

NOVEMBER 2021

SPECIAL REPORT

BOOSTING DC
PRODUCTIVITY

GUIDE

EXPEDITED CARRIERS
THAT DELIVER...STAT

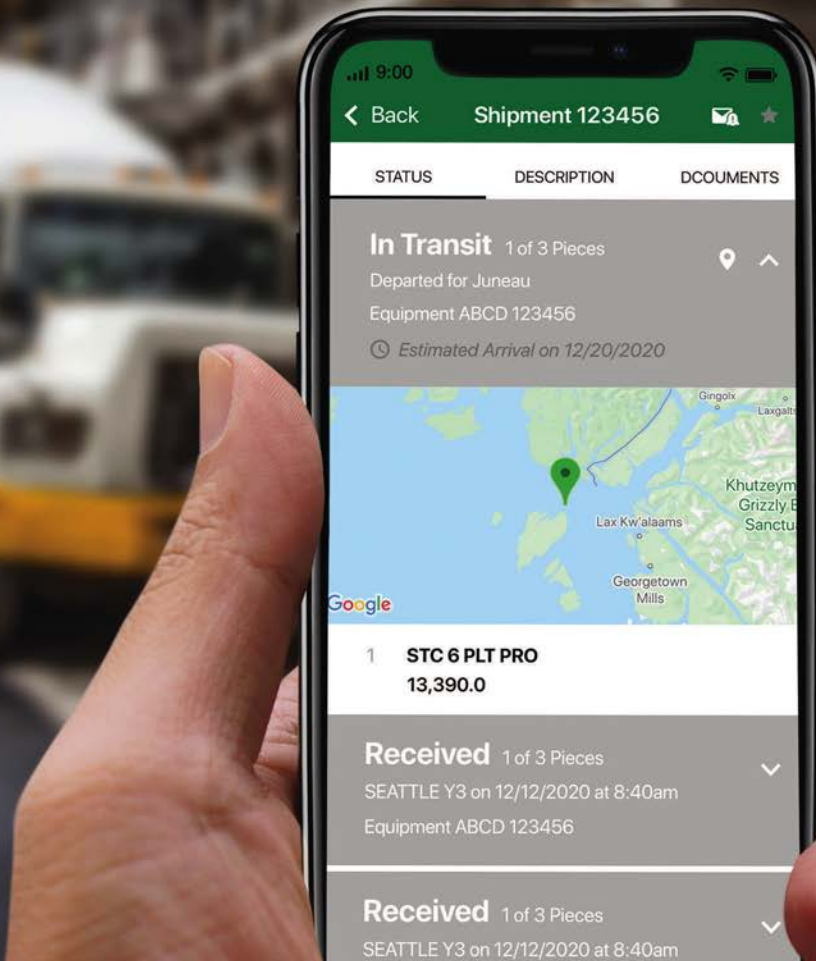
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SAVING TIME IN A BOTTLE(NECK)





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Info SNACKS

BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION



GOIN' MOBILE

- Nearly 60,000 mobile robots shipped in 2020 – an increase of more than 25% over 2019.
- 2020 was a tale of two halves: H1 was incredibly slow for mobile robot vendors; H2 was incredibly strong.
- Revenues to reach \$18 billion by 2025, despite lowered short-term forecast.

—Interact Analysis research

MAKE YOURSELF AT HOME

The **TOP FIVE STATES** Americans are moving to and now calling home in the past two years:

1. **Idaho**
(66.8% inbound)
2. **South Carolina**
(62.2% inbound)
3. **Oregon**
(62% inbound)
4. **Tennessee**
(61.3% inbound)
5. **Florida**
(60.5% inbound)

The **TOP FIVE INBOUND CITIES** in the past two years were:

1. **Sarasota, FL**
(76.9% inbound)
2. **Wilmington, NC**
(75.9% inbound)
3. **Fort Myers-Cape Coral, FL**
(75.1% inbound)
4. **Santa Fe, NM**
(73.1% inbound)
5. **Boise, ID**
(69.8% inbound)

—Mayflower “Finding Home” data



Amazon's First Place Win

Amazon's market share for U.S. parcel volumes jumped to 21% in 2020 following years of rapid growth, placing it ahead of FedEx and just behind UPS.

—Pitney Bowes Parcel Shipping Index

THE NOSE KNOWS

Nissan is looking to safeguard the most precious of benefits when it comes to getting a new car or truck: the smell. The Japanese automaker has begun employing “certified smellers” to ensure that the distinct olfactory sensation permeates throughout all areas of their new vehicles.

— DigitalTrends.com

55%

of fleets say spot rates, excluding fuel surcharges, will rise in the next 6 months.

67%

say truck capacity will remain tight through the end of the year.

—Bloomberg Intelligence/Truckstop.com survey

TAKING STOCK OF WAREHOUSES

- **85%** of 3PL warehouses experienced order volume growth in 2021, with **23%** growing order volumes by more than **50%**.
- **48%** report struggling to find and retain qualified workers, while also citing significantly increasing labor costs.
- **84%** of 3PLs have implemented a WMS as the central hub of technology for their business, with the average 3PL having three or more systems integrated to their WMS.
- **53%** of 3PLs fulfill orders less than 90 minutes after receipt, with speed of order fulfillment linked closely with annual order volume growth.

Third-Party Logistics Warehouse Benchmark Report, 3PL Central

CONTENTS

NOVEMBER 2021 | VOL. 41 | NO. 11

36

EXPEDITED TRANSPORTATION: QUICK TIPS

Expedite is becoming a go-to option for companies navigating slow procurement pipelines and congestion. Here's how to keep your freight moving when it seems like the whole world is conspiring to slow it down.



40

EXPEDITED CARRIERS GUIDE 2021

Need to get your cargo to its destination...STAT? These leading expedited carriers can get your shipments where they need to go, as fast as they need to get there.



46

AIR CARGO TODAY: BUCKLE UP!

Despite tighter capacity and rising rates, air cargo has become an even more critical part of the supply chain. Experts offer tips and advice for riding out the turbulent airfreight market.

40



50

SPONSORED

BOOSTING DC PRODUCTIVITY

Faced with increasing e-commerce complexity, distribution centers have to balance flexibility with efficiency. Here are the products, equipment, and systems that can help streamline operations.



60

GOOD QUESTION

What's the most challenging time-critical shipment you ever pulled off?

10

INFOCUS**1 INFO SNACKS****16 VERTICAL FOCUS: HOME IMPROVEMENT****18 NOTED****20 TAKEAWAYS****60 IN BRIEF****64 LAST MILE**

Breakfast purveyors rise and shine

INSIGHT**4 CHECKING IN**

Unleash short sea?

6 DIALOG**10 GOOD QUESTION**

What's the most challenging time-critical shipment you ever pulled off?

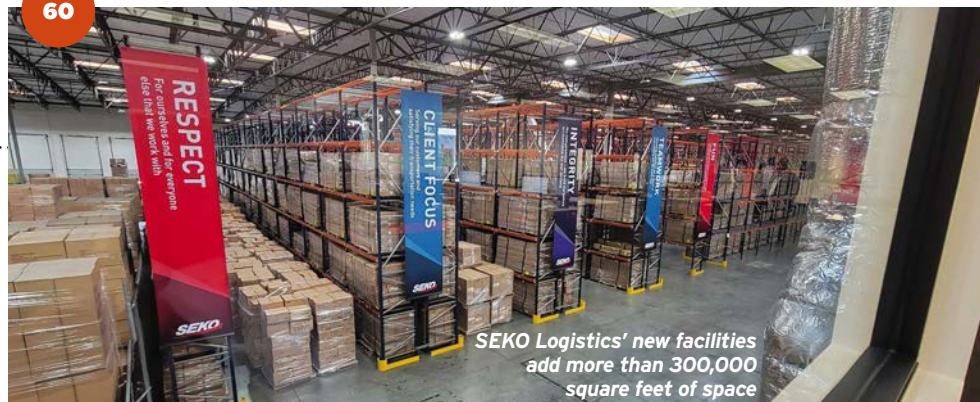
12 10 TIPS

Optimizing your routes

22 SPONSORED HOW

How can recommerce benefit your supply chain?...22

How to manage global specialty cargo supply chains...24



SEKO Logistics' new facilities add more than 300,000 square feet of space

26 SPONSORED SOLVED

Driving growth without boundaries...26

What to expect and how to prepare for peak season 2021...27

28 SPONSORED KNOWLEDGE BASE

Survive or thrive? How did your supply chain weather the pandemic?...28

Filling the education gap with LTL courses...29

30 VIEWPOINT

Big transportation impacts small and mid-size businesses

32 IT MATTERS

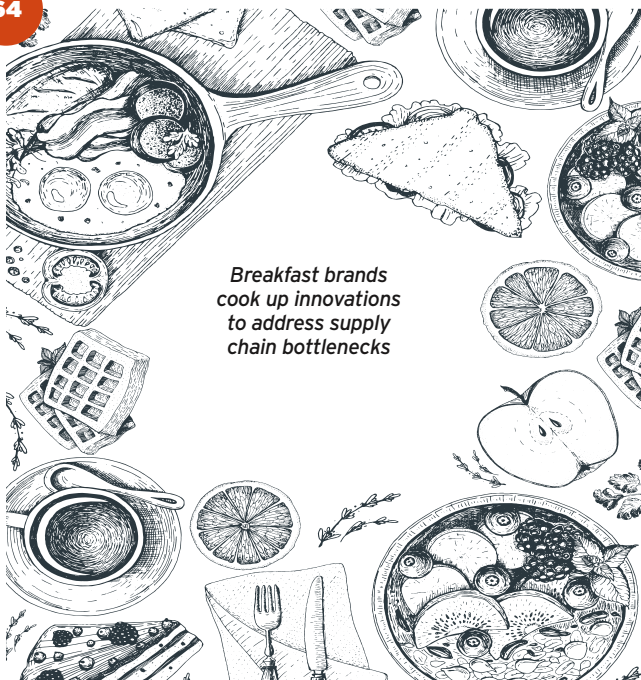
Is the healthcare supply chain ready for the Netflix effect?

34 TRANSPORTATION

Pulling levers and finding value in transportation

INFO**56 WEB_CITE CITY****58 SUPPLY CHAIN INSIGHTS****62 CALENDAR****63 RESOURCE CENTER**

64



Breakfast brands cook up innovations to address supply chain bottlenecks

**INPRACTICE****16 LEADERSHIP**

Chief executive officer Arch Thomason basks in a mentor list 33 names long, lean principles, and a team of smart people to keep Sunland Logistics Solutions shining bright and setting up customers for success.

CHECKING IN

Unleash Short Sea?



Keith Biondo, Publisher

The ports around the Great Lakes would love to help offset some of the pain of the horror show called the “shipping crisis.” Guess what. They can’t by law. Thank the Harbor Maintenance Fee (HMF), a well-intended policy perfect for the 1980s, along with related regulations, for sidelining port capacity around the Great Lakes.

The HMF was created by The Water Resource Act of 1986. The collected cash was to be used, in part, to dredge Great Lakes ports and harbors to make them more navigable. The fees were originally levied on any imports, exports, and cargo and passenger movements between domestic ports. The Supreme Court eventually found that taxes on exports were unconstitutional, but let stand taxes on domestic shipments.

The net result of the HMF on today’s supply chain activity: The United States has port infrastructure bandwidth that is sidelined and unable to be utilized.

“There are 1,000 ports in the United States, including 25 fairly decent-sized ones in the Great Lakes, that can’t help without some changes in legislative policy,” says Dean Haen, port director, Port of Green Bay. “The HMF was a way to facilitate and pay for dredging. We’re fully dredged now. But (the policy) needs to be tweaked because it’s stopping ways to alleviate congestion and it’s stopping commerce.”

The outdated policy limits Great Lakes shipping of materials to one port only. If a container is moved from a ship to a barge in one port, then moved to a second port and unloaded there, the HMF is paid twice, significantly increasing transportation costs.

“The way the federal taxation works on these vessels, you get charged on the value of goods at each stop,” explains Haen. “So if your goods don’t get off until the third stop, you’re taxed three times.

“The Great Lakes region is the third-largest economy if we were our own country, so there’s a lot of manufacturing and consumption happening around the Great Lakes,” he adds. “Yet all those goods that are being produced are moving to a coastal port, and other goods coming in to be consumed are also moving into coastal ports and then moved by truck or rail to the region.

“Think about the cost of building a highway or adding another lane—millions of dollars per mile,” says Haen. “This water is already here, there are no infrastructure costs, and the docks are there.”

Then there is the environmental impact of all those moves, as well as supporting the economies of the Midwest and other regions around the U.S. waterborne highway.

Altering historic transportation routes is not easy to do. Altering U.S. tax policy is really not easy. Is it time to look at *all* of our short sea shipping assets with an eye toward unleashing all that capacity?

Keith Biondo

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DROP US A LINE:

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SURVEY SAYS

We asked our LinkedIn followers:

 **FLORIDA IS INCENTING IMPORTERS TO MOVE THEIR CARGO AWAY FROM THE WEST COAST TO THE SUNSHINE STATE. WOULD YOU EXPLORE MAKING THE SHIFT?**

YES  77%
NO  23%

California has too many restrictions, which, in turn, inhibits commerce. Gulf ports are another option.

—Meta Miller

Plant Quality Team, Goodyear Lawton Facility

Load balancing among ports is crucial and it seems okay to help out other ports. But each port should know its limitations as well.

—Fahim Ahmed

Graduate Research Assistant,
University of South Carolina

South Florida ports are already heavily congested. Why bring even more congestion into these terminals? Perhaps Port of Tampa and maybe Jacksonville can handle a few more TEUs, but that's about it.

—Juan Ramirez

Managing Partner,
JSE Freight Solutions, LLC

Extra Caffeinated



I was reading a recent edition of *Inbound Logistics* and want to share an ironic happening. While reading the item on page 1 called “Caffeine Rush,” I was

drinking my coca-cola with coffee. I also live in Coffee County, Georgia!

—Rebecca Holton
via Facebook

Re. What's the Word?

bit.ly/whats_the_word

Companies are pivoting from just-in-time inventory management and distribution models to more traditional “just-in-case” approaches, and the shift is having a profound impact on transportation networks.

It's more important than ever to open lines of communication across carriers, logistics providers, suppliers, and customers, all of which benefit greatly when supply chain data (i.e., lead times, delivery times, potential delays, risks, etc.) is shared in advance versus after the fact. This enables end-to-end supply chain visibility and helps minimize risk, improve customer service, and avoid potential disruptions.

—Rick Ehrensaft

Chief Commercial Officer, Warehousing,
Odyssey Logistics & Technology

Quick TIP

Get real real-time visibility. Disruptions are rampant, costs are soaring. What's happening in the supply chain now wasn't happening two hours ago. Get immediate visibility into issues — across distribution centers, warehouse management systems, shipping, etc.

—Alex Wakefield
CEO, Longbow Advantage



Re. What Can Be Done to Make Progress on Moving the Mindset Away from “Us vs. Them”?

(Shippers/Receivers vs. Drivers)

bit.ly/Dialog_Sept21

Can we get around to sharing a mindset of “we all win”? The consumer is propelling the low-cost drive. With loss of brand loyalty, so often the deciding factor is price. Can we tell consumers through industry ads that quality costs money?

Driving efficiency in the supply chain means that we sometimes see low-quality vendors win the business. Accompanying that is repeated missed goals, low-quality people, assets (properties, information), and more.

The free market is part of capitalism, but along with that is supposed to be informed buyers who don't believe everything they are told.

I could write a book on this. I've lived it.

New topic: Our over-optimization has removed resiliency from the supply chain. It was viewed as a fair trade right up until it wasn't (about the time that it failed).

—**Danny R. Schnautz**
Clark Freight Lines Inc.

Supply chain management at its heart is the concept of comparative advantage: "How can the way I procure, structure, organize, and manage my supply chain provide an advantage versus the competition?"

Quite often this comes down to who can procure the cheapest service, leading to us vs. them. However, this in many cases sub-optimizes value creation; moving away from us vs. them entails thinking more broadly than procuring rates, sharing information, and being open to sharing channels / opportunities with suppliers and potential adversaries to enlarge the pie for all.

—**Neil Wheeldon**
*Chief Strategy & Innovation Officer
BDP International*

Quick TIP Remove friction by automating and digitizing processes like allocation management to optimize carrier selections based on capacity constraints.

—**Virgil Ferreira**
COO Rate Management, Magaya

INSIDER INSIGHT

Don't try to think you can predict accurately what the rate levels are going to be because realistically, nobody can do that right now. Take a risk-based approach—how much is supply chain certainty worth to you? How much are you willing to pay in freight rates and lock-in sometimes a substantial amount of time? How much are you willing to pay to make sure your cargo can actually get moved? What is that worth to you? Right now we are in a situation where there are not enough seats on the bus for everyone. Somebody's going to have to be left behind. What's it worth to you to be guaranteed that you can actually get a seat? This is the approach you need to take for 2021 and 2022.

—**Lars Jensen**
CEO & Partner, Vespucci Maritime, at the Flexport annual conference in Oct. 2021



Re. Good Question: What's the First Thing You Would Do to Address the Truck Driver Shortage?

bit.ly/driver_shortage_solutions

The driver shortage began when the Hours of Service (HoS) were modified "to combat fatigue." I am one of those 20-year trucking veterans who left the industry.

A 14-hour day was sold as a way for trucking companies to leverage the HoS to shorten load/unload times. That does not happen.

Instead of a driver being able to climb in the bunk and nap while waiting, with their logbook set to "off duty not driving"—allowing their drive time to push out until they finish napping—they have to sit and watch the clock continue to eat away at their 14-hour day.

Along with the HoS, companies do not offer decent compensation/benefits, and many small companies are taking advantage of immigrants and skirting DOT regulations.

HoS need to go back to what they were, to allow for naps without impacting productivity, and shippers and

receivers need to be hit with big fines for letting trucks sit at the dock instead of load/unload and go.

If your freight is not ready, cancel the load. If you have no one to unload or no room, refuse the load. Those two things will be all the change the industry needs.

—**Brian C. Gaffney**
*Supply Chain Specialist,
Natural Fiber Welding*

It comes down to how can we ensure our drivers feel like they are superstars? Because let's face it—they are.

First, you have to compensate them not fairly but feverishly. The market is constantly popping up with competition that lures a driver away with sign-on bonuses and annual raises.

Your routes and lanes, although at times out of our hands, can play a big part too. Are you allowing them to take toll roads? Routes that have less traffic yet more miles provide a less stressful drive for your driver.

And lastly, the truck's condition—at the terminal is everyone doing their part to ensure trucks are ready to run? The terminal is a driver's second home on the road next to their rig. It must have resources readily available for a weary truck driver i.e. laundry, vending, paper logs, envelopes, ice machine, showers, etc.

These are all factors that play a big part in a driver's happiness, motivation, and passion for the industry.

—**Dani Carrizales**
Terminal Manager, Tri-National, Inc.



Let's hear it for our Awardees!

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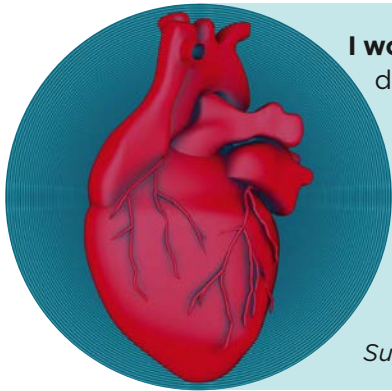
To learn how your company can achieve excellence visit:
epa.gov/smartway



GOODQUESTION

Readers Weigh In

What's the most challenging time-critical shipment you ever pulled off? How?



I worked for a 3PL in Holland that distributed surgical products. A Luxembourg hospital contacted us after hours, after realizing they did not have the right-size heart valve for a patient needing immediate surgery. One of our employees delivered the valve there in his car, saving the patient's life.

—**Antony Francis**
Supply Chain and Logistics Consultant, Endava

WE ARRANGED AND LOADED 200 CONTAINERS via a dedicated train from Los Angeles to Memphis to fulfill our customer's sales objectives. After a 72-hour transit, our trucks met the train trackside at 2 a.m. to deliver all containers that same day.

—**Mason H. George**
President, National Accounts
IMC

A REFRIGERATED TRUCK BROKE DOWN on a cross-country shipment for a priority customer. The part needed was on back order in the area and being a refrigerated shipment, time was limited. We were able to order the part somewhere else and fly out a driver to fix it.

—**Jared Moore**
VP, Traffic and Logistics
Alabama Motor Express (AMX)

A CRITICAL SHIPMENT OF HIGH-VALUE, SENSITIVE SEMICONDUCTORS needed to go from Austin to Malaysia in under 24 hours. We organized a hand-carry with our logistics provider, with couriers waiting on-site for pickup as the product finished final testing.

The shipment was tagged and flown carry-on via passenger flight to meet the deadline.

—**Frankie Mossman**
Chief Customer Officer, Overhaul

MOVING A WAREHOUSE FACILITY from El Paso, Texas, to Chicago in 5 weeks. We maintained facility operations while simultaneously removing 450,000 pallet positions of racking, shipping to the new warehouse, and then re-assembling there, minimizing supply chain disruptions and meeting client goals.

—**Allen Polk**
VP of Sales, Kenco

THE UPS FOUNDATION ORGANIZED AND SHIPPED 100 PALLETS containing 5,000 ventilators to India amid pandemic shortages, alongside the Toronto Business Development Corporation and the Province of Ontario. The team worked around the clock managing shipping logistics at a time when air capacity was extremely limited.

—**Srikanth Mallya**
VP, Operations
UPS Capital

NOT ONE SINGLE SHIPMENT, BUT BILLIONS: I was the VP responsible for Prime hitting its promise to customers, which included billions of time-sensitive 1-day or even 1-hour deliveries. The secret was "logical logistics" — we leaned into automating decisions throughout the entire supply chain based on big data.

—**Jason Murray**
Former VP of Retail Systems
and Services, Amazon
Co-founder and CEO, Shipium

RECENTLY THE EAST CAROLINA UNIVERSITY FOOTBALL TEAM needed their game clocks shipped from Missouri to North Carolina with a tight delivery window. We were able to use our regional LTL network to get the clocks to the stadium on very short notice in time for the clocks to be tested before kickoff.

—**Jonathan Partee**
Director, Sales & Expedited Services
Old Dominion Freight Line

Have a great answer to a good question?

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

How would you summarize the supply chain in 2021 in five words?

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



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10 TIPS

Optimizing Your Routes

This list of tips covers three critical phases: planning (1 to 3), implementation (4 to 7), and program optimization (7 to 10). Each phase calls on different teams to be involved and pursues discrete goals.

1 GET ALL KEY STAKEHOLDERS ON THE SAME PAGE.

Understand their needs and expected business challenges as you plan for route optimization. Take into account their key business problems, their definition of success for a route optimization program, and what they would consider a failure.

2 DOCUMENT EXPECTED CHANGES.

As part of those stakeholder conversations during the planning phase, examine any unrelated changes to business operations that may be on the horizon, noting any significant changes in forecasted business volumes and any geographical growth planned. Also factor in any new fulfillment channels and most critically, any considered changes in customer service levels.

3 FIND THE RIGHT ROUTE OPTIMIZATION PARTNER.

While this seems obvious, finding the right solutions partner to work with is the most critical factor beyond understanding the problems you are trying to solve. Has your partner worked in your industry? Does their “culture” fit yours? Does the level of their expected involvement in the project match yours?

4 START WITH A PILOT PROJECT.

To begin, optimize a small subset of your routes—or even just one. Select a route that needs help but will be self-contained and you know well enough that you can run your optimization and understand the impact without finding out from the driver.

5 BEGIN WITH THE BEST.

Always use your best driver as your guinea pig during the implementation phase. Find a driver who will be willing to work with you as a partner and understands

the value of the optimization project. This driver will be your ambassador to the rest of the fleet. Make sure that they are involved in the ongoing implementation project as a valued member of the team.

6 GET A QUICK WIN.

Once you have one or two routes running effectively, publicize your success and ensure that the key stakeholders are aware of your progress. Use real-world value—such as reduced carbon footprint, miles saved and, ultimately, dollars saved—to express the success of your project.

7 MAKE CUSTOMER RELATIONSHIPS YOUR BEST FRIEND.

Understand your customers’ preferences and historical needs as you implement route optimization. Focus on these pilot routes to make sure you know what your optimization project will do

to these customers’ pick-up times, drop-off times, and service levels. The last thing you need is a customer complaint caused by your route optimization.

8 OPTIMIZE DURING IMPLEMENTATION, NOT AFTER GO-LIVE.

Work with your partner to define your ongoing optimization process before you even implement your pilot project. Use the pilot project to tune your optimization process with precision, as if you were already live.

9 GET AHEAD OF THE CURVE WITH WHAT-IF SCENARIOS.

Think through ideas like: What if I lost a driver? What if my volumes increased by 20%? What if I opened another depot? Your delivery requirements are guaranteed to change, so make sure you have considered potential responses to those changes.

10 REVIEW YOUR HISTORICAL DATA.

This is important in order to understand metrics about your performance and service levels. Continuous optimization is a process of comparing cost against service and accuracy. Your optimization software should offer you these key metrics. Watch them closely and you should be in good shape.

SOURCE: BILL DENBIGH, VICE PRESIDENT OF PRODUCT MARKETING, TECSYS INC.

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Home Improvement



THE HOME DEPOT NAILS DOWN SAME-DAY DELIVERY

Do-it-yourself retailer The Home Depot's online sales almost doubled in 2020, and it is investing \$1.2 billion in its supply chain. As part of that investment, the company will expand its e-commerce delivery services and offer same-day or next-day delivery to 90% of the U.S. population by using Walmart's GoLocal delivery service.

The Home Depot will launch the service at select stores in New Mexico, Texas, and Arkansas, before expanding to other markets by the end of 2021. Walmart will deliver smaller items that can fit into a car, such as tools, paint, and other supplies, for The Home Depot.

Walmart launched GoLocal in August 2021 as a byproduct of its e-commerce infrastructure and network of stores across the United States.

"WE'RE FOCUSED ON CREATING A MORE CONVENIENT SHOPPING EXPERIENCE FOR OUR CUSTOMERS' HOME IMPROVEMENT NEEDS, WHETHER THEY SHOP IN STORES OR ONLINE."

—Stephanie Smith, SVP of Supply Chain, The Home Depot



PRE-ORDERS BUILD UP HOME IMPROVEMENT INVENTORY

Many manufacturers have discontinued their less-popular products or increased prices across product categories as ships wait off the California coast, truck drivers face long wait times, and rail yards remain backed up.

AAA Distributor, however, has all its kitchen cabinetry, shower doors, vanities, and flooring products ready to ship from its 120,000-square-foot warehouse in Philadelphia.

The home improvement store placed pre-orders to avoid running out of goods during the pandemic, and the strategy paid off. It started to receive containers in early 2021 and accumulated more than twice its 2020 inventory. The inventory arrived just in time to meet increased demand for summer home improvements.

AAA Distributor is now able to ship all kitchen and bath products within 48 hours. It also launched a new website, where all the products can be purchased and shipped directly to customers' job sites.

"BEFORE 2020 IF YOU TOLD CUSTOMERS IT WILL TAKE OVER 6 WEEKS TO GET KITCHEN CABINETS, THEY WOULD WALK OUT THE DOOR. IN THIS CURRENT SUPPLY CHAIN CRISIS, CUSTOMERS ARE EXCITED JUST TO BE ABLE TO ORDER PRODUCTS."

— Sales Manager, AAA Distributor

PATIO CONTRACTORS PLAY CATCH UP

Installing new patios was a big trend during the pandemic, as consumers built out their yards for at-home activities such as gardening, cooking, entertaining, and swimming. At the same time, restaurants and bars installed outdoor seating areas to allow for social distancing and keep their businesses open.

As a result, the demand for pavers—a popular hardscaping product used in outdoor installations—jumped nearly 7% in 2020, and many projects were delayed due to labor shortages, long wait times, and supply chain slowdowns, says a Freedonia Group analysis.

While supply chain challenges have persisted through 2021, they continue to become less of a factor, allowing more delayed projects to be completed. Near-term sales of pavers will remain elevated as pent-up demand for large-scale hardscaping installations is fulfilled, the report says. However, growth will moderate through 2025, with most of the gains stemming from price increases.

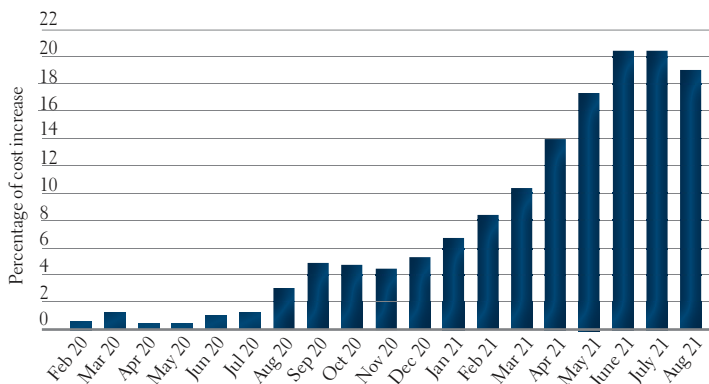
CONSTRUCTION WILL COST YOU

The cost of raw materials for U.S. firms is rising at its fastest rate in 40 years, with some of the higher costs making their way to consumers, says a Fitch Ratings analysis. Costs of construction materials and components have increased at a double-digit year-over-year rate since March 2020 (see chart).

The high demand for building materials persists due to new home construction and remodeling combined with government infrastructure and commercial construction spending, the report says. However, supply chain challenges in the building materials sector are taking longer than expected to normalize, hampering companies' ability to benefit from that demand.

Production capacity was constrained early on in the pandemic due to labor shortages, facility closures, and social distancing protocols. Port congestion and adverse weather events have exacerbated these challenges. As a result, building materials companies look to price increases, surcharges, and capacity expansion to compensate. Still, 2021 revenue growth remains within expectations, due largely to higher pricing, the report says.

PRICES SURGE FOR CONSTRUCTION MATERIALS AND COMPONENTS IN 2021 VS. 2020



Source: U.S. Department of Labor Bureau of Labor Statistics

IKEA CONSTRUCTS A PLAN

Swedish home furnishings retailer Ikea expects container shortages and port congestion to remain an issue through mid-2022, as consumers working from home continue to renovate. Here are four ways Ikea plans to pick up the pieces:

1. Focus its product offering on its most popular products.
2. Take other measures to get products shipped to its stores, such as renting its own containers and finding alternative routes on trains.
3. Absorb costs to accommodate price spikes for transportation and raw materials rather than passing them on to consumers.
4. Make products even more affordable and get a bigger share of revenue from its lower-price products.



PAINT DEMAND SPILLS OVER

Producer prices for paint and coating rose 10.6% in August 2021 from the previous year—the biggest annual jump since January 2009—as consumers change up their wall colors.

The deep freeze in the South has slowed production of petroleum, a critical ingredient for paint, and store owners have struggled to keep product on the shelves. Demand, however, isn't slowing down. The following home projects have been the most popular during the pandemic, adding to the supply chain strain, a HomeAdvisor report says:

1. Interior painting
2. Bathroom renovations
3. Flooring
4. Landscaping
5. Kitchen renovations
6. Exterior painting (tie)
7. Smart home devices (tie)
8. Roofing
9. Fencing
10. Deck or porch

“PRODUCTION DISRUPTIONS, COUPLED WITH SURGING ARCHITECTURAL AND INDUSTRIAL DEMAND, HAVE PRESSURED RAW MATERIAL SUPPLY AND RAPIDLY DRIVEN PRICES UPWARD.”

— Julie Young, VP of Global Corporate Communications, Sherwin-Williams

LEADERSHIP

Conversations with the Captains of Industry

Follow the Sun



Arch Thomason basks in a mentor list 33 names long, lean principles, servant leadership, and a talented team to keep Sunland Logistics Solutions shining bright.

by Merrill Douglas

Arch Thomason was enrolled in an executive MBA program while working in business development at Sunland Distribution (now Sunland Logistics Solutions). Along the way, he learned of an opportunity to acquire the business. “I remember sitting in class one night thinking, ‘How do I buy Sunland?’” recalls Thomason, who joined the firm as sales manager.

“I had never written a business plan, so as a project, we wrote one for my entrepreneurship class,” Thomason says. “Next question: How do you get funding from a bank?” It took eight tries, but he found a financial institution (one he still does business with today) to back him. He purchased Sunland and became its CEO in 2008.

Thomason recently shared some insights about his leadership at Sunland.

***IL:* What led you to a career in logistics after graduating from the Citadel?**

After college, I wanted to see the world, I so moved to Prague with 10 friends. We taught English and used Euro rail passes to travel around Europe on the weekends. Eventually, I had to come home and get a job. I was interested in international business. I got my first job in Atlanta with Mitsui-Soko, a logistics company.

***IL:* Did an early career experience help shape you as a leader?**

One month after I bought Sunland in 2008, the global economy collapsed. We were already highly leveraged, and the banks were nervous. Senior leadership took pay cuts. But we didn’t lay off anyone and we preserved the pay for all hourly associates. We weathered the storm, and that made us a stronger organization. Focusing on survival at the time gave us a keen sense of what it would take to win for the longer term.

***IL:* What interesting challenges do Sunland and its customers face?**

Since my career began in 1996, everyone has been leaning out their supply chains to serve traditional buying patterns for retail, automotive, and industrial products. Now, e-commerce has changed buying patterns and consumer expectations, forcing everyone to embrace greater speed and complexity, which can be challenging. The pandemic has exacerbated this tough situation. Clients demand resilience in their supply chains versus the lowest-cost option in the market.

Let's Get Real

For Arch Thomason, the most enjoyable part of the CEO job at Sunland Logistics Solutions is “going to the Gemba.” A term used in lean management, “Gemba” is Japanese for “the real place.” At Sunland, going to the Gemba means visiting each of the company’s warehouse facilities across the country, each quarter.

Take Thomason’s recent visit to Sunland’s 700,000-square-foot site in McDonough, Georgia. “We spent five hours on the warehouse floor and in a meeting,” he says. “Our COO and I listened to what they had accomplished in the past six months, walked the floor, had lunch with the associates, and helped them make a few key decisions.

“It’s fun getting out in the field where the action is,” Thomason says. In Georgia, that action included some quality time in the break room. “I played ping pong with one of our new engineers. He beat me.”

IL: How do you help customers adjust to those new conditions?

We focus on lean principles, starting with customer value, quality at the source, standardization, and flow. By adhering to these principles, we believe we can ‘help our customers do what they do better,’ which happens to be our purpose as a company.

IL: What qualities make you an effective CEO?

My background in business development has been helpful. I’ve worked in service businesses since my first job in a restaurant when I was 15. I discovered early that it’s important to learn what customers want, and then how to get people aligned to provide exactly that. Inquiry, problem solving, and building relationships are important tools that can create value for customers.

It’s also important to know how to think on your feet. And when you don’t know how to do something, bring in someone who does, listen to them, and develop a plan. We’ve had that kind of entrepreneurial spirit in the organization since its inception.

IL: How do you give criticism or correction?

Hard-to-have conversations are a must, and I’m having more of them today than ever. Every time this happens, I learn something about myself and how to foster better teamwork.

I strive to meet one-on-one every two weeks with my senior leadership team. I ask two fundamental questions: How are you? And how are we? That opens the door to honest conversations. Servant leadership is one of our organization’s core values, and one of the key components of servant leadership is honesty.

IL: Among your current projects, which is most exciting?

We’re implementing three types of automation and robotics in our network. We’re using drones to take inventory. We have a new Q-gate solution, which scans items as they pass through an outbound dock and transmits the data to our warehouse management system.

IL: What’s one valuable lesson you’ve learned since you became CEO?

Hire smart people and listen to them. Our strategy from 2013 was to hire the best talent in the industry in key roles and to let them run, even when it was a stretch for our smaller company. Our CSO Elijah Ray and COO Hari Sivaprakasam are my partners and are the catalysts to our growth story.

IL: How have you been influenced by a mentor or role model?

At least 33 people have helped me in my career (I actually made a list), including customers, peers, contractors, friends, and professors. But two of them were the main drivers. One was our former CEO and founder Sam Cole, who gave me a shot as a business development professional based on my one year of experience in sales. He also made it possible for me to get my MBA. I learned a lot from him about the entrepreneurial spirit.

My other important mentor was Bill Gates (not *that* Bill Gates), whom I met at a conference and competed against for years. He had just retired as the CEO of a global logistics firm, and I brought him into our company as chairman of the board, although he liked the title “coach.” He taught me how to build a team, grow the organization effectively, and invest in the right people.

IL: If you could do an entirely different job for one day, what would it be?

I’d be a singer-songwriter, someone like Jason Isbell. I’d get on a bus with a team and put on a rock-and-roll show. The only thing is, I’d like to start work at 7 p.m., because I go to bed by 10.

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

I have 12-year-old twin boys, so my wife and I tend to spend our weekends on various ball fields. We also like to travel frequently. I didn’t travel much as a kid, and there’s so much to learn from seeing different places and experiencing different cultures. ■

[IN FOCUS]

NOTED

The Supply Chain in Brief

> GOOD WORKS

- Partnering with not-for-profit organization The Book Fairies, **Transervice Logistics** collects and distributes books to help decrease high illiteracy rates in the New York metro area. It has donated and distributed about 1,600 books, with a recent drive collecting 450 books from its facilities.



- **AmerisourceBergen's** network of global businesses has helped distribute more than 75 million vaccines across 30-plus countries. The support includes services such as third-party logistics and temperature-controlled packaging, storage, and transport.

- **J.B. Hunt Transport Services** contributed \$1.25 million to the American Foundation for Suicide Prevention to help the organization save lives and support those affected by suicide. The gift supports national programs and includes education and resources to open conversations about mental health and suicide prevention.

> GREEN SEEDS

- Yard management company **Lazer Spot** partnered with SRECTrade, a cloud platform that registers clean energy assets, to reduce its vehicle emissions. As a result, Lazer accelerated its deployment of 100% electric yard trucks, eliminating more than 32 million pounds of carbon emissions.



- **Ford Motor** will build two new campuses to manufacture and assemble electric vehicles. It will spend \$525 million spanning five years to give U.S. auto technicians the skills they need for the new electric vehicle economy, and will expand its range of electric F-series pickup trucks.

- From ingredient sourcing to sales, **PepsiCo** plans to center all its operations on sustainability. The program, called pep+, outlines the company's goal to cut virgin plastic use in half by 2030 by using 50% recycled content in plastic packaging and scaling its SodaStream business. Other goals include achieving net-zero emissions by 2040 and becoming net-water positive by 2030.

m&a

- Logistics services provider **SEKO Logistics** acquired transportation and logistics group **Bansard International**.

- **Locus Robotics**, an autonomous mobile robots provider for fulfillment warehouses,

acquired **Waypoint Robotics**, a provider of industrial-strength, autonomous, omnidirectional mobile robots.

- **The Jordan Company**, a global private equity firm, entered into a definitive agreement to acquire **Echo Global Logistics**.

- European transport group **Samskip** acquired **Sea Connect**, a shipping company providing shortsea services to connect Russia, Lithuania, Denmark, Germany, and the Netherlands.

- **Worldwide Flight Services**, an air cargo handler and provider of ground handling services, acquired **Pinnacle Logistics**, a provider of cargo handling services in the United States.

- **project44**, a visibility platform for shippers and logistics service providers, acquired **Convey**, a delivery experience management platform for retailers.

- Logistics services provider **ArcBest** entered into a definitive agreement to acquire **MoLo Solutions**, a Chicago-based truckload freight brokerage.

> RECOGNITION



- **APM Terminals Elizabeth** was named **Terminal of the Year** by The Association of Bi-State Motor Carriers, recognizing its \$200 million infrastructure investment to upgrade the terminal and make it safer for trucks.
- **Geek+**, a global autonomous mobile robot company, won the **European Product Design Award** in the industrial robot category for the RoboShuttle, a tote-picking robot for high-density storage. The award recognizes the design's flexibility and functionality.

- **Christopher Clemmensen**, senior vice president of marketing at Echo Global Logistics, was named to **Crain's Chicago Business 2021 Notable Executives in Marketing** list, which recognizes marketing executives who have made a significant impact in their industry. Clemmensen, who has more than 25 years of experience, leads all aspects of marketing at the company.

- **South Carolina Ports** president and chief executive officer **Jim Newsome** will be inducted into the **International Maritime Hall of Fame** to honor his career in the maritime industry. Newsome has led South Carolina Ports since 2009, working to ensure Charleston remains a top U.S. container port.

> UP THE CHAIN

- **Tubelite**, a manufacturer of aluminum storefront systems, hired **Daniel Politowicz** as its logistics manager to oversee its U.S. and Canadian freight movement and distribution. With more than 35 years of experience, he previously served at Palogix Supply Chain Services and Coca-Cola Refreshment.



> SHOVEL READY

- **Duke Realty** completed a 622,230-square-foot industrial facility for Bob's Discount Furniture in Piscataway, New Jersey. This new distribution center enables the national furniture retailer to deliver quality service to consumers in the New York metro area.

- **Hallmark** broke ground on a new 850,000-square-foot facility in Liberty, Missouri. The new facility is an expansion of the current Liberty distribution center, growing the company's footprint in the area by 50%. Just outside of Kansas City, the facility provides a central location to help products reach customers quickly.

- **Intel** broke ground on two new chip factories at the company's Ocotillo campus in Arizona. They will not only support growing demand for Intel's products, but will also provide capacity for its new Intel Foundry Services. When fully operational in 2024, the sites will manufacture Intel's advanced process technologies.

> SEALED DEALS

- Makeup manufacturer **Estée Lauder** selected **Inther Group's** automated gantry robot picking technology to increase capacity and speed for e-commerce order fulfillment and reduce manual labor. This enables the company to respond faster to online orders and improve consumers' delivery experience.



- Fashion company **Benetton Group** is implementing **Dematic's** AutoStore software system in its facilities in Italy to optimize e-commerce storage capacity and order processing. Orders are picked by mobile robots that access more than 60,000 bins and transport the items to pick stations.
- **Kenco Logistics** is providing a custom fulfillment solution for natural soap company **Dr. Squatch**. Kenco's services allow for personalized unboxing experiences for each consumer. Its multi-node fulfillment solution optimizes transportation, operations, and process flow, and its warehouse management solution enables data-powered productivity.

> MILESTONE

- Global full-service logistics provider **Hellmann Worldwide Logistics** celebrates its 150th anniversary. Founded in 1871 by Carl Heinrich Hellmann in Northern Germany, the family-owned business has evolved into one of the largest international logistics providers with 263 branches and 11,000 employees across 59 countries.

[IN FOCUS]

TAKEAWAYS

Shaping the Future of the Global Supply Chain



EMPTY TRUCKS GET THE MESSAGE

Freight technology company Loadsmart partnered with The Home Depot to launch the first-ever automated flatbed platform that pairs capacity and price to a shipment. Called Flatbed Messenger, it combines Loadsmart's algorithms with The Home Depot's dedicated capacity to help shippers find capacity at lower rates.

Fleets that are dedicated to one customer often experience wasted miles when there are no loads available, consuming more fuel and spending more time sitting idle.

Flatbed Messenger feeds the truck's location, price, and destination into algorithms that match the information to a nearby shipment. This allows shippers to access flatbed capacity that was previously unavailable and gain visibility to lower rates. At the same time, carriers can fill their backhauls and reduce empty miles, helping to reduce emissions.

GROCERIES GIVE WAREHOUSE AUTOMATION A LIFT

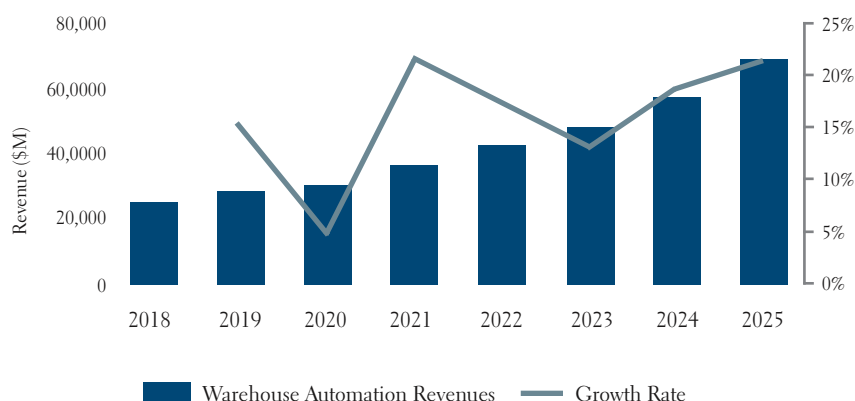
The global warehouse automation market will grow from \$29.6 billion in 2020 to \$69 billion in 2025 (*see chart*), says an Interact Analysis report, largely driven by e-commerce retailers that sell groceries and general merchandise, such as JD.com, Amazon, and Target.

Fixed automation, such as automated storage and retrieval systems, conveyors, and conveyor-based sorters, will remain the most common form of automation, the report says, but there is also a rapidly growing trend in adopting flexible mobile automation solutions.

Many automation companies saw a plateau in warehouse automation revenue while order intake increased significantly due to delays in project completion and supply chain limitations. As a result, the warehouse automation market will stabilize in 2021 and 2022. By 2022, the market will return to normal and face a permanently accelerated post-pandemic growth rate, the report says.

Significant growth in the American, European, Middle Eastern, and African markets will come from the general merchandise and grocery sectors. The single fastest-growing vertical is grocery, which is projected to grow from 12% of the market in 2020 to 16% in 2025.

WAREHOUSE AUTOMATION MARKET POISED TO ACCELERATE POST-PANDEMIC



Source: Interact Analysis



TAKEAWAYS

Tuning Up Automotive Supplier Programs

Automotive suppliers deal with increasingly complex manufacturing requirements, tight schedules, and manual processes that make it harder to keep programs on time, on spec, and within budget, finds a recent Lifecycle Insights report. More than 50% of responding suppliers report significant to moderate problems with issues such as missed errors and lack of consistent processes. Here's how they can improve practices, the report says:

- **Assess program complexity.** Are automotive requirements becoming more complex? Are timelines shortening? What's causing those changes?

- **Determine whether programs are performing as expected.** If not, what are the root causes of any difficulties? Do program managers have enough visibility to mitigate ongoing risks?
- **Identify the data and files that need to be exchanged** between program stakeholders and other functional departments to gain a complete view of programs. What tools and systems are being used to pull the information?
- **Identify the tools being used** to collect schedule status and share assignments with other functional departments. How many of them require manual work?
- **Establish the extent to which generic business tools may be reconfigured** or customized to meet program management needs. Have such efforts been effective?
- **Identify the gaps in systems and processes**, especially where the digital flow of information is broken and manual intervention is needed. Are customer and executive questions addressed in adequate time frames?



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How Can Recommerce Benefit Your Supply Chain?



Priorities for global commerce and consumerism continue to evolve, and retail companies are turning to *recommerce* to reduce their carbon footprint while managing the cost of returns.

Recommerce is a fast-growing service focused on reselling problem inventory to

extract value from existing products and reduce the environmental impact of manufacturing and transportation.

Companies spend an estimated \$100 billion a year on cross-border returns. Currently, cross-border sellers see a return rate of up to 30% on all online purchases; resulting in substantial costs, logistics and sustainability challenges.

The returns phenomenon is relatively new, and COVID has amplified the weaknesses of the reverse logistics flow because returns have not been treated as an opportunity. In the past, brands have thought that there is no money in returns, so they've tried to execute at the lowest possible cost, which typically gives the wrong people the wrong tools and generates ineffective targeting.

One of the most common sources of problem inventory comes in the form of ecommerce returns, particularly cross-border ecommerce returns. Compared to traditional methods of managing ecommerce returns, recommerce delivers benefits in commercial, environmental, and operational areas.

Recommerce reduces the timeframe in which returns are managed which, in turn, boosts cash flow. By comparison, the standard approach views returns as a cost center, rather than a revenue opportunity.

The recommerce approach reduces cross-border returns by utilizing in-country resale channels so businesses can drive down storage and freight charges.

Brands can emphasize their positive environmental impact with a recommerce strategy that emphasizes two critical aspects of sustainability—the longevity of a product and the carbon footprint it leaves behind. Recommerce gives products more than one life and more than one buyer. Some brands are encouraging secondary sales in recognition of growing consumer emphasis on sustainability.

The recent rise in recommerce is just beginning, and it is going to become an integral element of the retail market and the global supply chain.



PROVIDING QUANTIFIABLE FINANCIAL BENEFITS

With the transformation across ecommerce and within the global supply chain, clear operational changes are required to address certain outdated practices. Retailers have trained consumers to expect fast and free delivery, but in reality, there's no such thing as free.

- **Operationally, customer practices** were founded on the idea that there was no money in problem stock, and brands didn't invest in it or understand—it was treated as a “rear-view mirror” problem. The process of cross-border returns has been founded on a lack of awareness, a lack of data, and a lack of process.
- **An effective strategy** helps retailers identify high-value items that should be consigned to recommerce, and which items justify a cross-border return. For example, in fashion and apparel, top-selling shirts are flown back to the point of origin, and lower-value items are left in the original location or moved to another marketplace where they can be resold at a lower price point.
- **A recommerce solution builds operational proficiency** because of the data it provides through a product grading system. Each item is assigned an attribute map, which provides consistent data that can be applied across different locations so retailers can compare the process and outcomes consistently, allowing for better business decision-making.



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How to Manage Global Specialty Cargo Supply Chains

Not all cargo fits the traditional dock-to-dock standard delivery service. Some loads require specialized equipment and additional labor to perform the delivery and meet the customer's expectations.

Shippers in this situation may overlook the unique experience of a van line carrier, some of which are best known for moving household goods. Van line carriers have a wealth of experience moving everything from grandma's grand piano to a multimillion-dollar CAT scanner.

Load bars, straps, pads, decking, liftgates, and pallet jacks are just some of the equipment that is standard for a van line specialty carrier. These carriers provide their customers both the option of delivering to a dock and the flexibility of delivering to locations that may require a liftgate to unload the cargo.

Medical, hospitality, electronics, retail, and telecommunications are industries that benefit from a specialty carrier.

Specialty carriers are experienced with white-glove services such as inside pickup and delivery, uncrating, equipment placement, and assembly.

Oversized cargo like generators, pressure vessels, and construction components also take specialized carriers. This type of oversized cargo often requires rigging expertise at the origin and destination. Permits, pilot cars, and other preparation for oversize loads may be necessary to move this type of shipment.

Retailers frequently utilize specialty carriers for seasonal rollouts, new construction, and store remodels that require inside deliveries performed with a liftgate. These van line carriers offer their customers the additional services of on-day and on-time deliveries and often after hours. Other additional services that may be required are uncrating, assembly of fixtures, placement according to a blueprint, and debris removal. These types of additional services are what set van line specialty carriers apart from the standard freight carriers.

Reverse logistics can sometimes be a challenge for any carrier. When most medical equipment leaves a shipper's location, it is prepared for transport; however, the new equipment often replaces an existing piece of equipment that needs to be removed. This equipment is not packaged. Using their standard equipment, a van line carrier can protect the cargo using pads and straps to prevent damage during the return transport.

Shippers with specialized demands and complex logistical projects benefit from working with an experienced project management team to provide solutions with a single point of contact. A project manager will understand shippers' time-sensitive needs and unique concerns and requirements, supported by industry-specific expertise and attention to detail. Precise timing and operational consistency ensure your projects are completed on schedule and according to plan.



HOW TO SELECT A SPECIALTY CARRIER



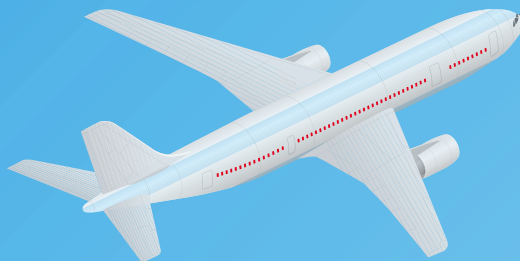
Here are three types of questions shippers should consider as they select a project manager and carrier.

- **Equipment Requirements.** Is the cargo oversize that would require permits? Will it be loaded/unloaded somewhere other than a dock? Do you need strapping, dunnage, pallet jacks, a lift gate, or other specialized gear?
- **Specialized Handling Requirements.** Will the shipment require inside pick up or delivery? White-glove uncrating and set up? Specialized material handling equipment? Labor-intensive manual unloading?
- **Carrier Requirements.** Does the carrier require hazmat certification or additional insurance requirements based on the value or risk of the load? Does the carrier have an adequate safety record?

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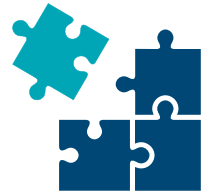


Transportation | Project Management | Final Mile | Warehousing Distribution Services | Specialty Logistics



Supply Chain Challenge?

SOLVED



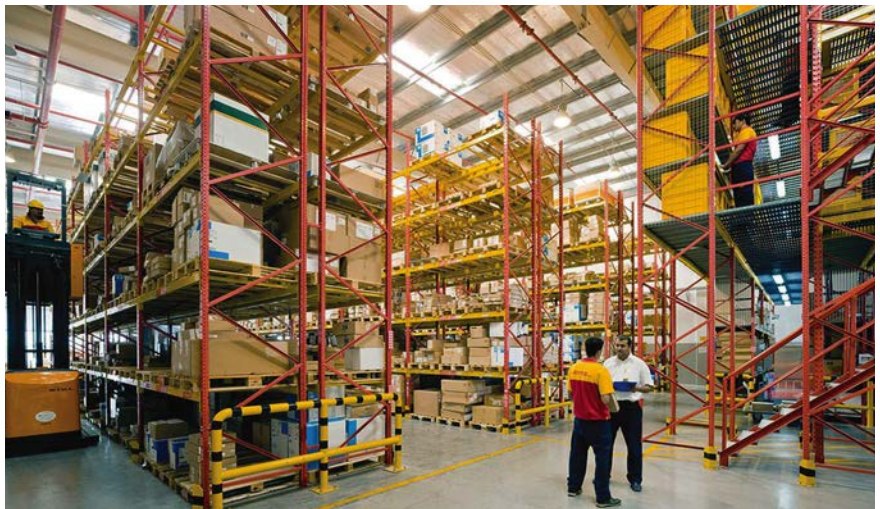
Driving Growth Without Boundaries

When Advanced Drainage Systems needed to expand its distribution footprint amid a building boom, DHL Supply Chain helped the company scale its supply chain and position itself for future growth.

THE CHALLENGE

Some of the economic effects of the pandemic can be seen across our cities and in our homes. The pandemic has sparked a surge in growth that has seen homeowners investing in DIY renovations and repairs, the largest uptick in building permits in 15 years, and municipalities investing in infrastructure.

That growth meant Advanced Drainage Systems (ADS), a leading provider of water management solutions products used in the storm water and on-site septic wastewater industries, needed to expand its distribution footprint to meet demand.



THE SOLUTION

To enhance its production capabilities and meet customer needs, ADS needed to invest in new facilities, consolidate its growing e-commerce operations, and increase capacity. ADS turned to its 3PL partner, DHL Supply Chain, to bring end-to-end supply chain expertise and best-in-class transport and logistics services to the ADS network.

DHL Supply Chain used its holistic knowledge of the supply chain to expand its existing partnership with ADS. To support the ADS retail business, DHL began managing a new 131,000-square-foot facility in South Carolina. DHL's 28-truck dedicated fleet enabled customized delivery to more than 700 DIY retail locations across the Southeast. In addition to bolstering ADS's retail business, DHL



Supply Chain freed up capacity for ADS to better support its commercial trade business.

An additional warehouse operation in Ohio has consolidated ADS's growing e-commerce fulfillment operations and provided additional capacity for finished goods distribution throughout their network of 63 manufacturing plants and 33 distribution centers.

The partnership with DHL Supply Chain has also advanced ADS's sustainability journey. The advanced tools and digitalization efforts will reduce the carbon footprint of ADS deliveries by optimizing trailer space and implementing dynamic routing and round-trip matching to reduce transportation miles. In addition, ADS converted to an all-electric forklift fleet, to dramatically reduce its carbon footprint.

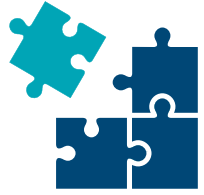
Through the efforts with DHL Supply Chain, ADS has been able to better serve its customers amid the building boom and better position itself for future growth.



To learn more:
www.DHL.com/AllBusinessNoBoundaries

Supply Chain Challenge?

SOLVED



What to Expect and How to Prepare for Peak Season 2021

Expect a longer and more unpredictable peak season. Here's how companies can get their logistics operations prepared for what's to come.

THE CHALLENGE

Peak season 2021 is shaping up to be especially challenging, as shippers are already dealing with tight capacity and other market-wide complications. Shippers whose volumes may not increase at this time of year will still be impacted, as strong demand for shipping from other companies can lead to higher rates and limited capacity.

Historically, peak season occurs from August to November every year; this year, peak season has the potential to last even longer than normal and have an even greater impact on shippers due to unique market dynamics.

While transportation networks have been strained over the past year due to the impact of the pandemic, peak season will likely spark even more freight shipping activity as more people get vaccinated, businesses fully reopen, and parts of the economy return to pre-pandemic levels. Closely following market trends and adjusting transportation plans if necessary will enable businesses to create a successful shipping strategy this peak season.

Because of the effects of the pandemic, there has been high demand for freight transportation, resulting in a continued tight capacity market. In fact, some carriers have had to cut back on servicing select shippers in order to maintain optimal service levels.

The tight market is causing many shippers to compete for space from carriers. As a result, carriers may increase



rates on top of the premiums and surcharges many have already added.

THE SOLUTION

Working toward becoming a shipper of choice—a company that carriers want to work with because they create a positive and valuable partnership—should be a priority right now for every company. For tips on building strong relationships with carriers, read our shipper of choice white paper at www.echo.com/resources/white-papers.

During peak season, shippers can also expect increased transit times and more delays that could hurt on-time delivery performance. Shippers can mitigate these issues by shipping freight as early as possible, building flexibility into a shipment's delivery date, factoring in the extra lead time it may take to source trucks, and exploring alternate shipping solutions.

Trusted and established third-party logistics providers (3PLs) are invaluable when your logistics operations are stretched to the max and you're facing

time constraints, tight capacity, and overwhelming consumer expectations.

By working with a 3PL, such as Echo Global Logistics, you'll be able to better manage through this year's peak season and stay ahead of your competition.

As a leading 3PL, our team at Echo uses a unique combination of industry expertise, best-in-class technology, and award-winning customer service to simplify transportation management for our clients. Our logistics experts are here to help you navigate the freight market during peak season and beyond. We can evaluate your transportation needs, discover efficiencies, and deliver the transportation solutions that are best for your business.

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Survive or Thrive? How Did Your Supply Chain Weather the COVID Pandemic?

What distinguishes companies that thrived from those that barely survived? The eighth MHI Annual Industry Report uncovers the answers.



Why were some companies able to quickstep around each supply chain obstacle, while others stumbled during the pandemic? How did certain organizations respond, recover, and excel amid the pandemic—emerging even stronger and more competitive than before?

To answer those questions, we focused our eighth MHI Annual Industry Report on assessing “Innovation Driven Resilience” (free at mhi.org/publications/report). Researched by Deloitte Consulting LLP, the 2021 edition shares the findings of a survey of more than 1,000 manufacturing, distribution, and supply chain professionals. Operations large to small participated, with 49% reporting annual revenues of \$50+ million, and 18% with annual sales of at least \$1 billion. Executive positions are held by 81% of respondents.

Embracing the Digital Supply Chain

The findings showed the most resilient organizations were those that had already invested in digital supply chain technologies. Since 2013, MHI’s Annual Industry Report has studied the trends and adoption of the following technologies:

- 3D printing
- Artificial intelligence (AI)
- Blockchain
- Cloud computing and storage
- Driverless vehicles and drones

- Internet of Things (IoT)
- Inventory and network optimization
- Predictive analytics
- Robotics and automation
- Sensors and automatic identification
- Wearable and mobile technology

The most forward-thinking supply chain organizations harnessed the power of these digital technologies and innovations to respond, recover, and thrive during the 2020 turmoil.

Among supply chain thrivers, adoption of these 11 technologies is considered table stakes. Indeed, 49% of companies reported a significant expansion of their investment in these innovations. Of those, 45% plan to invest more than \$1 million, and 12% will invest more than \$10 million within the next 24 months.

As for which digital technologies are most in use today, 57% of respondents report cloud computing and storage deployments. That’s followed by inventory and network optimization tools (45%), sensors and automatic identification (42%), and robotics and automation (38%). Those four technologies likewise saw the biggest jumps in investment in 2020 and are expected to be adopted at high rates over the next 1 to 5 years.

By the way, we are surveying supply chain industry professionals for the 2022 MHI Annual Industry Report. We would love to include your input. Participate at www.surveymonkey.com/r/2022MHIAIR.

A Digital Mindset Is Critical

The 2021 MHI Annual Industry Report also found that supply chain organizations who embrace digital technologies first achieved a digital mindset. That is, overcome internal

barriers to innovation across five key areas: leadership, innovation/technology, customer engagement, talent, and workplace environment.

To help organizations advance on their digital supply chain journey, MHI offers the Supply Chain Digital Consciousness Index (DCI). A free self-assessment tool (mhi.org/dci), the online evaluation enables a company to quickly determine its current digital mindset and gauge its progress on technology adoption.

Regardless of where a supply chain falls on the digital maturity spectrum, it’s important to not confuse “doing digital” with “being digital.” That is, leveraging a few digital technologies to maintain the operational status quo isn’t transformative. Rather, to achieve an end-to-end digital transformation, these innovations must be leveraged to optimize business, operational, and customer service models in a profoundly different way than before.

Want to learn more about how these digital innovations will bolster your supply chain’s resilience and enable it to thrive? Attend MODEX 2022, the premier manufacturing and supply chain expo held March 28-31, 2022, at Atlanta’s Georgia World Congress Center.

—By John Paxton



CEO, MHI

For more information or to register, please visit modexshow.com.

Filling the Supply Chain Education Gap with LTL Education Courses

LTL is not an industry of broad brush strokes; supply chain professionals need a pointillistic understanding of the logistics of LTL in order to excel in the industry.



If there's one immutable truth in the world of logistics, it's this: LTL is an inherently complex form of transportation. Tariffs, rates, DIM weights, transit times—it's enough to confuse even seasoned logistics professionals.

The solution to this knowledge gap has historically been on-the-job training or university supply chain education, but for a variety of reasons there is now a pressing need for third-party, remote LTL training that prepares logistics workers for transportation success.

Global Scope Can Overlook Local Intricacies

In the past, professionals looking to move into a supply chain career learned about the basics of supply chain from universities. However, many of these college supply chain programs are now global in scope, focusing on worldwide supply chain management instead of the intricacies of specialized domestic transportation.

And even these programs, which used to be widespread, are becoming less common. LTL is not an industry of broad

brush strokes; supply chain professionals really need a pointillistic understanding of the logistics of LTL in order to excel in the industry.

Accelerating Need for Dedicated LTL Education

This lack of specified training puts the onus on employers to prepare new hires with the LTL knowledge needed to do their jobs. Dedicated LTL study is a necessity, not a luxury.

At the same time, changes in LTL and the broader supply chain world are accelerating. The reliance on e-commerce has ballooned since the start of the pandemic, and last-mile LTL shipments and related e-commerce strains on the supply chain won't diminish once social distancing abates.

That genie isn't going back into the bottle. So supply chain employers need logistics workers that are fully versed in all aspects of the industry, ready to solve unique shipping and delivery problems based on their extensive supply chain knowledge.

But why care about LTL? It's been reported that some shippers in today's

world are no longer concerned with what mode is used to ship their goods.

A Multimodal Approach Ensures On-Time Delivery

This mode agnosticism means supply chain stakeholders have to be well versed in all modes of transportation. As unforeseen weather events and other disruptions, such as protests, become more common, savvy logistics employees will need to be armed with familiarity of all modes, not just the most popular, to ensure that freight is delivered on time, without damage, and in the most financially expedient way possible.

Offerings like SMC3's LTL online education courses cover a wide range of topics from LTL basics and operations to more advanced concepts like pricing analytics and transportation law. The company also has plans to continually refresh content, adding new expert presenters and taking the feedback of students to make the courses even better as time goes on.

Register:
logisticstrainingcenter.com/smc3-courses/

—By Brian Thompson



**Chief Commercial Officer
SMC3**

www.smc3.com
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SMC3 offers the industry's only path to LTL certification. SMC3 partnered with Logistics Training Center to produce five LTL courses, as well as an optional certification exam (CLTL). These seasoned logistics and supply chain management professionals, as well as leading university-level instructors, deliver up to 40 hours of content.



[INSIGHT]

VIEWPOINT

by *Stephen Aborn*

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Big Transportation Impacts Small and Mid-Size Businesses

One often overlooked budget item in growing companies is transportation and logistics. As companies focus on growth, the oversight of logistics programs frequently becomes a complimentary duty of employees whose primary focus might be in other company disciplines.

As a result, the transportation management approach is not visible or sophisticated enough, given the importance and impact it can have on your budget, brand image, and customer satisfaction.

Many programs are transactional and managed entirely by a spreadsheet tracker, which is ineffective in providing the necessary data or insight to support anything more than a roller coaster ride on the spot carrier market. Companies miss the opportunity to collect meaningful data, which, in turn, leads to higher prices—lack of data drives lack of strategy, which drives higher costs.

Simply, a company's profits can fall victim to the volatile and dynamic logistics industry by an under-managed or mismanaged internal focus.

Dramatic increases in transportation costs, poor service, and an inability to move products due to limited capacity is a direct result of a strictly transactional program. It is the high price companies pay for not having applied a thoughtful,

strategic, and data-driven methodology to a transportation budget that can represent 5% to 7% of total revenues in product-based organizations.

The latest industry news doesn't get much better for growing companies. Uber's acquisition of Transplace will become weighted even more heavily in favor of larger organizations. Transplace is a \$3-billion provider of managed transportation services to global mega-sized companies.

The acquisition provides existing Transplace customers with all of Uber's technology and resources. The consensus is that Uber/Transplace's increased commitment to the complex, volatile logistics industry in the managed transportation service space will continue to provide more products and greater tools to large, global customers.

Additionally, it reinforces the concept of outsourcing logistics services even at the highest and most sophisticated levels of the industry. Many of Transplace's

clients spend millions per year, and have robust in-house transportation and logistics departments staffed with tenured and experienced industry experts. Yet these well-managed mega-companies find value in partially outsourcing transportation services.

Better service efficiency and lower costs provide larger companies with more leverage to invest in their business and increase organic growth.

The good news for mid-sized businesses is that there are companies that offer a complete suite of outsourced, customized logistics services designed specifically to service the mid-sized and growing market.

Outsourced TMS companies form collaborative relationships and act as an extension of their client's transportation department. Subject Matter Experts (SMEs) in transportation management design logistics programs customized for analyzing company needs and transportation data for decision making with a proven track record of driving client savings and improving efficiencies.

Strengthening and improving a transportation program helps companies proactively manage a large cost service center with a best-in-class strategy. ■

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[INSIGHT]

IT MATTERS

by *CJ Singh*

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Is the Healthcare Supply Chain Ready for the Netflix Effect?

Have you ever marveled at how Netflix seems to know what you want to watch, when you want to watch it, and sets expectations with a high percentage of likelihood that you'll enjoy their recommendation? What if we could apply that same degree of accuracy to the healthcare supply chain? Armed with the right information, we could know who needs which supplies and when, down to the patient level. The result would be a more resilient supply chain and better patient outcomes.

If you recall, Netflix's original recommendations didn't always have a high level of accuracy. Through a combination of artificial intelligence, data, and predictive analytics, Netflix's picks are now so accurate that 80% of viewer activity is driven by personalized recommendations. Along with boosting customer loyalty, this saves Netflix more than \$1 billion per year, according to an *Insider* interview with Carlos Gomez-Uribe, the company's vice president of product innovation.

The healthcare supply chain is a lot like Netflix before it went all in on predictive analytics.

Due to a variety of factors, predictive analytics is poised to play a larger role in the healthcare supply chain. First, healthcare is at an inflection point.

COVID-19 has accelerated the necessity for change and hospitals recognize that they can't operate as they did in the past or they won't succeed. But forging ahead will require greater flexibility, resiliency and cost efficiencies.

Second, there is greater alignment among providers, payers, suppliers and patients. This alignment drives collaboration, innovation and the marriage of data sets.

Finally, the abundance of data available to improve decision-making continues to grow. Making sense of it requires predictive analytics.

From a supplier's perspective, predictive analytics will help get ahead of shortages, identify and address leakage, and maintain the integrity of the supply network. For healthcare providers, it will

enable them to align the right products with the right patients at the right time. Yet, as we've all learned over the past year, there's room for improvement.

Building a more resilient healthcare supply chain through the use of predictive analytics comes down to using data points from the past, converting them into actionable information, and using them to ask the right questions to accurately forecast what could happen next. The more data and insight you have, the better the recommendations and results.

Healthcare doesn't suffer from a lack of data. Where the industry can—and needs to—improve is aligning the right data sets and identifying variables within it to make recommendations in real time.

For example, if you're a hospital administrator trying to predict ICU capacity during the next week, one variable could be the number of current COVID-19 cases.

Another example is predicting the likelihood of a patient needing knee surgery in six months. Variables could be a patient's age and ZIP code, coupled with their medical record. However, a few general data points aren't enough to make accurate predictions. Conversely, an abundance of data makes it difficult

to know which variables are most relevant to a specific situation at that moment in time.

The most accurate predictions come from identifying the variables and studying them. To do this, you need models that can turn data into predictions. These models have historically been statistics, regression, and neural networks. In the past decade, we've seen advances in all three areas. It's these advances that will further modernize and fortify the healthcare supply chain.

For example, using predictive analytics, medical device suppliers can gain the insight they need to better understand their customers and markets, deliver products more efficiently and effectively, and match the right product to the right patient and the right case.

From a supplier's perspective, predictive analytics will get ahead of shortages, identify and address leakage, and maintain the integrity of the supply network.

They can also have deeper insight into the clinical impact of products and know which will drive adoption and profit and where to allocate resources to get the best returns. Finally, predictive analytics can vastly improve research and development, and drive innovation to continuously produce better products that yield even stronger patient outcomes.

That's not to say there isn't already good work happening with suppliers using predictive analytics. More recently, suppliers have deployed predictive analytics to better identify where to increase or decrease shipments of PPE supplies. Now that the technology

is advancing and healthcare is at an inflection point, the opportunities to optimize the value of predictive analytics for suppliers will increase. By extension, providers will also benefit as they seek to better understand factors such as inventory levels, forecasted demand, and upstream manufacturing capacity from suppliers.

Suppliers in the healthcare supply chain can learn great lessons from the Netflix experience. By consistently optimizing data and applying predictive analytics, the more accurate the recommendations. In turn, this increases loyalty while delivering greater cost savings. ■

CAN EVERYONE ON YOUR TEAM
SOLVE THIS?

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

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[INSIGHT]

TRANSPORTATION

by *Phil Schmidbauer*

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Pulling Levers and Finding Value in Transportation

Value is not always easy to measure. It's the same when discussing transportation costs. Lowest cost is not always the best, as poor quality can cost you much more. Corporate supply chain managers need to understand which levers to pull so they can get the best value for every transportation dollar spent.

Competition is driven by consumers who demand better products faster and cheaper than ever before. As every day passes, innovation is driving change and pushing demand for new goods and services. Transportation providers are being pushed to change the way goods are delivered to consumers.

Rising health concerns have led to an increase in local delivery services, including those for groceries. In 2021, e-commerce purchases grew 33% to \$792 billion, which accounted for 14% of all retail sales, according to the 32nd annual CSCMP State of Logistics Report.

One thing remains constant for many companies—transportation costs are the most significant part of their logistics budgets. Industry experts estimate transportation is roughly 58% of average corporate logistics costs. At the same time, consumers continue to demand innovative products requiring innovative transportation solutions.

As a supplier, focus on optimizing transportation costs for established distribution or supply networks. Once you have aligned the physical locations of your network, you have essentially determined most of your logistics costs—warehousing, inventory, and most of your transportation costs. The remaining variable costs are then your opportunity to create additional efficiencies.

Now, the dirty work begins.

Transportation strategy: insource or outsource? A company must make many tactical decisions when managing transportation. The first decision should be strategic: Is your company going to insource or outsource transportation management? Planners should ask themselves:

- Which option will make my company most competitive in the marketplace?
- Will the solution allow us to keep up with the latest technology?

- Do we have or are we willing to invest in the necessary expertise?
- Are we going to drive a competitive advantage?

This decision is not simple, but it is a critical success factor for leveraging the supply chain to create a competitive advantage. Once this decision is made and executed, a company can begin to focus on ways to optimize their transportation spend.

In this case, “optimize” means achieving the lowest possible transportation cost that supports the end customers’ desired service level.

Key levers for managing transportation cost. Many factors can impact a company’s transportation cost. Let’s focus on a few key areas to help better manage your company’s supply chain to optimize transportation spend.

Rate negotiation—It is imperative to have a process to secure market-competitive rates. There are various strategies for securing rates from carriers that vary by mode, but a company will need a process to manage those rates.

- **Parcel.** Discounts are usually larger with increased volume in the parcel market, and it makes most sense to leverage your company’s volume with one provider.

- **Intermodal.** In this sector it's most important to secure capacity, which can be accomplished with a volume commitment.
- **LTL.** Focus on the lanes you use and solicit bids from a variety of carriers to leverage competition in each lane. Utilize each carrier's strong suit on a lane-by-lane basis.
- **Truckload.** Optimization will vary based on your company's network and strategy. Rates can be dedicated for consistent volume, through carriers' direct, spot-market brokerage, or some mix of the items above. Some networks may be best managed through multiple brokers competing for business.

Mode selection—Picking the right mode for your freight is basic, but important. Managers must balance service and cost, but also need to understand how to gain efficiencies within each mode.

Parcel and LTL shipments move on tariffs with many confusing contracts and rules. If these are a large part of a company's network, it will be necessary to have experienced professionals managing this part of the business. Truckload and intermodal are generally dedicated to just your shipments but should also be utilized efficiently.

Carrier selection—Every network is going to need a mix of transportation providers and carrier options to be most efficient. The idea here is to build competition in the network where it makes sense. Any good network will have a variety of carriers or providers to best leverage cost and quality during the tactical management of the transportation network.

Transportation optimization—First, focus on using the fewest transportation dollars to move your products. At times, it can make sense to spend more on transportation to save on another logistics cost.

Companies encounter many complexities when managing transportation cost and customer service. Transportation optimization is about

Once you have aligned the physical locations of your network, you have essentially determined most of your logistics costs—warehousing, inventory, and transportation. The remaining variable costs are then your opportunity to create additional efficiencies.

planning loads most effectively to best utilize modes, carriers, and service levels to save the most money.

Many companies optimize modes, but then use the wrong carrier or pay more for a service level that is not required. A few questions you should ask:

- What technology are you using? How does it optimize cost?
- Are you measuring truckload and container utilization?
- Are you using the proper parcel service? How are you auditing this?
- Are you leveraging the right LTL providers?
- What key metrics are you measuring?
- How do your key metrics drive action?

Underutilized truckloads and containers can be expensive. Using the wrong LTL provider going into a specific shipper can cost time, money, and customer satisfaction.

There are many critical details in a transportation network and companies should be careful to manage them diligently.

Freight characteristics—Many product characteristics impact the transportation cost of freight. While this list is not all-inclusive, it provides a good start:

- What is the density of the product?
- Does the product damage easily?
- What's the value of the freight?
- How well is the freight packaged?
- Is the product hazardous?
- Is special equipment necessary?

Facility characteristics—The transportation market is fragile right now. Drivers are at a shortage and equipment is becoming scarce. A company must understand how facility characteristics impact changes:

- What are the hours of operation?
- Are appointments required?
- Is the facility easy to locate and navigate?
- Are transportation providers treated fairly?
- Are shipping and receiving locations easy to deal with?

Every company has a different logistics network and strategy to manage their networks. The key to success is understanding which levers to pull and how those levers will change the desired outcomes.

There is no right or wrong answer to the question of how to manage transportation. There will always be new technology, processes, and methods and it is critical that companies build continuous improvement into their logistics program. Measured success should be the goal for every organization.

Supply chain optimization. In the section above, we talked about transportation cost optimization. While it is important to understand how to control cost, it may not always be the most optimal to choose the lowest-cost option.

For example, if a consignee is going to charge the shipper a \$10,000 fine for being late, the shipper might find it advantageous to pay \$2,000 more for a shipment for a more reliable service that will likely avoid that fine. Quality service can cost more and may improve customer satisfaction—which might not necessarily be measured in dollars.

Effective supply chains can be an asset to a company and its customers. Companies should be careful to measure what is meaningful to their business. Measured improvement aligned with the satisfaction of the end customer will drive success within the organization. ■



EXPEDITED TRANSPORT:

QUICK TIPS

How to keep freight moving when it seems like the whole world is conspiring to slow it down.

By Merrill Douglas

Logistics professionals who rarely in the past let the word “expedite” pass their lips now find they’re ready to pay more for extra speed. Facing slow procurement pipelines and heavy transportation congestion, companies turn to premium freight services to keep production humming, inventory moving, and store shelves stocked.

“Expedite is becoming not an emergency option, but *the* option,” says Brian Bourke, chief growth officer at Seko Logistics in Itasca, Illinois, which counts time-definite transportation among its core solutions. Costly though it may be, expediting is the least bad option when the alternative is back-ordering products, failing on customer commitments, or shutting a factory, he says.

Companies are even paying extra to speed routine deliveries of mundane commodities. “Every time they’ve put in an order for bottles, they’ve gotten their bottles,” says Craig Laughlin, senior business development executive at Zipline Logistics in Columbus, Ohio. “Now suddenly they have to wait two weeks.

“If it’s going to cost a few hundred dollars more to get a product in time to make a production run, that’s just the world we’re living in,” he adds.

Shippers have historically viewed expedited transportation as waste in the supply chain, a sign of poor planning. “But now it has almost become a rite of passage,” says Daniel Harms, president of the Americas at Optimas Solutions in Wood Dale, Illinois.

A distributor and manufacturer of fasteners and other manufacturing components that also manages inventory for many of its customers, Optimas pays a premium these days to overcome obstacles such as weeks-long delays in ocean transit.

“We are taking advantage of expedited services when necessary to meet demand,” Harms says. The company works with customers to mitigate the need to expedite when possible.

“But due to the current market environment, we are using courier services and putting charters in the air more when circumstances warrant it,” he adds.

THE MANY FACES OF EXPEDITED

Expedited freight is not a specific set of modes or services. “Expediting is just upgrading over what you would have done before,” says Laughlin.

If you normally ship by intermodal rail, you might speed things by going over the road. If your usual less-than-truckload (LTL) service can’t meet your deadline, you might try a full truckload carrier, an exclusive use (or “hotshot”) vehicle, or air cargo, depending on your budget and needs.

One of Seko’s expedited offerings is next-flight-out, which puts freight on a scheduled flight immediately. “But we also do air charters that can be international or domestic,” Bourke says. Seko has chartered aircraft as small as a Cessna and as large as an Antonov, the world’s largest cargo plane.

In late 2020, XPO Logistics tailored an air service for a large automotive supplier whose production and deliveries had been running late. “We worked with our customer to create a dedicated air

route and put the plane into a closed loop, capable of making multiple trips a day to deliver supplies,” says Drew Wilkerson, president, transportation North America at the Greenwich, Connecticut-based third party logistics (3PL) provider. This solution was more reliable and cost-effective than going to market each day to find a plane.

Another option is expedited ocean, which costs more than standard ocean service but offers faster delivery. “Expedited ocean actually saves shippers money by speeding up their supply chains on the inbound side,” says Bourke, whose company offers this service.

“We’re even doing ocean charters now,” he adds. “We’re bringing charters into ports such as Portland, Oregon, and Jacksonville, Florida, because there’s no congestion there.”

The charter vessels are far smaller than standard containerships, with a capacity of 500 or 1,000 twenty-foot equivalents (TEUs). When time is of the essence, smaller can be better.

“Offloading a 20,000-TEU ship can take days if your container is all the way on the bottom,” Bourke says. Freight transported on smaller ships gets off the water much faster.

Optimas uses a different strategy to get ocean containers loaded and unloaded promptly. “We pay for preferred status at a lot of ports, just for the privilege of not being at the end of the line,” Harms says. “It doesn’t guarantee that we’ll be at the front of the line. But negotiating those partnerships with a lot of the ports and steamship lines has allowed us to mitigate some of that delay.”

ALTERNATIVES TO EXPEDITING

In the struggle to keep product moving these days, expedited freight isn’t always the answer. Shippers and their service providers also find creative ways to avoid the need to spend extra on transportation.

One strategy is to source differently. “Some companies have backup vendors on some of the products that they’re sourcing regularly, their highest-volume items,” Laughlin says. “That’s one way

we've seen shippers avoid some big issues and delays, which then go hand-in-hand with expedited shipment."

Recent transportation snarls have prompted many companies to source product closer to home, rather than from Asia. Optimas has done that. It also uses its in-house manufacturing capacity to avoid high-priced transportation.

"One of the first solutions we look at, before we expedite, is whether we

can make a product in-house in three weeks, versus having to try to source it," Harms says.

Storing inventory closer to customers can also eliminate the need to expedite, because product doesn't need to travel as far. For example, Optimas recently opened a distribution center in Monterrey, Mexico, in an industrial park where several of its customers also have facilities.

XPO also sometimes cuts miles out of the supply chain to reduce transportation challenges.

"We've seen our customers manage situations in which they've brought in product assumed to be critical, but ultimately didn't need as quickly," Wilkerson says. That product sat in trailers, tying up carriers' equipment.

"To solve this problem, we opened new facilities to help customers bring product closer to their end locations," he adds.

Pegasus Logistics Group in Coppell, Texas, takes a similar approach with some customers, encouraging them to use, among many other options, forward stocking locations rather than keep all their inventory in one warehouse, if that is viable for the client.

"That way, we can source from a regional, Newark-based warehouse if a shipment is destined for Boston, rather than sourcing from, say, a Dallas-based national warehouse location," says Heath Shoemaker, the company's executive vice president of solutions.

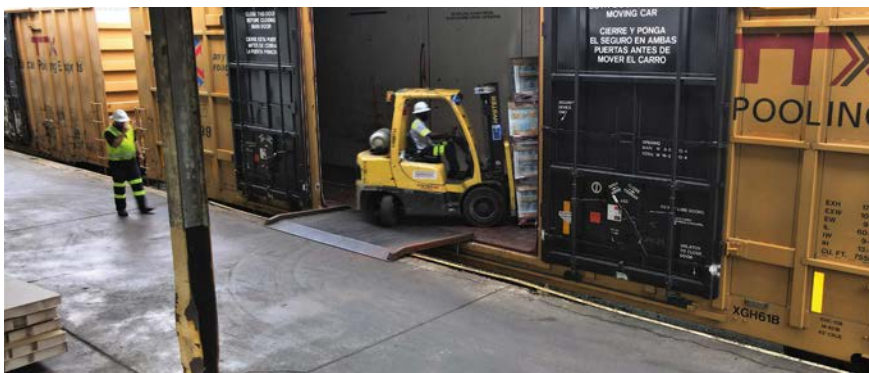
"When it's time for speed-to-market, and you have the ability to raise inventory levels a bit, place your product in strategic regional locations and cut some of that transit time," he suggests.

GET CREATIVE

Creative routing can also help. For some shippers, XPO has created round-trip regional transportation solutions, providing fleets to cover dedicated and ad-hoc lanes. "These solutions help the customer and carrier manage costs by having regular lanes between two points without paying for expedite," Wilkerson says.

Pegasus sometimes avoids the congested Port of Long Beach by routing shipments through Mexico and then transloading onto trailers for transport into the United States, says Chad Heller, the company's executive vice president of global development.

Transloading can also be a lifesaver for freight that would otherwise get stranded at ports because ocean carriers don't want containers tied up for weeks in intermodal moves. "We have a client



EXPEDITED LESS-THAN-CARLOAD

While shippers seeking fast delivery might not immediately think of rail, they can think again.

Railroads also offer expedited services. For example, in July 2021, Norfolk Southern (NS) launched an experimental less-than-carload (LCL) service called Thoroughbred Freight Transfer.

NS designed the new service as an alternative to less-than-truckload (LTL) transportation, especially for smaller manufacturers or distributors that ship heavy or odd-sized freight.

"LTL customers are building their services more and more toward customers in the e-commerce space," says Ed Elkins, vice president, industrial products at Atlanta-based NS. Since those shipments usually consist of not-very-heavy boxes, carriers often fill trailers without reaching the maximum allowed weight.

Thoroughbred Freight Transfer loads LCL shipments into 60-foot high-cube boxcars, which can handle the freight equivalent of three or four trailers, depending on their density. NS then puts those boxcars on its intermodal network.

"It takes the carrying capacity of our carload network and merges it with the transit velocity and reliability of our intermodal network, which is expedited," Elkins says. "It doesn't go through hump yards or any of the other processes that happen with regular carload service in North America."

NS launched the service in Chicago, Atlanta, and Miami and later added a fourth node serving the New York-New Jersey region. The service works best in densely populated markets that are connected to NS's intermodal network, Elkins says.

PLAY BALL!

Not only has COVID-19 produced supply chain snarls that force shippers to expedite, but uncertainty about the virus itself has created dilemmas that force shippers to dial up the speed.

Take the case of True Made Foods, official supplier of ketchup, mustard, and other sauces to Boston's Fenway Park and Washington, D.C.'s National's Stadium.

As baseball season approached in spring 2021, forecasting how much product the Red Sox and Nationals would need on opening day became a tough problem. The United States was just emerging from COVID shutdowns, and with regulations constantly evolving, no one knew until the last minute how many people would be allowed in each stadium.

So it was unclear how much product to supply, says Sherri Merrill, director of operations at True Made Foods, headquartered in Alexandria, Virginia. Provide too little, and True Made would disappoint fans. Ship too much and some of the unused product could spoil.

The customers delayed the decision as long as possible. "We literally got purchase orders to be filled in less than one week," Merrill says. Once those orders came in, True Made needed to truck product quickly from its distribution center in Philadelphia to both stadiums.

True Made relied on its third-party logistics provider Zipline Logistics, Columbus, Ohio, to expedite the two moves. "We had two sprinter vans come into the warehouse," says Craig Laughlin, Zipline's senior business development representative. "One delivered into Fenway Park the day before the game, and one delivered to Nationals Park directly before the game."

To complicate matters, True Made learned that it needed more of one product than expected, and that extra inventory was moving eastward by rail from a contract manufacturer's facility. To speed its progress, Zipline dispatched a truck to grab the pallets from the rail terminal.

"At the 11th hour, Craig and his team were able to call in some of the folks in their network to get that product off the train quicker than somebody else," Merrill says. "They got in front of the line, if you will, onto an over-the-road truck and delivered to the distribution center."



with 752 containers that are coming into the Port of Los Angeles and the East Coast that will not make it to their stores pre-Christmas without terminating at those ports and having us come in and do the drayage and transloading," says Hiram Hartnett, executive vice president of sales at Pegasus.

Finally, companies can use data analytics to improve demand forecasts, reducing the need to rush in more product when demand spikes catch them by surprise. Optimas uses demand forecasting tools powered by artificial intelligence (AI), coupled with a data visualization tool, to get early warning about potential demand spikes.

"It may mean we need to purchase a replenishment order ahead of what would be considered normal in the cycle," Harms says. "Ideally, it takes

weeks out of the replenishment order's lead time, because we're triggering a buy much sooner than we would have."

STAY IN TOUCH, WORK TOGETHER

Whether a company expedites or uses a different strategy, communication and collaboration are essential tools for getting freight where it needs to be.

"If we pay more for an expedited move, we might call in some favors from the warehouse as well, asking whether they can stay late, come in early, or give us priority," says Laughlin. "Those are all things that we [and the shipper] need to work on together to make it go well."

When a shipper keeps a 3PL informed about upcoming shipments, the service provider has time to locate the right equipment and develop efficient routes. "The more we can work to be up front in

the planning and forecasting schedule, the more we can advise about how to meet expedited needs," says Shoemaker.

Maintain accurate data about inventory and product demand, advises Harms. "Without the right master data management strategy, or the right data coming in to have conversations with your suppliers or customers, you're almost set up to fail in today's environment," he says.

Wilkerson offers three pieces of advice for managing expedited shipments:

1. Work with an experienced provider that has multiple escalation contacts to ensure time-sensitive shipments are delivered on time.
2. Find a provider that can meet your capacity needs and offer visibility into the status of your freight.
3. Evaluate buying criteria beyond price and consider all potential solutions. ■



EXPEDITED CARRIERS GUIDE 2021

In today's e-commerce-driven supply chains, speed is practically a given. Whether same-day, next-day, two-day, express, expedited, priority, or standard, consumers want their orders fast. That demand has accelerated even quicker during the pandemic, motivating shippers to find ways to optimize transportation to be fast and affordable.

To help make sense of the expedited delivery options, Inbound Logistics compiled this A-to-Z guide to some leading expedited carriers who can get your shipments where they need to go, as fast as they need to get there.

Amazon Freight

freight.amazon.com
freight-sales@amazon.com

Blends advanced technology with a network of 30,000+ Amazon trailers and carriers to move full truckload freight via GPS-tracked 53-foot dry vans.



SOLUTIONS/FEATURES:

Onboard instantly and book 24/7. Simple billing, online payments, and invoicing. Competitive spot and contract rates. Book, manage, and track shipments via web portal. Integrates with existing EDI or API systems. Book loads for next-day pickup or up to 14 days out. Dedicated shipper support and network monitoring 24/7/365.

American Expediting

americanexpediting.com
412-321-4546

American Expediting Company provides time-critical, mission-critical package delivery services, including cold chain management, next flight out, and managed transportation services.

SOLUTIONS/FEATURES:

Customized transportation solutions. Cold chain logistics. Licensed pharma storage and distribution. First- and final-mile same-day couriers. White glove. Animal transportation. Weather and disaster emergency logistics.

ArcBest

arcb.com/panther-premium
800-610-5544

Through its ground expedite service Panther Premium Logistics, ArcBest delivers time-sensitive, mission-critical and high-value freight quickly and precisely. ArcBest also offers

time-critical airfreight solutions, including same-day, second-day, hand-carry, and air charter options.



SOLUTIONS/FEATURES:

Geo-fencing technology tracks valuable freight in transit. Humidity control and temperature validation for sensitive shipments. Ground expedite services for freight with strict must-arrive-by dates.

Ascent On-Demand

ascentgl.com/on-demand
800-614-1348

Ascent Global Logistics helps shippers simplify supply chain management by providing customized domestic, international, and on-demand solutions, premium customer service, and state-of-the-art technology.

SOLUTIONS/FEATURES:

Global expedited solutions with access to an on-demand fleet. Bid board provides multiple solutions and just-in-time cost optimization. Real-time shipment visibility. Visibility to market pricing.

Averitt Express

averittexpress.com
800-283-1995

Averitt delivers customized solutions with a single source of accountability for service offerings that include dedicated, expedited, intermodal, international ocean/air, local customization, less-than-truckload, and more. Centralized call center, strict performance metrics, and an ongoing focus on green/sustainability efforts. Averitt's technology offerings include a full suite of web-based shipping tools, electronic data interchange, and transportation and operations management systems.



SOLUTIONS/FEATURES:

Guaranteed standard LTL and time-critical LTL shipments. Exclusive truck use solutions range from cargo van, straight truck, refrigerated (reefer), and flatbed to high cube, 53-foot dry van, and more. 24/7/365 access to a special ops team.

Continental Expedited Services

continentalexpedited.com
855-SHIPCES

Continental Expedited Services provides expedited surface solutions, offering door-to-door deliveries covering the United States, Canada, and Mexico. The company also offers time-critical airfreight solutions through a network of 200+ airfreight and air charter service providers.

SOLUTIONS/FEATURES:

Direct dual driver nonstop transit anywhere in North America. Satellite-tracked vehicles. ETA updates online, by phone, email, or EDI. Pre-Clearance (PARS) and ACI/ACE certified. Emergency freight rescue service. Through-trailer service with no transloading at North American borders. Temperature-controlled transport. Custom packaging.

DHL Express

dhl.com
800-225-5345

Along with global expedited parcel services through DHL Express, DHL offers expedited over-the-road LTL and truckload solutions for freight in Europe through its DHL Freight division. DHL Door-to-More direct distribution solutions also shorten delivery time to market by bypassing distribution centers/warehouses in destination markets and combining intercontinental transportation capabilities with road freight, courier, or postal networks.



SOLUTIONS/FEATURES:

Same-day, time-definite, and day-definite international express delivery. Day-definite LTL service in Europe. Consolidation of air, ocean, and rail shipments at origin including subsequent distribution via over-the-road, courier, or postal network. Direct pickup and delivery service with dedicated vehicles and control tower operations. End-to-end traceability.

Echo Global Logistics

echo.com/services/specialized
800-354-7993

Echo provides hot-shot ground and air cargo services for time-sensitive shipments all over the United States, drawing on a network of more than 10,000 expedited carriers. Echo monitors shipments from origin to destination to ensure time-definite delivery.

SOLUTIONS/FEATURES:

Air services include exclusive-use charter, next-flight-out, next-day, timed deliveries. Ground solutions include express cargo, sprinter vans, straight trucks, and on-demand team truckload. Expedited LTL services include next-day, second-day, time-definite guaranteed deliveries nationwide.

Estes Forwarding Worldwide

efwnow.com
855-433-9669

Through a global network of 10,000+ partners, combined with access to the assets of the largest privately owned LTL provider in the United States, Estes Forwarding provides domestic and international trucking and air charter solutions.

SOLUTIONS/FEATURES:

Home delivery. Truckload brokerage. Exhibit services, broadcast and media. Warehousing. Air charter. Custom solutions. Supports aerospace, automotive, e-commerce, healthcare, manufacturing, retail, and other industries.

FedEx SameDay

fedexsameday.com
800-399-5999

FedEx SameDay offers door-to-door delivery for urgent shipments in hours, depending on flight availability. The FedEx SameDay Freight service is for shipments weighing more than 150 lbs. and composed of multiple packages or palletized freight. Skids exceeding 2,200 lbs., as well as skids exceeding 70 inches in height, 119 inches in length, or 80 inches in width, require prior approval.



SOLUTIONS/FEATURES:

Proactive monitoring and notification. API integration available: E-commerce solutions can incorporate into the shipper's platform, including shipping and shopping cart software from third-party providers.

Forward Air

forwardair.com
800-726-6654

Forward Air supplies expedited ground transportation to and from its terminals located close to major North American airports. Its network includes stations and sort centers that reduce overall linehaul miles between points, providing expedited LTL ground transportation. Forward Air also offers truckload services, airport-to-airport moves, and transborder shipping to Canada and Mexico.

SOLUTIONS/FEATURES:

Time-definite service. Airport-to-airport service offers late cutoffs, early recovery times, weekend service (select areas), and expedited lanes. Overnight and second-day service available.

Holman Logistics

holmanusa.com/transportation
253-872-7140

Holman's transportation services include truckload, LTL, expedited, and same-day delivery. Providing white-glove services, its freight brokerage division offers expedited, night delivery 24/7/365.

SOLUTIONS/FEATURES:

National coverage and availability. Refrigerated, frozen, and temp-controlled capacity. Managed shipment tracking and tracing. GPS tractor tracking. On-board driver communication.

Hub Group

hubgroup.com
800-377-5833

Hub Group leverages multimodal transportation to expedite shipments and meet tight timeline requirements. Hub Group works with shippers to develop an expedited freight strategy, tapping into its network of regional and national carriers and end-to-end technology.



SOLUTIONS/FEATURES:

GPS-enabled container fleet. IoT devices and connections provide visibility. Online freight management platform Hub Connect provides shippers 24/7 access, shipment visibility, security updates, and freight management tools.

Landstar System

landstar.com
877-696-4507

Shippers get instant access to capacity for expedited and emergency shipping needs through the Landstar Express America dynamic business model. Landstar agents help shippers expedite shipments via a dedicated cargo or sprinter van, straight truck, or tractor-trailer, while providing updates throughout the process.

SOLUTIONS/FEATURES:

Emergency, disaster, and expedited transportation services 24 hours a day, 365 days a year. Independent Landstar agents can expedite shipments via air using TSA-approved capacity including commercial cargo aircraft and carriers, as well as air charters at major airports.

Load One

load1.com
800-957-4698

Load One operates a dedicated expedited operation serving the United States and Ontario, Canada. The division operates primarily sprinters, cube trucks, and straight trucks with both singles and teams. Additionally, the team works with more than 70 expedited carriers in the United States and Canada for critical ground shipments.



SOLUTIONS/FEATURES:

24/7/365 availability. Real-time tracking service. GPS-tracked equipment. TSA-approved drivers. In-cab scanning for fast proof of delivery. Hazmat authority.

Lynden Logistics

lynden.com
800-926-5703

With a network of service centers covering more than 6,000 U.S. cities, Lynden Logistics offers expedited ground freight service. The Lynden staff is experienced with truckload, LTL, and heavy hauls, including hazardous and petroleum products. Lynden Logistics also offers an expedited first-flight-out priority service for critical shipments.

SOLUTIONS/FEATURES:

Freight tracking through the EZ Commerce Center. Custom ground transportation plans available to meet time-frame and cost requirements. Proactive monitoring and notification available for urgent shipments.

Magnate Worldwide

magnateworldwide.com
630-394-1030

Magnate Worldwide is composed of logistics providers focused on expedited domestic transportation and global freight forwarding. Its Masterpiece Security Group offers expedited cargo handling and supervision, cargo escorts, and secure routing through its licensed staff and fleet of tarmac vehicles.

SOLUTIONS/FEATURES:

Specialized service levels available for sensitive, time-definite, and high-value shipments. Time-definite LTL, customized white-glove, airfreight, and other domestic and international expedited services.

Old Dominion Freight Line

odfl.com
800-432-6335

Old Dominion offers same-day, next-day, or time-specific delivery of expedited freight. From one-time to recurring shipments, Old Dominion provides must-arrive-by-date and on-time-in-full guarantees.



SOLUTIONS/FEATURES:

Customized door-to-door delivery. Friday to Monday service to and from 95% of the continental United States by 5 p.m., or time-specific delivery as requested.

Pegasus Logistics Group

pegasuslogistics.com
800-997-7226

Pegasus Logistics Group is a global freight forwarder that specializes in expedited ground, air, and ocean services including white-glove delivery, hot shots, specialized equipment, time-critical full truckload, and next-flight-out.

SOLUTIONS/FEATURES:

The 3PL manages shipments through 24/7 dedicated account teams and ensures visibility by providing satellite tracking, web services, interactive dashboards, and full-scale reporting.

Pilot Freight Services

pilotdelivers.com
800-HI-PILOT

Pilot Freight Services provides expedited ground service, offering door-to-door control over goods in transit via a wide range of vehicles including vans, cubes, straight trucks, and tractor-trailers. It offers First Flight, next-day, and two- to three-day delivery services.





SOLUTIONS/FEATURES:

First Flight service has no size or weight restrictions when shipping to 25,000+ cities throughout the United States and Canada. Aircraft charter services (direct flight with no cargo transfers) also available.

Purolator

purolator.com
888-302-8819

Purolator Expedited TL and LTL freight offers fast transit times, on-time performance, and online tracking. For urgent deliveries within Canada, to the United States, or to international destinations, Purolator's next-flight-out offering gets shipments on the first available plane. Global expedited import service into Canada on approved shipments valued at \$2,500 or less.

SOLUTIONS/FEATURES:

Shipments can be customized to and from the United States and within Canada. Online tracking gives visibility to all expedited shipments. Special freight services include advance delivery notification/appointments and tailgate (if no dock at the pickup site).

Quick Global Priority Logistics

quick.aero
800-488-4400

With a global footprint, Quick actively manages logistics around the world. Relationships with the global airline network allow it to choose the fastest and safest route for customer shipments. Quick understands all local rules and customs regulations, and can help expedite delivery to anywhere in the world. Serving the aviation, biotech/pharma, healthcare industries, among others.

SOLUTIONS/FEATURES:

Priority services include next-flight-out, on-board courier, air charter, priority freight, and dangerous goods. Logistics experts team. Time- and temperature-sensitive and mission-critical solutions. Focus on shipment integrity/quality control. Leverages advanced logistics technology.

Saia

saia.com
800-765-7242

Saia offers regional and interregional LTL, non-asset truckload service, and third-party logistics. With Saia Guaranteed—the company's reliable guaranteed service backed by an experienced team of logistics professionals—shippers pick the time: 12 p.m. or 5 p.m.



SOLUTIONS/FEATURES:

When shipments must arrive before standard delivery, Saia's Custom Solutions offer expedited shipments across a 48-state area in a shipper's delivery time frame.

Scan Global Logistics

scangl.com
45 32 48 00 00

Scan Global Logistics' user-friendly portal gives shippers easy access to its full range of import and export services, including track and trace, rates, multiple carriers, time in transit, and more. When speed is of the essence, Scan Global's express service is essential.



SOLUTIONS/FEATURES:

Multiple carriers, one system. Expert in complex deliveries. Dedicated customer service. Fast resolution of issues. SGL Priority handles daily departures when shippers require extra security, speed, and flexibility.

SEKO

sekologistics.com
800-228-2711

SEKO's domestic expedited shipping service uses multiple shipment methods such as exclusive truckload, commercial airlines, charters and hot shots, via cargo van or straight truck, to ensure parcels arrive on time. Dedicated and part-charter flights to handle time-sensitive deliveries. Proactive communication with a personal touch. Express, standard, economy and charter services available.

SOLUTIONS/FEATURES:

SEKO Next Flight Out is a time-critical service for situations where even next-day isn't fast enough. Regular, accurate status and location updates throughout the delivery. All shipments are tracked online 24/7 via MySEKO. No weight restrictions. Also available Saturday, Sunday, and holidays.

Uber Freight

uber.com/us/en/freight
877-289-8237

Uber Freight is an app that matches carriers with shippers. Carriers can tap a button and instantly book a load. Prices are fixed, eliminating the need for back-and-forth negotiations.



SOLUTIONS/FEATURES:

Clear, upfront pricing and visibility gives shippers the information needed to make informed business decisions. Streamlined workflow. 24/7 support.



SOLUTIONS/FEATURES:

Skilled coordinators are available 24/7/365, with a large network of owner-operators who understand the urgent nature of expedite. Can adjust modes quickly within its transportation range if circumstances change. State-of-the-art digital visibility of freight in transit.

YRC Freight

yrc.com/services/time-critical
800-610-6500

With YRC's time-critical service, air and ground modes are coordinated to meet demanding timelines. Specialized equipment—from air cargo to cargo vans, dedicated trailers to liftgate equipment—satisfy virtually all shipping requirements. Comprehensive North America LTL network and cross-border expertise ensure seamless service. Special handling surrounds the shipment from the time it's scheduled to its final destination. TSA-approved Certified Cargo Screening Facilities and Indirect Air Carrier status maintain shipment integrity and avoid delays.



SOLUTIONS/FEATURES:

Time-Critical accommodates customer-defined delivery dates and times, including holidays and weekends. Guaranteed deliveries. Dedicated customer service on call 24/7. Online tracking.

UPS

ups.com
888-742-5877

UPS' extensive domestic ground and air network can get shipments to more U.S. ZIP codes earlier than other major carriers. For urgent shipments, UPS offers several guaranteed next-day and same-day delivery options, with time-definite next-day delivery by morning, noon, or end-of-day, depending on need. UPS Express Critical service allows for same-day delivery of critical shipments.



SOLUTIONS/FEATURES:

UPS offers value-added services such as pickup and delivery options, delivery notification, and special handling to meet each company's shipping needs.

Ward Transport and Logistics

wardtlc.com/expedited-2
800-458-3625

Ward's Fast ForWARD Expedite Service handles time-sensitive shipments. Available 24/7, Ward provides national and international solutions in land, air, and sea modes. Maintains a network of 20 strategically placed service centers in the Mid-Atlantic region.

SOLUTIONS/FEATURES:

Guaranteed delivery, pool distribution. Protect from freeze/full-value insurance. LTL consolidation, dedicated spot quotes.

Werner

werner.com/shippers/expedited
800-228-2240

Werner's operating area reaches all of North America, via services such as transcontinental, engineered

solutions with designated OD pairings, terminal-to-terminal, and lane-based. Suited to small parcel packages, LTL purchase transportation, OEM manufacturing, freight forwarders, retail, and pharmaceutical/technology.



SOLUTIONS/FEATURES:

Provides a total team capacity of more than 1,000, delivering best-in-class service for those with team transit needs. Higher than 99% on-time delivery record for time-definite shipments.

WSI Supply Chain Solutions

wsinc.com/service/transportation
920-830-5000

WSI spans a nationwide distribution network with global logistics reach. Together, WSI's state-of-the-art transportation network and strategically located distribution centers help expedite shipments worldwide. Within the United States, WSI achieves same-day or next-day delivery to all major cities.

SOLUTIONS/FEATURES:

Parcel, LTL, full truckload, same-day, and next-day service.

XPO Logistics

expedite-solutions.xpo.com
844-742-5976

With more than 30 years of experience in domestic and cross-border solutions, XPO manages time-critical shipments from origin to destination with end-to-end digital visibility. Capable of facilitating time-critical shipments of all sizes. Largest web-based manager of expedite in North America. Quality solo and team transportation providers.

AIR CARGO TODAY: **BUCKLE UP!**



Experts offer tips and advice for riding out the turbulent airfreight market.

By Karen Kroll

“It’s going to be a tough few months for airlines, freight forwarders, and shippers,” says Niall van de Wouw, managing director of CLIVE Data Services, an air cargo intelligence provider.

Capacity remains tight, driving rates higher and extending the current fragility in many supply chains. Airports that have implemented zero-COVID strategies—which make sense from a public health perspective—may also be just one infected individual away from having to shut down.

Despite tighter capacity and rising rates, “air cargo has become an even more critical part of the supply chain,” says Bryan Schreiber, manager, air cargo, business development for the Columbus Regional Airport Authority, which owns and operates the cargo-focused Rickenbacker International Airport.

Rather than using air freight primarily to handle short-term peaks, companies are relying on it to move products to stores and production lines.

For instance, during the pandemic, logistics firm DB Schenker has been running about 57 flights per week. That’s up from about 15 full charters pre-pandemic, says Benno Forster, senior vice president, head of operations and procurement, airfreight Americas.

RIISING DEMAND, LESS CAPACITY

During August 2021, cargo ton kilometers had increased 7.7% over August 2019, or before the pandemic. Capacity, however, had dropped 12.2%, when compared to the same period, says Perry Flint, spokesperson, International Air Transport Association (IATA).

One reason capacity remains constrained is the large number of international passenger flights still grounded. Normally, passenger planes

haul about half of all cargo. For most routes, it doesn’t make economic sense to fly planes with cargo only and few passengers.

“As odd as it may sound, the lack of intercontinental passenger flights is causing the strain in the intercontinental air cargo market,” van de Wouw says.

The jump in ocean freight costs also is prompting some shippers to move to air. “The delta between ocean and air costs is not that significant, considering how much faster air can be,” says Brandon Fried, executive director, The Airforwarders Association.

And while increased airport congestion may add a few days to a shipping schedule, seaport congestion currently can add weeks.

For retailers concerned about receiving their shipments before the upcoming holiday season, the extra cost of air shipments often is worth it. “Shippers are willing to pay higher rates to receive their inventory in time,” says Cathy Morrow Roberson, president of Logistics Trends and Insights.

CHALLENGES REMAIN

At the same time, airports and air freight face their own challenges. One is congestion, due in part to a labor shortage. Even once employees are hired, it may take several weeks before they obtain the credentials needed to access the airfields. Some potential workers may be unable to wait and look elsewhere for employment.

Adding to the challenges, many airports were last modernized during the first Bush administration, when freight volumes weren’t as massive. “Cargo areas are congested because the road infrastructure is insufficient,” Fried says.



To bypass congestion, some shippers are turning to airports that focus on cargo, such as Rickenbacker in Columbus, Ohio. These airports offer hubs for major parcel services, fewer planes on the ground, and faster handling.

These shifts are converging to continue driving air cargo rates higher. In August 2021, for instance, they were 112% of pre-COVID levels, according to van de Wouw.

Air cargo providers have worked to respond to these shifts. For instance, when demand for personal protective equipment (PPE) peaked during 2020, about 2,500 passenger planes were used for cargo-only operations, and cargo was loaded in the planes' bellies, cabins, and overhead bins, says Glyn Hughes, director general with The International Air Cargo Association (TIACA).

PREIGHTERS ADD CAPACITY

Additionally, about 300 passenger planes had their seats removed completely, facilitating even more in-cabin transport options. Rickenbacker has handled more than 1,000 "preighters"—former passenger aircraft that shifted to carrying freight, Schrieber says.

While these moves can help, removing seats from passenger planes has "minimal impact on overall capacity," van de Wouw says. The reason? Cargo typically moves within either containers or pallets, which are cumbersome and time-consuming to load into a plane's passenger area.

"The seats aren't the issue," van de Wouw says. "The door is so narrow, you have to walk every box on board. It's inefficient."



To help meet demand, many airlines modified their planes to transport cargo on passenger seats. KLM, for example, started a Shanghai-Amsterdam service with B777-300ER as "Cargo-in-Cabin" flights.

GIVEN CONTINUED GROWTH IN DEMAND, SHIPPERS CAN EXPECT LONGER THAN NORMAL LEAD TIMES AND ELEVATED RATES WHEN COMPARED TO THE PRE-PANDEMIC NORMAL. "THERE IS JUST NOT ENOUGH CAPACITY IN THE ENTIRE SUPPLY CHAIN," SAYS BRYAN SCHREIBER, MANAGER, AIR CARGO, BUSINESS DEVELOPMENT, COLUMBUS REGIONAL AIRPORT AUTHORITY.

While the capacity constraints and higher costs in the airfreight market show no sign of abating any time soon, shippers can take steps to navigate through them.

One option is to move to airports that focus on cargo. Many, like

Rickenbacker in Columbus, Ohio, and the Chicago Rockford International Airport (RFD), in Rockford, Illinois, have hubs for major parcel services, fewer planes on the ground, and faster handling, Fried says.

Cargo numbers at RFD jumped by more than 15% in 2020, to 2.7 billion pounds of freight. Contributing to this rise was DB Schenker, which, in mid-2020, moved its operations to RFD.

The reasons? "Congestion at the major U.S. airports, and long wait times at delivery and pickup," Forster says. Several features at Rockford, such as an exclusive handling agent and the ability to situate a plane next to the company's building, also were key.

RFD is about 70 miles from O'Hare International Airport, which handles hundreds of flights each day. "We couldn't compete with O'Hare's passenger capabilities," says Ken Ryan, director of cargo.

So, more than a decade ago, RFD leadership decided to invest in the airport's cargo capabilities. Since about 2008, it has plowed more than \$100 million into its cargo infrastructure, including multiple warehouses and additional parking. The airport's proximity to major freeways also helps speed shipments on their way.

KEEP AN OPEN MIND

Ryan advises shippers to keep an open mind when considering different airports, noting that a facility like RFD used to be considered "outside the box" four or five years ago. Now, "I field calls from all over world," he says.

Like RFD, Rickenbacker has seen a surge in demand. In June 2020, the airport handled a record 120 international all-cargo arrivals. In June 2021, that number jumped to 150 flights.

Given continued growth in demand, shippers can expect longer than normal lead times and elevated rates when compared to the pre-pandemic normal. "There is just not enough capacity in the entire supply chain," Schrieber says.

While air is generally faring better



UPS plans to purchase electric Vertical Takeoff and Landing (eVTOL) aircraft to augment its air service for select small and mid-size markets. These aircraft will take off and land at UPS facilities in a whisper-quiet fashion, reducing time in transit, vehicle emissions, and operating cost.

than ocean, processing times have been extended as facilities and airports work to keep up with heightened demand.

Shippers need to incorporate all modes of transportation, including air, into their transportation strategies to mitigate the risks of tight capacity, rate hikes, and on-time requirements.

“Utilizing a transportation management system (TMS), for example, that includes all transportation modes, including parcel and last-mile options, benefits shippers and provides real-time management of goods in transit,” Roberson says. The technology also can offer business intelligence tools to help shippers analyze by trade lane the best transportation modes to use for different shipments.

COMMUNICATE EARLY AND OFTEN

Also key: communication. “Shippers should communicate their demand needs early and often with their freight forwarders,” Hughes says.

They also should be aware that travel restrictions and policies regarding inbound crew and local workers are likely to remain fluid. As a result, short term changes could impact operational efficiencies.

While capacity, rates, and delays are top of mind, air cargo cybersecurity also should be a concern. The ransomware cyberattack against the Colonial Pipeline in May 2021 was really an attack on the transportation system, and the “proverbial shot across the bow,” Fried says. All transportation sectors, including airlines, need to prepare for an attack.

“We owe it to our customers,” he

IT'S DIFFICULT TO ACCURATELY PREDICT WHERE THE AIR CARGO MARKET GOES FROM HERE, BUT CAPACITY, AND THUS RATES, LIKELY WILL REMAIN TIGHT UNTIL PASSENGER FLIGHTS RETURN TO ROUGHLY THE LEVEL THEY HAD BEEN BEFORE THE PANDEMIC.

says, adding that both industry and the government need to be more proactive.

The issue of sustainability also is gaining attention. “Unless air cargo is sustainable, it won’t have a license to grow,” Flint says.

Key priorities include sustainable aviation fuels (SAFs) and improving efficiency across the aviation chain through, among other steps, the development of new lightweight unit load devices (ULDs) and replacing ramp vehicles and forklifts with hybrid or electric alternatives.

Multiple startups are introducing electric and other environmentally friendly planes. In April 2021, for instance, UPS announced it was purchasing electric Vertical Takeoff and Landing (eVTOL) aircraft. In addition to reducing transit time, the planes will cut vehicle emissions, UPS says.

While these can play a role, for the most part, the planes’ mileage range is limited, Roberson says. The UPS planes, for instance, have a range of about 250 miles.

A SILVER LINING

It’s difficult to accurately predict where the air cargo market goes from here, but capacity, and thus rates, likely will remain tight until passenger flights return to roughly the level they had been before the pandemic.

“Until the tight capacity situation is rebalanced, we can expect to see higher than traditional rates continuing as well,” Hughes says.

Yet, there’s an upside. “The silver lining of the pandemic, despite the horrible toll it has taken on lives, is that people are thinking outside the box and looking for different solutions for their supply chain security and efficiency,” Schreiber says. Air cargo is demonstrating its importance to those who didn’t previously offer it much consideration.

And all involved in the airfreight industry are continuing to help find or develop solutions. “We are all in this together,” Schreiber says, “and we’ll find our way forward together.” ■

Boosting DC Productivity

Faced with increasing e-commerce complexity, distribution centers have to balance flexibility with efficiency. Here are the products, equipment, and systems that streamline DC operations.

Among the challenges, such as port congestion and raw material shortages, buffeting many supply chain and logistics operations, labor is “the number one pain point” for many, notes Rudolf Leuschner, associate professor with Rutgers University. “You can’t drive by a warehouse without seeing a help-wanted sign,” he says.

“Customers are constantly talking about the labor shortage,” adds Matt Cherewka, director of strategy and business development with Vecna Robotics, a provider of autonomous mobile robots geared to warehousing, distribution, and manufacturing operations. The shortage is prompting companies to identify ways to use their resources, including employees, more effectively, he adds.

For many, this is a shift. In many warehousing and distribution centers, the “traditional, go-to playbook has been to throw bodies at problems,” Cherewka says. That often made sense when wages were \$10 or \$12 per hour. Now, however, the labor shortage has prompted a spike in wages. “That’s changing the game for a lot of people,” he adds.

One driver behind the labor shortage is the pandemic, which took some potential workers out of the workforce. “COVID has thrown everyone for a loop,” says Scott Eisenberg, regional sales manager with EuroSort Inc., a manufacturer of high-speed unit sortation systems.

As stay-at-home orders accelerated the growth in e-commerce, more companies struggled to get orders out the door quickly. Orders of single products, like many e-commerce orders, tend to add complexity, “a primary determinant” of supply chain pain points, says Simon Tunstall, senior principal analyst with research firm Gartner, Inc.

Products often come in multiple sizes, colors, or shapes, all of which must be stocked. The hazardous nature or fragility of some items means they need extra care in handling. For some products, pickers may need to capture individual serial numbers or another attribute.

AUTOMATING E-COMMERCE

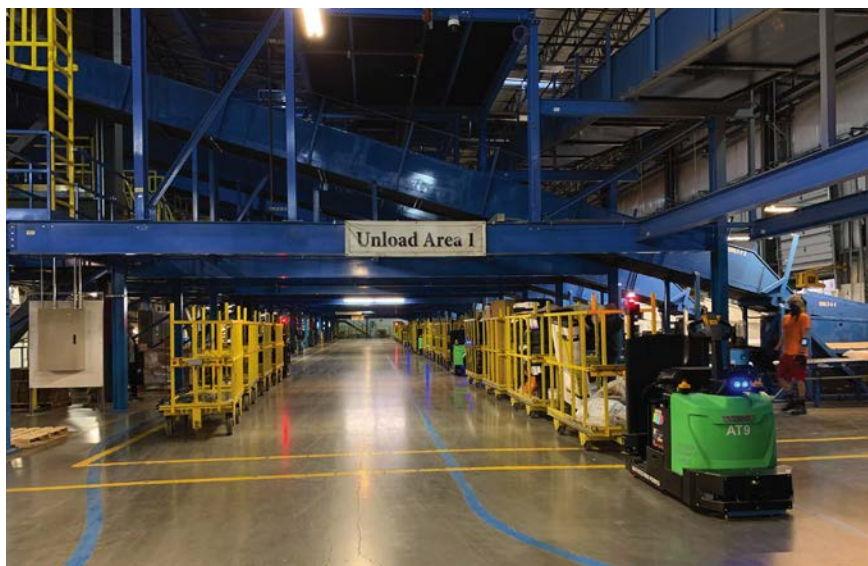
The need to manually manipulate products, also often required with e-commerce orders, is one of the final frontiers when it comes to automation. “The process of picking up and placing items is one of the most challenging things to automate due to the variety of products,” notes Rueben Scriven, senior analyst with Interact Analysis.

The challenges resulting from the growth in e-commerce are good problems to have. Yet they still need to be addressed.

Distribution centers that rely on manual processes, as many still do, often run into scalability challenges, Eisenberg says. As sales grow, the centers often need to throw more people at their processes.

While this may solve the immediate challenge, it remains inefficient. When processes are automated, however, it may be possible to, for instance, boost labor by 25% and increase throughput by 50%.

Some distribution center solutions that have been around for decades continue to advance. Conveyors, carousels, and pick-to-light systems are well-established,



Vecna Robotics' line of autonomous mobile robots (AMRs), including pallet trucks, tow tractors, and forklifts, helps streamline DC operations.

but still evolving, Tunstall says. To optimize their use, many companies use warehouse management systems (WMS) or warehouse control systems (WCS), which can integrate with other business systems. For instance, an organization might integrate a WMS and an enterprise resource planning (ERP) system.

Along with WMS solutions, Scriven says, many companies opt for some form of mechanization, such as “convey-and-sort” solutions. Goods-to-person technology that brings products to the picker eliminates much of the time

workers used to spend traveling to pick items.

Automation tends to work better for some products rather than others, Leuschner notes. For instance, the electronic components used in auto manufacturing tend to be roughly the same size and weight. Automating their movement tends to be more effective than when the product assortment is more varied.

The conundrum many distribution centers have confronted when considering automation is the need

ENSURING SUCCESSFUL AUTOMATION

Companies planning to automate their DCs will benefit from a few guidelines. To start, keep in mind that automation can't compensate for ineffective processes, says Rudolf Leuschner, associate professor, Rutgers University. The fundamentals need to be sound, as do the interfaces between processes and the systems driving those processes.

It makes little sense to implement a new solution, yet maintain inefficient processes or allow employees to work around the system. “Change management is key to accomplish major change,” he adds.

Companies also need to understand their entire supply chains. Some companies install efficient, automated warehouses, only to be blocked by inefficiencies up- or downstream. “Employ a systems approach to analyzing the use of automated warehouses,” says Rueben Scriven, senior analyst with Interact Analysis. In some cases, a manual approach in one spot, while perhaps not ideal, may allow investments to focus on the real bottlenecks.

Similarly, it's critical to understand peak seasons and future projected growth, Scriven says. If these parameters aren't considered, the facility may be under- or over-utilized, either at a significant cost.

to balance flexibility with efficiency. “Historically, there has been a trade-off between flexibility and throughput when it comes to fixed infrastructure automation, or automation that’s bolted to the ground,” Scriven says. Recently, the trend has been toward automation that offers flexibility.

INNOVATIONS IN AUTOMATION

One option is mobile robots. These tend to come with lower implementation costs than many more traditional materials handling equipment automation solutions. As added benefits, mobile robots can be more flexible and adopted more quickly, Tunstall says.

At the same time, the deployment of robots can boost complexity, Tunstall adds. That’s prompting the development of software that manages multiple fleets of robots. This software can be especially important for companies implementing more than one type of robot.

More organizations also are considering artificial intelligence (AI) to boost the accuracy of demand predictions. “It’s basically the old statistics and probability methods, but with today’s greater computing power, AI can be more predictive,” says Dale Rogers, business professor and director, Frontier Economics Logistics Lab with Arizona State University.

One question being asked more frequently is whether the supply chain

shortages of the past year have dimmed interest in just-in-time as an inventory approach. Rogers says he doesn’t foresee a permanent shift away from just-in-time, but adjustments, like companies holding more safety stock, are likely.

As more distribution centers and warehouses are built closer to consumers, the inventory levels needed typically increase. It’s the “square root law,” Rogers says. That is, achieving the same level of customer service in a greater number of facilities generally requires more inventory.

So, a company shifting from one facility that holds \$1 million in inventory to four, perhaps smaller, facilities typically will need to hold \$2 million in inventory, calculated as this: take the square root of four, which is two. Then, two times \$1 million equals \$2 million.

While the pandemic drove much of the initial urgency in many companies’ efforts to automate, the drive toward automation is likely to continue. “This was a wake-up call,” Cherewka says. “Companies know they can’t get caught like this again.”

EUROSORT INC. SPECIALIZING IN HIGH-SPEED SORTATION

Over the past 20 years, EuroSort has installed 450 of its high-speed, high-capacity unit sortation systems around the globe, from China to Kazakhstan to

South Africa, and including about 200 in North America. Along with its home base in Amsterdam, EuroSort has a North American branch in Baltimore, Maryland. “We’ve been busy,” Eisenberg says.

Because the company focuses on sortation systems, its employees have amassed a breadth of knowledge and experience. “We’re specialists,” Eisenberg says. “We focus on what we’re good at, and partner with other experts in material handling integrations.”

As one of the few remaining independent manufacturers of sortation systems, EuroSort has worked with many of the most highly regarded integrators in the industry, he adds.

SPACE-SAVING INNOVATIONS

As important, the investment and space needed to install a EuroSort sorter tends to be significantly less—up to 50% or 60% less—than required by many competing sortation systems. To achieve this, EuroSort has focused on developing “straightforward mechanical systems that allow our sorters to stay simple,” Eisenberg says.

So, while a competing machine may be able to fit 10 sortation destinations within a 10-foot-square area, EuroSort might fit 20.

Typical EuroSort applications include warehousing and distribution applications, including e-commerce and retail fulfillment, buy online pickup in store (BOPIS) orders, returns processing, central fill store replenishment, and others.

While EuroSort works with companies across multiple industries, most handle at least 15,000 items per day, with some processing more than one million products daily. “A company definitely needs a floor in order for the return on investment, or ROI, to make sense,” Eisenberg says. “But the ceiling is pretty high.”

EuroSort offers five types of sorters, and is known for its expertise in pharmaceutical products, postal orders, and apparel. The types of products to be sorted determine which system makes the most sense for a particular



EuroSort offers five types of high-speed sortation systems, and is known for its expertise in pharmaceutical products, postal orders, and apparel.



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- ✓ More Efficiency

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www.eurosort.com

operation. For instance, its cross-tray sorter is geared to handling small, lightweight items for apparel, shoes, and pharmaceutical products.

The single push tray sorter can sort up to 13,300 items per hour, including polybags, apparel, heavy cartons, and other items—all at the same time. EuroSort's Sweeper sorter works best with items that are less than 5 inches in size and weigh less than 5 pounds, such as books, small packages, and jewelry.

To cut shipping costs, many companies use EuroSort's solutions to take on some of the sorting tasks that they previously outsourced to the postal service.

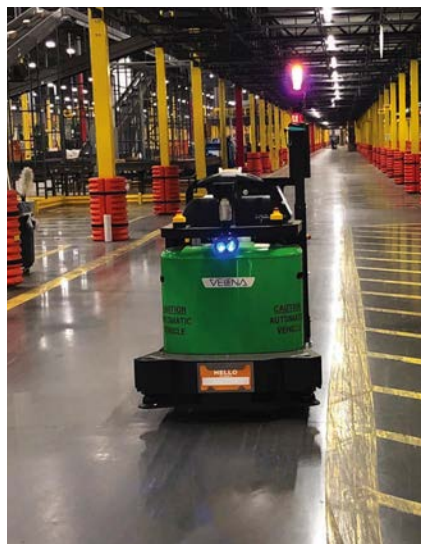
For example, a company might have used the post office to sort orders from its West Coast facility, distinguishing between those that were headed to a West Coast address and those that would travel to the east. "It can be that simple," Eisenberg says. "It's one less sort the post office has to do, and that can mean savings on each package." As important, especially given delays elsewhere in many supply chains, a company that takes on this function can slash up to one day from shipping time.

EuroSort recently worked with a pharmaceutical company that processes approximately 100,000 outbound orders each day. EuroSort engineers designed a layout using their innovative split-tray sorting system; it offers a high throughput, and also fits within the customer's existing facility.

Not only was the company able to recoup its investment within six months, but it cut shipping times by about a day. "Either one by itself would have made for a successful project," Eisenberg says. "The fact that we were able to do both made the customer very happy."

VECNA ROBOTICS SUPERCHARGING PRODUCTIVITY

Vecna Robotics' line of autonomous mobile robots (AMRs), including pallet trucks, tow tractors, and forklifts, helps streamline operations in distribution centers, warehouses, and manufacturing organizations. "Vecna's AMRs can supercharge productivity and allow



Vecna Robotics' robots-as-a-service model lets companies deploy its solutions without having to make a large upfront investment.

organizations to use existing resources, including employees, more effectively," Cherewka says.

Moreover, because it offers its solutions through a robots-as-a-service model, organizations don't need to commit to a large upfront investment or plan years in advance to implement them.

A key feature within the AMRs—path planning—along with multi-sensor fusion and state-of-the-art safety systems, enable Vecna Robotics' AMRs to safely navigate around obstacles, such as pallets. The robots also can leverage cloud-driven updates to immediately boost in-field performance.

For example, Vecna Robotics manages a large cross-dock operation for a multinational distributor of medical products. Once inbound containers are palletized, the robots transport them to storage, outbound staging lanes, or for e-commerce orders, to a case sorter.

Vecna Robotics worked with the medical distributor to implement this system before the pandemic. As a result, even when orders jumped in the early days of the pandemic, the existing fleet was able to handle the increased volume.

One reason? "Our systems have the ability to dynamically adjust their routes," Cherewka says. "Unlike

some systems, they don't operate on fixed AGV routes."

Instead, since the Vecna Robotics solution communicates with the warehouse management system, it knows where everything needs to move, and can orchestrate and adapt the optimal plan in real time. "It can effectively manage how everything moves through the building," Cherewka says.

GAINING OPERATIONAL INSIGHTS

As they move about, the Vecna Robotics robots continually collect data. "We can pump the information back into the system to improve how goods are flowing through the building," Cherewka says.

Moreover, the system can leverage both information from individual robots, as well as the entire production operation, to identify the most efficient ways to traverse a facility. Using Vecna Robotics' analytics tools, the system can provide operational insights, such as heatmaps of traffic and activities.

Vecna Robotics' orchestration system also can identify and flag bottlenecks, and then will re-plan tasks and reroute Vecna's fleets. It also will alert managers, who then can decide whether to add resources to these areas.

As more companies implement robots, often from multiple vendors, ensuring they work in concert with each other becomes more important. To that end, Vecna Robotics has been working across the robotics industry to create interoperability standards, which allow for visibility into combined solutions, so managers can see each robot and its activities.

While each vendor still manages direct control of its own robots, the standards would allow for greater coordination between the two, boosting both efficiency and safety.

"We're big believers that no one size fits all," Cherewka says. As a result, many companies will likely implement a mix of robots. In addition, he adds, the standards should "lead to greater democratization of automation." ■

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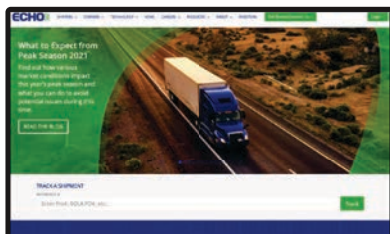
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Air Cargo - Expedited

AIR CARGO

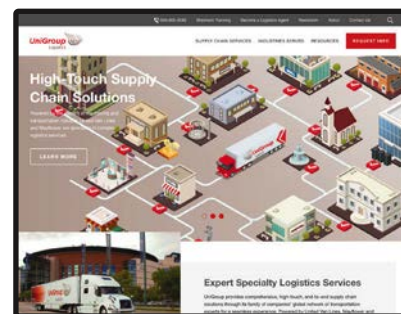


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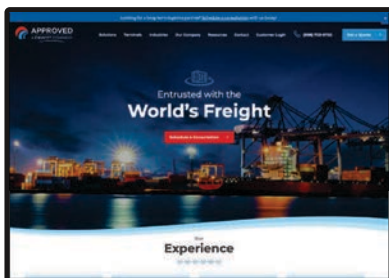
Echo Global Logistics, Inc. (Nasdaq: ECHO) is a provider of technology-enabled transportation and supply chain management services. Echo maintains a proprietary, web-based technology platform that compiles and analyzes data from its network of more than 50,000 transportation providers to serve its clients'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

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Expedited - Transportation

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Eurosort is a recognized industry leader in state-of-the-art technology in Bomb Bay, Push Tray, Cross-Tray and Sweeper sorters. We design and manufacture high-speed unit sortation systems using simple, efficient, space-saving designs at a higher quality, a lower price, and a smaller footprint than other technology on the market. Our proven technology and effective partnerships allow us to remain one of the last independent sortation companies in the industry.

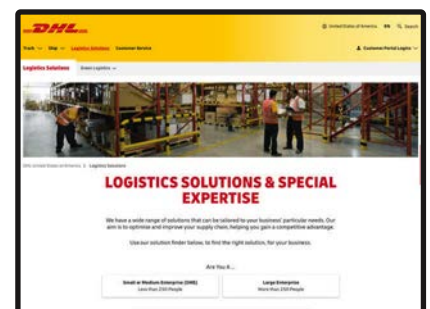
VECNA ROBOTICS • www.vecnarobotics.com

Vecna Robotics is the autonomous mobile robot (AMR) company that helps distribution, warehousing, and manufacturing organizations streamline materials handling and logistics operations. From pallet trucks to tow tractors and counterbalanced lift trucks, Vecna Robotics offers a range of high-capacity AMRs for all types of materials handling applications.

TRANSPORTATION

DHL SUPPLY CHAIN • www.dhl.com

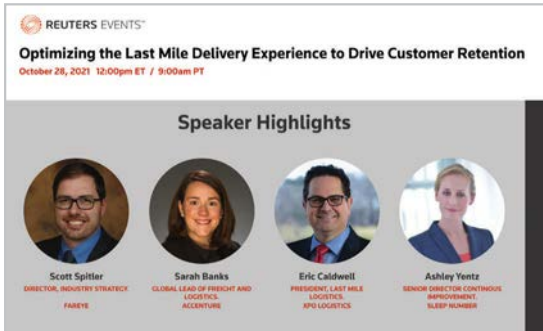
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Late deliveries are a concern for 87% of consumers, and 41% of shoppers are unlikely to purchase again from a retailer that delivers a late package. Find out how brands unlock existing capacity with route optimization, and how they create additional capacity by using hyper-local resources such as parcel lockers, ship from store, and micro-fulfillment facilities.

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WHITEPAPERS

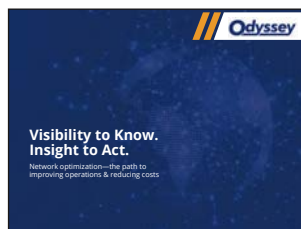


RETHINKING PHARMA SUPPLY CHAIN RESILIENCE

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The pandemic caused a host of issues for the pharma logistics supply chain. For many leaders, it is a crash course in crisis management and a stark warning of the need to build resilience. Learn how more than 100 directors of management from pharma companies worldwide increase visibility across their global supply chain and logistics partners through technology.

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WHY YOUR SUPPLY CHAIN IS BRITTLE (AND HOW AGILE NETWORKS CAN FUTURE-PROOF YOUR BOTTOM LINE)

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WHITEPAPERS



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It shouldn't take the shutdown of America's largest gas pipeline, a shock in infrastructure, and a \$5 million payout to hackers to warn businesses that cyberattacks are credible threats that can have devastating consequences. As of early May 2021, there was a nearly threefold increase in ransomware attacks in the past year. Read this whitepaper to learn the five signs of a cyberattack and how they can be prevented.

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HYPE CYCLE FOR LIFE SCIENCE MANUFACTURING, QUALITY & SUPPLY CHAIN

Offered by Tive

Life science manufacturers must continuously streamline processes for producing high-quality, regulated products, a Gartner report says. Use this free guide to prioritize adoption and analyze risks for emerging technologies that build resilience, ensure compliance, and enable more effective manufacturing and supply chain operations.

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Offered by Flock Freight

As consumers return to pre-pandemic shopping norms, supply chain leaders must prepare for the mounting impact of holiday purchases. Read this whitepaper to learn market and capacity projections for the 2021 holiday season, changes in consumer behavior, five ways to overcome peak season obstacles, and how shared truckload can strengthen your supply chain.

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PODCAST



James Armstrong



Chris Hoffmeister

HOW TO EASE PEAK SEASON SUPPLY CHAIN STRESS

James Armstrong
Vice President, International
Solutions, Hub Group

Chris Hoffmeister
Executive Vice President,
Account Management, Hub Group

Unprecedented consumer demand shows no signs of abating. Combine that with inventory shortages, a capacity crunch, and bottlenecks at ports, and shippers are in for a tough peak season. What solutions are available to help them manage? James Armstrong and Chris Hoffmeister of Hub Group discuss current trends and how to peak at the right time.

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[IN FOCUS]

INBRIEF

New Services and Solutions

> TECHNOLOGY

> Shippers can get estimated times of arrival (ETAs) for their ocean shipments with **FourKites'** Dynamic ETA for Ocean, a new AI-powered tool in its Dynamic Ocean offering. The tool integrates voyage/routing and captain data with more than 5TB of vessel data and 6 million port-to-port trips across 100,000 lanes worldwide over the past two years.

> **Nulogy's** Production Scheduling Solution helps contract manufacturers and co-packers manage work orders and improve on-time-in-full delivery performance. The real-time visualization tool lets them assess production schedules based on factors such as order promise date, planned downtime, changeovers, and labor and material availability.

> **Magaya** offers a Freight Allocation and Incentive Management extension for Catapult QMS by Magaya, helping shippers meet their ocean carrier allocation commitments with better data visibility and control. With built-in dashboards, the extension helps drive informed booking decisions based on allocation commitment performance.



> **SEKO Logistics** opened a new facility in its LAX campus close to the Port of Long Beach and Los Angeles International Airport, increasing its total footprint in southern California to more than 1 million square feet. The new Class A building is one of two new facilities adding more than 300,000 square feet of additional warehouse space for its clients; the second warehouse in the new complex will open in Q1 2022.

> SERVICES

> **Taylored Services** added a facility located less than 10 miles from the Port of Savannah. With more than 300,000 square feet of distribution and fulfillment space, Taylored Savannah provides more than 160 trailer spots with a secured yard under 24/7 surveillance, making the facility well suited for transloading and cross docking.

> **DHL** expanded operations in Philadelphia and New Jersey with the opening of two new service centers to better serve importers and exporters in the northeast region. The \$20-million investment enables faster shipment processing.

> **Amware Fulfillment** opened two new distribution centers in San Bernardino, California, and Dallas, Texas. Operational in October 2021, the facilities added 221,000 square feet of space to Amware's national fulfillment center network.

> Small businesses can get insurance coverage with supply chain risk management software provider **Avetta's** partnership with **NEXT Insurance**. Suppliers can link to NEXT's offerings from their account on Avetta's technology platform and purchase or bundle general liability, commercial property, workers' compensation, and other insurance coverage options.

> PRODUCTS

> The 40 x 48 Odyssey pallet from **ORBIS** can support loads of 2,800 pounds or more and is available in rackable, stackable, and nestable styles. It offers stability with design features such as steel reinforcements and molded-in frictional elements. These elements minimize load shifting and prevent pallet slippage off fork equipment.





> **Siemens** Visicon singulator can now process up to 18,000 parcels per hour, singulating and preparing consignments for later steps—scanning, weighing, and sorting—in sorting centers. Its AI-based vision system detects the shape, size, and relative position of each shipment. The information is relayed to the control system, which calculates spacing and alignment parameters required for singulation.

> **Orange EV**, a manufacturer of heavy-duty, electric vehicle (EV) truck solutions, is rolling out new intermodal terminal trucks in 2022 to meet increased cargo handling and lifting demands. Its new series of high-load, fast-charge terminal trucks will haul 180,000-pound loads up to 32 mph.

> **ORBCOMM**, a provider of Internet of Things (IoT) solutions, launched a wireless tractor ID sensor, which enables trailer pairing confirmation. The ORBCOMM sensor's Bluetooth and radar filtering capability ensure the tractor will connect to the desired trailer, while filtering out nearby trailers.

>TRANSPORTATION

> **CMA CGM** and France's **Brittany Ferries** formed a freight transport partnership, giving the CMA CGM Group use of available cargo space on board Brittany Ferries' roll-on roll-off ships to the United Kingdom, Ireland, and the Iberian Peninsula.

> U.S. exporters can now avail of a new direct, airfreight service to Germany. The weekly, direct service from **UWL** departs Houston's George Bush Intercontinental Airport on Friday and arrives at Düsseldorf Airport three to four days later. Cargo is deconsolidated in a customs-bonded warehouse, and available for pick-up within 12 to 24 hours of arrival in Germany.

> **cargo-partner** launched an LCL service from Ningbo, China, to Dunajska Streda, Slovakia, via Xi'an. Transit times are approximately 25 days, with regular departures every Sunday. Consolidation and deconsolidation take place in cargo-partner's warehouses in Ningbo and Dunajska Streda.

> **GEODIS** upgraded its AirDirect services between Europe, the United States, and Asia with its own leased A330-300 full freighter aircraft. Operating between Amsterdam, London, Chicago, and Hong Kong, the aircraft also serves the China-Europe route for the peak season.

> **Handheld Group's** new version of its NAUTIZX6 phablet, a handheld computer that combines a tablet with a rugged phone, has dual cameras—one 13-megapixel rear-facing and one 5-megapixel front-facing. With an optional 2D imager, the phablet runs Android 11 and is Android Enterprise Recommended.





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JAN 25-27, 2022
LAS VEGAS, NV

Manifest—The Future of Logistics

manife.st

Discover the future of logistics technology and the players transforming the industry. Join industry executives, entrepreneurs, and investors for learning and networking opportunities, and stay ahead of the curve by exploring thought-provoking topics from drone delivery to pandemic-proof practices.

MAY 11-12, 2022
ROTTERDAM,
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Smart Digital Ports of the Future

bit.ly/SmartPorts22

Exchange ideas with thought leaders and peers on the latest trends in supply chain and port digitization for innovative trade. Key themes include collaboration and data sharing, digitization and emerging technologies, and port connectivity.

FEB 7-9, 2022
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RLA Conference & Expo

bit.ly/RLAEvent

This conference brings together reverse logistics professionals for powerful keynotes, content-driven panel discussions, and networking opportunities. Pre-event activities include an academic roundtable, original equipment manufacturer and retailer roundtable, and a women's luncheon.

FEB 28-MAR 2, 2022
PALM SPRINGS, CA

eTail

bit.ly/eTail22

This e-commerce and omnichannel retail conference is designed to provide leaders with actionable strategies that increase their business's profits. Get practical tips and make connections with successful retailers, and hear from founders, CEOs, VPs, and those executing the work about what's disrupting the industry and what's to come.

MAR 28-31, 2022
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Modex 2022

modexshow.com

As the speed of transportation, logistics, and supply chain operations accelerates, the future depends on forward-thinking solutions. From illuminating education to next-generation technology and equipment in action, this event highlights the key industry trends and innovations that can transform your manufacturing and supply chain strategy.

MAY 16-18, 2022
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World Ports Conference 2022

worldportsconference.com

This virtual event assesses the indispensable role of ports in global maritime trade, bringing together key industry stakeholders for learning, information sharing, networking, and collaboration. Explore topics such as climate and energy, data collaboration, risk management, and resilience.

MAY 3-4, 2022
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American Supply Chain Summit

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This platform fosters collaboration on the impact of market dynamics and new technologies for current and future supply chain and operations leaders. Examine key case studies on how to navigate disruptions as well as how workforce management, advanced analytics, process improvement, and automation are rolled out in top facilities.



These in-person events were scheduled to proceed as of press time.

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INDEX

Approved Freight Forwarders	5
DHL	26
Echo Global Logistics	27, Cover 4
EPA SmartWay	8-9
Eurosort	53
JumpStart 22	13
KWIPPED	Cover 3
Lynden	Cover 2
Manifest	31
MGN Logistics	21
MHI	28
Pharr International Bridge	11
SEKO Logistics	22-23
SMC ³	29
ULINE	61
UniGroup Logistics	24-25
Vecna Robotics	55

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RISE AND SHINE

Breakfast purveyors whip up off-premise channels and hash out new products to address supply chain bottlenecks.

IT COSTS MORE TO BRING HOME THE BACON

Supply chain bottlenecks and inclement weather are driving up the cost of breakfast staples. The Financial Times breakfast indicator, based on futures prices for coffee, milk, sugar, wheat, oats, and orange juice, has surged 63% since 2019.

Additionally, the Consumer Price Index (Sept. 2021) shows a year-over-year price increase for beef steaks (22%), bacon (19%), and eggs (13%).

BOLD FLAVORS IN THE COFFEE SUPPLY CHAIN

Innovations are brewing in the coffee market to reduce deforestation and carbon emissions from growing, roasting, and distributing beans. For instance, Finland's **VTT Research Institute** recently produced its first cup of coffee in the lab, from cells harvested from real plants.

U.S. startups **Compound Foods** and **Atomo** are also looking to eradicate or significantly lessen water usage, carbon emissions, and deforestation from the coffee supply chain via lab-grown coffee. Compound Foods produces coffee by extracting molecules while Atomo, which is closer to market launch, has reverse-engineered the coffee bean. Atomo converts the compounds in plant waste into the compounds found within green coffee beans.

Also aiming to eliminate waste, Scottish company **BioBite** now offers an edible coffee cup. The wafer cups can hold both hot and cold beverages without any leakages for 12 hours and stay crispy for 45 minutes, for a post-coffee breakfast bite. The cups are protected by fully recyclable paper labels and are now in use at Manchester City Football Club's Etihad Stadium where they hold coffee, tea, and hot chocolate.



SUNNY SIDE UP

Breakfast franchise **Eggs Up Grill** bucked the trend of declining restaurant sales during the pandemic by streamlining its menu to address distribution challenges and volume declines. The breakfast food chain also quickly rolled out its online ordering platform after beta testing in February 2020. It closed out 2020 with 46 locations, up from 38 in 2019, and with a 27% sales increase. The chain now makes four times the number of sales outside than inside its brick-and-mortar locations.

Meanwhile, **IHOP** is also bulking up off-premise channels. The biggest brand in the breakfast chain segment introduced a curbside pickup program in 2020 and is now deploying Flybuy Pickup, which uses geofencing technology to provide updates on customer or delivery driver locations and arrival times.

EVERYTHING TASTES BETTER WITH BACON

In response to rising retail and foodservice demand, **Tyson Foods** is building a \$355-million bacon manufacturing plant in Bowling Green, Kentucky, to crank out Jimmy Dean and Wright Brand product lines.

Representing the company's largest investment in a facility to date, the 400,000-square-foot building will be constructed in the Kentucky Transpark. The facility is expected to be staffed by 450 workers when it becomes operational in late 2023.

Sources: Financial Times; Statista; Franchise Times; TechCrunch

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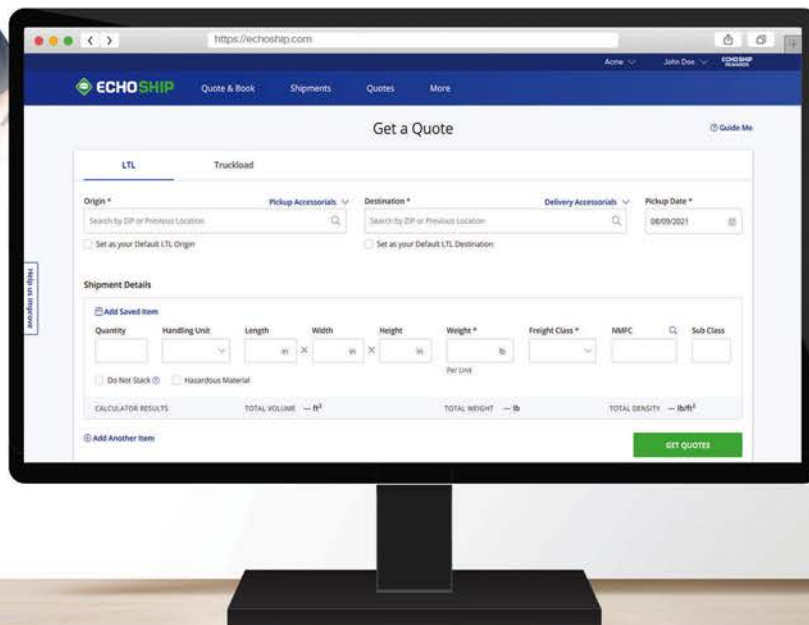
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