOUGHBOOK 33 also provides upgraded security with Intel Hardware Shield (part of Intel vPro) and meets Microsoft's Secured-core PC requirements.



IN BRIEF

to support Yang Ming's presence in the French market with more extensive transport service. With its cooperation with THE Alliance, Yang Ming deployed several weekly service routes on Asia-Europe, Asia-Mediterranean, Intra Europe, and Trans-Atlantic trades, with regular services to and from Port of Le Havre and Port of Fos-sur-Mer.

> PRODUCTS

> **Link Mfg.**, a manufacturer of lightweight folding aluminum ramps, unveiled the LB20-42-108SA spring-assist ramp for last-mile delivery. The new 42-inch-wide ramp gives users more ramp width without blocking door access when mounted to one side and folded to its upright, storage position.

> The **Magliner** Powered Lifting Hand Truck allows operators to easily lift and lower heavy loads, up to 200 pounds, minimizing awkward movements and reducing injury risk. The lithium battery powered unit lifts up to 40



> **Hubtex** unveiled an automated electric multidirectional sideloader for handling long, heavy, and bulky goods. The new PhoeniX sideloader offers full electric steering, enabling longer operating times due to its lower energy consumption.

inches high, making it ideal for handling heavy merchandise and loading vehicles.

> The M3 UL20 Mobile Computer from **idTRONIC Mobile Solutions** is equipped with a 2D barcode reader to support data collection for inventory management. Featuring a 5-inch touchscreen and long-range scanning capabilities, the handheld reader can capture information from labels or tags up to a range of 70 feet.



> Sensor manufacturer **Leuze** introduced the stationary barcode reader BCL 200i, which supports guided container and tray identification in tight installation spaces on the conveyor line. The new BCL 200i detects 1D codes, regardless of whether the barcode is printed vertically or horizontally on the label.

> **Timestrip**, a developer of smart indicator technology, unveiled two electronic temperature indicators, which monitor breaches of temperature outside the designated range for a wide range of goods including pharmaceuticals, produce, adhesives, and inks.

> SERVICES

> **DSV** launched a customs classification service for international businesses. Called DSV Customs Classification, the new service ensures the information about the goods DSV classifies complies with local customs regulations and aims to ease customers' administrative burden.

> Two affiliated services of **CFI**, **CFI Logistics** and **CFI Mexico**, are expanding into a new, dedicated facility in Laredo, Texas, providing expedited cross-border as well as in-country Mexico logistics and transportation services.

> The PitMaster II Under-leveler Seal from **Rite-Hite** helps facilities save energy and keep contaminants out by providing a seal at the loading dock opening. Utilizing a main sealing curtain, side seals, and filler panels, the PitMaster II seal helps maintain facility cleanliness and improve energy efficiency at the loading dock.

> The **Columbus Regional Airport Authority** is set to develop a new air cargo pharmaceutical handling facility at Rickenbacker International Airport, with the help of a \$600,000 grant from JobsOhio as part of the Ohio Site Inventory Program. The 9,600-square-foot warehouse will be the first dedicated handling facility for temperature-controlled



pharmaceutical air cargo shipments in Ohio.

> The **Chicago Rockford International Airport** is adding a new international cargo center. The project includes a 90,000-square-foot facility, a 100,000-square-foot building, a new ramp to accommodate six 747 aircraft, and a new road for tractor/trailer traffic to and from the facility.

> **Old Dominion Freight Line** boosted its network by adding or expanding nine service centers. The LTL carrier's new or upgraded facilities include Brooklyn, New York; Edinburgh, Indiana; Grand Island, Nebraska; Louisville, Kentucky; Mansfield, Ohio; McDonough, Georgia; Mesa, Arizona; Milton, Pennsylvania; and Olympia, Washington.

> **PITT OHIO** launched a warehousing service across the Mid-Atlantic and Midwest regions. With its new solution, PITT OHIO offers project work, surging inventory, and forward inventory solutions.

> Real estate services firm **JLL** and consulting firm **Miebach Consulting** entered into a business alliance to help enterprises with site selection choices to support customer-oriented supply chains. With a focus on retail clients, the combined offering includes digital support to enable data-driven decisions; and support to modernize warehouses.



> **Blackline Cold Storage** is set to develop, construct, and operate a 298,000-square-foot cold storage facility to be owned in partnership with Artemis Real Estate Partners at the Port of Houston, Texas, on a 36-acre site in the TGS Cedar Port Industrial Park. The rail-connected site is located within the heavy-haul corridor, close to the Barbour's Cut and Bayport container terminals and with access to the regional interstate highway system.

An advertisement for ULINE stretch wrap. The background shows a hand in a black glove holding a roll of clear stretch wrap over a wooden pallet. A black box with the ULINE logo and text is overlaid on the image. At the bottom, there is a red banner with contact information.

ULINE
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COMPLETE CATALOG
1-800-295-5510 uline.com

CALENDAR

Logistics Events 2021

Connect with industry peers, join thought-provoking discussions, and discover the future of supply chain.



**APR
12-16,
2021**

ProMatDX

promatshow.com

Discover new solutions to move your business forward as industry leaders showcase their latest manufacturing, distribution, and supply chain innovations at this digital event. Get critical access to content that improves the resiliency and agility of your operations.

VIRTUAL

MAY 3-5, 2021

WERC DX

bit.ly/WERCDCX2021

Find solutions to problems, such as labor challenges, technology changes, sustainability, e-commerce, and the demand for a fully integrated customer experience, facing distribution logistics professionals. Thought leaders address pressing issues and companies offer new products and services that meet the needs of modern distribution centers and logistics organizations.

MAY 6, 2021

World Trade Week

bit.ly/WTWCA

An initiative of the Los Angeles Area Chamber of Commerce, World Trade Week Southern California educates the public on the importance of global trade for the local and national economy. The observance has grown to more than 30 events held throughout the month, bringing together business executives, trade organizations, and diplomatic corporations.

MAY 11-13, 2021

American Supply Chain Summit

supplychainus.com

Join senior-level executives for thought-provoking case studies

and key implementable ideas. Access live-streamed sessions and real-time chats to address your most pressing questions. Select which sessions to stream and get instant access to all presentations. Download materials to store in your digital briefcase, and visit a virtual exhibit hall to find services to enhance your operations.

MAY 18-21, 2021

Container Terminal Automation Conference

ctac.events

This year's event will host debates on the state of ports, harbors, and terminals, featuring C-level industry leaders. Explore innovative technologies that can revolutionize ports and terminals and help guide your journey toward automation. Learn about the state of the sector, emerging technologies, big data, and automation in brownfield terminals.

JUN 8-10, 2021

GS1 Connect

gs1connect.gs1us.org

Live-streamed and on-demand digital content focuses on adapting to supply chain and e-commerce challenges, with tracks such as healthcare, grocery, retail, and technology. Industry leaders share success stories leveraging GS1 standards and how to solve specific

challenges. The expanded program features a pitch competition, discussion groups, and virtual classrooms.

IN PERSON

**AUG 17-20, 2021
ORLANDO, FL**

Link: The Retail Supply Chain Conference

bit.ly/LinkConference

Top executives in the retail supply chain come together to network and learn. This forum addresses retailer challenges with breakout sessions and roundtables, industry executive general sessions, and executive insights. A new products and services expo experience lets you take fresh ideas and best practices back to your company.

**SEPT 25-28, 2021
LAS VEGAS, NV**

Truckload 2021

truckload2021.com

Attend truckload-specific educational sessions with industry experts, insightful panel discussions, and engaging keynote presentations. Take advantage of unique networking opportunities with trucking leaders as well as dedicated exhibit hours to learn about the latest products and technology for your fleet.

**SEPT 28-30, 2021
LAS VEGAS, NV**

RLA Conference and Expo

rta.org/event/125

This Reverse Logistics Association (RLA) event features industry thought leaders who discuss how to navigate the demanding world of reverse logistics, especially during these challenging times. Take part in powerful keynotes, content-driven panel discussions, and ample networking opportunities.

**JULY 16-17, 2021
WAYNE, IN**

Expedite Expo

expediteexpo.com

Learn about the latest expedite trucking industry news, equipment, career opportunities, and products geared toward owner-operators and drivers of medium-duty and heavy-duty trucks. Attend workshops packed with advice on how to spec a truck, choose the right carrier, reduce costs, improve profits, and save time. There's something for every type of industry professional, from fleet owners and owner-operators to chief executive officers.

These events were scheduled to proceed as of press time.

Are You Ready for Today's New World?

Thanks to the explosion in e-commerce and the COVID-19 pandemic, a manufacturer, distributor, or retailer of consumer products can no longer just “fill the pipeline” and wait for orders to come in. Now, they must anticipate various purchases and delivery items, while at the same time minimizing costs.

To do this is no easy task; it requires a Lean, agile, and responsive supply chain.

There was no existing “playbook” for organizations to navigate their way through this new world – **until now.**

Omni-Channel Retail and the Supply Chain

Working Together for a Competitive Advantage



Paul Myerson

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A PRODUCTIVITY PRESS BOOK

Omni-Channel Retail and the Supply Chain: Working Together for a Competitive Advantage By Paul Myerson

This book describes the impact of omni-channel marketing on the supply chain and logistics functions. It will help management meet the needs of not only today's ever-changing world but to anticipate what may be required in the future to achieve superior customer service, profitability, and a competitive advantage.

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<http://bit.ly/OmniChannelRetailAndTheSupplyChain>

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INDEX

Alliance Shippers	19
Atlanta Bonded Warehouse	69
COSCO Shipping	29
CT Logistics	Cover 3
Echo Global Logistics	Cover 4
Evergreen Line	15
Generix Group North America	26
GEODIS	39
Georgia Ports Authority	67
Hub Group	5, 28
Locus Robotics	41
Lynden	13
Mantis	27
North Carolina Ports	7
nVision Global	65
Pharr International Bridge	9
Port Authority of New York and New Jersey	3
Port Everglades	74
Port of Long Beach	33
Port Tampa Bay	35
Schneider FreightPower	48-49
SMC ³	63
Syfan Logistics	70-71
Taylor Services	31
Tforce Worldwide	Cover 2
ULINE	91
World Trade Week	95

3PLs

Atlanta Bonded Warehouse pg. 69
atlantabonded.com 678-322-3120

CT Logistics Cover 3
ctlogistics.com 216-267-2000 x2190

Echo Global Logistics Cover 4
echo.com 800-354-7993

Generix Group North America pg. 26
generixgroup.com 514-938-4562

Lynden pg. 13
lynden.com 888-596-3361

Syfan Logistics pgs. 70-71
syfanlogistics.com 855-287-8485

Taylor Services pg. 31
tayloredservices.com 844-RING-TDF

Tforce Worldwide Cover 2
tfwwi.com 877-744-3818

EVENTS

World Trade Week pg. 95
worldtradeweek.com 213-580-7569

FREIGHT PAYMENT SERVICES

nVision Global pg. 65
nvisionglobal.com 770-474-4122

Schneider FreightPower pgs. 48-49
schneider.com/freightpowershipping

INTERMODAL

Alliance Shippers pg. 19
alliance.com 800-222-0451

Hub Group pgs. 5, 28
hubgroup.com 800-377-5833

LOGISTICS IT

SMC³ pg. 63
smc3.com 800-845-8090

Mantis pg. 27
mantis.group 678-784-4015

OCEAN

COSCO Shipping pg. 29
cosco-usa.com 866-830-2550

Evergreen Line pg. 15
evergreen-line.com 201-761-3000

PACKAGING

ULINE pg. 91
uline.com 800-295-5510

PORTS

Georgia Ports Authority pg. 67
gaports.com 800-342-8012

North Carolina Ports pg. 7
ncports.com 855-211-1313

Port Authority of New York and New Jersey pg. 3
portnynj.com 888-767-8696

Port Everglades pg. 74
porteverglades.net 800-421-0188

Port of Long Beach pg. 33
polb.com 562-283-7000

Port Tampa Bay 3pg. 5
porttb.com 800-741-2297

REAL ESTATE LOGISTICS/SITE SELECTION

Pharr International Bridge pg. 9
pharrbridge.com 956-402-4660

ROBOTICS

Locus Robotics pg. 41
locusrobotics.com 844-562-8700

WAREHOUSING

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Thursday, May 6 | 8:30 a.m. – Noon

EXPERT SPEAKERS | INDUSTRY AWARDS | NETWORKING

www.worldtradeweek.com



VISUALIZE + CONFIGURE

3D-powered augmented reality solutions let e-tailers provide nuanced product detail to consumers, increasing purchasing confidence and reducing reverse logistics costs. 3D configurators can do physical showrooms one better, providing a dynamic, immersive experience that **lets consumers build products in real time.**

AR commerce provider Threekit, which renders shoes, clothes, and jewelry, among other products, launched a 3D configurator for sports equipment maker TaylorMade to let golfers build custom golf clubs.

E-COMMERCE ENTERS A NEW DIMENSION

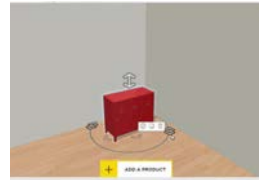
RETAILERS ARE TURNING TO **AUGMENTED REALITY (AR) SOLUTIONS** TO PROVIDE CONSUMERS WITH RICH PRODUCT INFORMATION, PERSONALIZATION OPTIONS, AND A SEAMLESS OMNICHANNEL EXPERIENCE.

AR FOR NEWBIES

Even small enterprises can enter the realm of augmented reality. With **no-code or low-code** options (platforms that make it easy for users with little development experience to design and deploy applications), companies of all sizes can soon develop and launch custom AR applications. For instance, developer Scope AR aims to “make authoring 3D AR content as fast and as easy as PowerPoint.”



THE ROI IS REAL: NEARLY HALF of U.S. online consumers will use AR or virtual reality by the end of 2021 predicts technology researcher Forrester. Retailers report an increase in sales conversion rates and a reduction in product returns from deploying 3D configurators on their websites.



IN-STORE + AT-HOME ENGAGEMENT

HomeByMe for Home Retailers, a 3D home planning solution from Dassault Systèmes, supports omnichannel experiences, helping retailers engage customers at the store and at home.

Customers can create detailed designs with exact dimensions based on real-time stock availability and cost calculations before sending the order to the furniture factory. Home furniture maker Gautier will roll out the solution to its 120 stores around the world, as well as incorporate it into its website in 2021.



Freight Bill Audit & Payment

TMS & 3PL
Managed Freight
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Global Audit & Payment
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Benchmarking
Consulting

FBAAP

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