

APRIL 2022

**SPECIAL REPORTS**

**ALASKA:  
NOURISHING  
INNOVATION**

**TECH: BREAD &  
BUTTER OF 3PL  
SOLUTIONS**

a **THOMAS** company

THE MAGAZINE FOR DEMAND-DRIVEN ENTERPRISES

# inbound logistics

## TECHNOLOGY SOUPS UP THE SUPPLY CHAIN

**PIPING HOT IT  
MARKET RESEARCH**

**TOP 100 LOGISTICS  
IT COMPANIES:  
MMM MMM GOOD**

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# The Road to **Digital Transformation** Starts with SMC<sup>3</sup> Carrier Connectivity

SMC<sup>3</sup> LTL APIs eliminate gaps in shipment visibility, automate manual processes and redeploy resources to revenue generating activities.



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# Info SNACKS

BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION



## HITTING WHERE IT HURTS

- 78% of businesses have experienced moderate to significant IT supply chain delays over the past 12 months
- 71% are experiencing shipping delays of up to 6 months.
- 74% had to cancel at least one order and reorder with a new vendor to get employee laptops.

– GetApp research into supply chain issues IT professionals face and how they impact their companies



## FedEx Drones On

In an effort to speed its deliveries, FedEx has teamed up with Elroy Air, which is developing a vertical take-off and landing cargo drone, to transport packages between sorting centers via autonomous flights. The Chaparral C1 drone is in a pre-production phase. If tests prove positive, FedEx would be able to use drones to move cargo from Fort Worth to Oklahoma City.

## 100,000+

Number of mobile robots shipped globally in 2021

## 700,000

Number of mobile robots expected to ship globally by 2025

– Interact Analysis

## \$2,984

The amount of money Tesla spends on research and development per car produced. That's three times the industry average and higher than the collective R&D budgets of Ford, General Motors, and Chrysler per car.

– StockApps.com

**“Leaders win through logistics. Vision, sure. Strategy, yes. But when you go to war, you need to have both toilet paper and bullets at the right place at the right time. In other words, you must win through superior logistics.”**

– Tom Peters

## TRUCKLOAD TROUBLES

- **51% of truckloads** booked in 2021 were moving partially empty
- **96% of LTL shippers** experience delays between 1-4 days; some experience 5-6 day delays
- **1 in 2 shippers** are paying for air in underutilized truckload shipments
- **100% of shippers** had to remanufacture and reship goods due to damage

– Flock Freight survey of 200 shippers across various industries

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## ALASKA: INSPIRING AWE AND INNOVATION

This special 10th edition of our Alaska supplement explores the state's beauty, resources, and the challenges presented by its location, geography, and climate. The logistics providers that excel in Alaska rely on grit, dedication, and expertise to move products to, from, and within the state safely and efficiently.



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## LOGISTICS IT MARKET RESEARCH REPORT

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Consumers slurped up e-commerce with gusto amidst boiling disruption in 2021. To sate that appetite, supply chain professionals can serve up technology that aids with visibility, intelligence, and efficiency.



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# *Team* **KENCO**

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INBOUND LOGISTICS'  
TOP 10 3PL 2022!**



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TO  
VOTE**

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Kenco has risen in the rankings for the past few years, thanks to your support. Vote Team Kenco again now and let's take our supply chain game to the next level!



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FedEx will test Elroy Air's Chaparral autonomous air cargo system

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# CHECKING IN

## Artificial and Human Intelligence: An Unbeatable Combination



Keith Biondo, Publisher

Investment in logistics technology—\$26 billion in the past seven years—is white hot right now. Here's a small sampling of the types of solutions that venture capitalists are financing:

- An artificial intelligence (AI)-driven demand-prediction engine that helps lifestyle brands forecast how many units of a particular item will sell. The mission? To better match global inventory levels to demand *before* the demand.

- AI-powered warehouse management software solutions that optimize operations globally, while shaving costs and providing better fulfillment percentages.

- A full-stack, low-cost agri-tech startup targeting farmers in developing countries that uses AI to bring process optimization tools to areas that previously were not plugged into the global techno web.

- Online marketplaces using AI to aggregate and deliver automobile and other spare parts on specialty e-commerce platforms. The value proposition: limit inventory investment and offer e-commerce-style delivery to “under-served” market sectors.

AI, AI, AI! The buzz-worthiness of that acronym is driving billions in investment, and rightly so. We are all aware of what AI can do to power complex demand-driven solutions in a high-speed dynamic global market.

OK, let me say it. AI driving the finest transportation and supply chain solutions cannot solve all problems. Given the disproportionate emphasis on AI, especially in investment and news coverage, I want to posit a reminder that there are plenty of non-AI-driven technologies solving enterprise logistics challenges. You'll find some of the best solutions in our annual Top 100 Logistics Technology Providers list (pg. 74) in this edition.

I recently ran across an opinion piece by Michael Wax, managing director and co-founder of Forto, titled *Combining Human Expertise With State-of-the-Art Logistics Technology*. Back in 2018, I floated a similar idea, except I called it the *Human Experience* or *HX*. True then, truer now.

A recent example of combining human expertise with technology comes from Toyota Motor Company North America. Bob Young, group vice president of purchasing and supplier development, has access to a broad range of technology, including AI. It's Toyota, after all. But it's the giant whiteboard on the wall where Young and his team list and track the problems of the world and their related supply disruptions in up-to-the minute detail. In March, Young's team and their whiteboard were tracking at least 70 threats to the production and delivery of Toyota vehicles to dealerships across America.

A whiteboard, dry erase markers, and supply chain practitioners with superior skills and intelligence, along with the latest technology, create an unbeatable combination.

**inbound**  
**logistics**  
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Cast your vote at [voteforhubgroup.com](https://voteforhubgroup.com)

## How can retailers compete with the logistics dominance of the e-commerce behemoths?



**You compete by exposing the chink in their armor.** They have serious quality and trust issues with counterfeits in their marketplace. Promote transparency and quality in your supply chain all the way back to the direct manufacturer and you will allay customer fears while giving yourself a leg up on them.

—**Dusty Dean**  
Founder and CEO  
BITCADET

**ADOPTING AUTOMATED SYSTEMS IS KEY** for smaller retailers to keep pace with e-commerce giants. To meet the high demand for online orders and address the cost of increasing speed to the consumer, companies are looking at automated system features and models to streamline fulfillment including micro-fulfillment, hub stores, and BOPIS.

—**Alex Hempel**  
Senior Director RSC VST,  
ORBIS Corporation

**DON'T VIEW THIS AS A COMPETITION** with e-commerce behemoths, but as another sales channel in your omnichannel strategy. Treat it as such and develop your strategy to provide differentiation on customer service and trust to be able to drive direct sales, while still leveraging other channels to build brand awareness.

—**Scott Hebert**  
CEO, SYSPRO USA

### **BEAT THEM AT THEIR OWN GAME.**

E-commerce giants are still typically moving slowly. Beating them is about moving quickly and precisely and focusing on execution.

—**Daniel Sokolovsky**  
Co-Founder and CEO, Warp

### **THOUGHTFULLY EXECUTE ALL COMMUNICATIONS AND CUSTOMER TOUCH POINTS**

to leave an impression and promote acquisition and retention. Every point of contact with a potential client—from web store design, to ease of checkout, and all the way to receiving a beautiful

**AN E-COMMERCE PLATFORM IS REQUIRED.** Many logistics positions have transitioned remotely and therefore increased the demand for digital solutions. You may not be able to compete with the behemoths in all verticals, but differentiation in niche markets will always be desired. Establish a good reputation and maintain a good brand. From this point, a customer base grows.

—**Adam Whelpley**  
Transportation Logistics Manager  
Mickey

## Corner Your Own Market

**If a company set out to corner the beverage market** with a refreshing carbonated cola-flavored drink targeting a neatly defined carefree audience, they'd fail. No one out Coca-Colas Coca-Cola.

In the same way, nobody is going to outperform the logistics capacity of an e-commerce giant when the product is not particularly fragile, relatively small, and fits in a box. The thing is, very few people only drink coke.

—**Techa Pacitto**  
COO, IL2000 LLC

**The key is to have a product that has a clear value proposition** and cannot be found on any other website. Consumers will find what they need even if your inventory is not found on an e-commerce behemoth.

—**Donny Salazar**  
Founder and CEO, MasonHub



branded shipment—can help influence a purchasing decision.

—**Brendan Heegan**  
CEO, Boxzooka Fulfillment & Global Ecommerce

**THE KEYS TO SUCCESS ARE STRATEGIC DISTRIBUTION POINTS,** communication, technology, and touching a vertical that strives for the utmost superior customer service expectation. You have a winner if you can get to the heart of what the client and their customers need, with a decent price and ease of use.

—**Nicole Glenn**  
Founder and CEO  
Candor Expedite

**BETTER UNDERSTAND STOCK LEVELS** and SKU-level demand to make effective promotions and full price decisions. To compete with big e-tailers, retailers can't hesitate when making promotion decisions, and must prepare with better data insights and automated reports.

—**Juliana Prather**  
CMO, EDITED

**MOVE INVENTORY CLOSER TO THE END CUSTOMER,** leveraging the gig economy and using technology to create an asset-light, scalable, and flexible supply chain.

—**Adam Bryant**  
CEO, AxleHire

**UTILIZE YOUR PHYSICAL STORE NETWORK** for online fulfillment, last-mile services, and customer service. Retail stores are typically closer to the consumer, allowing for faster online fulfillment, last mile, and return services while good customer service can build strong relationships with customers.

—**John Haber**  
President, Parcel,  
Transportation Insight

**FIND TOOLS THAT INTEGRATE** seamlessly with 3PL providers. This can help small businesses successfully fulfill large orders and keep up with the big guys.

—**Doug LaBahn**  
Chief Marketing Officer  
Cin7

## Find a Partner



**Level the playing field** by partnering with the right transportation/logistics provider using their core competencies. They can also ship directly from a vendor network that negates the need for regional warehouses and speeds up their cash position.

—**John Hill**  
Chief Commercial Officer, Pilot Freight Services

**Consumer shifts bring opportunity for service providers to create new value.** 3PLs are already well-equipped to compete with the Amazons of the world by providing scalable fulfillment and transportation capacity, integrated supply chain technologies, and strategically partnering with customers to create a better connection to the end consumer.

—**Mike Glover**  
VP eComm Fulfillment, Legacy Supply Chain

**UTILIZE FLEXIBLE AUTOMATION SOLUTIONS,** cloud-based software, rapid installation/integration, and opex financing models to gain access to advanced technology without the need for large capital budgets or long commissioning timelines.

—**Matthew Cherewka**  
Director, Business Development  
and Strategy  
Vecna Robotics

**FOCUS ON FULFILLMENT.** Can you deliver for your customers? That's the top way to succeed in e-commerce, whether it's processing returns, producing goods, or delivering products. Ensuring you're running smoothly from staffing to production to deliveries to returns is the path to success in this environment.

—**Carl Schweih**  
President and COO  
PeopleManagement,  
a TrueBlue company

**LEVERAGE HIGHLY DEMOCRATIZED, LOW-COST DATA,** like location analytics, to manage and optimize your supply chain. The near real-time nature of this data enables increased visibility and streamlined communication throughout supply chains.

—**Jeff White**  
Founder and CEO, Gravy Analytics

**IN E-COMMERCE, CONSUMER TRUST IS EVERYTHING.** Any company—regardless of size—that fails to accurately communicate a product's status within the supply chain risks damaging its customer relationships. Consumers are more likely to shop with businesses whose product availability and delivery information is accurate and consistent, even if there may be a longer wait time.

—**Thomas Kasemir**  
Chief Product Officer  
Productsup

## Have a great answer to a good question?

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

What's the biggest supply chain silo?  
How would you break it down?

We'll publish some answers. Tell us at [editorial@inboundlogistics.com](mailto:editorial@inboundlogistics.com) or tweet us @ILMAGAZINE #ILGOODQUESTION

[INSIGHT]

# DIALOG

@ILMagazine

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**TWITTER TAKE** @ochsfamily

Clever cover! Not sure about song title #5, *I Will Survive*. It feels more like Thunderdome: “Two men enter, one man leaves.”

**Re. You Won't Get Fooled Again:**  
January 2022 Checking In  
by IL Publisher Keith Biondo  
[bit.ly/0122\\_CheckingIn](https://bit.ly/0122_CheckingIn)

I always enjoy and look forward to your comments regarding the state of supply chain matters—especially your recent comments in your *Checking In* piece.

I had to email and tell you: Keep up the good work. We all enjoy your perspectives. As you said, hopefully, “We Won't Get Fooled Again.”

—Grant Sebaugh  
via email

**Re. Good Question: What's the difference between traceability and transparency in the supply chain?**  
[bit.ly/Feb22\\_GoodQuestion](https://bit.ly/Feb22_GoodQuestion)

Both deal with information flow throughout a supply chain; the difference is the relationship and trust formed between two supply chain partners. Anything can be tracked and traced, but transparency involves a level of trust and honesty between two partners.

Think of it in terms of dating. At first, two people are sharing only minimal information with each other (traceability). As the relationship progresses and a partnership is formed, more honest communication and information flow between the two parties (transparency).

—Casey Jenkins

## Fast TAKES

### On Diesel Fuel Surcharge Rates

Shippers and carriers are bracing for the short-term impact from rising diesel prices, and potential long-term effects to their end customers who will eventually feel cost increases if fuel costs stay high. Paying fuel surcharges is a common industry practice. Therefore, paying higher surcharges for higher fuel costs makes perfect sense, right? However, when the market has drastic spikes in fuel prices, that doesn't mean rate per mile should also spike dramatically, but often it does.

While fuel will never be a fixed operating expense for carriers, and shippers will always be exposed to moving fuel surcharge schedules, shippers can be cognizant and critical of increasing linehaul rates given the many other factors affecting the marketplace.

Focus on reducing costs where you do have control including deadhead miles, sourcing strategies, supplier and receiver relationships, warehouse and storage utilization, modal selection and more.

Condensing freight networks is critical to eliminating unnecessary competition and driving down costs. Duplication and overlap can cost you time and money; that's why it's crucial to leverage partner networks by building capacity strategies.

—Mark Derks  
Chief Marketing Officer, BlueGrace Logistics

### On Inventory Strategies

Supply chain disruptions have forced us to move from “just in time” to “just in case” logistics. Shippers are now prioritizing capacity and service over rates. Global conflicts only accentuate these disruptions, prolonging deliveries and escalating costs for companies trying to move goods around the world.

—Jenny Vander Zanden  
Chief Operating Officer  
Breakthrough

Though supply chains have run on “just in time” principles for years, calculating the cost of downtime due to events such as port slowdowns can change the calculus in favor of keeping more critical inventory on hand.

—Tony Pelli  
Practice Director of Security & Resilience, BSI



SINGLE-SOURCE FREIGHT

# Forward

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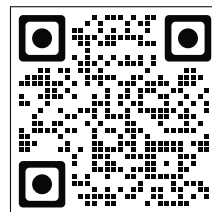


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# 10 TIPS

## Managing the Amazon Effect

Whether online or in-store, customers expect an immediate and frictionless shopping experience, thanks to Amazon. To compete, you must level the playing field with experiences that keep customers coming back to your branded e-commerce site.

### 1 PROVIDE CONSUMERS WITH CONVENIENCE EXPERIENCES.

*Convenience experiences can include anything from customizable products to buy-now-pay-later options to simply providing convenience. Offer consumers the option to choose the most convenient delivery method, select the delivery date, or accept multiple ship-to addresses. Retailers that can provide “convenience experiences” similar to what Amazon does will continue to compete.*

### 2 LOOK AT THE ENTIRE PURCHASING PROCESS.

Examine the purchasing process from browsing and checkout through delivery and returns. Every interaction with a brand is pivotal in developing a repeat—or better yet, lifelong—customer.

### 3 USE SEAMLESSLY INTEGRATED SYSTEMS.

When used together, order management systems and e-commerce storefronts enable retailers to automate manual or time-consuming processes to manage inventory, transactions, or fulfillment.

### 4 ENABLE CUSTOMERS TO SEE ALL INVENTORY.

Make sure customers see accurate inventory across all channels as this is one of the first customer-facing interactions that consumers have with a retailer. Allow customers to pick and choose how they want their order fulfilled—pick-up-in-store, curbside, or home delivery.

### 5 ENABLE OMNICHANNEL FULFILLMENT.

Be certain you can fulfill any order from any distribution point with improved shipping times. Make sure your fulfillment capabilities successfully scale, such as having the ability to fulfill orders locally from a micro-distribution center or a centralized warehouse or other location.

### 6 IMPLEMENT A CUSTOMER SERVICE (CS) PORTAL.

Representatives need to promptly and accurately answer customer questions and inquiries. A web- and role-based CS system provides global visibility so that representatives can see all the orders placed across every

channel. Give customers the ability to change their minds on their fulfillment location with grace periods before sending orders to be fulfilled.

### 7 OFFER PREORDERS AND ACCEPT BACKORDERS.

These offers help you gain momentum and improve the customer experience. If a product is out of stock, highlight on the storefront when it is expected back in stock. When retailers integrate ERP information with order management and inventory, they know what inventory is scheduled to show up at the DC. This helps businesses gauge the volume of demand they might expect by having pre-sales or pre-orders. Retailers

won't lose orders by being able to supply a backorder scenario where customers wait a few extra weeks.

### 8 MAKE RETURNS AND EXCHANGES EASY.

Give customers the ability to self-initiate the process. Retailers can also incentivize consumers to make additional purchases during the process. Retailers need to be prepared for an influx of returns post-holiday and as e-commerce sales continue to soar. Use technology to optimize returns and ensure a seamless end-to-end customer experience.

### 9 COMMUNICATE OFTEN AND WELL.

Be sure customers have what they need, when they need it, including order status, shipment notifications, and SMS notifications. Communications on a BOPIS or curbside order are more complex as customers need details about where to pick up the order, when it will be ready, and if there are any additional charges.

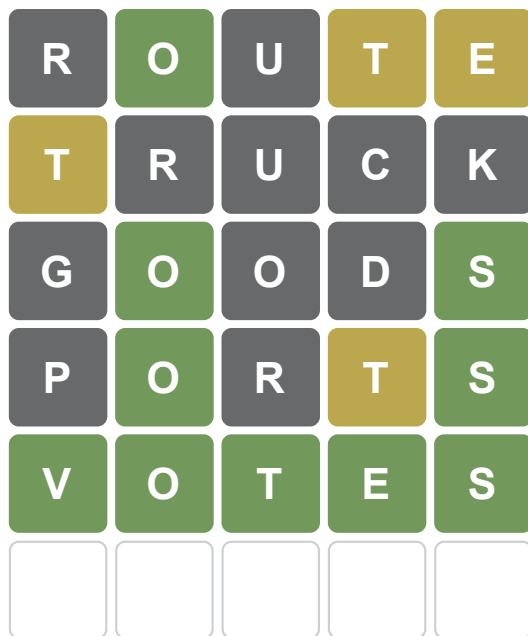
### 10 IMPLEMENT A BUY ANYWHERE, FULFILL ANYWHERE, RETURN ANYWHERE MODEL.

*These options range from BOPIS and curbside pick up to drop shipping and ship-from-store. This type of convenience delights customers and makes them want to do more business with a retailer or tell their friends about how great it is to shop with the store.*

SOURCE: ED RUSCH, CHIEF REVENUE OFFICER, DECK COMMERCE

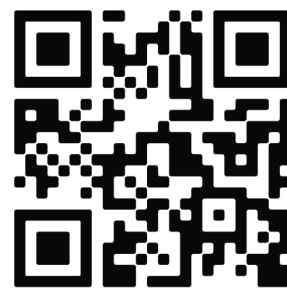


# Wordle



**It doesn't take a puzzle to see  
that Sunset wants your vote  
for Top 10 3PL Provider!**

A vote for Sunset is a vote for personal service,  
flexibility, and continuous improvement.



**Cast your ballot now!**



@sunsettransportation



sunset-transportation



@sunsettransportation



@SunsetTrans

# Fitness & Exercise Equipment



PLANET FITNESS

## FISCAL FITNESS

Here's a sampling of statistics about the fitness equipment industry, compiled by RunRepeat and other sources, that helps to illustrate its status today.

- The fitness equipment industry is estimated to be worth **\$11.3 billion** as of 2021, up 11% from 2020.
- The fitness equipment industry is projected to be worth anywhere from **\$14.7 to \$21.1 billion** by 2028.
- One of the biggest growth markets globally is China, which is expected to have a **16% compound annual growth rate** in the industry from 2021 to 2027.
- Consumer fitness equipment sales grew 68.4% from **\$3.3 billion** in 2010 to **\$5.6 billion** in 2020.
- At-home fitness equipment sales shot up **218%** in 2021.
- By 2024, cardio equipment such as treadmills, ellipticals, and recumbent bikes will make up **65%** of the total fitness market.
- Online fitness is expected to grow by 33% year-on-year, making it a **\$6-billion** slice of the annual fitness industry by 2027, according to Uday Anumalachetty, divisional vice president at FitnessOnDemand.
- **Planet Fitness** is the largest fitness center (in terms of members) in the world, with more than 2,200 clubs, primarily in the United States, Canada, and Australia.

## PANDEMIC GIVES FITNESS FIELD A WORKOUT

Like most industries, the fitness equipment field changed dramatically when the pandemic struck. In particular, sales of fitness gear, gadgets, and apparel soared in 2020 as consumers stuck at home and locked out of gyms invested heavily in new equipment for their homes.

"As soon as the lockdowns took effect, the home-fitness business took off like wildfire," Matt Powell, vice president and senior industry adviser for the NPD Group told the *Washington Post* last year.

Health and fitness equipment revenue more than doubled to **\$2.3 billion**, from March to October 2020, according to NPD data. Some manufacturers, in fact, struggled to keep up with demand, particularly as sales of stationary bikes tripled and sales of treadmills jumped 135%, according to the *Post*. Dumbbells also saw a sharp sales spike.

The trend also extended beyond exercise-style equipment, leading to increases in the purchases of products such as bicycles, kayaks, and cross-country skis.

Meanwhile, gyms suffered major initial losses and operational challenges amid widespread shutdowns that particularly put pressure on those already struggling. Gold's Gym, 24 Hour Fitness, and Town Sports International, the owner of the New York Sports Clubs and Lucille Roberts chains, all filed for bankruptcy protection in 2020. More than 9,000 gyms, clubs, and studios closed for good as a result of the pandemic, estimates Mark Williamson, co-founder of ClubIntel.

As vaccinations became available and gym doors reopened, fitness center numbers began to rebound. The home gym will never replace retail gyms, which will always offer the advantage of a social environment and a wide assortment of sophisticated equipment, notes Joanna Zeng O'Brien, a Moody's analyst who covers the fitness industry.

For most equipment manufacturers, serving both home and retail gym markets is nothing new. But many gyms extended their presence into the home market as a result of the pandemic with apps that help members work out away from the facility.

"There is the convenience of working out from home, but people also want to go to physical locations. People miss that," O'Brien says. "Fitness companies that want to stay around and not become obsolete have to do both."



The Peloton Bike+ is the subject of legal battles.

PELOTON



## PELOTON PEDALS IT BACK

Perhaps no home product will be more associated with the pandemic than the stationary bike, particularly the one made by Peloton. The company's fortunes have fallen since demand exploded in the first year of the pandemic, and it has faced an array of challenges.

In one of the latest legal efforts surrounding the competing home-fitness equipment companies, NordicTrack's maker iFit Health & Fitness has filed a U.S. trade complaint seeking to block imports of Peloton Interactive's stationary bikes.

The case centers on the Peloton Bike+ stationary bikes that alternate between bicycling and weight lifting. In May 2021, iFit was issued a patent for an invention involving stationary bikes that have free-weight cradles. The company uses the invention in several studio bike models. In its complaint, filed with the U.S. International Trade Commission, iFit says, "The unauthorized use of patented inventions by Peloton is pervasive," reports the *American Journal of Transportation (AJT)*.

Peloton and iFit already have a legal case over patents in federal court, but *AJT* notes that the U.S. International Trade Commission tends to work faster than district courts and has the authority to stop products from crossing the U.S. border, which could create a major headache for Peloton. The company's Taiwan-based manufacturers, Tonic Fitness and Rexon Industrial Corp., are also named in the complaint.

The case is not the only one before the trade commission involving Peloton and iFit. Both are accused, along with Mirror owner Lululemon Athletica, of infringing patents for streaming video over the internet by Dish Network Corp. and its Sling TV.

In March 2022, CNBC reported on Peloton's efforts to overcome the struggles it has faced since the surge in the pandemic's early days, including declining demand for at-home workout products and heightened supply chain expenses. The company's stock shares dropped 80% over 12 months and it replaced its CEO early in 2022.

## TREADMILL MARKET NOT STANDING STILL

Among the oldest exercise equipment categories is the treadmill market, and they remain a popular choice in fitness-minded homes and the health clubs where rows of the machines have long been such a familiar sight, finds a report from Allied Market Research.

The report shows that the global treadmill market was valued at \$3.2 billion in 2020 and is forecast to climb to \$5.9 billion by 2030, enjoying a compound annual growth rate of 5.1%. Treadmills represent the highest-selling exercise equipment category in the fitness industry, "well ahead of others," according to the Sports & Fitness Industry Association. The treadmill industry now includes hundreds of manufacturers globally, estimates Allied Market Research.

Although the category encompasses both manual and electronic treadmills, the treadmill industry is dominated by the electronic-based products. Users have come to expect treadmills that provide sophisticated measurements and guidance, helping them understand the nuances of their workouts and the effort they are putting into them.

Treadmills were among the fitness categories to see increased demand when the pandemic arrived and pushed many consumers to seek personal pieces of fitness equipment for their homes. Still, the commercial segment of the global treadmill market remains much larger than the residential segment, according to Allied Market Research.

The specialty store segment reigns over franchise and online stores among distribution channels. Allied Market Research points to that segment's advantages in providing consumers with more detailed expert guidance. However, online stores are expected to be the fastest-growing segment through 2030 as e-commerce becomes increasingly popular and simple for customers to use.

SPORTSART



Treadmills represent the highest-selling exercise equipment category.

# LEADERSHIP

*Conversations with the Captains of Industry*

## Culture, Collaboration, and Courage



**Megan Davidson**  
Chief People Officer,  
Crowley

Through transparency, honesty, and decisiveness, Megan Davidson champions Crowley employees and makes sure everyone is heard.

*by Merrill Douglas*

An early job in retail helped Megan Davidson find her calling in human resources. “As store manager, the recruiting and training parts of my job energized me most,” she says.

Davidson’s latest role in HR is her position as chief people officer at Crowley, the logistics, government, marine, and energy solutions firm based in Jacksonville, Florida. She entered the C-suite at Crowley in November 2021.

We spoke with Davidson about her career trajectory, agenda at Crowley, and strategies for nurturing talent in challenging times.

**IL: You came to Crowley after 11 years at British Petroleum. What are the corporate culture differences between them?**

The two companies share many similarities. But Crowley is able to be more purposeful and agile at all levels of the company. Decisions are made faster. Also, people at Crowley have more autonomy to put new ideas into action due to the environment that the leadership team has fostered over the years.

**IL: Share an early experience that shaped you as a leader.**

Shirley Bailey, who was HR business partner at Deutsche Bank when I joined that company in 2005, had a big influence on me. First, she took a chance on hiring me. I didn’t necessarily have all the required skills, but I was tenacious and had a strong work ethic. She gave a lot of her time, helping me to build my skill set. She also taught me a great deal about overcoming adversity and the power of attitude.

As I’ve stepped into bigger roles, I’ve tried to be just as generous with my time, and sponsor people who need extra support to accelerate their careers.

**IL: What’s at the top of your agenda since you took on your new role?**

This is a pivotal time at Crowley. We’re shifting our strategy, with new emphasis on sustainability, emerging energy sources, and digital transformation. The question is how to leverage and reshape our culture as needed to support our goals. We have to make sure our culture works to enable, not hinder, our success.

For example, we might need to move quickly to seize a new opportunity that aligns with our strategy. We’re a highly collaborative culture, and collaboration is good, but sometimes it can slow things down. To stay nimble, this may be one area where we need to consider making a shift.



**IL: If we followed you around on a typical day, what would we find you doing?**

I'm in meetings about three-quarters of the day. I spend a lot of time with my peers on the leadership team, working to understand the business context—what challenges they face and where they are trying to move the business. This enables me to adjust the people strategy as needed.

I meet with employees to understand how they experience work, what they love, where they encounter obstacles, and where the HR team can support them.

I meet with my team to create alignment and build capability. I also try to build in some white space—time to think, educate myself, talk with leaders at other organizations, and talk to third parties. It's easy to get caught up in the day-to-day. But to recommend a people strategy that supports the organization, it's important to step back and look above and farther out.

**IL: How do you collect feedback from employees?**

My team runs focus groups, but often I'll just sit with different people at different levels of the organization to find out what they enjoy about the company and what gets in the way.

**IL: As many companies struggle with the Great Resignation, how are you helping Crowley retain talent?**

We haven't seen the volatility that many organizations have. But we need to keep moving to stay ahead of things. We recently went through a review to make sure our pay and benefits are still competitive in the market. We're studying what work will look like as people come back to the office, eyeing a hybrid model at least for this year but making sure we understand employees' concerns and needs.

We're getting employees energized about our new brand, including an increased focus on sustainability and a drive toward the future. Also, through our Crowley Cares Foundation, we encourage community involvement. In 2021, we rolled out a policy that gives each employee two paid days off a year to volunteer with organizations that matter to them.

**IL: What qualities make you an effective leader?**

The first is transparency. I've always tried to be honest—sharing what I know and what I don't know, where I'm uncomfortable and where I need support. I'm collaborative;

## Know Thyself

Employees who meet with Megan Davidson often ask what they should do differently. "How can I make an impact on the job I'm in or the team I'm leading?" they ask.

"For me, the answer has always been 'Get to know yourself better,'" Davidson says. "If you're in tune with yourself, you'll see where you're excelling and where you're falling down."

One of the best paths to self-knowledge, Davidson says, is simply to contemplate how people react to you in different situations. Keeping a journal can help, too.

"Also, ask for advice from the people you might call your board of advisors," she says. "Those are the ones who won't tell you just positive things but will provide a balanced response."

I seek opinions and perspectives. But once I have them, I'm decisive. I'm comfortable with change and I'm courageous. I've always felt my role in HR was to speak on behalf of employees who don't feel they have a voice. I've continued to nurture that quality, making sure people hear the quiet voices and difficult messages.

**IL: What's the hardest part of your job?**

It's ensuring that leaders across all levels are aligned. Every decision made related to diversity and inclusion, to the work environment, to whether an employee feels developed—stems from leaders.

Getting leaders aligned is particularly challenging in a company like Crowley. For example, think of leaders who are out on vessels in the middle of the ocean. We need to ensure that leaders at all levels and in different work environments are all pulling in the same direction.

**IL: With whom would you like to sit down for a chat?**

That would be the lecturer and author Brené Brown. Her research shines a light on the need for authentic, vulnerable leaders who lead in their truth. I'd like to hear her thoughts on how leaders choose courage over comfort and make sure we're not silent on the tougher topics.

**IL: Beyond work, how do you like to spend your time?**

I spend most of my free time with my daughters, who are 8 and 11 years old. Sometimes that's doing a whole lot of nothing; sometimes it's traveling. I also enjoy reading and gardening. ■

[IN FOCUS]

# NOTED

## *The Supply Chain in Brief*

### > GREEN SEEDS

- **Maersk** will add 300 electric trucks to its North America network—the largest heavy-duty electric truck deployment to date. The trucks will be delivered between 2023 and 2025 for use by Performance Team, Maersk's North American warehousing, distribution, and transportation business. The trucks will be operated using technology company Einride's digital road freight operating system and charging solutions.



- **The Massachusetts Port Authority (Massport)** aims to reduce carbon emissions across all facilities and become net zero by 2031, coinciding with its 75th anniversary. Its agenda focuses on 100% of the greenhouse gas emissions directly controlled by Massport-owned facilities, equipment, and purchased electricity.

- To increase traceability and transparency in its global palm oil supply chain, **Unilever** launched a pilot program of the GreenToken by **SAP** solution. Aiming to achieve sustainability benchmarks, Unilever applied GreenToken to source more than 188,000 tons of palm oil fruit through a pilot program conducted in Indonesia. The solution helps Unilever track, verify, and report the palm oil supply chain in near real time.



### > UP THE CHAIN

- **General Motors** named **Jeffrey Morrison** vice president, global purchasing and supply chain. In this role, he will develop supplier relationships and help the company accelerate electric vehicle (EV) launches, building a scalable and sustainable EV supply chain.



- Outdoor specialty retailer **Sportsman's Warehouse Holdings** appointed **Tom Clement** as vice president, supply chain/omnichannel operations. In this newly created role, he leads the company's distribution, transportation, planning/allocation, and omnichannel operations.

### > M & A

- **Veho**, a technology company that enables next-day package delivery, acquired reverse logistics startup **QuikReturn**. Veho plans to accelerate the Veho Returns product and expand into 50 U.S. markets by the end of 2022.

- **Deutsche Post DHL Group** closed the acquisition of **J.F. Hillebrand Group AG (Hillebrand)** and its subsidiaries. Hillebrand is now part of DHL Global Forwarding, Freight.

- **AFS Logistics** acquired **DTA Services**, a freight bill audit, cost allocation, and analytics firm located in Toronto. DTA will continue serving clients under its established brand as an AFS operating company and will maintain its current team, service offering, and location.

- **Dayton Freight Lines**, a provider of regional less-than-truckload transportation services, purchased the cartage division of **Valley Companies**. Dayton Freight acquired Valley assets including service centers, trucks, and miscellaneous equipment; Valley Logistics and Warehousing is not part of the purchase.

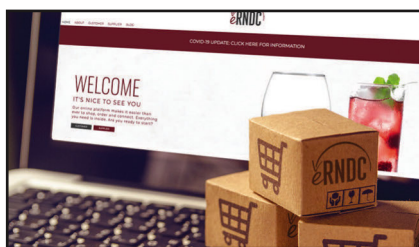
- **Zebra Technologies** plans to acquire **Matrox Imaging**, a developer of advanced machine vision components and systems, to expand its offerings in the automation and vision technology solution space.

- **Lineage Logistics** acquired **MTC Logistics**, a cold chain provider with four locations on or near the ports of Baltimore, Maryland; Wilmington, Delaware; and Mobile, Alabama. Through the acquisition of these facilities, Lineage adds nearly 38 million cubic feet of capacity and more than 113,000 pallet positions in the United States.



## > SEALED DEALS

- **Republic National Distributing Company**, a wholesale beverage alcohol distributor, selected *Manhattan Active Warehouse*



*Management* to run its growing supply chain network. The distributor selected the cloud-native solution from **Manhattan Associates** so it could focus on customer service and plans to roll it out in its distribution centers across North America over the next 30 months.

- Consumer goods company **Orkla** chose **HICX**, a supplier management platform, to manage its increasingly complex supplier ecosystem and onboard new suppliers with as little operational disruption as possible. Orkla aims to remove friction points from supplier relationships and enable a single version of truth across all supplier data.

- **Southern Glazer's Wine & Spirits**, a distributor of beverage alcohol, selected **Ryder System** to restructure its inbound transportation and implement its visibility and collaborative logistics technology *RyderShare*. The distributor aims to make its inbound supply chain more efficient and resilient, in order to get its suppliers' products to market even faster.

## > GOOD WORKS

- The **CMA CGM Foundation** provided humanitarian supplies to Ukrainian civilians in partnership with the CDCS (Crisis and Support Centre of the French Ministry of Europe and Foreign Affairs). The CMA CGM Foundation completed an emergency shipment of 55 tons of humanitarian supplies, including food, tents, and medical equipment, via a cargo plane from Paris to Warsaw, Poland.



- The **Trucking Cares Foundation** donated more than \$40,000 to three organizations involved in Ukrainian humanitarian relief efforts: Save the Children, the International Red Cross, and the United Nations Children's Fund. These organizations were recommended by the group Trucking & Logistics Professionals for Ukraine, which launched a fundraising and awareness campaign in response to the crisis.

- **Union Pacific** donated \$500,000 to humanitarian relief for Ukraine, its largest-ever corporate disaster relief donation. The funds will be divided between the American Red Cross and Save the Children and come after UP employees drove nearly \$50,000 in matching donations from the company earlier in the year.

## > RECOGNITION

- **EnerSys**, a provider of stored energy solutions, earned the **2022 Most Valuable Supplier (MVS) Award** from the Material Handling Equipment Distributors Association (MHEDA). Every year, MHEDA recognizes fewer than 10% of all member companies with the MVS Award to acknowledge suppliers that have demonstrated commitment to their dealer network, employees, and the community.

- **Roadrunner**, a less-than-truckload (LTL) carrier, was recognized by Amazon with the **On-Time Pickup Performance Award** and the **EDI Compliance Award**. Roadrunner outperformed Amazon LTL carriers with a best-in-class on-time pickup rate and nabbed the second award with its efficient transmission of confidential data via EDI.

- **Leonard's Express**, a provider of refrigerated trucking, dry van, warehousing, and freight brokerage services, won the **Trucking Association of New York's (TANY) Fleet Safety Award** in the large-class, general commodities truckload category. The TANY Fleet Safety Awards recognize member fleets with the best record of safe operation in New York State.

## > SHOVEL READY

- The **Canaveral Port Authority** broke ground on a \$48-million project to rebuild Port Canaveral's North Cargo Berth 3. Built in 1976, North Cargo Berth 3 has been out of service since 2014. Demolition of the existing pier began in December 2021; it will be replaced with an 880-foot-long multipurpose wharf with the channel width to accommodate larger cargo vessels simultaneously at berth.



Officials from the Canaveral Port Authority joined with leaders from federal, state, and municipal government, along with business and space industry representatives for the ceremonial groundbreaking in Port Canaveral, Florida, on March 25, 2022.

# TAKEAWAYS

*Shaping the Future of the Global Supply Chain*

## CONSUMERS CATCH COLD

Growing consumer demand in the United States is impacting the storage and distribution of frozen foods and other products that depend on cold environments, finds the Thomas Index Report.

The report examines the shift to buying groceries online during the pandemic, as consumers embraced online ordering and fully filled pantries and freezers. The increased demand for frozen foods means distributors need more refrigerated trucks to handle the available goods and more space in cold storage warehouses to store them.

As a result of this demand, freight rates are going up. In March 2022, it cost \$4.97 per mile to ship goods by refrigerated truck, a striking jump from \$2.93 in early 2020. If demand continues to climb, it could exceed available capacity and drive prices up more starkly.

In response, a growing number of third-party logistics providers plan to expand their cold storage capacity in the coming months, building new facilities and acquiring more cold storage warehouses. The growth in cold storage aligns with overall growth in the storage and warehousing sector. The average availability of U.S. warehouse space dropped from 8.5% in the first quarter of 2016 to a mere 5.6% in the first quarter of 2021, says real estate firm CBRE Group.

Meanwhile, U.S. warehousing and storage companies have added 420,000 new jobs to accommodate the increased work they are bringing in, reports the Bureau of Labor Statistics.

## Russia-Ukraine Supply Chain Strain

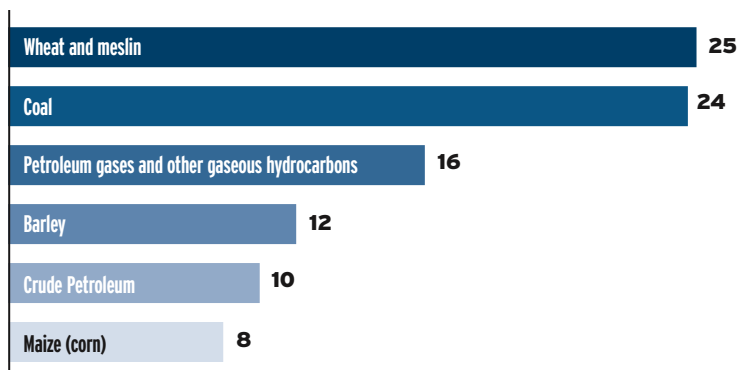
The commodities markets are the industry category that is experiencing the greatest strain as a result of Russia's invasion of Ukraine, according to a Dun & Bradstreet briefing report released in March 2022.

The report, which assesses the global business impact of the crisis, focuses on the businesses and countries that work with Russian and Ukrainian suppliers. Data compiled by the business intelligence provider shows that 25 countries heavily depend on Russia and Ukraine for a variety of commodities. In particular, at least 374,000 businesses worldwide rely on Russian suppliers—90% based in the United States—and at least 241,000 businesses rely on Ukrainian suppliers—93% based in the United States.

The most prominent commodities affected by the conflict include wheat and meslin, coal, and petroleum gases and other hydrocarbons. Of particular concern, the crisis threatens “to widely exacerbate Europe’s energy crisis,” according to the report, which notes that European gas storage levels are at a critically low 33% of capacity. Another concern is Germany placing a hold on the Nord Stream 2 gas pipeline as part of European Union sanctions on Russia.

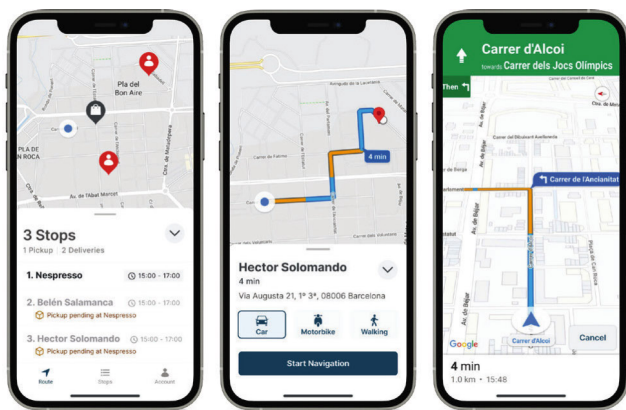
The impact of the Russia-Ukraine crisis on the supply chain includes not only the disruption of trade routes but also increased freight costs and inaccessibility of critical raw materials. The sanctions on Russian companies issued by the United States, the UK, and the EU impact thousands of entities and “further cripple an already weakened global supply chain,” the report says.

### Number of countries that have a high dependency on Russian and Ukrainian exports of select commodities



Source: UN Comtrade, Dun & Bradstreet





Example driver experience with Last Mile Fleet Solution customer, Paack.

## Google Searches for Last-Mile Market

Google is getting into the last-mile game with the launch of two new solutions to help fleet operators improve delivery success and optimize fleet performance through an integrated suite of mapping, routing, and analytics capabilities— Cloud Fleet Routing API from Google Cloud and Last Mile Fleet Solution from Google Maps Platform.

Cloud Fleet Routing API focuses on the route planning phase of delivery and allows operators to perform advanced

## TAKEAWAYS

fleet-wide optimization, enabling them to determine the allocation of packages to delivery vans and the sequencing of the delivery tasks. Natively integrated with Google Maps routes data, Cloud Fleet Routing API can solve simple route planning requests in near real time, and scale to demanding workloads with parallelized request batching.

Across this spectrum, customers can specify a variety of constraints, such as time windows, package weights, and vehicle capacities. Cloud Fleet Routing can help carriers meet sustainability targets by reducing distance traveled, number of delivery vans, and CO2 output from computing.

Last Mile Fleet Solution focuses on delivery execution and allows fleet operators to optimize across every stage of the last-mile delivery journey, from e-commerce order to doorstep delivery. The solution also helps businesses create exceptional delivery experiences for consumers and provides drivers the tools they need to perform at their best. It builds on the On-demand Rides & Deliveries mobility solution from Google Maps Platform, which leading ride-hailing and on-demand delivery operators use around the world.

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## TAKEAWAYS



### E-COMMERCE GROWTH: SLOWER BUT HEFTY

Even as growth slowed from 2020's pandemic-fueled explosion in activity, the global e-commerce market still grew a robust 19.9% in 2021, according to Transport Intelligence (Ti).

Indications are growth will slow but remain hefty. Ti's market sizing and forecast data and analysis shows a projected annual growth rate of 11.8% in the global e-commerce logistics market for 2021 through 2026. North America, in particular, will enjoy rapid growth, surpassing Asia Pacific by 2026 as the largest e-commerce logistics market in the world, Ti says. The United States, Canada, and Mexico are all expected to see growth above the global average, while the more mature Chinese and South Korean markets are expected to see slowing growth.

"In 2021, e-commerce has been a key growth sector for logistics and we've seen some spectacular revenue growth from individual service providers," says Michael Clover, head of commercial development for Ti. "Overall growth has slowed since 2020, leveling off as the extraordinary conditions for e-commerce growth brought about by the pandemic unwind, but is still above pre-pandemic levels.

"The forecast out to 2026 portrays a maturing market where online retail penetration levels are sustained in the most mature markets between 25 and 30% and other markets move up to this level," he adds.

Of note, the cross-border e-commerce logistics market has a projected compound annual growth rate of 10.7% from 2021 to 2026. Driving the growth are consumers who increasingly use e-commerce to search outside their country for particular luxury goods unavailable at home. Still, compliance with tax and customs regimes could hinder cross-border e-commerce market growth from fully reaching its potential.

### Consumers Have the Last (Mile) Laugh

While the use of last-mile delivery has increased in the pandemic era, the process has experienced various growing pains. A new consumer survey shows customers have encountered regular delays and would like to have greater visibility of their deliveries.

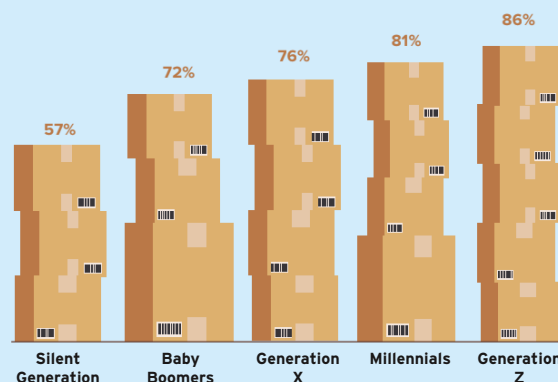
The survey, conducted for Anyline by Researchgate, examines the extent to which consumers have turned to online purchases since the start of the pandemic. In particular, some respondents say they have shopped online for items they previously only would have bought in person, including groceries (43%), home essentials (30%), and restaurant meals (29%). As last-mile delivery becomes more prevalent, customer expectations have grown, finds the report.

Consumers' responses suggest last-mile delivery's performance has faltered; 44% say delivery time frames have slowed since the start of the pandemic, and 68% say they have encountered delivery delays.

More than three-quarters (76%) say that an unacceptable delivery experience would strongly or somewhat affect their decision to order from that company again (*see chart*). The number rises for each passing generation, including 81% of millennials and 86% of Gen Z shoppers.

Of those surveyed, 88% say they would find the ability to redirect a delivery either very useful or extremely useful, and 96% favor the use of GPS to allow them to track their deliveries.

#### Would an unacceptable delivery experience strongly or somewhat affect your decision to order from that company again?



Source: Survey conducted for Anyline by Researchgate



# Shipping Lines Skip a Beat

Global ports lost more than one-third of their expected capacity to ship containers in 2021, causing economic trouble for some smaller developing nations, among others, finds research commissioned by the Global Shippers Forum (GSF).

The study, which was conducted by MDS Transmodal, identifies the extent of capacity restriction in 2021 that resulted from scheduled port calls being skipped by shipping lines. It measured the number of container ship slots that were expected to be available at the port but never materialized because the lines skipped the port—often because vessels were already fully occupied by containers collected at ports called at earlier on the service.

Among the hardest-hit were the ports of Colombo (Sri Lanka) and Piraeus (Greece), where about 40% of expected container capacity never arrived during the last quarter of

2021—a sharp increase from the 15-20% that the ports saw before the pandemic. In Asia Pacific, Port Klang in Malaysia also saw a 40% shortfall, while Melbourne (Australia) and Tauranga (New Zealand) were down by around one-third of the expected container capacity during the second half of 2021. In 2019, average no-shows at those ports amounted to between 10 and 15% of expected capacity.

Skipped ports have become part of how shipping lines are managing their heavily utilized fleets.

“Skipped port calls have multiple effects on shippers,” says James Hookham, director of the GSF. “They create local upward pressure on shipping rates, as shipping line agents ‘auction off’ available slots on the vessels that do call. Shippers also face unexpected surcharges for the handling and storage of delayed containers.

“More pernicious is the wider effect on national economies, especially those of developing nations that lose opportunity to deliver their exports, and hinder the recovery of their economy from the effects of lockdowns and COVID restrictions,” Hookham adds.



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# Two Generations With a Drive to Serve, Grow and Innovate

When Dave Cox (pictured) joined Polaris Transportation Group in 1998, the trucking company was still finding its footing. Founded four years earlier by his parents, Larry and Geri Cox, Polaris had just four employees with Dave's addition—and only one was not a family member. However, the Ontario-based company already had something invaluable: a reputation for reliability within the industry.



technology. We understood the importance of customer service and leveraging innovation and technology from the get-go.”

Larry and Geri Cox started Polaris on the strength of their respective backgrounds in transportation—Larry in operations and Geri in finance.

Dave worked for a large trucking firm before joining his parents at Polaris.

As operations manager, Dave spearheaded the company's first major service expansion when Polaris implemented cross-border LTL between Toronto and major U.S. cities. Today, Polaris remains well-known in the industry for its overnight next-day delivery service.

When Larry passed away in 2017, Dave took over as president. Dave's history of working side by side with his parents and their shared morals and vision kept the company on course.

The company has continued to grow and evolve, expanding its services to become a single-source supply chain provider and to offer customers a full suite of services that includes global logistics and warehousing and distribution. Throughout its growth, Polaris' success can be traced back to their founders' principles.

“From the beginning, we were driven to serve, grow, and innovate. Dave shares that same drive and vision,” says Geri Cox, co-founder. “The family drove the company's exponential growth through strategic investments, a strong commitment to our customers,

assembling a team of innovative, passionate experts, and encouraging open, honest communication. This is how Polaris evolved as a family business and put us on the road to prosperity and future success.”

## CUSTOMER-CENTRIC FOCUS CONTINUES

Polaris has received a host of accolades for its service and innovation, including four consecutive years named as a top 100 Trucker by *Inbound Logistics*, 14 years in a row as the Shipper's Choice for LTL while holding the Carrier of Choice designation since 2012 by *Inside Logistics*, CCJ's 2020 Innovator of the Year award, and the Mastio Quality Award in the Canadian LTL category.

In 2019 Polaris opened their in-house digital lab and created a technology company, NorthStar Digital Solutions, to develop and integrate robotics, artificial intelligence, and other technologies that would not only elevate Polaris' way of doing business but improve industry-wide processes. “We've taken our old processes and are focusing on advanced technologies, automation, and digitalization,” Dave says. “This has been for our customers, partners, and employees.”

The customer-centric approach that sparked Polaris' beginning is shared by every team member in the company today.

“Everyone here plays a big role in our customers' success,” Dave says. “Treating our customers the right way is what allows us to do everything we do as a company.” ■

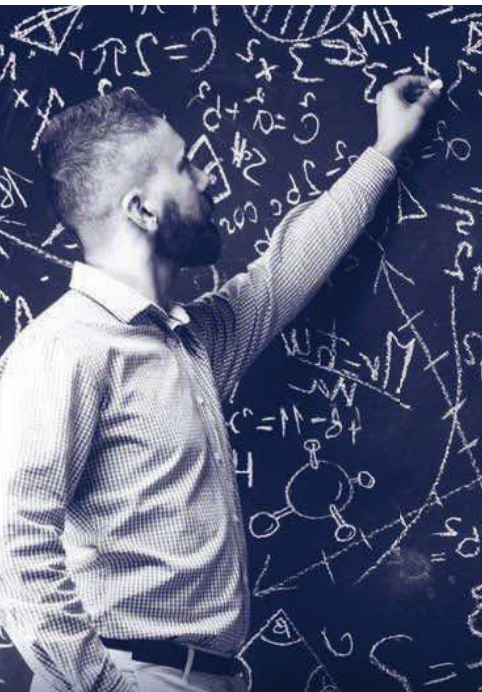
[polaristransport.com](http://polaristransport.com)

## STRONG ROOTS, CONTINUED GROWTH

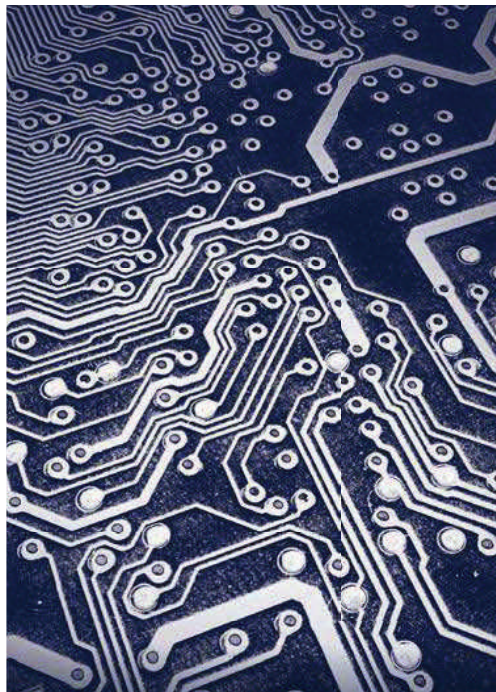
“For me, valuable lessons were learned very early on as a small business owner,” Dave says. “It was a case of starting a company with virtually no money, but everything earned was reinvested back into the business. That meant investing in good people, equipment, and



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# Mobile Solutions Enable Efficient Facility Management Operations

**Utilizing mobile solutions such as a tablet can optimize facility management. Here are the features to consider when selecting a tablet for industrial needs.**

**M**odern facility management is a complex operation involving multiple tasks and responsibilities, such as concierge services, entrance control, cleaning services, and site patrols. Nowadays, all commercial buildings and industrial estates require security measures to protect assets and reduce liability.

For manufacturing facilities, regular maintenance is required to avoid production downtimes and ensure worker safety. Although the recent adoption of IoT technologies and surveillance systems allows factory administrators to be notified as soon as issues occur, site patrols are still necessary for managing large-scale production sites. Moreover, ensuring facilities are in good condition is essential for maintaining a safe working environment.

During site patrols, security guards typically inspect specific areas according to patrol schedules and manually record findings on clipboards. This approach is not only time-consuming and labor intensive, but also vulnerable to errors, discrepancies, and illegibility. Additionally, by the time the final analysis reports reach management, the opportunity for taking corrective action may be long gone.

Utilizing mobile solutions such as a tablet to replace the use of clipboards for patrol inspections allows the inspection results to be digitalized and seamlessly transmitted to the control center for real-time communication and optimized management. There are some features to consider when selecting a tablet for industrial needs: ruggedness, reliability, flexibility, and ergonomics.

**Ruggedness.** Industrial-grade tablets are designed to withstand rough

operation in hazardous environments. Tablets with an IP65-rating for water and dust resistance as well as drop tolerance provide a reliable computing solution for patrol inspections and onsite services that involve difficult-to-reach or dangerous locations where tablets are at risk of being dropped.

**Reliability:** Team members need a reliable device with battery power that can last long working hours. The device should offer a swappable battery for continuous charging and multi-bay charging stations. To ensure reliable connectivity for mobile computing, the tablet needs to be equipped with Wi-Fi roaming, LTE, and GIS communication technologies for quick switching between networks.

**Flexibility:** Find a tablet that allows for multiple types of data input via stylus, touch, and keyboard. Mobile computing devices provide real-time data access, enabling field workers to make informed decisions on the spot. This streamlines workflows and improves efficiency to ultimately optimize quality and increase productivity.

**Ergonomics:** With an ergonomic design and comfortable accessories, operators can increase productivity, efficiency, and reduce injuries. Peripherals such as a 1D/2D barcode scanner and UHF RFID scanner expand the system functionalities according to specific usage requirements. With support for wide-angle scanning, these peripherals enable rapid task completion regardless of environmental limitations. Finally, additional optional accessories such as multi-bay charging/docking stations and shoulder/hand straps ensure portability and ease of use in diverse scenarios.



Overall, the mobile solution helps reduce errors related to human input while providing a convenient tool for documenting field operations and managing devices. It can greatly improve your company's supply chain visibility and view up-to-date information on the inventory database, which can also help the shipping department to verify the order and print bills laden with all the customer shipping information.

.....  
**-By Al Deissroth**



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# Own the Transportation Conversation: Debunking Common Truckload Myths

**Transportation leaders should debunk these six common myths to help their C-level executives understand truckload freight and get executive buy-in.**

**U**nprecedented inflation and supply chain bottlenecks have made logistics a boardroom topic. Transportation leaders are now positioned to influence business outcomes, but they first must educate executives on truckload freight nuances. They need to debunk these six common myths to help their C-level executives understand truckload freight and get executive buy-in.

**Myth 1: Increasing volume always reduces cost per load.**

Most goods that companies procure exhibit economies of scale, where increasing quantities decrease per-item costs. Truckload freight instead exhibits *economies of scope*.

Truckload carriers load at an origin, move to a destination to unload, then reposition for the next load. Costs are lower only if the next load's origin is near the initial destination. Carriers try to balance inbound and outbound shipments, yet markets like Miami lack outbound freight. If a shipper increases their inbound volumes to Miami, this exacerbates the carrier's challenge of finding outbound loads, so the carrier may raise rates in response to increased volumes.

**Myth 2: The purpose of an RFP is to find the market rate.**

The RFP determines a rate that aligns a shipper's service needs with a carrier's capacity. Shippers' internal operations and policies vary widely, such that, for the same lane, service needs may significantly differ between shippers. Executives may assume the lane has a market rate, but

these different requirements make the market rate almost irrelevant.

**Myth 3: The RFP creates the routing guide, which defines the budget.**

The RFP creates a routing guide that helps determine which carriers move freight at what rate. Executives may then assume the routing guide sets the budget, but unplanned shipments, carrier capacity shortages, and other challenges cause routing guide failures that impact costs. While the routing guide is a good starting place for budgeting, transportation leaders should plan for a percentage of freight to cost more than the rates in the routing guide.

**Myth 4: Carrier contracts ensure capacity.**

Truckload transportation contracts are unlike other business contracts in that they are binding in price, but not in shipment volume or carrier capacity. Reiterating the dynamic nature of transportation will help executives wrap their heads around this. Carriers face market conditions that impact truck availability, while shippers face supply chain challenges and sales pressures that impact shipment volumes. The contract does not guarantee capacity will be available exactly where and when they might need it.

**Myth 5: Paying higher rates leads to better service.**

With truckload freight, higher prices aren't associated with higher service levels. Several dynamics are at play. Smaller carriers tend to provide superior service at lower rates on the lanes they operate to keep the shipper's business.

National carriers provide wider capacity coverage to service the lanes that smaller regional carriers can't, but at lower service levels and slightly higher rates. Low-cost, low-service carriers quickly get cut out of the network, since the shipper's top priority is getting products delivered to customers.

**Myth 6: Transportation is a simple make vs. buy decision.**

Businesses frame procurement decisions on whether to make the service internally, or buy it from a vendor, yet transportation best practices suggest a portfolio approach with both "make" and "buy" components. The "make" decision aligns with dedicated and private fleets where you bring capacity in-house to service steady, balanced lanes. The "buy" decision can include both contract carriers for relatively consistent lanes with moderately high volumes, and spot carriers for one-off lanes and more sporadic freight.

These myths have come up more often since the onset of the pandemic, giving transportation leaders an opportunity to educate executives. Debunking them and building effective transportation strategies require comprehensive analytics on rates, capacity, and performance to support continuous improvement.

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**-By Dr. Chris Caplice**

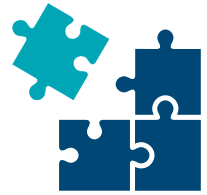


Chief Scientist  
DAT Freight & Analytics  
[dat.com/knowledgebase](http://dat.com/knowledgebase)

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**Dr. Chris Caplice is the Chief Scientist at DAT Freight & Analytics, the industry's most trusted source of supply chain analysis and truckload pricing data. He is also a Senior Research Scientist at the MIT Center for Transportation & Logistics, and hosts the DAT IQ Freightvine podcast. Dr. Caplice may be reached at [chris.caplice@dat.com](mailto:chris.caplice@dat.com)**

## Supply Chain Challenge?

# SOLVED



# Echo's Managed Transportation Solution Supports Resin Distributor's Rapid Growth

Leveraging enhanced technology and a dedicated LTL carrier network, Echo's solution enables M. Holland to meet national business needs with a more strategic routing process.

### THE CHALLENGE

A leading international distributor of thermoplastic resins, M. Holland supports more than 4,000 clients in industries ranging from automotive to healthcare.

Following a period of robust growth, M. Holland saw an increase in LTL shipping and needed to find a way to keep pace with demand. Company leadership decided a national freight broker with technology expertise was the solution it needed to become a shipper of choice.

### THE SOLUTION

**A Better Outbound Shipping Process.** Echo's Managed Transportation solution introduced proprietary technology to M. Holland's transportation management operations, allowing the company to

automate its routing process and increase visibility into shipments. M. Holland's logistics team was able to reallocate its time to business objectives while Echo:

- Helped validate distribution center locations with improved analytics
- Assessed M. Holland's shipping costs to identify savings opportunities
- Provided guidance on quality issue resolution with strategic insights
- Identified pain points related to market segment, region, and time of year

By presenting M. Holland with a broader view of its shipping practices, Echo was able to provide information about the company's total lane operation and offer insights into establishing a more efficient network design.

**A Partnership Focused on Strategy.** Echo provided M. Holland guidance for educating customers, account managers,

*With Echo, we experienced an attitude of continuous improvement. Very quickly we realized that Echo could optimize, refine, and create a more efficient routing process for our needs.*

—Pete Nutley  
Vice President of Operations  
M. Holland

and industry partners on the challenges facing the freight market. As a strategic partner, Echo:

- Hosted quarterly business reviews
- Helped M. Holland develop long-term business goals
- Introduced a new outlook on shipping operations
- Supported panel discussions during streaming web conferences

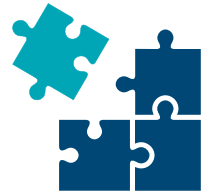


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## Supply Chain Challenge? **SOLVED**



# Real-Time Visibility Plays an Integral Role in Linfox's COVID Vaccine Delivery

When cold chain logistics provider Linfox had to distribute COVID-19 vaccines starting in late 2020, it partnered with Tive to gain real-time shipment location and condition visibility.

### THE CHALLENGE

When the Australian government needed a reputable cold chain logistics provider to distribute COVID-19 vaccines starting in late 2020, it turned to Melbourne-based Linfox, the largest privately owned logistics company in the Asia-Pacific region. In business for more than six decades, Linfox understands the tremendous value of collaborative partnerships in the pharmaceutical supply chain.

The temperature-control guidelines for COVID vaccines are some of the most stringent—even the slightest variation of a degree or two beyond the acceptable ranges could render a shipment unusable. Prior to January 2022, the Therapeutic Goods Administration (TGA) of the Australian Government Department of Health had approved three COVID vaccines for distribution in the country, each with its own acceptable temperature range.

Though each of the vaccines has different storage temperature requirements and shelf lives, each requires a stable cold chain with reliable tracking capabilities to ensure compliance.

With human lives potentially at stake if the vaccines failed to adhere to these strict temperature controls, Linfox needed real-time location and condition tracking capabilities (in addition to traditional data logging) to ensure these critical shipments arrived on time, in full, and in full compliance.

### THE SOLUTION

Linfox decided to partner with Tive to gain real-time shipment location and condition visibility. A leading provider of supply chain insights, Tive helps logistics professionals actively manage global shipments to ensure every shipment arrives on time and in full through the use of multi-sensor trackers that record and stream real-time, in-transit location and condition data to a cloud-based software application.

Regardless of the mode of transport used (air, sea, truck, rail), Linfox sends every vaccine shipment with a Tive Solo 5G multi-sensor tracker attached to each pallet, container, or shipment, which records temperature and location data in real-time. The Solo 5G Tracker can be used in environments of -20°C to 60°C, with an accuracy of  $\pm 0.5^\circ\text{C}$ , NIST Traceable.

The data it collects gets passed along to the Tive cloud application, which interfaces with the Linfox control room dashboard.

The Linfox-Tive partnership has proven to be quite successful. As of December 1, 2021, Linfox reports the following results:

- More than 10,500 different metro and regional customers serviced
- 31 million kilometers traveled
- More than 20 million vaccine doses delivered
- More than 75,000 vaccine consumables handling units delivered
- 400,000+ quality checks conducted along the way
- 125 million+ data messages (25,000 per hour) with 100% accuracy

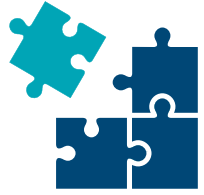
Furthermore, the teams achieved stellar compliant delivery on time and in full performance regarding vaccines (99.9%) and consumables (99.9%), and 100% cold chain performance in its distribution centers.



To learn more:  
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## Supply Chain Challenge?

# SOLVED



# Streamlining Supply Chains During Widespread Port Congestion

Hub Group's customer-focused approach led by dedicated, problem-solving freight engineers provides the supply chain solutions that shippers need when faced with even the most challenging conditions.

### THE CHALLENGE

Shippers moving freight through ports over the past two years have been faced with many challenges. From scheduling appointment times to navigating the chassis shortage, to obtaining dray and transloading capacity to securing nearby warehouse or DC space, shippers were faced with unprecedented delays and backlogs. These challenges were both exhausting and costly for shippers who felt the impact of demurrage and detention fees that reached all-time highs in the United States in 2021.

### THE SOLUTION

**Collaboration** – As a solutions-driven 3PL, Hub Group was able to avoid many of the service disruptions that other 3PLs struggled with during this pandemic. How? Hub Group spent decades proactively building strategically-aligned networks long before COVID-19.

When consumers started panic buying and spending more through e-commerce, record-breaking freight volumes and tight capacity crippled many shippers. Hub Group's solid relationships with key players such as carriers, draymen, railyards, and shipping lines, combined with its range of asset-based equipment, made it a reliable resource for customers over the past two years.

**Agility** – Data-driven decision making with the ability to act quickly is important in keeping the supply



chain moving during a pandemic. This became more challenging as shippers began experiencing extreme wait times at West Coast ports. When steamship lines were held up at one port, Hub Group's multiport diversification abilities provided the equipment and relationships to quickly transload the freight to other, less congested harbors.

Hub Group also used its resources and experience to quickly change modes for its customers when needed, including access to team drivers for over-the-road expedited freight. By proactively using the right mode with full management from pickup to delivery, shippers receive a true end-to-end solution—giving them a distinct advantage over the competition. Access to Hub Group's easy-to-use, advanced transportation management system, Hub Connect®, also gave shippers the added capability to act fast with real-time information about their freight's location and condition.

**Cost Savings** – One of a shipper's greatest costs is tied to outbound transportation from the ports. Part of the

key is to make this leg of the journey as streamlined as possible, avoiding exorbitant demurrage and drayage costs. Hub Group excels in this area by providing “on-dock” rail solutions that allow a customer's freight to go directly from port to rail without delay or disruption—no drayage needed so no delays, providing fixed capacity with speedy transit time and reliable service.

### THE RESULTS

As shippers continue to navigate their freight through clogged ports across the globe, Hub Group's customer-focused approach led by dedicated, problem-solving freight engineers provides exactly what shippers need when faced with even the most challenging conditions.

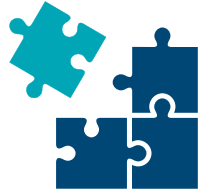
Hub Group's solutions combine a series of scalable strategies and are tailored to the individual client's needs. By leveraging the company's expertise and top-down collaboration, Hub Group shippers find they can streamline their existing practices and create surprising innovation in their supply chains.



To learn more:  
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## Supply Chain Challenge?

# SOLVED



# How Edge Logistics Leverages Supply Chain Standards Through Technology Solutions and Service

Niagara Bottling sought absolute transparency and compliance in procurement. It found a solution to market volatility with Edge Logistics, which accomplished top carrier milestones.

### THE CHALLENGE

Volatility plagues all industries, especially the trucking industry, and slight failures amount to big problems. Those issues are inherent in any company but especially for shippers with finite, absolute requirements for pickup and delivery, like Niagara Bottling. Missed pick-ups or deliveries at Niagara Bottling result in immediate chargebacks, up to 4%, plus any downstream damages or issues caused by delays.

Edge Logistics can deliver on those needs and promises with the CAPACITY app and top-notch service.

### THE SOLUTION

Using the CAPACITY app, Edge Logistics has successfully delivered loads of raw materials like bottle caps, preforms, resins, labels, and shrink films to Niagara Bottling. Edge Logistics also used real-time monitoring to meet Niagara GPS tracking requirements. Paired with first-rate service at all legs of transport, Edge has accomplished top Niagara Bottling carrier milestones:

- Offering 24-hour bilingual support across a larger carrier network.
- Ensuring 100% invoicing compliance.
- Accepting and confirming tenders within 90 minutes of posting.

- Accepting 99% of all Niagara Bottling tenders posted.
- Maintaining 98%+ on-time pickup and delivery rates, 8% above Niagara's 90% minimum.

Will Kerr, CEO and founder of Edge Logistics, wrapped up the accomplishments, saying, "Niagara Bottling is only one example of how Edge Logistics helps drivers and shippers come together to move more freight. We make promises to stay frictionless, to participate, to bring more market options, and to perform. We pick up and deliver it on time. We stay focused on fulfilling those promises to build a better network of the future."

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[INSIGHT]

## E-COMMERCE

by *Mark Haslam*

Managing Director Oceania, APL Logistics

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# Out of Stock? Hoarding is Not a Solution

Investing time and money in making products available is more important today than ever before, thanks to the ripple effects of COVID-19. Capacity constraints and delivery agents have been upended, and product availability is at risk. Rising digital trends and changing consumer behavior and spending habits have also led to an urgency to respond to market conditions quickly.

Customers no longer tolerate out-of-stock items and long waiting times for restocking. A recent Marsh McLennan study reveals that 32% of customers are willing to forsake an out-of-stock product, and 12% will purchase a similar product from competitors.

As e-commerce competition heightens, the fight to retain top of mind with customers will intensify. Retailers who raced to increase or “hoard” orders in fear of stock-outs are absorbing rising costs to get products on shelves. This is not sustainable.

To gain market dominance, organizations must go beyond the traditional playbook. Here are three sets of actions to consider:

### **1. Harness logistics innovations to plan and forecast demand.**

Organizations rethinking their business strategies are moving to the next phase of pandemic planning, transitioning to identifying emerging trends.

There is a shift to move away from just-in-time and adopt the just-in-case approach. The question remains: how do retailers plan

the right safety stock levels to protect them from supply chain fluctuations?

**Imagine what's possible without real-time commitment.** Organizations can harness logistics innovations such as digital twins to address business needs accurately, simulating disruptions and managing risks. Through advanced analytics and artificial intelligence, organizations can optimize supply chain inventory management and help the team come to a decision quickly without having to experience the real thing.

**Plan better with data.** Organizations can rely on data analytics to gain valuable insights into market trends and drive inventory scenario modeling and better decisions. Organizations can also stock up on popular products ahead of predicted demands or potential risks.

### **2. Rethink your inventory strategy.**

To meet customer demands with agility and speed, organizations should constantly examine their inventory management strategies. Here are five key actions:

- Adopt a multi-sourcing approach.

Procurement leaders are moving away from single product providers and diversifying suppliers across regions. Localizing supply sources closer to demand reduces exposure to delivery delays and bottlenecks.

- Augment inventory and expand pockets of inventory within the supply chain by prioritizing products. Reduce costs with strategic inventory and pick-up locations.

- Avoid unnecessary costs that could come with overstocking. Organizations should weigh the priorities of their goods and rethink their pricing strategy to move the products.

- Update fulfillment models—such as urban fulfillment centers—with automation to support the e-commerce hub-and-spoke model.

- Modernize your supply chain environment early with technologically driven partners to stay ahead of the curve.

### **3. Keep your supply chain resilient and sustainable.**

The benefits of being resilient are the credibility and loyalty gained in meeting changing customer demands. Similarly, organizations focused on sustainable practices can avoid having their products penalized by regulators or unloved by customers.

The conventional one-size-fits-all method is no longer sufficient to succeed in today's world. Organizations need to invest in technology, constantly rethink inventory strategies, and adopt sustainable practices to gain long-term customer loyalty. ■

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[INSIGHT]

## IT MATTERS

by *Tim Motter*

VP of Transportation Solutions, SAP

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# Digital Transformation: The Experience is King

Over the holidays, my wife and I decided to give ourselves the gift of a new couch. Because I work in transportation and logistics, I knew that constraints up and down the supply chain easily could result in a long delivery lead time. So it was a pleasant surprise when the home furnishings company said to expect the couch in about three weeks.

Soon after that, the company's warehouse dispatch contacted us to provide a specific day and two-hour window for when to expect delivery from the local transport provider. When a text message arrived on delivery day morning, inviting me to track the couch's movements in real time, I clicked on the link. That's when things turned murky.

"Delivery canceled" read the message posted on the delivery app, with a phone number to call for more details. When I called the number and got a warehouse person on the line, she told me that not only had the couch *not* made it onto a delivery truck that day, but that there was no information about its whereabouts.

My two-piece sectional had gone AWOL. Because of an apparent lack of visibility and communication between the home furnishing company's warehouse and its contract transportation logistics company—along with likely staff shortages due to the holidays, illness, and employee attrition—no one could

say exactly where it was, why it had been delayed, or when delivery could be rescheduled.

As frustratingly commonplace as situations like these have become in the past few years, this one hit close to home. It got me thinking about some impactful steps that key links in the supply chain can take—beyond obvious ones like throwing more people and/or better compensation at the problem—in the back office to minimize disruption and preserve what must be among their highest priorities: a high-quality customer experience.

Here, based on extensive experience working with logistics and transportation organizations up and down the supply chain, are some of the systems and strategies that are helping them to operate and work more intelligently and efficiently in four critical back-office areas, and in the process, better insulate themselves and their customers from disruption.

### 1. Human resources. Labor

shortages are to blame for many of the disruptions like the one I experienced with my couch delivery. The problem is particularly acute in the world of trucking, which accounts for about 70% of cargo shipments in the United States.

As the Great Resignation is demonstrating, people value their work experience more than ever, and companies that provide a superior employee experience will have a leg up in avoiding disruption and meeting customer expectations.

HR and payroll can help in that regard. They could, for example, give drivers more insight into their routes and resulting compensation—with mobile access to that information—and differentiate themselves with new pay practices that better compensate drivers for their time.

Meanwhile, using experience management (XM) tools that link front-line employees to the back office, a company can gather in-the-moment worker feedback, analyze that feedback and mobilize to shape the employee experience accordingly. Companies such as Purolator are seeing substantial gains in employee engagement, along with other benefits, from using XM tools.



**2. Finance.** Today's generation of integrated digital platforms for managing financials and accounting provides a viable—and in many cases, much-needed—alternative to the notoriously siloed, disjointed, manually intensive systems on which many organizations have relied.

By incorporating artificial intelligence (AI), machine learning (ML), and advanced automation capabilities, these platforms can execute and manage a huge range of processes and tasks that otherwise would require manual intervention across multiple systems, and do so much more quickly and efficiently than those multiple systems could.

Many high-volume transportation and logistics organizations are shifting to these integrated platforms for pricing, order management, billing and collections, invoice processing, receivables and payables management, fees and commissions, demurrage, re-rating, and reporting.

One big advantage with these systems is their ability to manage thousands of highly complex contracts, with all the unique terms, conditions, tariff requirements, and other conditions they may bring. They can automate many previously labor-intensive manual processes and rapidly collect, analyze, update, and provide insight into huge volumes of data and records from disparate sources and systems.

The result: fewer disputes and faster reconciliation, settlement and collections with customers, partners, vendors and the like, which not only makes the supply chain run more efficiently, it also helps companies recognize revenue faster.

And, as complicated as many supply chain ecosystems have become, an integrated finance platform can bring simplicity, process automation, standardization, and clarity to areas of finance and accounting where they are needed most.

**3. Asset management.** More efficiently and intelligently managing assets is another way transportation and logistics companies can add resilience

and preserve the quality of their customer experience.

By integrating real-time onboard and trackside monitoring data from multiple tracking systems with sophisticated tools like digital twin, companies such as Swiss Railways are replacing costly, disruption-prone run-to-failure maintenance strategies with a proactive maintenance approach across the entire rolling fleet. They use real-time data and AI- and ML-powered tools to strengthen planning, improve failure discovery, identify issues before they escalate, speed up maintenance work and ultimately reduce disruption to its fleet.

With the help of AI and ML technologies, companies across the transportation and logistics landscape—rail, trucking, shipping—now have the ability to remotely inspect and analyze the condition of equipment, then identify and address potential issues.

Say, for example, a rail company could use connected remote cameras to

inspect its rolling fleet. An AI-powered app such as Cogniac could analyze the video to quickly identify an issue with one freight car's wheelset, then notify the appropriate maintenance team to address the issue.

**4. Supply chain.** If only the company that sold me my couch had an integrated track-and-trace system, one that could monitor a product's journey from factory to warehouse to order fulfillment with geolocation capability and full visibility into logistics service providers and carrier networks.

Evidently the home furnishing company's track-and-trace capabilities don't quite reach far enough, because as I write this, they still can't tell me where my couch is and when it might be delivered.

One thing I can say with certainty, though, is that whenever that furniture truck finally arrives, I'll do my part to boost employee satisfaction by tipping the delivery people generously. ■



## GET WITH THE PLANNER

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[ INSIGHT ]

# LEANSUPPLYCHAIN

by Paul A. Myerson

Instructor, Management and Decision Sciences, Monmouth University and author of books on Lean and the Supply Chain for McGraw-Hill, Pearson, and Productivity Press.  
732-441-3879 | pmyerson@monmouth.edu

## Lean Isn't Mean and Agile Isn't Cheap

Back in 2014, I wrote a column extolling the benefits of a lean and agile supply chain, also known as a hybrid strategy. Depending on your product or service, your supply chain may tilt more one way or the other, or it might be segmented but still exhibit characteristics of both. For example, if you sell commodities, you would focus more on efficiency. If you were in fashion, you'd tend to be more responsive.

Also, because the supply chain consists of suppliers, customers, and the producer, companies can achieve competitive advantage by aligning the entire extended supply chain to a competitive hybrid strategy.

To illustrate how important a hybrid supply chain strategy is, companies that took this approach to heart appear to have performed the best through the pandemic.

The fact is, many companies that I have visited over the years have misinterpreted the idea of Lean entirely. They thought they were already lean because they laid off a significant part of the workforce, had minimal levels of inventory, or had single-sourced suppliers.

This kind of thinking missed the point, dangerously as it turned out. Having a Lean philosophy means getting to the root cause of your variabilities first and then lowering inventory levels.

Low-cost thinking made sense through the early 2000s when the focus was mainly on cost reduction (which helped to rein in inflation for

30+ years). However, since around 2010, there has been a shift in thinking from an emphasis on an efficient supply chain to a more responsive one requiring flexibility.

Furthermore, being Lean means that you are flexible and agile to some degree anyway. A primary example of this is the conceptual idea of one-piece flow, where batch size reductions are enabled through quicker changeovers in manufacturing. As most activities in a factory, warehouse, or office involve batching and changeovers of some kind, it is really a universal concept.

### LEAN AND AGILE SUCCESS

To be truly successful in a lean and agile endeavor, not only do your processes need to have these characteristics, but so do your people. You also need the technologies to support the strategy.

Agility is all about customer responsiveness, flexibility, people, and available information, collaboration

within and between firms, and readying a company for change.

Your supply chain needs to take a hybrid approach structurally, as well as organizationally, which refers to the way decisions are made about how to schedule and utilize supply chain resources. This requires capabilities such as team alignment, end-to-end visibility, and cross-training.

Strategically, the hybrid supply chain professional of the future needs:

- To generate and manage large volumes of data, and have the ability to analyze and model it to support more frequent decision-making.
- A deep understanding of complex supply chain dynamics and how to plan or react.
- A better understanding of business objectives and how any daily individual decision or action can impact those objectives.
- The ability to communicate, often remotely, clearly and concisely with partners, other functions, senior management, and stakeholders.
- The ability to bring together dispersed and diverse teams through technology to solve problems.
- Up-to-date communication skills using new collaboration technologies.

What are you waiting for? If you delay adopting a hybrid supply chain strategy, it may be too late. ■



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# Optimizing Multimodal Shipping with a One-Stop Solution



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**Q** What does multimodal shipping look like in 2022?

**A** Historically, companies have relied on third-party freight brokers to handle complex shipments that include multiple modes, geographies, and freight characteristics. Planning and executing these shipments requires careful planning and coordination with various transportation providers for efficient freight hand-off.

Industry experts agree that multimodal transport can increase efficiency while reducing costs. Recent supply chain disruptions put additional pressure on efficiency and optimization. As a result, shippers need to rethink their approach to multimodal shipping.

The multimodal shipping approach can be as complex as sending a container from Austin to Chengdu, using diverse transportation modes, and typically involving multiple carriers. By streamlining this process, multimodal ensures that cargo easily flows from its origin to destination—no matter how complicated the routing, number of modes, and number of carriers involved. It's one thing to understand the challenge, and it's another to solve it in a single transportation management system (TMS).

**Q** How does Fortigo simplify multimodal shipping across geographies and cargo types?

**A** Fortigo's one system, any shipment TMS, allows users to build a multimodal shipment with at least three legs in less than a minute. Whether the freight is traveling over land, air, sea, or a combination, Fortigo's global reach allows users to operate in any geography.

Whether you ship an envelope or an aircraft engine, the system works in harmony with your carrier network to optimize its routing. Fortigo users quickly, easily, and confidently arrange and expedite shipments using their entire carrier network, unlocking new and more efficient shipping opportunities with access to all modes of transport for any given shipment.

Fortigo's recent marketplace integrations also empower users to identify real-time dynamic rates from more than 70,000 carriers. Building a complex multimodal shipment is easy and offers maximum flexibility with direct visibility of the marketplace alongside contract rates with a user's established network.

Additionally, Fortigo's one-stop solution provides on-demand visibility into scheduled multimodal shipments. The TMS makes it easy to see everything in one place, including all segment statuses and related documentation.

Status notifications are updated automatically, giving the user complete control and visibility into their multimodal shipments. On the back end, Fortigo's TMS leverages proprietary algorithms to optimize transactions and ensures all shipments flow seamlessly between carriers.

**Fortigo has more than 20 years of experience solving challenging and complex logistics problems. Our system has always serviced multinational companies with unique logistics operating environments.**

**Contact us at [info@fortigo.com](mailto:info@fortigo.com) to learn more about how we can optimize your logistics needs with a single SaaS TMS.**

# How Collaboration and Technology Create Efficiencies for SMB's



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One of the things people are starting to realize is that relationships and collaboration matter. Many shippers have long viewed their relationships with their transportation providers as tactical rather than strategic, and they're the ones suffering the most with today's supply chain challenges.

Simply taking the time to develop meaningful and long-term relationships can eliminate so many headaches down the road.

**Q** How can collaboration be used to build relationships?

**A** Education plays an important role. For instance, a typical LTL carrier has an economic disincentive to educate their customers. If you have the wrong NMFC (National Motor Freight Classification) number for the items you're shipping, your costs can increase dramatically. Unfortunately, a carrier will almost never tell you about a misclassification when you should be getting charged less.

However, as a 3PL, we have an economic incentive to educate our customers because we can only grow if we are able to show our customers a savings and a higher level of service.

So, one of the services we provide with the onboarding of any customer is looking at every item they are shipping, matching NMFC numbers for that item, the correct freight class, and tariff they should be using. In turn, allowing them to gain the best value for their freight spend.

**Q** What technology solutions can be utilized to create efficiencies for SMB's?

**A** We found in our research that about 90% of companies with less than \$250 million in revenue don't have a transportation management system to help them professionally manage their freight.

We built our TMS from the shipper's perspective, and it encompasses everything that a transportation manager would need to manage their organization's freight spend. Whether that be reporting or on-demand track-and-trace tools. The R2 TMS is specifically designed for those SMB's that don't have the budget to justify an enterprise solution.

**Q** How long does it take to implement the R2 TMS?

**A** We like to measure implementation in days not months, but the process can go as fast as the customer is willing. Where our TMS really shines is in the data aggregation phase. We request three to six months of customer data so we can preload it into the system. This includes everything from their products, freight classes, origins, and destinations.

We also do an NMFC audit on all their freight to make sure they're not being overcharged. Taking all this data and translating it into meaningful reports allows our customers to make good decisions quicker and gives them a competitive advantage against larger corporations. Typical implementation time is two to three weeks before the customer is up and running.

# Why Transportation Spend Management Visibility is Crucial in Today's Global Supply Chain



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**Q** Why is transportation spend management so important today?

**A** The world is an unpredictable place, and the global supply chain has never been busier. Global trade reached an all-time high in 2021, jumping 23% to \$28 trillion, according to the UN Conference on Trade and Development.

Meanwhile, an array of challenges complicate the movement of goods – and impact the costs that go with it. Never has it been more vital to understand where you are spending your transportation dollars. Visibility with summary and line-item detail allocation is critical to understanding where every freight dollar goes.

**Q** What does freight spend management encompass?

**A** Freight spend management is not just about what the total cost on an invoice is—it's about the detail. Knowing how much you spend for specific accessorial charges, as well as every type of service, helps identify opportunities for cost reduction. Knowing your lanes, where you are shipping from and to, the specific service requirement, the products, allows you to make informed decisions. Freight spend management is an all-inclusive, deep dive into what goes into the costs of not just moving your products but running your entire supply chain.

It's easy to lose track of major potential cost savings. Consider this scenario. A location of your business in Poland does not know the United States headquarters has negotiated rates with a transportation provider. In Poland, they use a different provider with higher prices. Without true freight spend and contract/pricing visibility, those unnecessary costs will

continue, the spilt milk analogy. With good freight spend visibility, the situation can be identified and corrected. You can "stop spilling the milk."

**Q** What are the benefits of freight spend management?

**A** Experience has proven there are opportunities to save money and improve profits no matter how big or small the company.

Imagine a customer spending more than \$100 million a year for expedited freight without having any spend visibility. By implementing our freight audit and payment systems, we identified this continued expense and then proposed a solution to validate these shipments before they were made. Our expedited freight approval solution saved them more than \$30 million within its first year.

We don't just capture information at the invoice level—we capture all detailed shipment information on each invoice so the customer has full visibility to their freight spend. If there are discrepancies or issues on an invoice that do not meet the customer's business rules, we use web portals to interact with either the customer or the transportation provider to highlight those items so they can be fixed, the invoice can be processed, and the provider can be paid on time.

Following the audit, we send the information back to the customer with general ledger codes assigned so that information can be uploaded into their enterprise system, easily allocating costs across their organization and further enhancing the global freight spend management visibility that is critical to streamlining their processes and saving money.



# Digitally Transforming Your Supply Chain? Here's How to Make It Meaningful



**Russ Felker**  
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**Q** Digital transformation has made a huge impact in logistics. What is your approach?

**A** When working with a digital solution, ensuring the reliability of that solution is critical. Tracking a shipment through digital partners is helpful only until a problem occurs.

Backups and fail-safes keep business moving. Companies cannot become completely dependent on an automated solution but should rather make sure digital initiatives support the process and do so consistently.

Digitization shouldn't simply move or mask inefficiencies but address them within the enterprise. Part of that is the capturing of data, not just in support of creating the transformation, but also creating ancillary information as part of having a digital system in place of a manual one.

**Q** How do you acquire reliable and useful data from digital transformations?

**A** Data has to be linked to processes and action to be meaningful. Generating even Zettabytes of data is next to useless if that data is not understood within the process and what the resultant actions are from generating it. Logistics is still, in many ways, about the blue dot—or where is my thing right now? But that's not really a meaningful piece of information.

What we really want to know is—when will my thing get there—and even further—how does that relate to my supply chain or timeline needs?

Understanding how raw data truly connects to actions and processes is critical to understanding its importance. Obtaining useful data is all about process and action. If you can answer the question of how a particular person would use the data, you're on the right track. This takes the right tools and skillsets to action.

Transportation companies, like many other industries, must transform their approach to be data-driven and have the partners and/or team members to drive that approach.

**Q** How has having a holistic digital transformation and data approach enabled Trinity to meet industry challenges?

**A** Digital transformation cannot be considered in a silo; it needs to be approached from a holistic perspective. In logistics there are many pieces of information coming from a variety of different sources. Approaching document retrieval digitally, for example, has created tremendous efficiencies in the organization; however, digitizing anything uncovers issues that were addressed by people in the manual process but show up as gaps in the digital approach.

That data needs to be captured and evaluated as part of the implementation to understand when exceptions are occurring and how to deal with them. Understanding both the positive and negative datasets inherent in any digital transformation allows us to create an effective implementation. That effective implementation frees up our team to spend more time building relationships with each other, our shippers, and carrier customers which is the ultimate goal of digital transformation and technology in general.

# Hub Group's Leading Supply Chain Solutions Facilitated Clear Sailing During 2021-2022 Port Congestion



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This past year presented extreme challenges for the supply chain. By providing the industry's leading supply chain solutions for more than 50 years, Hub Group supported its customers by leveraging experience in strategic planning across the supply chain, tailored solutions, dependable capacity, and advanced visibility.

**Q** These past two years were some of the most challenging for everyone, but especially for key players in the supply chain. How did Hub Group approach it? What did Hub Group do on behalf of its customers to get their freight through the ports unfettered and unrestrained?

**A** It certainly was a challenge. We were able to deliver for our customers because of our overall approach and culture. For Hub Group, having a holistic, customer-focused approach gives us the ability to analyze the entire supply chain and find multiple areas for improved efficiencies and possible economies of scale. This proved to be an important capability when disruptions occurred. That holistic perspective, coupled with the ability to leverage our company-owned assets, was a huge advantage.

**Q** What tactics did Hub Group use to deliver for customers?

**A** Part of our culture is "innovating with purpose" and that's exactly what we do. One example is our ability to move freight around port delays. As our new containers are built overseas, we worked with customers to bring their freight, stuck elsewhere, over in our newly built containers.

We streamline the import process for our customers through inland international drayage, transloading, and expedited OTR solutions, delivering containers directly to DCs while providing consistent, reliable service levels.

Having one point of contact for customers also helped simplify their supply chain processes, reducing complications that are typical when using multiple transportation providers.

**Q** What proactive steps did Hub Group take to "switch gears" when faced with delays?

**A** We have always been nimble, but over the past few years that has been a huge advantage. Whether we're finding chassis to move our customers' freight or switching modes of transport, such as using rail instead of OTR, we had a solution for every challenge.

Some of the other strategies we used were accessing nearby warehouse and storage facilities, employing multiport diversification, and accessing OTR team drivers to expedite freight when needed.

**Q** What was the role of technology during the past few years?

**A** Technology is a critical part of the supply chain and we've always seen the value in it. In fact, we were the first to have a fully GPS enabled fleet. Our technology integrates machine learning and AI, giving us complete end-to-end visibility into our customers' supply chains. This gives us and them real-time updates, so they always know where their freight is in the system.

# Manage Supply and Demand Swings with a Digital Logistics Platform



**Geoff Kelley**  
President &  
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TI & NTG

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[TIHoldco.com](https://TIHoldco.com)

**Transportation Insight (TI) & Nolan Transportation Group (NTG)** service more than 10,000 shippers and over 80,000 carriers through their proprietary **Beon™ Digital Logistics Platform**—a single point of access to TI and NTG's mode-agnostic network and services from port to porch. Their services and digital product portfolio span across North America, offering domestic freight and parcel transportation solutions, warehousing, data intelligence, and supply chain consulting.

**Q** Capacity constraints, labor shortages, rising shipping costs, and growing shipping volumes are making it difficult to find carriers to cover freight. How can shippers, logistics providers, and carriers become more efficient amidst fluctuating market conditions?

**A** A digital logistics platform with intelligence AND execution capabilities from a proven partner drives efficient collaboration between shippers, 3PLs, and carriers—representing a more resilient solution to manage the swings of supply and demand.

While cycles are normal with supply and demand rarely in balance, this time, capacity has been impacted by the new state of labor markets and difficulty sourcing drivers versus simply accessing new trucks. Shippers are challenged accessing net new capacity and the right capacity, at the right time. Carriers are challenged finding the right freight to optimize their in-demand networks, even in a favorable carrier market.

A digital logistics platform can solve these pain points, using artificial intelligence, machine learning, and automation to drive out inefficiencies and provide an on-demand, mutually beneficial network to collaborate. The right platform is more reliable than traditional 3PL tactics, providing faster, more flexible access, and increased transparency and intelligence. Larger, diversified networks amplify platform benefits by consuming high-quality data, making pricing algorithms and freight matching tools more accurate and actionable. These tools can be a game changer, leveraging data-driven insights in decision making.

The digital logistics model runs on an open-source platform, enabling 3PLs to better

manage the matching of shippers and carriers at scale. This model can fluctuate depending on the provider, so understanding the network and expertise behind the platform is important. To be clear, digital logistics platforms don't have to exclude people and in fact, shouldn't. Lack of execution has deterred adoption of these platforms, but comprehensive platforms backed by experts are different. They can provide solutions across complex and unpredictable conditions, bringing resilience and optimization to your operation without sacrificing execution and performance.

To the shipper audience, these platforms are your chance to eliminate capacity constraints imposed by large carriers and diversify your network with thousands of smaller regional and independent carriers. With 97% of U.S. carriers owning 20 or fewer trucks, tapping into this pool helps build a larger, more reliable, and scalable carrier network.

To the small-to-midsize carrier audience, these platforms are your chance to eliminate bottlenecks and gain access to the right freight opportunities. Simply by accessing the platform, you immediately become larger with more visibility and options across modes, regions, and freight types. The right platform can provide more self-service tools that accelerate the growth of your business.

Resource shortages and e-commerce volumes continue to climb, causing capacity constraints and higher freight rates for some time to come. Market conditions are changing rapidly, day-to-day and month-to-month. Businesses can't wait for the market to ease up, or for more capacity to be injected in. By utilizing a digital logistics platform, businesses can address short-term needs while expanding and diversifying networks to better position themselves moving forward—no matter the market conditions.



# ALASKA: *Inspiring Awe and Innovation*



**This 10th edition of our special Alaska supplement explores the state's beauty, resources, and challenges presented by its location, geography, and climate. The logistics providers that excel in this state rely on grit, dedication, and expertise to move products to, from, and within the state safely and efficiently.**



**T**he state of Alaska offers so much. “Alaska is beautiful, and that drives tourism,” says Chris Rye, vice president of operations with TOTE Maritime Alaska. “In the summer, Alaska gets daylight for 20 hours a day. The winter has fewer daylight hours, but also has the Northern Lights.” With more people working remotely, it’s possible some, and particularly those who enjoy the outdoors, will seize the opportunity to relocate to Alaska. “My colleagues there love it,” Rye adds.

At more than 663,000 square miles, Alaska is about one-fifth the size of the 48 lower states combined. East to west, it measures about 2,500 miles, or roughly the distance from Savannah, Georgia, to Santa Barbara, California.

Substance accompanies Alaska’s size and beauty. “The state also has enormous energy, mineral, and seafood resources,” says Alex McKallor, executive vice president and chief operating officer with Lynden, a provider of logistics and transportation solutions.

“Alaska is strategically important to the United States,” says Jason Totah, president of logistics provider Odyssey International and Odyssey Alaska. Along with its reserves of oil and other natural

resources, Alaska is home to multiple military bases.

The Frontier State presents multiple logistical challenges. “Outside of war zones, Alaska is the world’s most challenging logistical laboratory,” says Darren Prokop, Ph.D., professor of logistics with the University of Alaska Anchorage.

In *Inbound Logistics*’ 10th edition of its supplement spotlighting Alaska, we explore the state’s resources and the challenges presented by its location, geography, and climate. We also highlight the logistics providers committed to serving their Alaskan clients with grit, dedication, and expertise to move products to, from, and

within the state safely and efficiently.

For many logistical purposes, Alaska is basically an island. It’s connected to Canada and the continental United States by a single road and lacks a robust manufacturing industry in-state that could supply goods. More than 90% of Alaskans rely on ocean shipping services for everyday necessities.

“Almost everything is brought to Alaska from the lower 48 states, typically by ship several times each week,” Totah says, adding that Odyssey provides reliable ocean service between Seattle and Anchorage.

Odyssey, which annually moves cargo valued at \$60 billion, operates terminals in Anchorage, Fairbanks, and Kenai-Soldotna and provides a range of ocean freight consolidating and freight forwarding, trucking, logistics, and warehousing and distribution services.

### Weathering the Cold

The extreme Alaskan weather—average January temperatures in Fairbanks range from -17° to 1° Fahrenheit—along with heavy snowfall and seasonal flooding adds to the challenges.

Most equipment purchased to operate in Alaska has to incorporate heaters that can warm the engine blocks and ensure they turn on when needed, no matter the temperature, Totah notes.

The salt spread across the roads to melt snow wears away at equipment. Some parts of the state, like the North Slope and Prudhoe Bay, are accessible by road only in winter, when the ground is frozen.

Alaska’s population is not only small—about 740,000 people—but half live in the three cities of Anchorage, Fairbanks, and Juneau. The remaining residents are scattered in villages across the state.

Another challenge “is the lack of transportation infrastructure,” McKallor says. Most of the state isn’t connected to the road system, so many shipments must combine multiple transportation modes. “Lynden applies new approaches to connecting these remote communities,” he says.



**Odyssey annually moves cargo valued at \$60 billion, operating terminals in Anchorage, Fairbanks, and Kenai-Soldotna. The logistics provider offers a range of trucking, logistics, ocean freight, consolidating and freight forwarding, and warehousing and distribution services. Odyssey provides reliable ocean service between Seattle and Anchorage.**

Indeed, since completing its first scheduled truck delivery to Alaska in the early 1950s, transporting a load of fresh meat from Seattle to Fairbanks, Lynden has deployed trucks, ships, barges, ferries, aircraft, and even hovercraft to help customers move shipments beyond Alaska's roads and to their customers.

"By leveraging our large service center network and multimodal capabilities, we can connect Alaska's people and businesses seamlessly to each other and to the world," McKallor says.

### Air Transport Soars

"The limited road structure makes air transport more essential," says Adam Drouhard, managing director of cargo with Alaska Airlines.

What's more, the primary airport in Alaska, Ted Stevens Anchorage International Airport, is within about 9.5 hours flying time to 90% of the industrialized world. Perhaps not surprisingly, it routinely ranks among the busiest cargo airports in the world.

About 80% of air cargo freight from Asia that's destined for the mainland United States will move on air cargo freighters that lay over in Anchorage as part of "gas-and-go" operations. When the freighters are fully loaded, they need to refuel in Anchorage.

"The extra one or two hours of in-transit time is more than compensated for by the extra revenue earned by carrying more cargo," Prokop says.

"Alaska Airlines supports many markets and communities in Alaska and creates new supply chain channels where it needs to," Drouhard says. The fifth-largest U.S. airline based on passenger traffic, Alaska Airlines is the only passenger airline in the United States with dedicated cargo planes.

From its headquarters in Seattle, Alaska Air Cargo's fleet of 737-700 freighters delivers transportation flexibility and capability to, from, and throughout the state of Alaska.

Even as many logistics operations were tested over the past few years, "air cargo didn't miss a beat," Drouhard says. Indeed, Alaska Airlines airplane



**Alaska Airlines is the only passenger airline in the United States to fly dedicated cargo planes. From its headquarters in Seattle, its fleet of 737-700 freighters delivers transportation flexibility and capability to, from, and throughout Alaska.**

bellies were 80 to 90% fuller, he says. As in the rest of the world, e-commerce orders in Alaska "have been on fire," Drouhard adds, noting this boosted the air cargo market.

In addition to e-commerce orders, Alaska Airlines has long moved items essential for daily living, like food and pharmaceuticals. That included transporting COVID-19 vaccines through Project WarpSpeed and other partners.

"We move groceries and life-saving medicines every day," Drouhard says. "It's humbling to be part of these efforts."

Similarly, Alaska Airlines handles the movement of transplant organs throughout the state. "It requires much coordination, as well as understanding what's at stake at the end of the day: life and death," Drouhard says. "We strive to make sure these go off perfectly."

The airline also has led in its environmental efforts. Alaska Airlines was one of the first to compost and remove single-use plastic straws and citrus picks from its planes and lounges. It's the leading U.S. airline on the Dow Jones Sustainability Index, and was ranked first in fuel efficiency for seven consecutive years by the International Council on Clean Transportation, an independent, nonprofit research organization.

In 2023, Alaska Airlines will add two 737-800 aircraft to its Alaska Air Cargo fleet, for a total of five scheduled freighters connecting Alaska to the mainland United States. The planes will be converted from existing passenger aircraft and will offer more main deck and belly-load space, as well as higher fuel efficiency than the three 737-700 planes currently in use.

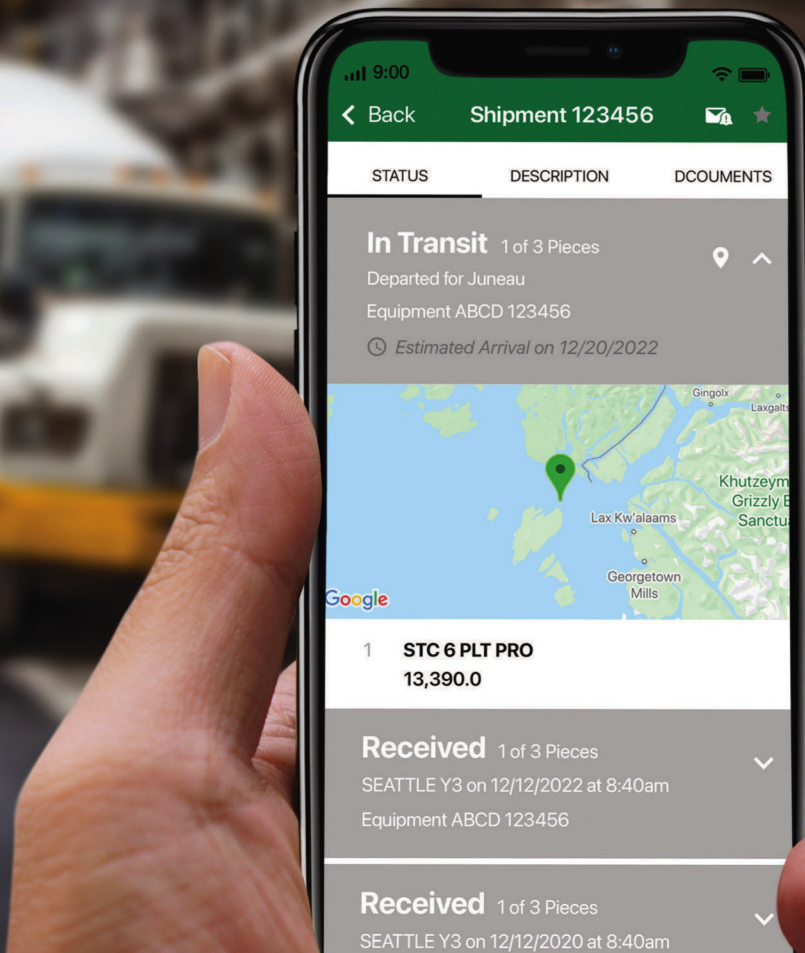
### Streamlining Operations

That's not the only change. Alaska Air Cargo is partnering with IBS Software to upgrade its cargo management system to iCargo, also during early 2023. Among other changes, this will enhance terminal operations and the mobile application. Shippers also will be able to manage their accounts through a new online portal.

Other logistics providers also offer air transport in Alaska. Lynden's Hercules cargo planes fly scheduled service to the Alaskan towns of Bethel, Nome, Kotzebue, St. Mary's, Emmonak, and McGrath from the company's hub in Anchorage. From Bethel, Lynden's hovercraft service supplies villages on the lower Kuskokwim River.

In addition to moving shipments from mainland U.S. to southcentral Alaska, Span Alaska, a division of Matson





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Innovative Transportation Solutions

Logistics, offers overnight or two-day air service from Anchorage to Fairbanks and the Kenai Peninsula. Some of the westernmost villages are only accessible by air or ocean, so Span Alaska offers air cargo service to those points to ensure total state coverage.

The proposed Anchorage Pacific Air-to-Sea Service (ANC PASS) will likely enhance air cargo's viability and coverage. Under the proposal, shipments would fly via air charter from Asia to Anchorage, transload in Anchorage to ocean vessel (or truck for ANC PASS+), then head to Seattle/Tacoma, where they'd be transloaded to truck for final delivery. A study found cargo from Asia could travel to West Coast distribution facilities in as few as six to seven days, with the worst-case maximum of 15 to 19 days.

"ANC PASS can offer shippers a medium-speed, medium-cost, transpacific option," says Jim Szczesniak, airport director at Ted Stevens.

#### [Ocean Transport Provides Reliability](#)

About 90% of goods (outside of petroleum) heading into Alaska travel by ocean. The Port of Alaska in Anchorage handles about half of all inbound freight into Alaska and is one of 17 commercial strategic seaports in the United States, supporting military operations in Alaska, the Arctic, and across the Pacific Rim.

Reliable service in Alaskan shipping operations is critical. If a part breaks or fails to work, trying to expedite a replacement can be a nonstarter, given limited supplies. For instance, Odyssey often has just a four-hour window to restock a cruise ship. "You can't have problems," Totah says.

Along with cruise ships, Odyssey frequently works with oil and gas producers. Again, reliability is critical, given that the potential cost of downtime due to a delay can hit six figures per day, Totah notes.

TOTE Maritime Alaska, which has been serving customers in Alaska since 1975, operates two cargo ships that transport goods to and from Tacoma, Washington, to Anchorage, Alaska,



COURTESY OF LYNDEN

## Shipping to Alaska: Ten Factors to Consider

- 1) Alaska is a logical refueling point between Asia and mainland United States.
- 2) Alaska is about 9.5 hours flying time to 90% of the industrialized world.
- 3) The sheer beauty of the state draws more than one million visitors each year.
- 4) Alaska is strategically located as a key trans-shipment hub for businesses targeting Asian, European, and North American markets, says McKallor of Lynden.
- 5) It's likely one of a few places in which you can travel on ice roads.
- 6) The size of the state and lack of infrastructure mean many shipments must travel by a combination of transportation modes. Logistics providers need to be experts in connecting these together to offer a seamless experience.
- 7) In addition to harsh weather, Alaska is home to 70 potentially active volcanoes. Every year, more than 5,000 earthquakes rock the state. Carriers have to plan for contingencies in case the weather or topography—or both—decide not to cooperate.
- 8) Alaska is, for most logistical purposes, an island.
- 9) One challenge with most ocean shipments to and from Alaska is the inability to fill backhaul trips. Boats carrying food, apparel, and other items to Alaska typically return empty, as do the tankers hauling commodities from Alaska. Fronthaul shippers bear the entire cost of the roundtrip, boosting prices on many retail items.
- 10) Parts of the state are so remote, GPS and cell service is questionable. Truckers and other drivers need to be prepared to handle any event on their own.





# Fast Way to the Last Frontier

For 43 years, Span Alaska has connected the Lower 48 to all of Alaska with a weather-tested network of highway, vessel, barge, and air transportation.

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twice-weekly. Rye also recognizes how critical reliability is. “It’s such a tight supply chain and Alaskans rely on consistent service,” he says. “We operate safely, but reliably.”

TOTE Maritime’s Orca Class ships were built for the challenging conditions of the Gulf of Alaska. As important, its telematics technology provides end-to-end visibility of shipments.

TOTE’s unique roll-on, roll-off (RORO) ships enable shippers to drive their cargo directly onto the ship. Another benefit: the ships can accommodate blended cargo and keep all goods within their trailers. What’s more, cargo can be safely loaded without using forklifts and cranes, Rye says.

During the pandemic, when access to Canada was limited, many Americans from mainland United States who wanted to get to Alaska could ship their vehicles and RVs on TOTE, and fly in to meet them in Anchorage. “It’s like an extension of the highway to Alaska,” Rye says.

TOTE offers a range of equipment, including 53-foot, refrigerated, and insulated trailers. “When the weather drops to below-zero temperatures, insulated trailers maintain the temperature without freezing,” Rye says.

TOTE also moves construction and military equipment, using vessels that accommodate over-the-road trailers and over-sized freight equipment. Just as important, its telematics technology provides end-to-end shipment visibility.

### Preventing Stockouts

Alaska’s size, geography, and weather can make distribution centers and centralized warehouses expensive and impractical to operate. As a result, shippers from the lower 48 states need to coordinate and consolidate shipments to arrive on time to prevent stockouts at stores.

The weekly replenishment of clothes and food from ocean shipments is critical. “We can serve as a company’s distribution center in Alaska, providing a statewide service network and last-mile delivery to virtually any part of the state,”



**TOTE Maritime Alaska operates two cargo ships that transport goods to and from Tacoma, Washington, to Anchorage, Alaska, twice-weekly. The ships can accommodate blended cargo and keep all goods within their trailers.**

says Michael Johnson, president, Span Alaska, a division of Matson Logistics. Span Alaska Transportation provides over-the-water shipping twice weekly via containership, or weekly via barge, from the Port of Tacoma, Washington, to the Port of Anchorage as well as Kodiak Island. Its team of expert logisticians then uses rail, road, and air to deliver shipments to their ultimate destinations.

Span Alaska is a leader in moving less-than truckload (LTL) and less-than-container (LCL) freight across Alaska. At its base in Auburn, Washington, Span Alaska Transportation operates a 93-door terminal on 15 acres.

From Anchorage, Span Alaska also offers southbound shipping to Kodiak, Dutch Harbor, and the Port of Tacoma once weekly. For shipments destined beyond Tacoma, Span Alaska leverages a network of premium truck and rail carriers to deliver Alaska-origin shipments to any location throughout the United States and Canada.

To ensure adequate inventories, especially given current supply chain shortages, Odyssey and some other companies have been back ordering supplies. Odyssey also has helped get some clients to change packaging materials to those that are more readily available.

“Odyssey prides itself on being agile,” Totah says. “If we need to, we’ll fly

someone to accompany a shipment or hand-carry a critical item to ensure it arrives at its final destination.”

### Ensuring Reliability

Matson Navigation Company has been a leader in shipping through the Pacific Ocean since 1882 and its team has been serving customers in Alaska since 1964, says Bal Dreyfus, senior vice president, Alaska, with Matson.

In 2015, through the acquisition of the Alaska operations of Horizon Lines, Inc., Matson added the ports of Anchorage, Kodiak, and Dutch Harbor to its shipping network. Matson also invested millions in new equipment, including a 65-ton gantry crane for its Kodiak terminal. It’s the largest crane in Alaska and powered by renewable energy.

Matson operates three ships in the Alaska trade lane. The ships call in Anchorage and Kodiak twice each week and Unalaska once per week. Matson owns its own equipment and operates its own terminals in Tacoma, Anchorage, Kodiak, and Unalaska. Control of these assets allows Matson to operate reliably as close to its service schedule as weather and tides allow.

Matson, which is the only Jones Act containership operator serving Kodiak and Dutch Harbor, serves more Alaska ports than any other containership operator. Matson’s Alaska service offers a

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**Matson operates three ships in the Alaska trade lane. The ships call in Anchorage and Kodiak twice each week and Unalaska once per week. Matson owns its own equipment and operates its own terminals in Tacoma, Anchorage, Kodiak, and Unalaska.**

large inventory of refrigerated containers and expertise in cold-chain operations to ensure consistent product quality. Cold chain logistics solutions help keep Alaska seafood exports frozen.

Through its Alaska-Asia Express service, Matson offers direct service from Dutch Harbor, Alaska to Ningbo and Shanghai, China. Once at the Shanghai hub, shipments can transfer to 37 other cities in Asia through Matson's partner network, including in South Korea, Japan, and Taiwan.

### Sustainable Shipping

Carriers increasingly are taking steps to reduce the environmental impact of their voyages to Alaska. For example, TOTE is in the process of converting its fleet to dual-fuel liquid natural gas (LNG) technology, which will cut greenhouse gas and sulfur emissions.

In 1993, Matson became the first container vessel operator to adopt a zero solid-waste policy. Its "Greentainer" program collects all non-food solid waste for transfer to recycling, waste to energy, or other environmentally regulated disposal facilities on shore. Other than food waste, no solid waste aboard its vessels is thrown overboard.

Matson has also been an industry leader in installing ballast water treatment systems to prevent the spread of invasive species.

Matson recycled the last of its

steamships in 2021. It's committed to a 40% reduction in Scope 1 greenhouse gas emissions from its fleet by 2030. It's also set a goal of net zero total Scope 1 greenhouse gas emissions by 2050.

Although it was in operation for only part of 2021, Odyssey's Cloverleaf Sustainability Program reduced carbon emissions for clients by about 490,000 tons. To achieve this, Odyssey invested in a range of technologies, including alternative fuel vehicles, devices enabled by the Internet of Things (IoT), and telematics.

The company also created tools that help it work with customers to determine sustainable transportation modes, and partnered with its clients to identify intermodal options.

### Alaska's Road Network

Of the goods arriving at the Port of Alaska via containership, approximately 25 to 30% is distributed throughout the state via rail and truck service. Alaska has one mile of paved road for every 640 square miles of land. In comparison, Minnesota has 22 square miles of land for every mile of road, while North Carolina has 14 square miles of land. About 20% of Alaska's roads are paved; in the other 49 states, the average is 91%.

Moreover, the road network is mostly in south central Alaska. Anyone traveling any distance in Alaska, including truck drivers, knows they're vulnerable to

extreme weather and topography, which can occur amidst long stretches without cellphone service or GPS service. As a result, "each trucker will stop to help another over lonely stretches of road," no matter which company they're from, Prokop says.

That's especially true when traveling Alaska's unique ice roads, which are built each winter to traverse land that's otherwise too soft to drive on. By traveling the ice roads, trucks can proceed from Fairbanks up the Prudhoe Bay oil fields near the Arctic Ocean. Otherwise, deliveries have to be made via expensive air freighters. At the same time, "the drive can be treacherous," Prokop adds.

Between about late September and through April, Span Alaska, one of the largest freight forwarders in Alaska, offers a "keep from freezing" or KFF service. Insulated containers for KFF goods maintain temperatures above the freeze point. "A significant portion of freight moves within these insulated containers," Johnson says.

At times, Span Alaska heats its containers to keep them from freezing. Examples of products shipped this way include water-based paints and adhesives, and certain pharmaceuticals.

Span Alaska, also recently initiated a chill/freeze offering and is growing this business to supply stores across Alaska, Johnson says. The chill/freeze service is primarily for perishable products, such as refrigerated groceries, produce, and meat.

### Focus on Technology

Span Alaska also is "intensifying its focus on technology," Johnson says. Among other initiatives, it's implementing faster connections to carrier partners to automate the transmission of bills of lading and other documents. It's also releasing a new customer portal and redesigning its website to improve the user experience.

"Over the next year, we'll be redeveloping our entire operating system so it's easier and faster to connect to online," he adds.



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The 54,000-square-foot Anchorage Service Center, which Span Alaska opened several years ago, is a “signature facility,” Johnson says. It boasts 88 dock doors and incorporates technology that allows Span to enhance customer service, streamline freight handling, and accelerate delivery timelines. The center handles about 60% of the freight Span moves through Alaska.

“Our Anchorage Service Center is a major hub in our Alaska multimodal network,” he says. “Owning our own assets, including trucks, containers, and facilities, makes our network seamless, responsive, and transparent.”

### Coordinating Modes

Alaska’s logistics infrastructure must be built and maintained to withstand the state’s challenging weather and topography. For example, the Port of Alaska requires frequent dredging because it’s surrounded by waters that take in cold, silty glacial run-off.

Moreover, in a state as vast as Alaska, shippers need to rely on several modes of transportation and seamless handoffs between them. That’s why Span Alaska is advancing its shipment visibility technology—so customers can monitor their shipment every step of the way and be assured that the delivery will be on time, Johnson says.

In developing its business in Alaska,

Lynden has been driven by its customers’ need to “get beyond the road to reach their customers,” McKallor says.

Lynden’s service center network is one of the largest in the state. By leveraging its operating hubs and multi-modal capabilities, Lynden is “able to connect Alaska’s people and businesses seamlessly to each other and to the world,” he adds. Because Lynden offers a range of transportation options, customers can optimize their time and money when shipping to, from, or within Alaska.

Across its fleets, Lynden invests in new equipment and modifications to ensure their trucks, planes, and vessels are as aerodynamic and energy efficient as possible. Lynden companies consistently score among the most efficient fleets in the nation despite operating in some of the steepest terrain and extreme weather.

These efforts have led to Lynden being the first Alaska-based transportation company recognized by the Environmental Protection Agency (EPA) SmartWay Transport Partnership and the first trucking company to earn the Green Star Award for Alaskan businesses.

Matson coordinates truck, rail, and barge service connections throughout south central Alaska, Kodiak, and the Aleutian Chain, as well as the lower 48 states. Its equipment includes dry and refrigerated containers, open-top



## 10 Ports in Alaska

### Anchorage, Port of Alaska

[www.portofalaska.com](http://www.portofalaska.com)

### Haines Borough, Ports and Harbors

[www.hainesalaska.gov/ports](http://www.hainesalaska.gov/ports)

### Homer, Ports and Harbors

[www.cityofhomer-ak.gov/port](http://www.cityofhomer-ak.gov/port)

### Juneau, Docks and Harbor

[juneau.org/harbors](http://juneau.org/harbors)

### Ketchikan, Ports and Harbor

[www.ktn-ak.us/port-harbors](http://www.ktn-ak.us/port-harbors)

### Nome, Deep Draft Arctic Port

[www.nomealaska.org/port-nome](http://www.nomealaska.org/port-nome)

### Seldovia, Harbormaster (seaplane dock too)

[www.cityofseldovia.com/harbormaster-office](http://www.cityofseldovia.com/harbormaster-office)

### Sitka Harbors (total of 5)

[www.cityofsitka.com/departments/Harbors](http://www.cityofsitka.com/departments/Harbors)

### Unalaska Ports and Harbors

[www.ci.unalaska.ak.us/portsandharbors](http://www.ci.unalaska.ak.us/portsandharbors)

### Valdez Small Harbor

[www.valdezak.gov/146/Harbor](http://www.valdezak.gov/146/Harbor)



**An Alaska Marine Lines barge, part of the Lynden family of companies, navigates the waters of Alaska. Alaska Marine Lines provides barge service to Southeast, Central, Western, and Arctic Alaska. Lynden companies consistently score among the most efficient fleets in the nation despite operating in extreme weather and steep terrain.**

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**Span Alaska is a leader in moving less-than truckload (LTL) and less-than-container (LCL) freight across Alaska. It provides over-the-water shipping twice weekly via containership, or weekly via barge, from the Port of Tacoma, Washington, to the Port of Anchorage.**

containers, insulated containers and flat racks. Technology offers end-to-end transit cargo visibility.

### Rail Transport

The mainline track of the Alaska Railroad is about 470 miles long, anchored on the south by Seward and on the north by Fairbanks. It's one of a few railroads that handles both passenger and freight traffic, with more than a half million passengers riding Alaska Railroad trains each year.

Yet, freight generates more than half of its operating revenues. The Alaska Railroad moves major commodities, including petroleum products, chemicals, oilfield supplies, gravel, coal, and dry goods.

### Supply Chain Education

Considering the challenges of moving shipments to, from, and within Alaska, it's not surprising that the University of Alaska Anchorage has offered a BBA in global logistics and supply chain management and an MS in global supply chain management for more than 20 years. Prokop says faculty have published widely, showing how Alaska meets its logistics challenges and uses logistics and supply chain management

to enhance its economy and the quality of life of its residents, and to maintain a key role in U.S.-Asia trade.

Since 2011, the Alaska Performance Scholarship (APS) program has awarded Alaskan high school students who excel more than \$98 million in scholarships they can apply toward in-state secondary education. In 2020 and 2021, more than one-third of students were eligible for the scholarships.

A primary goal of the program is to keep high-achieving graduates in Alaska. One to six years after graduation, APS recipients were 8% more likely to remain in the state than their non-APS counterparts. More than two-thirds (71%) said the scholarship influenced their decision to attend school in-state.

### The Workforce and Military

Education doesn't stop at graduation. "Alaska-based companies devote many resources to train personnel for the unique challenges involved in doing business in Alaska," Prokop says. Examples include teaching employees about the requirements of Arctic engineering and mining.

The oil and gas industries account for the largest component of Alaska's economy; nearly 85% of the state's

budget comes from oil revenue. Next is tourism; the state attracts 1.1 million visitors each year.

Nearly 6 billion pounds of seafood are harvested each year off Alaska's coastlines. The state is one of the world's top producers of wild salmon. Forestry is another thriving industry, given Alaska's 28 million acres of commercial forest.

Somewhat surprisingly, about 15 million acres of Alaskan land can be farmed. With sunlight stretching long into the night in the summer, produce can reach mammoth sizes. Cabbage grown in Alaska's Matanuska Valley, for instance, can top 90 pounds.

Alaska also is home to multiple military bases, and TOTE is among the logistics providers that specializes in military moves across the Gulf of Alaska. This includes cold-weather training cargo, and brigade-sized and division-level moves.

"When the military is moving equipment from Alaska to the lower 48 states, our vessels and experienced team give them ideal operations to work with," Rye says. "We've moved tanks and helicopters, among other equipment."

TOTE provides shipping updates via EDI and manually, as needed. Its employees understand military moves and provide knowledgeable support.

### Tackling Challenges

Alaska poses unique challenges, yet the logistics providers doing business in the state, as well as their clients, pride themselves on tackling these obstacles to deliver the products their customers need.

Throughout the pandemic, for instance, Matson maintained reliable supply chain service. "To date, Matson has not 'blanked' (canceled) a single Alaska sailing and has continued to deliver critical supplies, including PPE," Dreyfus says.

A few years ago, Lynden's barge service expanded into multiple Arctic villages, like Barrow and Wainwright.

"We mean it when we say we cover the entire state of Alaska," McKallor says. "We have earned a reputation for being able to get it there, no matter where 'there' is." ■





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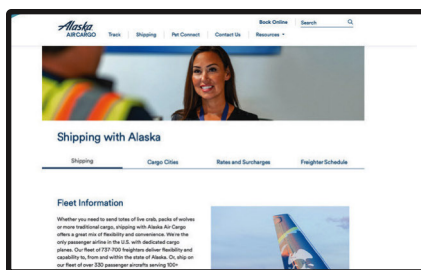


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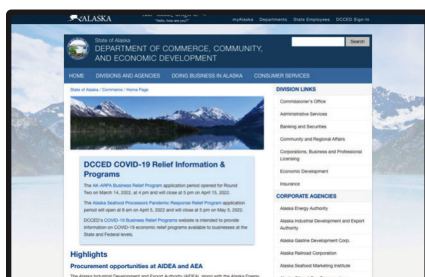


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## ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT • [www.commerce.alaska.gov/web](http://www.commerce.alaska.gov/web)

The Alaska Department of Commerce's mission is to promote a healthy economy, and strong communities and to protect consumers in Alaska. To that end, the website offers a wealth of information about doing business in Alaska, from establishing a business in the state to obtaining licenses and more. You'll find links to corporate agencies, business and consumer services, and much more.



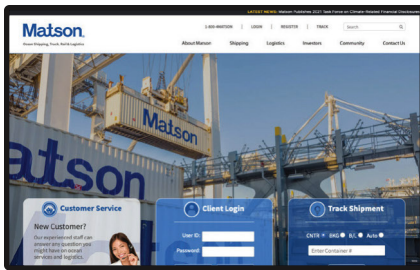
## ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES [dot.alaska.gov](http://dot.alaska.gov)

The Alaska Department of Transportation and Public Facilities designs, constructs, operates, and maintains the state's transportation infrastructure systems, buildings, and other facilities used by Alaskans and visitors. These include more than 5,600 miles of paved and gravel highways, 237 airports, 839 bridges, over 800 public facilities, 16 harbors, and a ferry system covering 3,500 nautical miles serving 33 coastal communities.

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



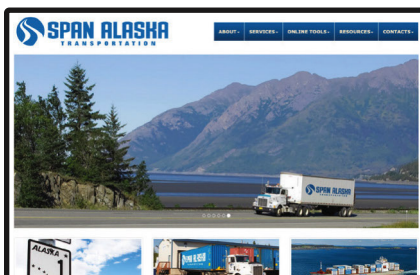


**MATSON • [www.matson.com](http://www.matson.com)**

Matson's Alaska services are supported by experienced operations professionals in all specialties, including transporting fragile and refrigerated items. Matson offers twice weekly, consistent day-of-the-week service between Tacoma, Anchorage and Kodiak; weekly service between Tacoma and Dutch Harbor Truck, and rail and barge service connections throughout Central Alaska, Kodiak and the Aleutian Chain, as well as the Lower 48. The company's full range of equipment includes dry and refrigerated containers, open top containers, car carriers, flat racks, and insulated containers. And, its ReeferPlus service ensures a commitment to cold chain integrity, processes, and solutions with state-of-the-art refrigerated equipment.

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Odyssey Logistics & Technology Corporation (Odyssey) combines deep industry expertise with leading technology to provide multimodal logistics management services to the chemical industry and other process manufacturers. Odyssey enables clients to outsource any part of their logistics processes to achieve savings through reduced transportation and infrastructure costs, measurable customer service and process improvements, and improved data quality and management. Odyssey is a leader in intermodal with expertise in liquid food, chemicals, and metals transport.

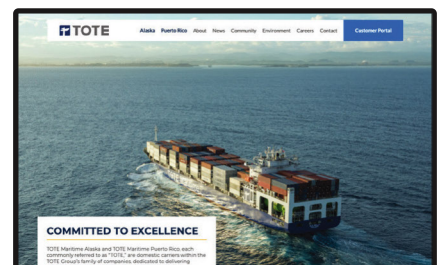


**SPAN ALASKA • [www.spanalaska.com](http://www.spanalaska.com)**

Span Alaska understands Alaska and has everything it takes to transport your shipments to, from, and around the state. Span Alaska moves more LTL freight than any other carrier to Alaska—for several good reasons. It has the equipment, the people, and the clout with ocean carriers necessary to transport your freight quickly and efficiently. These kinds of connections enable Span Alaska to give you the best value and to get things done that others simply cannot.

**TOTE MARITIME ALASKA • [www.totemaritime.com](http://www.totemaritime.com)**


TOTE Maritime Alaska delivers the supplies for life in the Last Frontier with twice-weekly sailings between Tacoma, Washington and Anchorage, Alaska. Our Orca vessels—custom built for Alaska—provide safe, reliable service with efficient roll-on/roll-off (RO/RO) loading and unloading. With our network of sister companies and experienced partners, we are committed to solving the toughest transportation and logistics challenges.





# TECHNOLOGY SOUPS UP THE SUPPLY CHAIN



A close-up photograph of a white bowl filled with vibrant red soup. A wooden spoon is partially submerged in the soup, its handle extending towards the bottom left. Scattered across the surface of the soup are several small, dark, flake-like particles. Overlaid on the image are large, stylized, orange letters: 'S' and 'R' near the top, 'G', 'T', and 'M' in the middle left, 'E', 'D', and 'I' near the bottom left, and 'B' and '/' near the bottom left. The background is a solid yellow color.

**Consumers slurped up e-commerce with gusto amidst boiling disruption in 2021. To sate that appetite, supply chain professionals can serve up technology that aids with visibility, intelligence, and efficiency.**

**By Helen Mann**

**W**ill 2021 be remembered as the year of the supply chain startup? In the first three quarters alone, investors poured \$24.3 billion into budding technology companies aimed at smoothing out supply chain operations, according to Pitchbook Data. By the end of September, these startups had raised nearly 60% more than in the entire year of 2020.

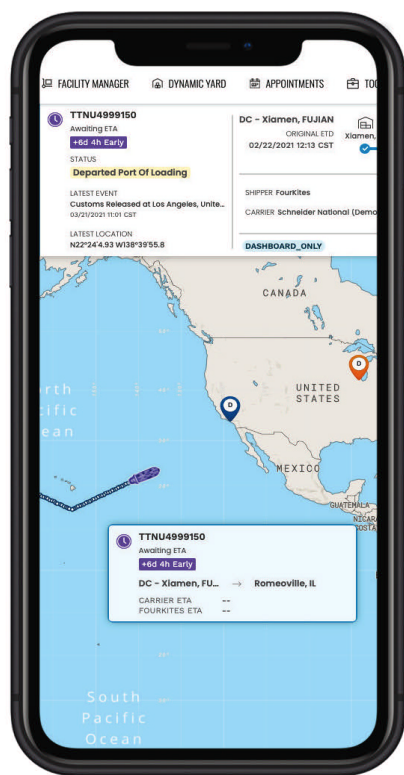


This phenomenon can be attributed in part to rising consumer goods demand. Sparked by economic stimulus and a large-scale shift in preferences from services to goods spending, U.S. retail sales jumped 17.9% annually in 2021. E-commerce sales, which had a record year in 2020, rose 14.2% to \$870.8 billion and accounted for 13.2% of retail spending, according to the Census Bureau.

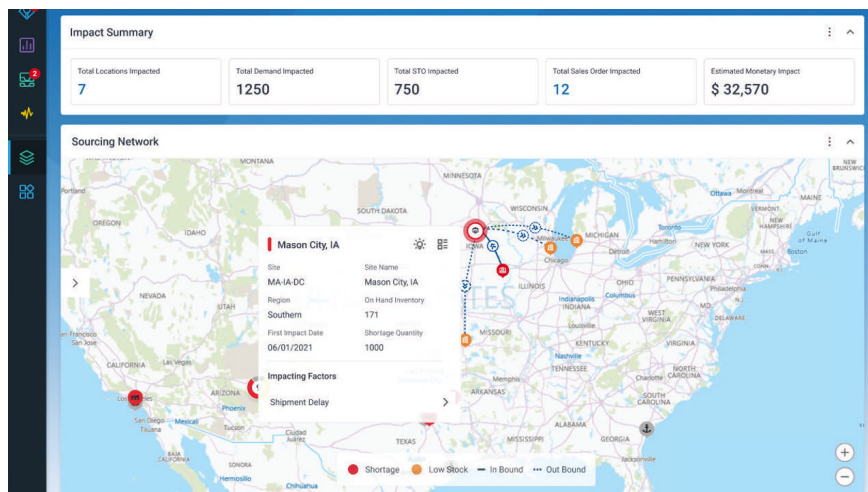
As a result, businesses have been tasked with trying to meet demand while navigating through an obstacle course of logistics disruptions. It's fueling a spate of technologies aimed at building intelligence, smoothing out disruptions, and averting bottlenecks.

## STIRRING UP INTELLIGENT SUPPLY CHAINS

Ask analysts to name the most important development in supply chain technology in 2021, and they will likely say something about visibility. A host of disruptions over the past two years



**FourKites' Dynamic Ocean platform seamlessly tracks end-to-end ocean cargo shipments in one unified platform. It helps shippers stay on top of delays through ETAs and alerts.**



**Control towers, such as Blue Yonder's Luminata, help resolve disruptions by enabling end-to-end supply chain visibility. The technology provides insights to understand and act on real-time information from the entire digital ecosystem.**

underscored the need for companies to know the status of their shipments in real time.

Meanwhile, tracking technologies such as radio frequency identification (RFID), Internet of Things devices, GPS, and electronic logging devices (collectively known as telematics devices) have created a brew of data, giving shippers a high-level view into their entire supply chain.

"There's a convergence of capabilities creating a new phenomenon," says Fab Brasca, executive vice president of industry and market strategy at FourKites, a supply chain visibility platform based in Chicago.

"The availability of cloud computing power and abundance of data, sprinkled with advancements in machine learning and artificial intelligence, has generated a cauldron of amazing innovation," he says.

This confluence of factors is paving the way for supply chain intelligence that is predictive, not just reactive, Brasca explains. For example, take an ocean container that's in transit. Visibility can warn a shipper that the container will arrive three days late. But, by analyzing historical patterns of data, a visibility tool could also help predict when the goods that are being carried will arrive at their final destination.

Taken one step further, visibility can help shippers foresee chokepoints and design a plan to deal with them

proactively. "Understanding your goods in motion and goods at rest, and understanding where you might have potential bottlenecks, both forward-looking and as they happen, is what gives organizations agility," Brasca says.

One technology that's helping shippers get a closer look at their wares is a supply chain control tower—a data visualization platform that allows shippers to view inventory throughout its entire journey. Control towers can track data from suppliers, factories, and distributors, and can even incorporate information gleaned from weather reports or social media.

Blue Yonder, a supply chain solutions software company headquartered in Scottsdale, Arizona, offers control tower technology that helped medical product company Becton Dickinson reduce complexity after it acquired two other healthcare companies. The technology also helped Becton Dickinson manage skyrocketing demand for their products after the pandemic began, says Chirag Modi, Blue Yonder's corporate vice president of industry strategy.

## A PEPPER POT OF PREDICTIVE ANALYTICS

One way that shippers can use the large quantities of data being amassed is through predictive analytics. This is done by funneling data into algorithms to

anticipate future events or patterns.

“Predictive analytics is the culmination of historical data around certain data points in combination with some form of machine learning model,” explains Azad Ratzki, chief technology officer at BlueGrace Logistics, a third-party logistics provider in Tampa, Florida. “For example, you can look at your shipments and determine when they will get from point A to point B by incorporating traffic, weather patterns, or previous data into a model.”

A consequence of the pandemic has been lingering materials shortages. Odyssey Logistics & Technology, a third-party logistics provider based in Danbury, Connecticut, says its shipper customers deal with raw materials shortages from metals to cooking oil. The shortages inevitably lead to an increase in urgent and short lead time orders, which is exacerbated when there’s limited carrier availability.

Analytics can help identify chokepoints and find transportation capacity to keep shipments moving, notes Charlie Midkiff, Odyssey’s senior

vice president of global managed logistics services.

“We capture so much data with our clients,” says Midkiff. “We work with our shippers to create robust forecasts. If you can provide a forecast, then you will get in line for carrier capacity.”

One way Odyssey does that is by using analytics to assess order patterns and carrier acceptance rates. The results of a forecast can help to identify potential bottlenecks in getting materials to clients.

From there, Odyssey creates “mini-RFPs” to make routing guide enhancements based on data from a particular set of lanes. Shippers can see whether particular carriers are

performing and adjust the routing guide based on the results of the analysis.

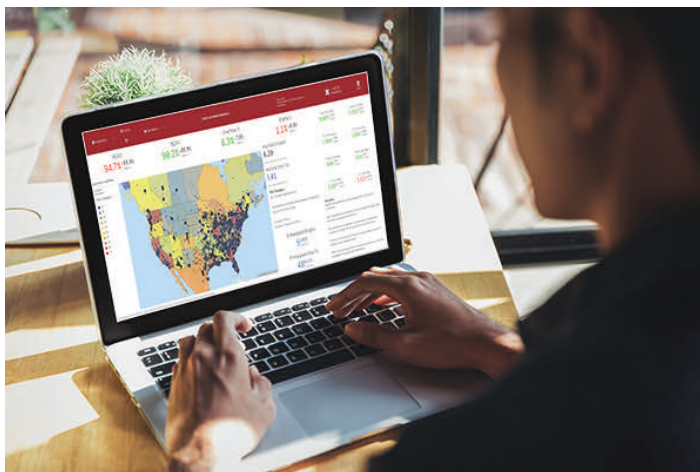
However, be careful not to implement predictive analytics without the proper expertise behind it, cautions Deanna Kaufman, vice president of sales at enVista, a software and consulting firm headquartered in Carmel, Indiana.

“There’s an opportunity for companies to use predictive analytics,” she

says. “But data science roles are hard to fill right now. There are tool packages out there that will provide insights, but unless a company can understand, interpret, and do something with that information, it won’t help.”

## A PURE OF DISRUPTIONS

Trucking sector disruptions have been a near constant since the start of the pandemic. Meanwhile, demand for consumer goods has driven up the need for transportation services, says Gregg Lanyard, senior director of product management at Manhattan Associates, a supply chain software provider based in Atlanta.

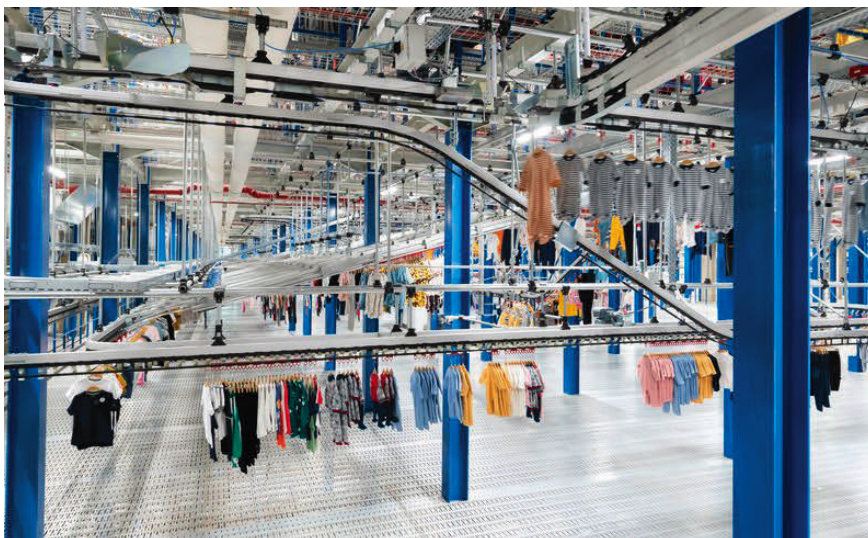


**To help shippers manage supply chain volatility, Odyssey Logistics & Technology released an interactive technology that provides visibility into shipments that overlay with geography profiles that present risk, including COVID-19 hotspots and transportation embargoes.**



**Odyssey Logistics & Technology captures data for its shipper customers and then uses predictive analytics to identify chokepoints and find transportation capacity to keep shipments moving.**





**Technology such as Dematic's garment-on-hanger system stores, sequences, picks, and ships garments without removing them from hangers. The system helps shippers move apparel faster, reduces labor, and minimizes warehouse space.**

"The rise in transportation demand leads to a rise in the need for capacity to haul that freight," Lanyard says. "That means a need for transportation resources. We've seen shortages in those areas when demand spikes."

As a result of the turmoil, Lanyard says some shippers are seeing a 200% increase in their use of spot rates. He recommends using a transportation management system (TMS) as a tool to keep products traveling smoothly across the supply chain in today's market conditions.

A TMS can help manage volatile market conditions in a few ways—determining optimal routing and carrier selection, consolidating freight, or selecting the right mode for a shipment.

Part of how it accomplishes this is through transportation modeling. For example, Manhattan Associates' TMS technology includes a "what-if" analysis tool that allows companies to simulate changes to their supply chains. By proactively modeling different disruption scenarios, shippers will be better prepared when change does occur.

TMS technology can help even after changes stop being theoretical. One example is carrier volume restrictions. In 2020, thanks to the e-commerce boom, parcel shipments rose at an annual rate of 37%, according to Pitney Bowes' Parcel Shipping Index. That's

well above what carriers were prepared to handle. In such circumstances, TMS providers can help secure capacity by consolidating shipments, for instance, or looking into multi-stop truckload routes.

In 2021, grocery chain Hy-Vee used Manhattan Associates' TMS platform to move perishable items through its distribution network efficiently. Modeling transportation network changes helped the grocer optimize orders and reduce transportation costs.

## E-COMMERCE TURNS UP THE HEAT

In 2020, COVID-19 kicked off an e-commerce bonanza that hasn't let up yet. In 2021, market research service eMarketer forecast that e-commerce sales would reach \$4.9 trillion that year (complete historical data won't be available until the end of 2022). The growing market presents new opportunities for shippers—and new challenges.

Kaufman argues that these changes can be seen as a chance for shippers to reimagine their supply chain, starting with demand planning. The trick is to have software in place to gain visibility into inventory and maximize customers' purchasing experience.

"Many companies see an enormous opportunity in direct-to-consumer, but they aren't set up for it yet," Kaufman says.

"Using an order management system lets shippers make purchases and understand when they're actually going to get the goods," she adds. "It improves the entire experience all the way from planning and sourcing to fulfillment and consumption."

GNC, a health and nutrition brand, used enVista's Unified Commerce Platform drop-ship feature to grow the array of products the company offered



**The Dematic Multishuttle stores, buffers, and sequences products between bulk stock and other functions such as picking and order assembly. These types of systems can increase speed, storage density, accuracy, and throughput in warehouses and distribution centers.**

online. In March 2020, in response to the pandemic, GNC added enVista's order management system to deploy buy online pick up in store (BOPIS) and ship-to-store strategies.

### DELIVERY IN AN INSTANT

A final piece of the puzzle is maximizing speed and efficiency within the walls of a distribution center. On top of the usual complexity that accompanies e-commerce fulfillment, retailers in 2021 were challenged to meet expectations for faster fulfillment—and to do so with fewer workers, to boot.

"Speed of delivery is becoming a top-of-mind issue for our customers," says Kim Baudry, market development director at Dematic, a materials handling systems, software, and services supplier headquartered in Atlanta.

"As Amazon pushes the envelope, fulfillment times have dropped from two days to a few hours," she adds. "Companies are trying to shorten cycle times to deliver products within that time frame."

At the same time, warehouse labor has gotten scarcer and more expensive. The State of Warehouse Labor, published by staffing solutions provider Instawork, finds that 73% of warehouse employers struggled to attract enough labor in 2021.

Once employees are hired, they tend not to stick around, either.



PHOTO: AUTOSCHEDULER.AI

**Companies increasingly turn to warehouse management technology to address labor shortages and turn inventory faster.**

As of January 2022, the Bureau of Labor Statistics puts warehouse labor turnover at 43%.

This is where automation enters the picture. Technology such as automated storage and retrieval shuttle and robotic piece picking are becoming increasingly prevalent to turn inventory faster and compensate for labor shortages.

One example is Landmark Group, an apparel retailer servicing 2,200 stores in 24 countries across the Middle East and Southeast Asia. Landmark uses

Dematic's garment-on-hanger and inter-aisle transfer systems to speed store replenishment and direct-to-consumer fulfillment. The technology has helped them move items into their distribution center and sort products for delivery to stores faster, while reducing reliance on manual labor.

Technology can also be used to optimize what labor there is at a distribution center. AutoScheduler.ai is an artificial intelligence tool that orchestrates production schedules within a warehouse setting. It works by creating mathematically optimized strategies for manual decisions (what trailer needs to be in what door or what inventory can be crossdocked), and then integrating the plan with a customer's warehouse management system, says Keith Moore, chief product officer.

Let's say that a team wants to avoid detention charges at a facility. Not only would employees have to factor in multiple truck's arrival times, but they would also need a plan to unload inventory that accounts for outbound shipments. In that scenario, AutoScheduler could generate an optimal unloading schedule instead of having a staff member plan one out.

Procter and Gamble has used AutoScheduler technology to reduce workforce planning time from eight hours to 20 minutes per day.

Leaders are facing a pivotal moment, as they confront the twin needs to plan for the worst while remaining agile. One top challenge will be "investment in digital and driving toward autonomous supply chains," finds Ernst & Young's Future of Supply Chain report. And 52% of executives surveyed state that autonomous supply chains either are here or will be by 2025.

As a result, organizations are encouraged to digitally transform their operations with lights-out, hands-free and self-driving technologies. Doing so will optimize supply chains, make supply chain professionals' jobs easier, and deliver needed products more effectively.

It's time to roll up our sleeves. ■



**Using artificial intelligence, AutoScheduler.ai creates mathematically optimized strategies for manual decisions—such as what trailer needs to be in what dock door—and then integrates the plan with a customer's warehouse management system.**





# LOGISTICS IT PERSPECTIVES

**Companies rely on logistics technology to help navigate a landscape reshaped by a pandemic and evolving customer demand. Our annual logistics IT market research report explores the challenges these companies face and the latest trends in IT solutions designed to meet that need.**

BY MERRILL DOUGLAS

**M**ore than two years after the start of the pandemic, many companies still struggle with dramatic supply chain challenges. High transportation rates, tight capacity, scarce labor, and ongoing shortages of certain commodities continue to squeeze supply chains.

Consumer demand remains strong, especially in the booming e-commerce sector. But companies can seize this opportunity only if they can move products quickly and cost-effectively. The Russia-Ukraine crisis further complicates the picture, pushing up fuel costs and driving fears of economic recession.

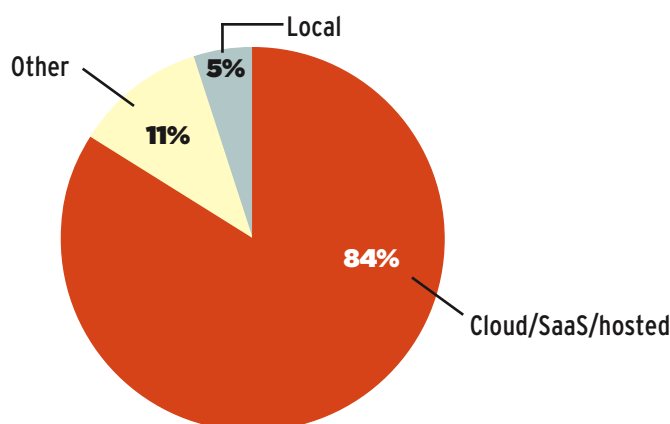
Tough times call for smart solutions. That's why this is a healthy era for vendors of supply chain-oriented information technology. Shippers deploy

logistics IT to better match inventory to customer demand, operate more efficiently, accomplish more with tighter resources, and gain crucial business intelligence.

To help manufacturers, distributors, retailers, and others understand how IT solutions can improve their operations, each year *Inbound Logistics* distributes a survey to a variety of logistics IT providers. Gathering data on the latest trends, we offer insights that logistics professionals use as they invest in new technology.

Once you've read this report on our latest survey, have a look at the annual *Inbound Logistics* Top 100 Logistics IT Providers (*see page 74*). When you're ready to add to your technology toolkit, this detailed guide will help steer you toward solutions that fit your requirements.

## PLATFORM: HOW DO YOU DELIVER YOUR SOLUTIONS?



Cloud solutions, also known as software-as-a-service (SaaS) or hosted services, remain the most popular format for logistics IT solutions. Among our respondents this year, 84% say they provide cloud-based solutions, while another 11% offer a combination of cloud-based delivery and on-premise installation. This means that 95% offer some kind of cloud option.

## COST BASIS: HOW DO USERS PAY FOR TECHNOLOGY SOLUTIONS?

Transactional (subscription) **89%**

Seat/user **47%**

System **41%**

No cost **21%**

Many logistics IT vendors offer multiple ways to pay for their products and services. As more solutions move into the cloud, the transactional or subscription model is becoming more important. In 2022, 89% of vendors let users pay for their solutions by subscription, up from 80% in 2021. Slightly fewer than half—47%—can charge by the seat or user, and 41% charge a flat rate for the system. These figures are similar to last year's. An increasing number of vendors—21% this year, compared with 15% in 2021—offer at least some of their solutions free of charge. This can happen, for example, when a third-party logistics (3PL) provider or other service provider includes technology in a larger service package.

## INDUSTRY: WHAT INDUSTRIES DO YOUR SOLUTIONS SERVE?

Transportation **91%**

Manufacturing **88%**

Wholesale **84%**

E-business **81%**

Retail **80%**

Services/government **36%**

As in 2021, the biggest demand for logistics IT is in the transportation industry: 91% of respondents say they serve transportation companies. Two other industries have seen notable changes. While 81% of respondents in 2021 said they served the manufacturing industry, in 2022 that number has risen to 88%. Have more companies—discouraged by the high costs and long delays inherent in supply chains that span the globe—brought manufacturing back to the United States, requiring new technology to support those redesigned supply chains?

We've also seen an uptick in the number of logistics IT vendors serving e-business, from 76% in 2021 to 81% in 2022. This is no surprise, given the continued surge in online shopping.

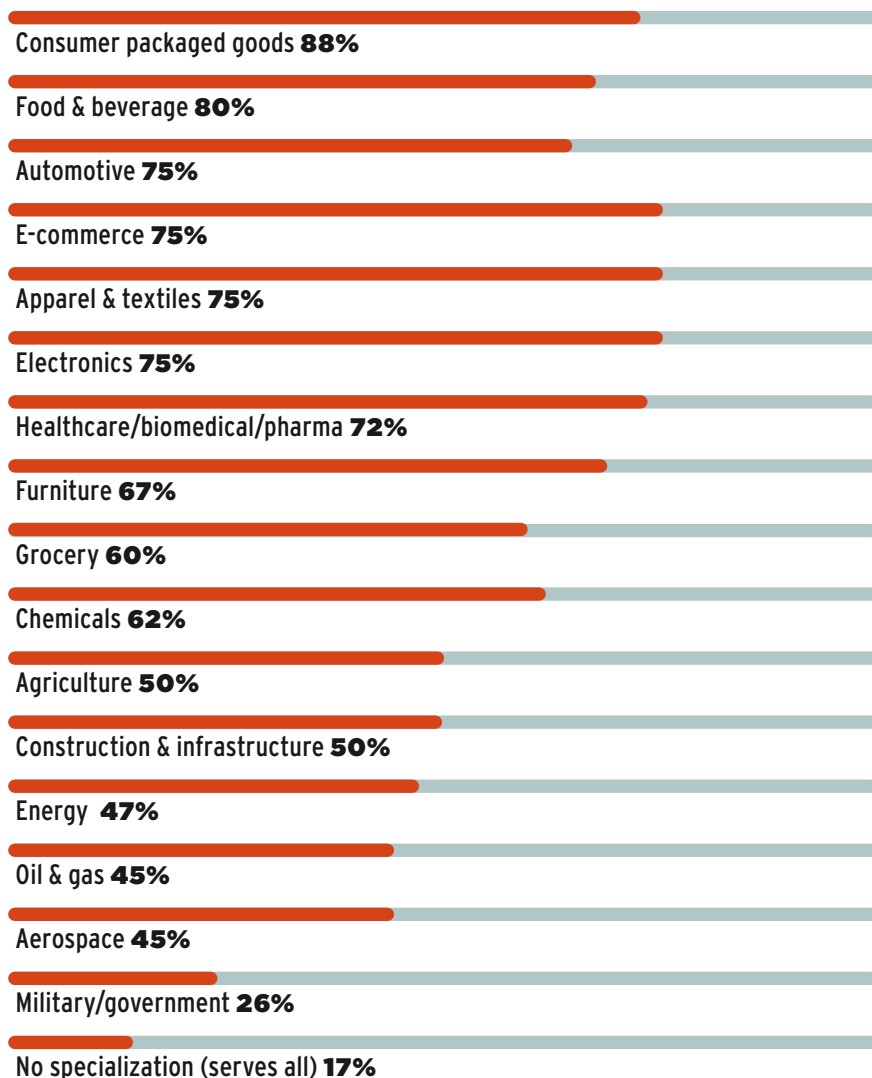


## WHERE IS THE MOST DEMAND?

We asked vendors where they have seen the greatest increase in demand for new logistics technology. Here's a sampling of their observations:

- "We are seeing a lot of requests lately for complete optimization of supply chains from the inbound side to the last mile."
- "No longer is there just a driver shortage; there is a worker shortage. AI, analytics, and automation can help LTL companies accomplish more with fewer staff."
- "Automation of higher-frequency carrier negotiations in sourcing of ocean, air, and ground freight movement to respond to supply chain disruptions or to new changes in supply/demand. Optimization of carrier awarding in sourcing around sustainability goals. Optimization of sourcing decisions for mode-shifting freight movement (i.e. ocean to air)."
- "A lot of new software projects were put on hold in the beginning stages of COVID; things are starting to return to normal and new sales are increasing."
- "We see growing demand across all the regions and verticals we serve, with the biggest growth coming in life sciences and consumer products."
- "We see an increase in demand for a logistics platform that supports smarter operational decisions, integrating operational, tactical, and strategic decisions to make daily decisions in line with the tactical and strategic targets and parameters of the current scenario."

## VERTICAL SPECIALIZATION: WHAT VERTICALS DO YOUR SOLUTIONS SERVE?



The top vertical markets for logistics IT vendors in 2021 remain the top markets list in 2022, in generally the same order. But the percentage of vendors serving several of those industries has jumped. For instance, 88% of this year's respondents say they service customers in consumer packaged goods (CPG), a 16-point increase over last year. Eighty percent of respondents this year have customers in the food and beverage vertical, compared with 67% in 2021. The survey also shows similar increases in several other verticals. Automotive and e-commerce both increased from 64% in 2021 to 75% in 2022. Apparel and textiles and electronics both rose from 59% in 2021 to 75% in 2022. The healthcare, biomedical, and pharmaceutical sector increased almost as much, from 59% in 2021 to 72% in 2022.

In fact, every vertical market mentioned in the survey is now served by a greater percentage of logistics IT vendors than last year. Clearly, these vendors are finding ways to apply their technologies in a wider range of contexts.

## SOLUTIONS OFFERED

### SUPPLY CHAIN

Process improvement **61%**

EDI **60%**

Order management **59%**

Modeling, forecasting, predictive analytics **55%**

Supply chain control tower **48%**

Supplier, vendor management **45%**

Strategic sourcing **29%**

Demand management **28%**

Global trade management **26%**

Enterprise resource planning **21%**

Remote workforce enablement **18%**

Security (risk management, compliance) **18%**

Sales & operations planning **17%**

Customer experience/relationship **16%**

Product lifecycle management **14%**

The top supply chain solutions offered by IT providers in 2022 are those that support process improvement: 61% of survey respondents provide solutions in that category, up from 56% in 2021. The second most popular is electronic data interchange (EDI), although its position is slipping as companies adopt more advanced data sharing technologies. In 2021, 70% of our survey respondents offered EDI; this year, the number is 60%.

There has been an increase in the number of vendors that provide solutions for strategic sourcing (29% vs. 23%) and global trade management (26% vs. 16%)—both important functions given the challenges that COVID-19 and the conflict in Ukraine have posed to traditional sourcing strategies. There has also been a healthy increase in vendors that offer solutions for demand management, from 17% in 2021 to 28% in 2022.

### LOGISTICS

Optimization **82%**

Routing & scheduling **65%**

TMS **63%**

Load planning **56%**

Rate & bid **55%**

Auditing, claims, freight payment **54%**

Inventory management **50%**

Capacity solutions **43%**

Reverse logistics **37%**

Procurement **36%**

WMS **34%**

Wireless, mobile **29%**

Asset management **26%**

Container, chassis management **23%**

YMS **21%**

Labor management **20%**

RFID **13%**

Among applications for logistics functions, the most striking increase concerns capacity solutions. In 2021, 28% of vendors offered those; in 2022, the percentage has jumped to 43%. Transportation capacity has been in short supply over the past year, with rates rising accordingly. So no wonder more IT companies see opportunities in that area. Logistics solutions getting the most attention from vendors, however, include optimization, routing and scheduling, transportation management systems (TMS), load planning, systems for rating and bidding, and systems from auditing, claims, and freight payment. One category has seen a surprising dip: warehouse management systems dropped from 41% in 2021 to 34% in 2022.



## ADVANCED SOLUTIONS

AI, machine learning **54%**

Big data management **38%**

IoT, IIoT solutions **26%**

Robotics, automation **19%**

Blockchain **12%**

3D printing **2%**

Among the more advanced technologies that companies adopt to manage supply chains, one category has gained a great deal of heat in the past year: artificial intelligence (AI) and machine learning. In 2021, 35% of vendors in our survey offered such solutions; today the number stands at 54%. Advanced technologies offered by a smaller but still healthy proportion of IT vendors include big data management (38%), internet of things (IoT) or industrial internet of things (IIoT) solutions (26%), and robotics or automation (19%).

## CHALLENGES: WHICH TRANSPORTATION/LOGISTICS CHALLENGES ARE MOST CRITICAL TO YOUR CUSTOMERS?

Cost reduction **94%**

Visibility **94%**

Capacity **81%**

Transport optimization **70%**

Data management **69%**

Customer service/CX **56%**

E-commerce/omnichannel enablement **53%**

Demand forecasting **47%**

Compliance **46%**

Labor **46%**

Inventory management **41%**

Sustainability/social responsibility **40%**

Growth management **37%**

Vendor management **34%**

Risk management **33%**

Security **28%**

Global expansion **23%**

Work from home **21%**

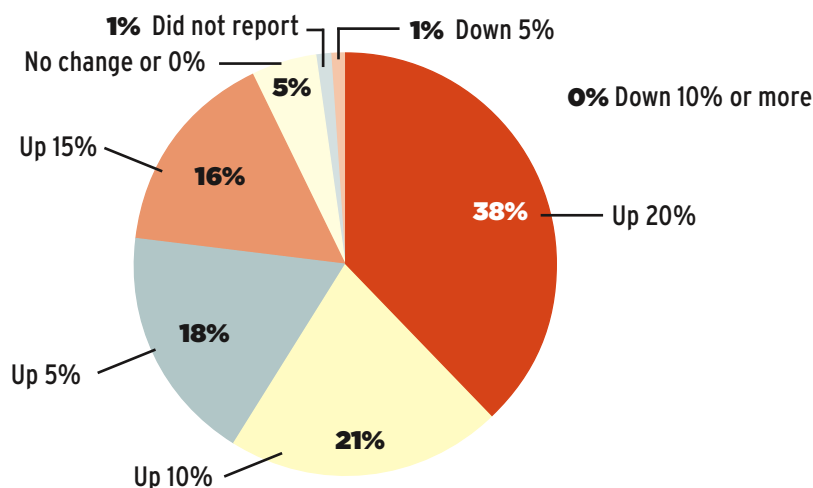
Supply chain asset redeployment **13%**

Companies always strive to drive down costs, and shippers always need to know the status of their freight. That's why vendors in our survey named cost reduction and visibility the two top challenges faced by their customers. But in an era of soaring transportation and fuel costs, intense consumer demand, and long transportation delays, those two challenges have grown even more critical. In 2021, 78% of survey respondents named cost reduction as a critical issue for their customers, and 77% mentioned visibility. This year, 94% of respondents say that each of those issues keeps customers up at night.

Several other challenges are also causing significantly more pain than last year. Notable among them is capacity. In 2021, 58% of IT vendors named that as a crucial challenge for their customers. This year, as shippers compete for space on ships and trucks, and for containers, that number has risen to 81%. Also, in the era of the Great Resignation, there's a striking increase in the number of vendors who say their customers worry about labor—46% in 2022, vs. 29% last year.

Other challenges that take up more room in customers' minds these days include data management (69% vs. 57% in 2021), demand forecasting (47% vs. 32% in 2021), and sustainability or social responsibility (40% vs. 23% in 2021).

## CUSTOMER BASE: DURING YOUR LAST MEASUREMENT PERIOD, DID YOUR CUSTOMER BASE GROW? BY HOW MUCH?



Nearly all vendors in our survey saw the ranks of their customers grow in their most recent measurement periods, reinforcing the notion that shippers want technology to help them in today's complex supply chain environment. And that wasn't just a token uptick: more than half of respondents—54%—reported customer growth of 15% or more. Another 21% saw their customer base grow by 10%, and 18% saw a 5% bump. Only 1% of respondents say they have lost customers.

## WHERE THE CHALLENGES LIE

Changes sparked by COVID-19 and the ongoing rise of e-commerce pose many of the challenges that shippers confront today, according to quite a few logistics IT vendors who responded to our survey.

Take warehouse operations. "Warehouse capacity is extremely tight," says Geoff Greenhill, director of sales at Camelot 3PL Software in Charlotte, North Carolina. As increased consumer spending drives demand for space, warehouse rent and construction costs are both going up, he says.

E-commerce fulfillment doesn't need as much real estate space as traditional retail distribution. "But it needs more labor," Greenhill says. Due to shortages across all industries, exacerbated by the pandemic, workers are hard to come by even at today's elevated wages. Companies either spend more on workers or they spend on automation to close the labor gap. "Everything is pointing toward higher costs to operate," he says.

Camelot helps control those costs by setting up more efficient warehouses, for example by integrating technologies such as robotics and automated forklifts, Greenhill says.

Customer demand for faster e-commerce delivery drives a need for better inventory management and visibility, says Padhu Raman, chief product officer at Project Verte, an Atlanta-based firm that offers a cloud-based supply chain platform powered by artificial intelligence (AI). "This challenge is more prominent right now, with changes in

customer expectations." As consumers demand a better shopping experience and greater convenience, brand owners sell through multiple channels to connect with as many customers as possible, he says.

Project Verte's technology helps companies gain the visibility they need to streamline e-commerce fulfillment. "We provide a hub where they can integrate into the platform and get the data centralized in one view," Raman says. Among other functions, the technology also helps shippers improve their parcel shipping, consolidating packages to save money on linehaul shipments and last-mile delivery.

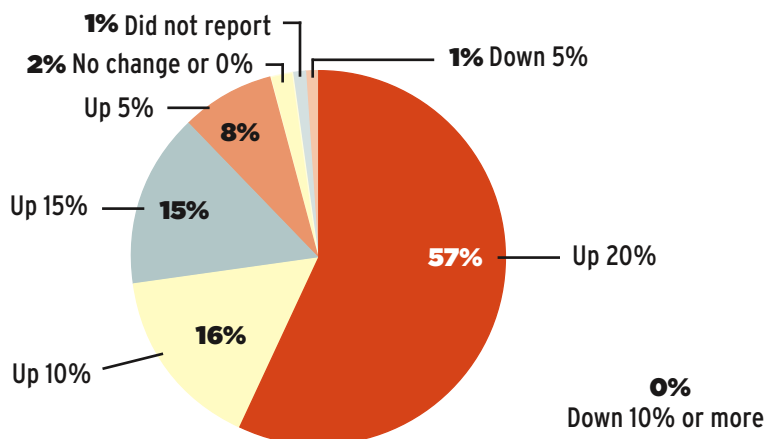
For retailers who use supply chain technology from Inmar Intelligence, in Winston-Salem, North Carolina, the biggest challenges right now involve formulating strategies for the future, says Joe Marcaurelle, director of product strategy for the company's supply chain division. "These retailers incorporated a lot of new processes and technologies during the pandemic to keep up with new customer expectations and stores not being able to be entered."

Now they have a chance to determine which business trends applied only during the pandemic and which represent permanent change. "They're starting to evaluate what technologies they need to bring them into the future of where they think the economy is going," he says.

Inmar helps its customers stitch together various technologies—Inmar's own and its partners'—to provide an end-to-end picture of their businesses, Marcaurelle says.

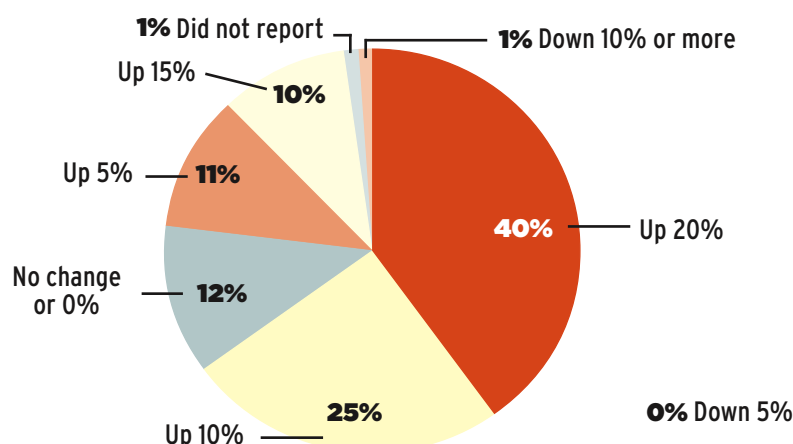


## SALES: DURING YOUR LAST MEASUREMENT PERIOD, WERE SALES UP OR DOWN? BY HOW MUCH?



While logistics IT vendors were welcoming new customers over the past year, they were also raking in new dollars. Fifty-seven percent of survey respondents saw sales grow by 20% during their most recent measurement period, an increase over 2021's already-impressive 40%. Another 15% of vendors saw sales rise by 15%, and 16% of them saw an increase by 10%. Just 2% of respondents reported no change at all in sales, and only 1% noted a drop in sales—and that by just 5%.

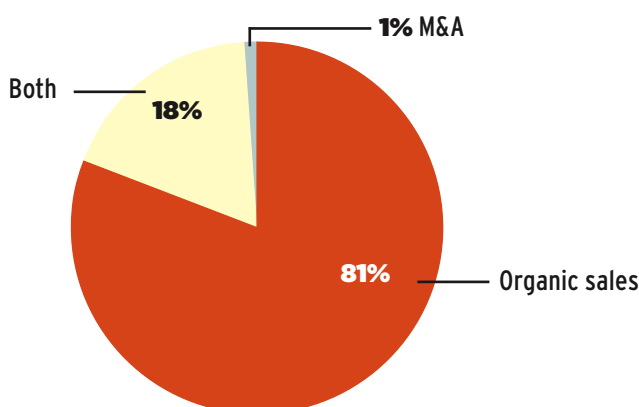
## PROFITS: DURING YOUR LAST MEASUREMENT PERIOD, WERE PROFITS UP OR DOWN? BY HOW MUCH?



While logistics IT vendors were bringing in more revenue, they were also sending more of that money to the bottom line. In 2022, 40% of respondents say their profits were up by 20% during their last measurement period, an even better result than the 30% who reported an increase on that scale in 2021. Ten percent of vendors saw profits increase by 15%, 25% saw a rise of 10%, and 11% saw a rise of 5%.

A significant proportion of respondents—12%—saw profits hold steady in their most recent measurement period. But only 1% of vendors noted negative results.

## GROWTH: WHAT LED TO GROWTH IN THE PAST YEAR?



A large majority of vendors in the survey—81%—attribute their growth over the past year to organic sales. Just 1% grew through mergers and acquisitions, while 18% say both of those factors helped to enlarge their companies.

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# TOP 100 LOGISTICS IT PROVIDERS

## 360DATA

920-830-5000 | 360data.com

**PRODUCTS:** WMS, TMS, OMS

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Transportation

### SOLUTIONS:

- 3D Printing
- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Blockchain
- Capacity

- Container Chassis Management
- EDI
- ERP
- Inventory Management
- IoT/IIoT
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- Routing & Scheduling
- Sales & Operations Planning
- Security
- Strategic Sourcing
- Supplier/Vendor Management
- TMS
- Wireless/Mobile
- WMS

**INDUSTRIES SERVED:** E-Commerce, Transportation  
**SOLUTIONS:**

- EDI
- Inventory Management
- IoT/IIoT
- Optimization
- Order Management
- Process Improvement
- Robotics/Automation
- Wireless/Mobile
- WMS

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System

## 3PL CENTRAL

888-375-2368 | 3plcentral.com

**PRODUCTS:** 3PL Warehouse Manager WMS, topShelf

WMS, Skubana OMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

## A3 FREIGHT PAYMENT

901-759-2969 | a3freightpayment.com

**PRODUCTS:** Spend Management Solutions

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables), Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

### SOLUTIONS:

- AI
- Auditing/Claims/Freight Payment
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Rate & Bid
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

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### ACUITIVE SOLUTIONS

704-321-4992 | [AcuitiveSolutions.com](https://AcuitiveSolutions.com)

**PRODUCTS:** AcuAudit, AcuSource, AcuRoute

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Retail,  
Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Global Trade Management
- Procurement
- TMS

### ADVANTECH

609-617-9786 | [advantech.com](https://advantech.com)

**PRODUCTS:** Industrial Tablet, Vehicle Mounted  
Computer, All-in-One PC

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,  
Retail, Wholesale, Services/Government,  
Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Capacity
- Inventory Management
- IoT/IIoT
- Machine Learning
- Optimization
- Process Improvement
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Sales & Operations Planning
- Supplier/Vendor Management
- Supply Chain Control Tower
- WMS
- YMS

### AGISTIX

650-362-2000 | [agistix.com](https://agistix.com)

**PRODUCT:** Agistix

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,  
Retail, Wholesale, Services/Government,  
Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment

- Big Data Management
- Blockchain
- EDI
- Global Trade Management
- Inventory Management
- IoT/IIoT
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Product Lifecycle Management
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Sales & Operations Planning
- Security
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile

### ARTC LOGISTICS

212-736-8565 x3035 | [artc-logistics.com](https://artc-logistics.com)

**PRODUCTS:** CalcRate

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** Manufacturing, Wholesale,  
Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- EDI
- Optimization
- Rate & Bid
- TMS

### AUTOSCHEDULER.AI

615-428-2035 | [AutoScheduler.AI](https://AutoScheduler.AI)

**PRODUCT:** AutoScheduler

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** System

**INDUSTRIES SERVED:** Manufacturing, Wholesale,  
Transportation

**SOLUTIONS:**

- AI
- Big Data Management
- Demand Management
- Inventory Management
- Machine Learning Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- WMS
- YMS



### BANYAN TECHNOLOGY

844-309-3911 | [banyantechnology.com](https://banyantechnology.com)

**PRODUCT:** LIVE Connect

**PLATFORM:** TMS

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** Manufacturing, Retail,  
Transportation

**SOLUTIONS:**

- EDI
- ERP
- Optimization
- Process Improvement
- Rate & Bid
- Routing & Scheduling
- Supplier/Vendor Management
- TMS

### BLUE YONDER

480-308-3000 | [BlueYonder.com](https://BlueYonder.com)

**PRODUCTS:** Luminate Logistics, Luminate Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,  
Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- Demand Management
- ERP
- Inventory Management
- IoT/IIoT
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
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- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Sales & Operations Planning
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS
- YMS





### C3 SOLUTIONS

514-315-3139 | c3solutions.com

**PRODUCTS:** C3 Reservations, C3 Yard

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Advanced Visibility
- Dock Scheduling Systems
- Dock Capacity Planning
- IoT/IIoT
- Optimization
- Process Improvement
- Remote Workforce Enablement
- Routing & Scheduling
- Supplier/Vendor Management
- Wireless/Mobile
- YMS

### CADRE TECHNOLOGIES

866-252-2373 | cadretech.com

**PRODUCTS:** Cadence WMS, Accuplus WMS, LogiView

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Inventory Management
- Labor Management
- Optimization
- Order Management
- Reverse Logistics
- RFID
- Supply Chain Control Tower
- Wireless/Mobile
- WMS

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System

### CAMELOT 3PL SOFTWARE

704-554-1670 | 3plsoftware.com

**PRODUCT:** Excalibur Warehouse Management System

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Transportation

**SOLUTIONS:**

- EDI
- ERP
- Inventory Management
- Reverse Logistics
- WMS

### CARRIER LOGISTICS

914-332-0300 | carrierlogistics.com

**PRODUCT:** FACTS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- AI
- Big Data Management
- Capacity
- EDI
- ERP
- Load Planning
- Machine Learning
- Optimization
- Process Improvement
- Rate & Bid
- Routing & Scheduling
- TMS
- Wireless/Mobile
- YMS

### CASS INFORMATION SYSTEM

314-506-5500 | cassinfo.com

**PRODUCTS:** Freight Audit, Payment, and Business Intelligence

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment

### CDM SOFTWARE SOLUTIONS

281-298-8880 x102 | cdmsoft.com

**PRODUCTS:** CDM Web Freight, CDM Global Compliance

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables), Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Big Data Management
- Blockchain
- Container/Chassis Management
- CRM/CX
- Demand Management
- EDI
- ERP
- Global Trade Management
- Inventory Management
- IoT/IIoT
- Load Planning
- Machine Learning
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Routing & Scheduling
- Sales & Operations Planning
- Security
- Supplier/Vendor Management
- TMS
- WMS
- YMS

### CENTERBOARD (FORMERLY WIN)

855-946-4739 | centerboard.com

**PRODUCT:** Centerboard Microservices

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- Container/Chassis Management
- Demand Management
- EDI
- ERP
- Inventory Management
- Load Planning
- Optimization
- Order Management
- Process Improvement
- Routing & Scheduling
- Security
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

## IT DECISION SUPPORT TOOL

Search on any data point to match your  
requirements to the Top 100:

[BIT.LY/IT-DST](https://bit.ly/IT-DST)

### CONTROLANT

354-517-0630 | [controlant.com](https://controlant.com)

**PRODUCT:** Cold Chain as a Service

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Manufacturing, Retail,  
Wholesale, Transportation

**SOLUTIONS:**

- Cold Chain
- Quality & Compliance
- Supply Chain Visibility
- Workflow & Process Optimization

### CT LOGISTICS

216-267-2000 | [ctlogistics.com](https://ctlogistics.com)

**PRODUCT:** FreightRater

**PLATFORM:** Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Manufacturing, Retail,  
Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Capacity
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Procurement
- Rate & Bid
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

### CTSI-GLOBAL

888-836-5135 | [ctsi-global.com](https://ctsi-global.com)

**PRODUCTS:** CTSI-Global + Honeybee TMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,  
Retail, Wholesale, Services/Government,  
Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- EDI
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement

- Procurement
- Rate & Bid
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

### DAT FREIGHT AND ANALYTICS

503-643-4331 | [dat.com](https://dat.com)

**PRODUCT:** Data Insights

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- Asset Management
- Big Data Management
- Capacity
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Rate & Bid
- Routing & Scheduling
- Security
- TMS

### DATA2LOGISTICS

239-425-8033 | [data2logistics.com](https://data2logistics.com)

**PRODUCTS:** Data2Resolve, Data2InformBI,  
Data2Docs

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,  
Retail, Wholesale, Services/Government,  
Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- EDI
- Global Trade Management
- IoT/IIoT
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Procurement
- Rate & Bid
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower

### DATEx

727-571-4159 | [datexcorp.com](https://datexcorp.com)

**PRODUCT:** Datex FootPrint WMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Manufacturing, Retail,  
Wholesale, Transportation

**SOLUTIONS:**

- EDI
- Inventory Management
- Labor Management
- Optimization
- Order Management
- Reverse Logistics
- RFID
- Supplier/Vendor Management
- Supply Chain Control Tower
- Wireless/Mobile
- WMS

### DDC FPO

303-674-0681 | [ddcfpo.com](https://ddcfpo.com)

**PRODUCTS:** DDC Sync, DDC Intelligence, IT  
Outsourcing

**PLATFORM:** Cloud

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,  
Retail, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Big Data Management
- CRM/CX
- Demand Management
- EDI
- Global Trade Management
- Labor Management
- Load Planning
- Machine Learning
- Optimization
- Process Improvement
- Remote Workforce Enablement
- Wireless/Mobile

### DECK COMMERCE

844-386-8777 | [deckcommerce.com](https://deckcommerce.com)

**PRODUCT:** Deck Commerce OMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** System

**INDUSTRIES SERVED:** E-Commerce, Retail,  
Wholesale

**SOLUTIONS:**

- AI
- Big Data Management
- CRM/CX
- Demand Management
- Inventory Management
- Machine Learning
- Order Management
- Process Improvement
- Reverse Logistics



## DEMAND MANAGEMENT

800-886-3737 | [demandsolutions.com](https://demandsolutions.com)

**PRODUCT:** Logility Digital Supply Chain Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Big Data Management
- Blockchain
- Demand Management
- Inventory Management
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Product Lifecycle Management
- Reverse Logistics
- Routing & Scheduling
- Sales & Operations Planning
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower

## DEPOSCO

877-770-1110 | [deposco.com](https://deposco.com)

**PRODUCT:** Omnichannel Fulfillment

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Inventory Management
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- WMS

## DESCARTES SYSTEMS GROUP

800-419-8495 x280337 | [descartes.com](https://descartes.com)

**PRODUCTS:** Logistics & Supply Chain Solutions

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- EDI

- Global Trade Management
- Inventory Management
- IoT/IIoT
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Security
- Strategic Sourcing
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS
- YMS

## E2OPEN

866-432-6736 | [e2open.com](https://e2open.com)

**PRODUCT:** Digital Supply Chain

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Control Towers
- Collaborative Manufacturing
- Global Trade Management
- Supply Management

## EDGE LOGISTICS

312-319-4766 | [edgelogistics.com](https://edgelogistics.com)

**PRODUCTS:** Capacity by Edge Logistics

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables)

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- AI
- Machine Learning
- Optimization
- Routing & Scheduling

## EMERGE

888-736-7710 | [emergemarket.com](https://emergemarket.com)

**PRODUCTS:** Emerge Freight Procurement Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables)

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Capacity
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Procurement
- Routing & Scheduling
- TMS

## ENVISTA

317-208-9100 | [envistacorp.com](https://envistacorp.com)

**PRODUCT:** myShipINFO

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Capacity
- CRM/CX
- Demand Management
- EDI
- ERP
- Global Trade Management
- Inventory Management
- IoT/IIoT
- Labor Management
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System





- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Robotics/Automation
- Sales & Operations Planning
- Security
- Strategic Sourcing
- Supplier/Vendor Management
- TMS
- WMS

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## EWMS

847-475-2710 | ewms.com

**PRODUCTS:** eWMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Retail, Transportation

**SOLUTIONS:**

- Asset Management
- E-Commerce
- EDI
- Inventory Management
- Order Management
- Process Improvement
- WMS

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## FAREYE

+91120 620 5800 | getfareye.com

**PRODUCTS:** FarEye Intelligent Last-Mile Delivery, FarEye Intelligent Delivery Visibility, FarEye Intelligent Delivery Experience, FarEye Intelligent Supply Chain Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Retail, Transportation

**SOLUTIONS:**

- AI
- Machine Learning
- Optimization
- Reverse Logistics
- Routing & Scheduling
- Supply Chain Control Tower

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## FASCOR

1888-8-FASCOR | fascor.com

**PRODUCT:** FASCOR WMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale

**SOLUTIONS:**

- Inventory Management
- Labor Management
- Optimization
- TMS
- WMS

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## FLOCK FREIGHT

855-744-7585 | flockfreight.com

**PRODUCT:** FlockDirect, available on the Flock Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables)

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Capacity
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Routing & Scheduling

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## FLOWSPACE

323-741-1325 | flow.space.com

**PRODUCTS:** Flowspace

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Retail, Transportation

**SOLUTIONS:**

- Capacity
- Demand Management
- EDI
- Inventory Management
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Routing & Scheduling
- Supply Chain Control Tower
- WMS

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## FORTIGO

512-372-8884 | fortigo.com

**PRODUCTS:** Fortigo TMS and Fortigo Freight Audit & Payment

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- EDI
- Optimization
- Supply Chain Control Tower
- TMS
- Wireless/Mobile

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## FORTNA | OPTRICITY

919-237-4846 | optricity.com

**PRODUCTS:** OptiSlot DC Software, @Ease

Warehousing Technologies, Moves Conductor

**PLATFORM:** Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Case & Pallet Picking
- E-Commerce fulfillment
- Microfulfillment
- Omnichannel
- Returns
- Ship From Store

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## FOURKITES

888-466-6958 | fourkites.com

**PRODUCTS:** FourKites Real-Time Supply Chain Visibility Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional (subscription)

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Transportation

**SOLUTIONS:**

- AI/Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Routing & Scheduling
- YMS

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## FREIGHT MANAGEMENT INC. (FMI)

714-397-3262 | freightmgmt.com

**PRODUCTS:** Freight and Data Management

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- ERP
- Load Planning
- Modeling/Forecasting
- Optimization
- Predictive Analytics
- Procurement
- Process Improvement
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS



## FREIGHTGATE

714-799-2833 | freightgate.net

**PRODUCT:** logisticsCloud

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- Container/Chassis Management
- CRM/CX
- Demand Management
- EDI
- ERP
- Global Trade Management
- Inventory Management
- IoT/IIoT
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Sales & Operations Planning
- Security

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System

- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS
- YMS

## GENERIX GROUP-NORTH AMERICA

514-938-4562 | generixgroup.com

**PRODUCT:** WMS

**PLATFORM:** Local

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- EDI
- Inventory Management
- Order Management
- TMS
- WMS
- YMS

## HIGHWAY 905

908-874-4867 | highway905.com

**PRODUCTS:** Warehouse Management System, Transportation Management System, Shipment Tracking and Alerts System, Shipment Tracking App

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- EDI
- Inventory Management
- Labor Management
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS

## INFOR

800-244-5479 | infor.com

**PRODUCT:** ERP

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Gov't., Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- Blockchain
- Capacity
- Demand Management
- DRP
- EDI
- ERP
- Global Trade Management
- Inventory Management
- IoT/IIoT
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Supplier/Vendor Management
- TMS
- Wireless/Mobile
- WMS

## INMAR INTELLIGENCE

866-440-6917 | inmar.com

**PRODUCTS:** Post-Purchase Experience Solutions, Returns as a Service

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Big Data Management
- Blockchain
- CRM/CX
- Inventory Management
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Product Lifecycle Management
- Reverse Logistics



- Routing & Scheduling
- Supply Chain Control Tower
- WMS

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## INTELLECT TECHNOLOGIES

415-806-3509 | intellecttech.com

**PRODUCTS:** Intellect eFreight, Intellect WMS-CFS, Intellect eBrokerage, Intellect eCustoms, Intellect eSHIP

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Retail, Transportation

**SOLUTIONS:**

- Container/Chassis Management
- CRM/CX
- EDI
- ERP
- Inventory Management
- TMS
- WMS

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## INTELLIGENT AUDIT

201-880-1110 | intelligentaudit.com

**PRODUCTS:** Global Logistics and Freight Audit

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Big Data Management
- Machine Learning
- Optimization
- Process Improvement
- Rate & Bid
- Strategic Sourcing

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## INTELLITRANS

800-603-9175 | intellitrans.com

**PRODUCTS:** IntelliTrans TMS (CarrierPoint), IntelliTrans GVP (global visibility platform), GVMI

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** Manufacturing

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- EDI
- Inventory Management
- IoT/IIoT
- Load Planning

- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- YMS

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## KINAXIS

844-390-0322 | kinaxis.com

**PRODUCTS:** RapidResponse

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** Manufacturing, Retail, Transportation

**SOLUTIONS:**

- AI
- Capacity
- Demand Management
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Product Lifecycle Management
- Reverse Logistics
- Sales & Operations Planning
- Security
- Supply Chain Control Tower

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## KLEINSCHMIDT

847-945-1000 | kleinschmidt.com

**PRODUCTS:** Kleinschmidt EDI + API Integration

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Blockchain
- EDI

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## LOG-NET

732-758-6811 | log-net.com

**PRODUCTS:** Global Supply Chain Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Blockchain
- Capacity
- Container Chassis Management
- CRM/CX
- Demand Management
- EDI
- ERP
- Global Trade Management
- Inventory Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Optimization
- Order Management
- Predictive Analytics
- Process Improvement
- Procurement
- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Sales & Operations Planning
- Security
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- WMS
- YMS

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## IT DECISION SUPPORT TOOL

Search on any data point to match your requirements to the Top 100:

[BIT.LY/IT-DST](https://bit.ly/it-dst)





## LOGIFLOW SERVICES

630-484-0150 | logiflow.com

**PRODUCT:** TMS Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- Container/Chassis Management
- Dynamic Pricing
- EDI
- Global Trade Management
- Inventory Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

## LOGILITY

800-762-5207 | logility.com

**PRODUCT:** Logility Digital Supply Chain Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Big Data Management
- Blockchain
- Demand Management
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Product Lifecycle Management
- Reverse Logistics
- Routing & Scheduling
- Sales & Operations Planning
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower

## LOGISTICAL LABS

312-999-9762 | logisticalabs.com

**PRODUCTS:** LoadDex & BidDex

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Asset Management
- Big Data Management
- Capacity
- Demand Management
- Load Planning
- Optimization
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Remote Workforce Enablement
- Routing & Scheduling
- Sales & Operations Planning
- Strategic Sourcing

## LOGISTIX SOLUTIONS

703-203-1274 | logistixsolutions.com

**PRODUCTS:** ProLogix

**PLATFORM:** Local

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Capacity
- Demand Management
- Global Trade Management
- Inventory Management
- Load Planning
- Machine Learning

- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Reverse Logistics
- Routing & Scheduling
- Strategic Sourcing

## MADE4NET

800-646-1041 | made4net.com

**PRODUCTS:** WarehouseExpert Warehouse Management System, SCEExpert Supply Chain Execution Platform, YardExpert YMS; LaborExpert Labor Management, RoutingExpert

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Inventory Management
- Labor Management
- Routing & Scheduling
- WMS
- YMS

## MAGAYA

786-845-9150 | magaya.com

**PRODUCTS:** Magaya Digital Freight Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- CRM/CX
- Customs Compliance
- Digital Customer experience
- ERP
- Freight Forwarding
- Global Trade Management
- Inventory Management
- Rate & Bid
- Rate Management
- Shipping
- WMS

## MAGICLOGIC OPTIMIZATION

206-274-6248 | magiclogic.com

**PRODUCTS:** Cube-IQ, BlackBox

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Load Planning
- Optimization
- Robotics/Automation

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System



## MANHATTAN ASSOCIATES

877-596-9208 | manh.com

**PRODUCTS:** Manhattan Active Transportation Management

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Inventory Management
- Labor Management
- Load Planning
- Order Management
- Procurement
- Robotics/Automation
- Routing & Scheduling
- TMS
- WMS

## MANTIS

678-784-4015 | mantis.group.com

**PRODUCTS:** Logistics Vision Suite

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Business Intelligence
- Container/Chassis Management
- Demand Management
- EDI
- Inventory Management
- Labor Management
- Load Planning
- Optimization
- Order Management
- Parcel Management
- Process Improvement
- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Sales & Operations Planning
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS
- YMS

## IT DECISION SUPPORT TOOL

Search on any data point to match your requirements to the Top 100:

[BIT.LY/IT-DST](http://BIT.LY/IT-DST)

## MCLEOD SOFTWARE

877-362-5363 | McLeodSoftware.com

**PRODUCTS:** LoadMaster, PowerBroker

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- Container/Chassis Management
- EDI
- ERP
- Load Planning
- Order Management
- Process Improvement
- Rate & Bid
- Routing & Scheduling
- TMS
- Wireless/Mobile

## MERCURYGATE INTERNATIONAL

919-469-8057 | mercurygate.com

**PRODUCTS:** MercuryGate TMS; MercuryGate Final Mile; MercuryGate Claims

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Capacity
- Container/Chassis Management
- EDI
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Rate & Bid
- Reverse Logistics
- Robotics/Automation
- Routing & Scheduling
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile

## MPO

646-520-0841 | mpo.com

**PRODUCTS:** Multi-Party Orchestration Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Inventory Management
- Load Planning
- Machine Learning
- Optimization
- Order Management
- Reverse Logistics
- Supply Chain Control Tower
- TMS
- Supply Chain Orchestration

## NETSUITE

877-638-7848 | netsuite.com

**PRODUCTS:** ERP, CRM, E-Commerce

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- CRM
- Fulfillment
- Order Management
- Procurement
- Supply Chain Control Tower
- Supply Chain Management
- TMS
- Warehousing

## NULOGX

877-968-5649 | nulogx.com

**PRODUCTS:** Nulogx TMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- EDI
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Procurement
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Supply Chain Control Tower
- TMS



## NULOGY

888-685-6491 | nulogy.com

**PRODUCTS:** Visibility, Order & Capacity Management, Analytics

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables)

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Capacity
- Demand Management
- EDI
- ERP
- Inventory Management
- IoT/IIoT
- Labor Management
- Machine Learning
- Modeling/Forecasting

## NVISION GLOBAL

770-474-4122 | nvisionglobal.com

**PRODUCTS:** Global Freight Audit, Payment & Transportation Spend Management Services, iMPact TMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables), Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- EDI
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System

- Procurement
- Rate & Bid
- Routing & Scheduling
- Strategic Sourcing
- Supply Chain Control Tower
- TMS

## ORACLE

800-392-2999 | oracle.com/logistics

**PRODUCTS:** Oracle Cloud Transportation Management, Oracle Cloud Global Trade Management, Oracle Cloud Warehouse Management

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- 3D Printing
- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Blockchain
- Capacity
- Container/Chassis Management
- CRM/CX
- Demand Management
- EDI
- ERP
- Global Trade Management
- Inventory Management
- IoT/IIoT
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Product Lifecycle Management
- Rate & Bid
- Remote Workforce Enablement
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Sales & Operations Planning
- Security
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS
- YMS

## IT DECISION SUPPORT TOOL

Search on any data point to match your requirements to the Top 100:

[BIT.LY/IT-DST](https://bit.ly/IT-DST)

## PIERBRIDGE (WISETECH GLOBAL GROUP)

508-630-1220 | pierbridge.com

**PRODUCTS:** Transtream Multi-Carrier Parcel Management

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- EDI
- Global Trade Management
- Modeling/Forecasting
- Multi-Carrier Parcel Management
- Predictive Analytics
- Optimization
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- TMS

## PRIMUS INTELLECTUAL SOLUTIONS

312-800-1942 | shipprimus.com

**PRODUCTS:** ShipPrimus TMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Optimization
- Order Management
- Process Improvement
- Rate & Bid
- Remote Workforce Enablement
- TMS

## PRINCETON TMX

260-341-5017 | princetonmx.com

**PRODUCTS:** Princeton TMX

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Big Data Management
- Blockchain





- Capacity
- CRM/CX
- Demand Management
- EDI
- Inventory Management
- IoT/IIoT
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Remote Workforce Enablement
- Routing & Scheduling
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- Tender & Exception Management
- TMS
- Wireless/Mobile
- YMS

## PROJECT44

312-376-8883 | [project44.com](https://project44.com)

**PRODUCTS:** Advanced Visibility Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Machine Learning
- Optimization
- Process Improvement
- Real-Time Visibility

## QAD PRECISION

805-566-6100 | [precisionsoftware.com](https://precisionsoftware.com)

**PRODUCTS:** QAD Precision GTTE

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Global Trade Management
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

## QSSI

732-805-0400 | [qssi-wms.com](https://qssi-wms.com)

**PRODUCTS:** PowerHouse WMS

**PLATFORM:** Cloud/Hosted

**PRICING:** Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Inventory Management
- Reverse Logistics
- TMS
- WMS

## RATELINX

480-717-9490 | [ratelinx.com](https://ratelinx.com)

**PRODUCTS:** ShipLinx, TracLinx, PayLinx

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Big Data Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Rate & Bid
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

## REVEEL

877-421-4994 | [reveelgroup.com](https://reveelgroup.com)

**PRODUCTS:** Shipping Intelligence Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables), Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Rate & Bid

## SAP

800-872-1727 | [sap.com](https://sap.com)

**PRODUCTS:** ERP

**PLATFORM:** Cloud/SaaS/Hosted, Local

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing,

Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Demand & Supply Planning
- Predictive Analytics
- Product Lifecycle Management
- Sales & Operations Planning
- Strategic Sourcing
- Visibility

## SHIPPERSEDGE

952-224-2400 | [shippersedge.com](https://shippersedge.com)

**PRODUCTS:** ShippersEdge TMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Capacity
- Custom Programming
- Dock Scheduler
- EDI
- Last-Mile Management
- Load Planning
- Optimization
- Process Improvement
- Procurement
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Supplier Portals
- Supplier/Vendor Management
- TMS
- Wireless/Mobile

## SLYNC.IO

817-541-9788 | [slync.io](https://slync.io)

**PRODUCTS:** Logistics Orchestration, Booking and Allocation Management, LCL Network Collaboration, Order-to-Invoice Management, Document Management, Multi-Party Process Management

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Booking & Allocation Management
- Document Management
- LCL Network Collaboration
- Multi-Party Process Management
- Order-to-Invoice Management



## SMC<sup>3</sup>

800-845-8090 | smc3.com

**PRODUCTS:** CzarLite, RateWare XL, CarrierConnect XL, SMC<sup>3</sup> LTL APIs, BidSense

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Capacity
- Demand Management
- EDI
- Optimization
- Process Improvement
- Procurement
- Product Lifecycle Management
- Rate & Bid
- Strategic Sourcing
- TMS

## SOFTEON

855-833-2848 | softeon.com

**PRODUCTS:** Softeon Warehouse Management System; Softeon Warehouse Execution System; Softeon Distributed Order Management System

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Demand Management
- Distributed Order Management
- Inventory Management
- IoT/IIoT
- Labor Management
- Machine Learning
- Optimization
- Order Management

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IIoT:** Internet of Things/  
Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System

- Process Improvement
- Reverse Logistics
- RFID
- Routing & Scheduling
- Supply Chain Control Tower
- TMS
- WMS
- YMS

## SPHEREWMS

818-678-2601 | spherewms.com

**PRODUCTS:** SphereWMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Gov't., Transportation

**SOLUTIONS:**

- EDI
- Inventory Management
- Labor Management
- Optimization
- Order Management
- Reverse Logistics
- RFID
- Supplier/Vendor Management
- Supply Chain Control Tower
- Wireless/Mobile
- WMS

## SPS COMMERCE

866-245-8100 | spscommerce.com

**PRODUCTS:** SPS Commerce Fulfillment

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- EDI
- Inventory Management
- Order Management
- Process Improvement
- Rate & Bid
- Supplier/Vendor Management
- Supply Chain Control Tower

## SYNERGY LOGISTICS

720-372-1250 | snapfulfil.com

**PRODUCTS:** SnapFulfil WMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Inventory Management
- Robotics/Automation
- WMS

## SYSTEM LOGIC

866-967-7226 | warehouseinabox.com

**PRODUCTS:** Warehouse in a Box

**PLATFORM:** Local

**PRICING:** System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Wholesale, Transportation

**SOLUTIONS:**

- Wireless/Mobile
- WMS

## TECSYS

800-922-8649 | tecsystech.com

**PRODUCTS:** Tecsys Elite, Tecsys Omni

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Business Intelligence/Analytics
- Demand Management
- Distributed Order Management
- EDI
- ERP
- Inventory Management
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Point-of-Use Inventory Management
- Predictive Analytics
- Optimization
- Order Management
- Procurement
- RFID
- Routing & Scheduling
- TMS
- Wireless/Mobile
- WMS
- YMS

## TIVE

617-631-8483 | tive.com

**PRODUCTS:** Tive

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Capacity
- Container/Chassis Management
- Demand Management
- Inventory Management
- IoT/IIoT



- Labor Management
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Procurement
- Routing & Scheduling
- Security
- Supply Chain Control Tower
- Wireless/Mobile

### TRANSMETRIQ (POWERED BY RAILINC)

877-724-5462 | [transmetriq.com](https://transmetriq.com)

**PRODUCTS:** RailSight Track & Trace; RailSight Advanced ETA; RailSight Demand Trace; RailSight Monitor; CarLogix; Analytics & Insights Equipment Health Reporting, and Wheelset Intelligence

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Container/Chassis Management
- IoT/IIoT
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Sales & Operations Planning

### TRANSPOREON

267-281-1555 | [transporeon.com](https://transporeon.com)

**PRODUCTS:** Transporeon Ticontract

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- EDI
- Load Planning
- Machine Learning
- Process Improvement
- Procurement
- Rate & Bid
- Strategic Sourcing
- Supplier/Vendor Management
- TMS
- YMS

## IT DECISION SUPPORT TOOL

Search on any data point to match your requirements to the Top 100:

[BIT.LY/IT-DST](https://bit.ly/IT-DST)

### TRANSPORT PRO

615-823-1937 | [transportpro.net](https://transportpro.net)

**PRODUCTS:** Transport Pro

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Capacity
- CRM/CX
- EDI
- Load Planning
- Machine Learning
- Order Management
- Process Improvement
- Rate & Bid
- Remote Workforce Enablement
- TMS

### TRANSPORTATION INSIGHT HOLDING COMPANY

770-519-9611 | [tiboldco.com](https://tiboldco.com)

**PRODUCTS:** Beon Digital Logistics Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables),

Transactional, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- Capacity
- Container/Chassis Management
- EDI
- Global Trade Management
- Load Planning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Procurement
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Security
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

### TRANSPORTGISTICS

631-567-4100 | [transportgistics.com](https://transportgistics.com)

**PRODUCTS:** RoutingGuides.com, TGIbid,

InsourceAudit, FreightTracing, TGI-TMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** Manufacturing, Retail, Wholesale, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- EDI
- Global Trade Management
- Optimization
- Order Management
- Process Improvement
- Procurement
- Rate & Bid
- Reverse Logistics
- Routing & Scheduling
- Strategic Sourcing
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS

### TRIMBLE TRANSPORTATION

866-914-5299 | [transportation.trimble.com](https://transportation.trimble.com)

**PRODUCTS:** Fleet management platforms, transportation management systems, asset maintenance solutions, commercial navigation and routing technology

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Free (pricing based on other variables),

Transactional, System, Seat/User

**INDUSTRIES SERVED:** Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Demand Management
- IoT/IIoT
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Rate & Bid
- Routing & Scheduling
- Sales & Operations Planning
- TMS
- Wireless/Mobile





## U.S. BANK

866-274-5898 | [usbank.com/transportation-solutions/freight](https://usbank.com/transportation-solutions/freight)

**PRODUCTS:** U.S. Bank Freight Payment

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Auditing/Claims/Freight Payment
- Big Data Management
- EDI
- Freight Benchmarking & Data Analytics
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Process Improvement
- Rate & Bid
- Small Parcel Optimization
- Strategic Sourcing
- U.S. Bank Freight Payment Index

## UCBOS (ITORIZON)

919-909-9076 | [ucbos.com](https://ucbos.com)

**PRODUCTS:** Business Execution Platform

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Auditing/Claims/Freight Payment
- Container/Chassis Management
- EDI
- ERP
- Inventory Management
- IoT/IloT
- Labor Management
- Load Planning

- Machine Learning
- Order Management
- Procurement
- Product Lifecycle Management
- Reverse Logistics
- RFID
- Robotics/Automation
- Routing & Scheduling
- Supplier/Vendor Management
- Supply Chain Control Tower
- TMS
- Wireless/Mobile
- WMS

## URROUTE

313-600-5308 | [uroute.net](https://uroute.net)

**PRODUCT:** Transportation Management

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government

**SOLUTIONS:**

- AI
- Auditing/Claims/Freight Payment
- Capacity
- EDI
- Load Planning
- Machine Learning
- Optimization
- Order Management
- Procurement
- Rate & Bid
- Routing & Scheduling
- TMS
- Wireless/Mobile

## VERTE

630-991-7758 | [projectverte.com](https://projectverte.com)

**PRODUCTS:** Unified Commerce

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** Transactional, System

**INDUSTRIES SERVED:** E-Commerce, Retail, Wholesale, Transportation

**SOLUTIONS:**

- AI
- Blockchain
- EDI
- Inventory Management
- IoT/IloT
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Product Lifecycle Management
- Security
- WMS

## YARDVIEW

303-781-3430 x1 | [yardview.com](https://yardview.com)

**PRODUCTS:** YardView YMS

**PLATFORM:** Cloud/SaaS/Hosted

**PRICING:** System

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Wholesale, Services/Government, Transportation

**SOLUTIONS:**

- Asset Management
- Capacity
- Container/Chassis Management
- EDI
- Inventory Management
- IoT/IloT
- Labor Management
- Load Planning
- Optimization
- Process Improvement
- Routing & Scheduling
- YMS

## ZEBRA TECHNOLOGIES

262-960-6108 | [zebra.com](https://zebra.com)

**PRODUCTS:** Zebra MotionWorks Warehouse

**PLATFORM:** Cloud/Hosted

**PRICING:** Transactional, System, Seat/User

**INDUSTRIES SERVED:** E-Commerce, Manufacturing, Retail, Transportation

**SOLUTIONS:**

- AI
- Asset Management
- Big Data Management
- Container/Chassis Management
- Demand Management
- Inventory Management
- IoT/IloT
- Labor Management
- Load Planning
- Machine Learning
- Modeling/Forecasting
- Predictive Analytics
- Optimization
- Order Management
- Process Improvement
- Reverse Logistics
- RFID
- Robotics/Automation
- YMS

## KEY

**AI:** Artificial Intelligence

**CRM/CX:** Customer Relationship Management/Customer Experience

**EDI:** Electronic Data Interchange

**ERP:** Enterprise Resource Planning

**IoT/IloT:** Internet of Things/Industrial Internet of Things

**TMS:** Transportation Management System

**WMS:** Warehouse Management System

**YMS:** Yard Management System

## IT DECISION SUPPORT TOOL

Search on any data point to match your requirements to the Top 100:

[BIT.LY/IT-DST](https://bit.ly/it-dst)



# TECHNOLOGY COMPANIES

**Many third-party logistics providers offer best-in-class technology solutions as part of their service. Here are just a few of the many leading 3PLs with outstanding technology.**

## **AFS LOGISTICS**

877-242-3383 | [afs.net](https://afs.net)

The AFSmart Technology Suite combines a data-driven approach with time-tested skills to drive measurable savings and optimize essential elements of the supply chain. AFS offers proven processes and the dynamic application of analytics that run through its entire portfolio of services, including freight audit and payment, parcel, LTL and transportation management services.

## **ALC LOGISTICS**

800-282-3246 | [alclogistics.com](https://alclogistics.com)

ALC Logistics' Alchemy is a web-based transportation management system designed and customized to meet each company's unique transportation needs. The TMS applications are hosted in a fully secured, SaaS/cloud architecture backed by disaster recovery systems with 24/7 customer support. ALC's software can be integrated with existing ERPs, order entry and financial systems, providing operational efficiency, visibility, and accountability.

## **ECHO GLOBAL LOGISTICS**

800-354-7993 | [echo.com](https://echo.com)

EchoShip is a self-service shipping platform for less-than-truckload and truckload shippers. With its simple, user-friendly interface, EchoShip eliminates repetitive workflows and speeds up shipping with an efficient four-step process, giving users time back to focus on their business.

## **GEODIS LOGISTICS**

877-401-6400 | [geodis.com/us](https://geodis.com/us)

GEODIS Logistics supports its warehouses with a variety of technology systems, including Manhattan Warehouse Management for Open Systems. The company's IT tools eliminate the need to invest in redundant, inadequate, or antiquated IT resources. GEODIS also continuously invests in improving and adding features to its technology.

## **JOHANSON TRANSPORTATION SERVICE**

800-742-2053 | [arriviture.com](https://arriviture.com)

Arriviture lets shippers manage freight throughout the entire logistics process from start to finish, in one, easy-to-use location in the cloud. The software offers rating, order entry and processing, optimization, document management, tracking, accounts payable, and reporting solutions. Arriviture technology is designed for speed, efficiency, and transparency to provide real-time updates on LTL, truckload, and rail intermodal freight progress, plus tracking for international shipments.

## **ODYSSEY LOGISTICS & TECHNOLOGY**

855-875-0681 | [odysseylogistics.com](https://odysseylogistics.com)

The Odyssey Global Logistics Platform is a comprehensive, web-based global transportation management solution designed to manage day-to-day transactional logistics processes and to refine inter- and intra-enterprise movement of products. Odyssey's technology platform enables transportation optimization, carrier selection, execution, visibility, event management, analytics and reporting.

## **POLARIS TRANSPORT CARRIERS**

905-671-3100 | [polaristransport.com](https://polaristransport.com)

Polaris's NorthStar Digital Solutions bring the digital experience to transportation and the supply chain through powerful, efficient, and seamless technology platforms. As a system integrator, NorthStar provides seamless end-to-end solutions and offers direct connectivity streams to connected partners, carriers, shippers, brokers, and consumers. The solutions optimize systems performance, create a user-less environment, and provide predictive and proactive analytics.

## **PROTRANS**

317-240-4100 | [protrans.com](https://protrans.com)

A partnership with Microsoft Azure enables OPTIMIZ to deliver faster, stronger, more securely, and more reliably. Azure offers multiple benefits including global scale, optimized performance, world-class physical and cybersecurity, and speed—users can input data into, and receive data from, OPTIMIZ instantaneously, providing greater visibility and decision making.

## **RINCHEM COMPANY**

888-3PL-CHEM | [rinchem.com](https://rinchem.com)

Rinchem utilizes Chem-Star, a warehousing and transportation management system that enables inventory visibility across Rinchem's network of warehouses. Chem-Star also utilizes GPS tracking for Rinchem's customized, over-the-road fleet of tractor/trailer units to ensure visibility of customer loads. Chem-Star is available to customers 24/7 through a secured web-based interface that offers many different real-time inventory queries and reports. Rinchem also employs radio frequency technology to improve warehouse receiving, picking speed, and accuracy.

## **TRANSPPLACE**

866-413-9266 | [transplace.com](https://transplace.com)

Transplace's Transportation Management System gives organizations greater control over their transportation operations, as well as enhanced visibility of shipments and overall supply chain performance. The comprehensive cloud-based solution is built for freight management by freight managers and is available as a SaaS product or as part of a managed transportation solution. The Transplace TMS can quickly and efficiently look at carrier sites, get rate quotes, track shipments and gather status information to speed up the order lifecycle and ultimately the entire supply chain and allow organizations to better meet customer needs.



# TECHNOLOGY: BREAD & BUTTER OF 3PL SOLUTIONS

**Third-party logistics providers meet customer challenges by spreading their IT capabilities on thick to become indispensable supply chain partners.**



**C**ustomer demand follows roughly similar patterns in most years, making it possible to project supply and demand with some confidence. “But 2022 is perplexing,” says David Cox, president of Polaris Transportation Group. “It shouldn’t be as busy as it is right now, and it’s not clear where the rest of the year will go.” Inflation, potential interest rate hikes, and global uncertainty make it difficult to gauge what’s going to happen. “I’m very cautious right now,” he adds.

Many third-party logistics (3PL) providers have been implementing a range of solutions to help them collaborate with their clients to navigate an uncertain business environment and address challenges like product shortages and delayed shipments.

Logistics providers “need to understand the changing needs of the shipping community and be agile to adapt their value-added services accordingly,” says Matthew Beckett, senior director analyst with Gartner’s supply chain practice.

What’s sometimes known as the “bullwhip effect” has had even more opportunity to wreak havoc on many supply chains. The term refers to the phenomenon in which a relatively small shift in retail demand is magnified as it moves through the supply chain.

Say a store normally sells 100 T-shirts each day, but the owner knows an upcoming local festival will bump sales to 110 each day. She orders 120 shirts for each day of the festival, just to be safe. The distributor, in turn, orders 130 for each day from the manufacturer, also to be safe. The manufacturer then increases production to 140 T-shirts per day.

### **PANDEMIC’S IMPACT**

While the bullwhip effect has always been a challenge, its impact became more pronounced recently, as businesses have faced sudden shifts in demand, labor and container shortages, a jump in e-commerce, and factory shutdowns. Shippers responding to the 2022 Third-Party Logistics study, conducted by NTT DATA and Pennsylvania State University, indicated the areas

most impacted by the pandemic were international transportation and logistics (43%), sourcing and procurement (30%), and manufacturing (24%).

Due both to supply chain disruptions, as well as consolidation in the logistics sector, the traditionally transactional nature of the relationship between logistics providers and shippers has shifted.

“The value of collaborative long-term partnerships with mutually rewarding outcomes have become popularized,” Beckett says.

### **TURNING TO TECHNOLOGY TOOLS**

Logistics providers’ actions have also been ignited by the growth in shippers engaging stand-alone technology firms to integrate their logistics platforms and digitize logistics activities, Beckett says. That has prompted 3PLs to invest in and make available enhanced tools for end-to-end shipment visibility, sustainability, and predictive analytics.

The current changes are forcing both shippers and carriers to be more transparent, with carriers providing data on capacity, and shippers, information on volume demands, says Spencer Shute, principal consultant with Proxima.

The more logistics providers have access to this information, the better they can manage their network, reduce in-house labor spent on tracking and tracing, and provide timely status updates.

In addition to transparency, reliable and rapid communication is essential to navigating challenges. Shippers need seamless, ongoing communication with their logistics

providers, starting from the time an order is placed, says Jill Sloand, senior consultant with Tompkins Solutions, a subsidiary of Tompkins International. Real-time communication allows shippers and logistics providers to address any problems before they grow bigger and more complicated.

### **AUTOMATION GETS COOKING**

Even as delays constrain many supply chains, advancing technology has improved the speed and efficiency with which many logistics providers can fill orders, Sloand says.

That’s helping them reduce costs and operate more efficiently. For instance, automation allows for denser storage options, so the same operation can run in a smaller footprint. That can help companies struggling to secure additional space in today’s demanding real estate market.

Advances in automated equipment have also boosted internal processing efficiencies from put-away through pack-out, helping to mitigate the labor shortage. The increased capacity gained from automation also allows logistics providers to offer clients additional, advanced operations.

“Logistics providers are no longer seen only as the manual operations to move goods, but now as service and technology providers,” Sloand says.

As e-commerce continues to grow, logistics providers will need to remain efficient and up-to-date with technology, Sloand says. Among the top technologies in which 3PLs are investing, according to the 2022 Third-Party Logistics study, are high-density storage pickers and palletizers, autonomous forklifts, and wearables.





TECHNOLOGY:  
**BREAD & BUTTER**  
OF 3PL SOLUTIONS

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**IN 2019, THE POLARIS TRANSPORTATION GROUP LAUNCHED NORTHSTAR DIGITAL SOLUTIONS, A DIGITAL LAB IN WHICH POLARIS LEVERAGES MULTIPLE TECHNOLOGIES, INCLUDING ROBOTIC PROCESS AUTOMATION, ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING, AND THE INTERNET OF THINGS.**

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When it comes to transportation, technology and visibility can help logistics providers better manage the assets within their networks. Technology implementations lead to data accessibility, and “that can help reduce empty miles, ensure driver hours of service are properly utilized, and create cost reduction opportunities,” Shute says.

The proliferation of shipping options, modes, and estimated delivery windows has highlighted the importance of transportation management systems. These solutions can offer logistics providers the insight they need to identify the best option for each order, Sloand says.

#### **RECIPE FOR FUTURE SUCCESS**

As logistics providers strive to maintain more customer-centric approaches while also broadening their services, network design complexity will increase, Beckett says. The logistics sector will need to use technology to become more resilient, agile, and transparent.

Technology also can offer logistics providers a competitive edge, as shippers who decide not to implement technology on their own, perhaps due to resource or cost constraints, will seek providers who can offer technology as a service, Shute says.

While low-cost service logistics provider models will remain, “service-driven models have earned the focus of logistics teams across the globe,” he adds. In particular, supply chain visibility will be a priority.

“Shippers see the value of a truly integrated logistics partner now more than ever before,” Beckett says. “3PLs need to continue to evolve and transform

Polaris Transportation Group provides cross-border and domestic LTL and truckload transportation; intermodal; short- and long-term warehousing and distribution; and ocean and air freight forwarding services.



from operational and people-centered organizations to technology-centered organizations that retain a people-driven culture.”

“Business keeps getting faster,” says Todd Morrison, chief operating officer with Taylored Services, a logistics provider. “Customers expect faster, cheaper, better, and logistics providers have to continue to be creative and adapt to the market.”

#### **POLARIS TRANSPORTATION GROUP: SCALING THROUGH INNOVATION**

Through both organic growth and acquisitions, Polaris Transportation Group has become the largest privately held cross-border Canadian carrier, Cox says. Polaris works with shippers from across many industries, including auto parts, scientific companies, and small manufacturers.

Since 1994, Polaris Transportation Group has been known for its scheduled less-than-truckload (LTL) service between Canada and the United States. Among its other services are cross-border and domestic over-the-road LTL and truckload transportation services; intermodal service; short- and long-term warehousing and distribution services; and air and ocean freight forwarding.

Behind Polaris’s success is their dedication to recognizing what is important to clients and providing it. “Right now, what’s important is visibility,” Cox says. “People need cleaner, quicker, faster information.”

To that end, Polaris has long invested in technology enhancements that enable them to efficiently provide the data their clients need.

As the company grew, Cox notes, it was moving more than 300,000 orders across the Canada-U.S. border annually, each of which could include anywhere from five to 50 pieces of paperwork per shipment. “I had great people, but they were buried in keyboards,” he says.

In an effort to shift manual processes to digital and “unlock employees’ creative sides,” Cox and his management team invested in robotics and artificial intelligence, among other solutions. Today, few employees need to manually handle cross-border paperwork, he says. Instead, they monitor transactions, stepping in only when it’s necessary to resolve an issue.

“We’re moving cargo across the border faster, cleaner, and cheaper,” Cox adds. The technology also allows Polaris to efficiently scale up or down without exponentially expanding headcount.

#### **BLENDING IN TECHNOLOGY SOLUTIONS**

In 2019, the company launched NorthStar Digital Solutions, a state-of-the-art digital lab in which Polaris leverages multiple technologies, including robotic process automation, artificial intelligence and machine learning, and the Internet of Things (IoT). Polaris uses these technologies to identify efficiencies and boost customer service in processes like online ordering, real-time shipment tracking, inventory management, predictive analytics, and fulfillment. Other areas of technology focus include connecting to customers by API and EDI, as well as the use of GPS tracking.

“These moving parts allow us to paint a picture showing where our clients’ goods are at all times,” Cox says.



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TECHNOLOGY:  
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**TAYLORED SERVICES HAS HEAVILY INVESTED IN TECHNOLOGY SOLUTIONS THAT PROVIDE VISIBILITY, SHIPMENT TRACKING AND TRACING, AND AUTOMATED HANDLING, AMONG OTHER CAPABILITIES.**

The company's employees benefit as well, Cox says. Polaris's investment in technology allows them to shift from transaction processing to more analytical roles, offering greater career opportunities.

"Whether an employee is here for one year or 15 years, we want them to know their time was valued," he adds. "We want to help them develop their careers."

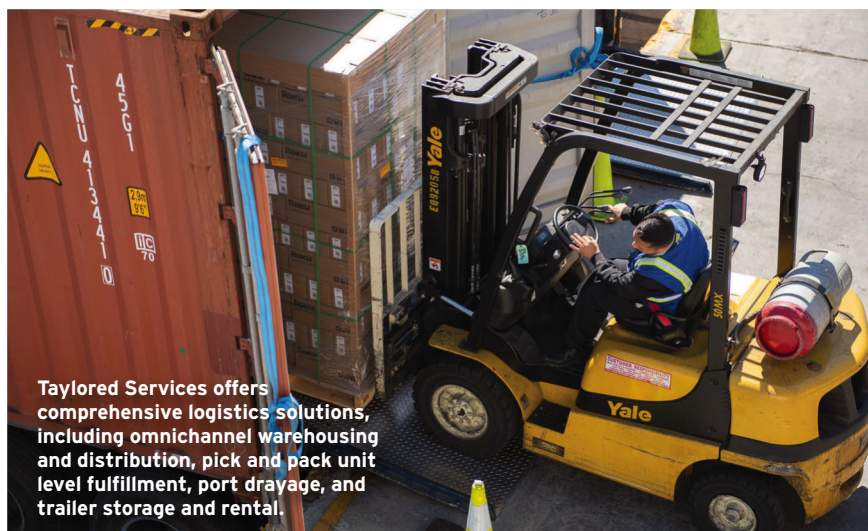
Currently, Cox and his team are creating the "Polaris Digital Supply Chain." This initiative will use a hyper ledger to eliminate paper records and automate the transfer of information for transactions between Polaris entities, while providing visibility to all involved. Polaris is also testing the system with several business partners. "Who doesn't want cleaner, quicker transactions?" Cox asks.

While the technology is critical, Polaris Transportation Group also is committed to communicating with clients so they can work effectively together. "It's about listening to their needs," Cox says. "Our conversations about where their business is going and how it's growing are essential to helping us plan our business and support them."

Looking ahead, Cox anticipates steady, consistent growth. Even as Polaris grows, leadership will maintain its focus on clients. "We don't look at clients as just a revenue stream," he says. "It's about the relationship."

#### **TAYLORED SERVICES: COMPREHENSIVE SUPPLY CHAIN SOLUTIONS**

Celebrating 30 years in business, Taylored Services offers more than 4.4 million square feet of warehouse space across a dozen-plus locations in the United States, from Newark to Los Angeles, along with a range of comprehensive logistics solutions.



Taylored Services offers comprehensive logistics solutions, including omnichannel warehousing and distribution, pick and pack unit level fulfillment, port drayage, and trailer storage and rental.

Its services include omnichannel warehousing and distribution, pick and pack unit level fulfillment, port drayage, and trailer storage and rental. "We act as extensions of our customers and manage their supply chains," Morrison says.

For instance, the recent supply chain crunches have delayed shipments of building materials, among other products. Taylored Services had been working with a client whose efforts to build a new facility were about one year behind schedule, due largely to supply chain challenges. Taylored Services helped the company bridge the gap between its existing provider and its new facility by using another Taylored building to take on additional volume from the client.

#### **INGREDIENTS FOR TOP-NOTCH SERVICE**

In late 2020, Taylored Services acquired the U.S. operations of Toll Global Logistics, an \$8.7-billion Australian logistics company. The acquisition expanded Taylored's footprint in key distribution centers near the ports of Los Angeles, Long Beach, New York, Miami, and Louisville, Kentucky.

More recently, Taylored won a bid for a property at the Port of Los Angeles. The three buildings, each 200,000 square feet, are situated on 85 acres and offer 474 doors. "It provides a huge opportunity to handle additional transload volume," Morrison says. "Rather than drayage inland, we can 'turn and burn' right there, within hours."

Taylored Services has also heavily invested in technology solutions that provide visibility, shipment tracking and tracing, and automated handling, among other capabilities. Over the past few years,

"visibility of data has become paramount and invaluable to effective supply chain management," Morrison says.

To that end, Taylored Services has implemented several solutions, such as mesh network technology that provides real-time asset tracking. Magnetic tags placed on each container show where on the property the containers are located. The tags also serve as security alarms, sounding alerts if anyone tries to tamper with the containers.

#### **BRINGING IT ALL TO THE TABLE**

In its Chino, California, facility, Taylored Services is leveraging robots to handle some e-commerce processing. "The robots have proven to boost productivity," Morrison says. In addition, Taylored Services can add to its fleet to handle spikes in orders. The company will also be introducing robots to its Savannah, Georgia, location.

Many members of Taylored Services' management team bring deep experience in retail, wholesale, and omnichannel distribution to their positions. "Most within our leadership team worked on the other side of the table," Morrison says. "We understand what it's like to run retail businesses, and partner with our clients to help manage their supply chains."

As logistics and supply chain management continues to accelerate and change, Taylored Services will lead by continuing to provide timely, efficient service and by maintaining its customer focus. "We take pride in fostering lasting, thriving partnerships that enable our customers to reach their goals," Morrison says. ■





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### NEXT WEEK, NEXT DAY, NEXT HOUR: HOW TO MEET EVER-INCREASING CUSTOMER DEMANDS

*Offered by DHL Supply Chain*

Learn how changing consumer behaviors have impacted the retail supply chain in this episode of the DHL Supply Chain All Business. No Boundaries.™ podcast, recorded live at RILA LINK 2022. The podcast features a conversation with Brian Bobigian, VP Supply Chain, Ulta Beauty; Bill Best, VP Supply Chain, REI; Carl Weaver, Senior Director of Logistics, 7-11; John Barbee, Partner, McKinsey & Co.; and Chris Blickhan, VP Retail & eCommerce, DHL Supply Chain.

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## WHITEPAPERS



### KENCO RELEASES E-COMMERCE CONSUMER SURVEY RESULTS

*Offered by Kenco*

Kenco's survey offers insights into how consumers purchase products and services online. Will the surge in e-commerce buying subside along with the pandemic, or have shopping preferences changed permanently? What percentage of the public regularly shops online? Does this cause conflicting feelings between the desire for a quick turnaround while preferring sustainable practices? Download this free report to see the results.

[bit.ly/KencoMar22SCI](https://bit.ly/KencoMar22SCI)



### HOW TO GROW YOUR 3PL AND WIN CUSTOMERS FOR LIFE

*Offered by Deposco*

Do you spend hours every day onboarding new clients, chasing down inventory and wading through contracts to find billing answers? See how to redeploy those resources into revenue-generating activities, like services tailored by client and self-serve billing and order tracking. This guide shows how 3PLs have cut the billing cycle by 35%, increased shipping volume by 63%, and boosted labor efficiency up to 60%.

[bit.ly/DeposcoMar22SCI](https://bit.ly/DeposcoMar22SCI)



### 3PL THIRD-PARTY LOGISTICS WAREHOUSE BENCHMARK REPORT

*Offered by 3PL Central*

Using aggregated responses from logistics professionals who own or operate third-party logistics warehouses, this report provides insight on industry-specific topics including analysis of best practices for growth opportunities, the labor shortage, technology integration, and trends 3PLs need to know to remain competitive.

[bit.ly/3PLCentNov21Eb](https://bit.ly/3PLCentNov21Eb)



## WHITEPAPERS



### TOP 5 WAYS SELF-DRIVING FORKLIFTS PROVIDE A COMPETITIVE EDGE

*Offered by Vecna*

Self-driving forklifts are creating more profitable operations and providing warehousing, manufacturing, and distribution facilities a competitive edge. Download this valuable whitepaper to explore the top 5 key advantages of driverless forklifts. Find out how they are helping companies address today's common industry problems and preparing facilities for future success.

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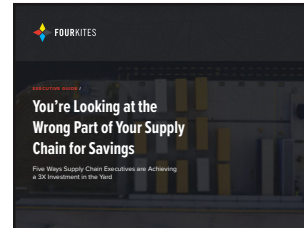


### HOW AUTOMATION EQUIPS WAREHOUSES

*Offered by Inbound Logistics*

To meet consumer demand, warehouses and fulfillment centers are turning to automation and robotics—and today, the solutions are more affordable and flexible. In this digital edition, you'll also see how supply chain education can advance your career, get 9 steps to safeguard your digital supply chain, and more.

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### 5 WAYS YARD MANAGEMENT SYSTEMS GENERATE ROI

*Offered by FourKites*

Supply chain budgets have been updated, revised, and revised again in the wake of global supply chain disruptions. You may notice a trend emerging: a significant increase not just in the cost to secure capacity, but the cost of holding on to assets for too long as well. This whitepaper discusses why reining in the high costs of facility operations is a necessary part of any executive's supply chain strategy.

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## PODCAST



Professor Farzad Mahmoodi

### MITIGATION STRATEGIES TO MEET SUPPLY CHAIN CHALLENGES

*Guest: Professor Farzad Mahmoodi, Clarkson University*

The lasting impact of the global pandemic continues to reverberate throughout the industry. Companies face daily challenges to their supply chain efficiencies and are often forced to adapt quickly to try and enact effective mitigation strategies. With few signs of an immediate return to pre-pandemic normality, how can businesses best position themselves for success? Professor Farzad Mahmoodi of Clarkson University shares his expert advice.

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## IN THIS SECTION: 3PLs

### 3PLs

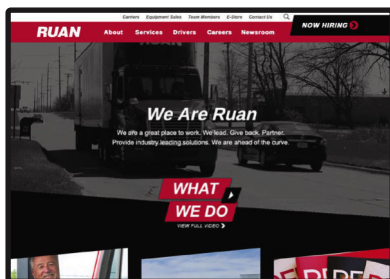
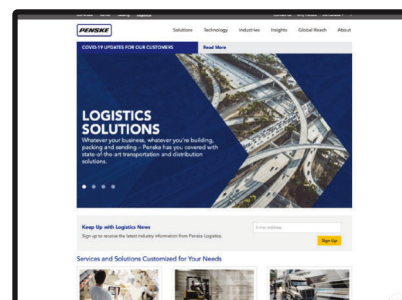


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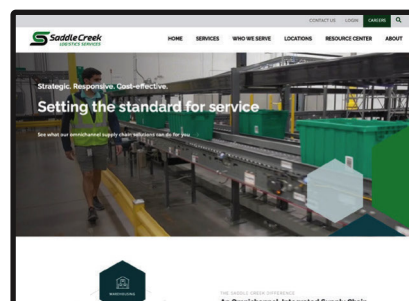


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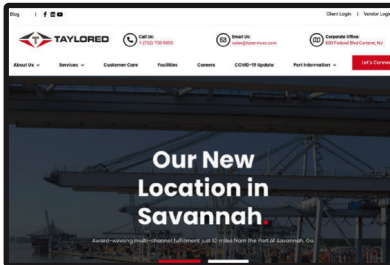
#### SADDLE CREEK LOGISTICS SERVICES • [www.sclogistics.com](http://www.sclogistics.com)

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



IN THIS SECTION:  
3PLs - Intermodal

## 3PLs

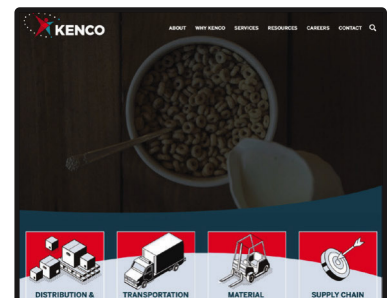
TAYLORED SERVICES • [www.tayloredservices.com](http://www.tayloredservices.com)

At Taylored Services, we look at your business as if we were a box moving through your supply chain. Our goal: to provide a comprehensive array of fulfillment services that best fits your business needs. Award-winning retail experts. Strategically located bi-coastal facilities. Expertise in wholesale and retail distribution. Best-in-class systems and technology. A full range of services including drayage management, transload, DC bypass, crossdock, case distribution, unit fulfillment, and value-added distribution solutions (repacking, reticketing, point of purchase, display assembly, inserts and labeling, returns). Visit [www.tayloredservices.com](http://www.tayloredservices.com) or contact [sales@tps-services.com](mailto:sales@tps-services.com)

## E-COMMERCE

KENCO • [www.kencogroup.com](http://www.kencogroup.com)

Adding value to your bottom line? That's the mission of Kenco. For more than 50 years, Kenco has guided some of the most demanding supply chains in the world. Kenco's convergence approach can help you streamline your supply chain and bring a greater return on assets and investments. Kenco invites you to visit this website so that you might get to know its services. Then, contact Kenco so that you might truly understand its unique strategic advantages.



## FREIGHT PAYMENT/AUDIT SERVICES

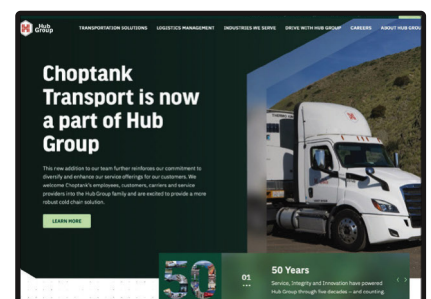
CTSI-GLOBAL • [www.ctsi-global.com](http://www.ctsi-global.com)

Since 1957, CTSI-Global has developed industry-leading supply chain management expertise and technology. Shippers and 3PLs manage their global supply chains through CTSI-Global's transportation management system, business intelligence solutions, freight audit and payment, and consulting services. Partnering with one expert provider for all your logistics needs ensures seamless integration to eliminate redundant processes and costs while providing the visibility you need. CTSI-Global is your link to supply chain solutions.

## INTERMODAL

HUB GROUP • [www.hubgroup.com](http://www.hubgroup.com)

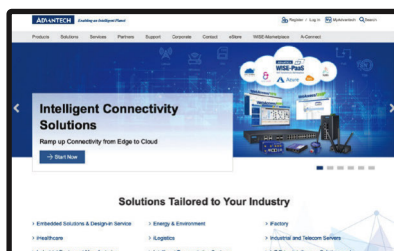
Hub's extensive service network—built over many years—enables it to provide innovative transportation solutions that are versatile, flexible, and designed to deliver maximum efficiency. With this advantage, Hub Group is able to collaborate with customers daily to help them meet their transportation challenges.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





## IN THIS SECTION: Logistics IT

### LOGISTICS IT

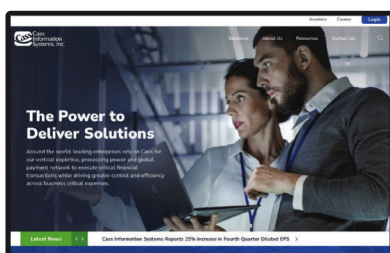
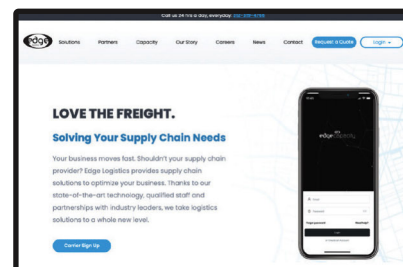


#### ADVANTECH • [www.advantech.com](http://www.advantech.com)

Advantech's corporate vision is to enable an intelligent planet. The company is a global leader in IoT intelligent systems and embedded platforms. To embrace the trends of IoT, big data, and artificial intelligence, Advantech promotes IoT hardware and software solutions with the Edge Intelligence WISE-PaaS core to help business partners and clients connect their industrial chains. Advantech is also working with business partners to co-create business ecosystems that accelerate the goal of industrial intelligence.

#### CAPACITY BY EDGE LOGISTICS • [www.edgelogistics.com](http://www.edgelogistics.com)

CAPACITY is a freight-matching platform providing an easy, accessible way for Edge Logistics carriers to book and bid on loads, view shipments, process payments and much more. With its simple, user-friendly interface, CAPACITY speeds up carriers' booking and bidding processes, giving you the time to focus on your business.



#### CASS INFORMATION SYSTEMS • [www.cassinfo.com](http://www.cassinfo.com)

Cass is the nation's oldest and largest provider of freight bill payment, audit, and rating services. We offer a wide array of services for processing and paying freight bills, as well as our industry-leading Internet reporting service, CassPort. In business since 1906, and providing freight payment services since 1956, Cass continues to offer stability, security, and expertise in the freight audit, payment, and information market.

#### CT LOGISTICS • [www.ctlogistics.com](http://www.ctlogistics.com)

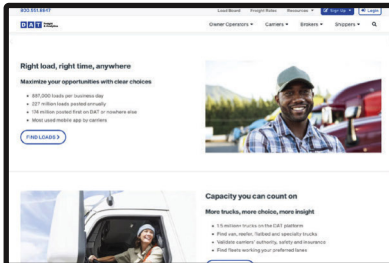
Since 1923, organizations have leveraged CT Logistics to provide global freight audit and payment and transportation management solutions. Partner with CT to design and implement customized supply chain and rate management solutions. CT's Business Intelligence platform provides global spend visibility and data analysis using SOCII and ISO 9001:2015 certified processes. Services also include: Shipment Execution, Bid Management, Shipment Planning and Execution Software, and Professional Services for consulting and advising.



## IN THIS SECTION:

## Logistics IT

## LOGISTICS IT

**DAT • [www.dat.com](http://www.dat.com)**

DAT operates the largest truckload freight marketplace in North America.

Transportation brokers, carriers, news organizations and industry analysts rely on DAT for market trends and data insights derived from 249 million freight matches and a database of \$110 billion of market transactions.

**ECHO GLOBAL LOGISTICS • [www.echo.com](http://www.echo.com)**

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

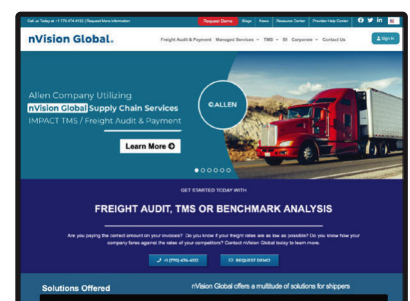
**FORTIGO • [www.fortigo.com](http://www.fortigo.com)**

Fortigo's team of experts specializes in logistics optimization and enterprise web-based software. For companies seeking to reduce costs, improve customer satisfaction, and increase profitability, Fortigo automates, optimizes, and audits logistics decisions. Fortigo plugs into established supply chain applications and provides rapid return on investment by optimizing and deploying closed-loop logistics processes, minimizing ship-to-order times and streamlining collaboration with logistics providers.

**nVISION GLOBAL TECHNOLOGY SOLUTIONS  
[corporate.nvisionglobal.com](http://corporate.nvisionglobal.com)**

nVision Global is an industry leader in providing configurable logistics services and solutions for customers around the world, enabling them to optimize their supply chain and gain access to critical data. We offer a full suite of logistics services and solutions that allow for end to end shipment and supply chain management and visibility.

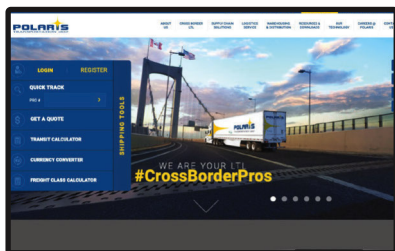
Our solutions include a global, multi-modal TMS application, international freight audit and payment, loss & damage/overcharge/service failure claims management, as well as industry-leading logistics analysis solutions.



## IN THIS SECTION:

## Logistics IT

### LOGISTICS IT

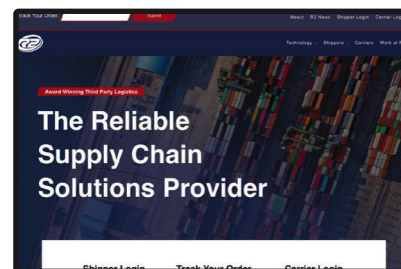


#### POLARIS TRANSPORTATION GROUP • [www.polaristransport.com](https://www.polaristransport.com)

Polaris Transportation Group is best known for scheduled LTL service between Canada and the United States. Polaris specializes in the shipment of dry goods. But it also has developed complementary transportation services including: specialized movement of trade show displays and exhibits, third-party cross-border and domestic freight management, cross-border and domestic intermodal service, expedited ground and air service, and global air and ocean freight forwarding.

#### R2 LOGISTICS • [www.r2logistics.com](https://www.r2logistics.com)

Founded in 2007, R2 Logistics is a national provider of transportation services and logistics solutions. As a third-party logistics (3PL) company, we provide access to thousands of contracted transportation providers. With offices located across the United States, we are able to provide your company with any possible over-the-road shipping need nationwide, including Mexico and Canada. Backed by game-changing technology and our culture for Reliable Service and Relentless Passion, we've built a strong reputation as an industry leader.

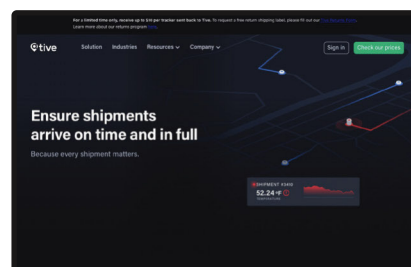


#### SMC<sup>3</sup> • [www.smc3.com](https://www.smc3.com)

SMC<sup>3</sup>—the leading provider of freight transportation technology data and solutions—delivers the only integrated suite of intelligent technology data solutions geared toward the less-than-truckload and truckload industries. As a leader in both transportation software innovation and supply chain education, more than 5,000 North American shippers, carriers, logistics service providers and freight-payment companies rely on SMC<sup>3</sup>'s sophisticated LTL base rates, content, and expert bidding tools to make the best business decisions, achieve higher returns on their transportation investments, and meet the dynamic demands of the market.

#### TIVE • [www.tive.com](https://www.tive.com)

Tive is a leading provider of real-time supply chain visibility insights that help logistics professionals actively manage their in-transit shipments' location and condition. With Tive, shippers and logistics service providers (LSPs) eliminate preventable delays, damage, and shipment failures.

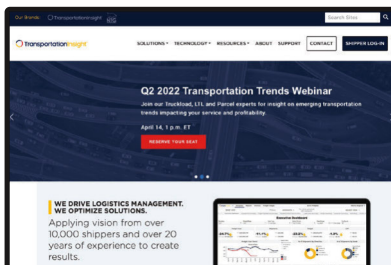




## IN THIS SECTION:

## Logistics IT - Warehousing

## LOGISTICS IT

TRANSPORTATION INSIGHT HOLDING COMPANY  
[www.transportationinsight.com](http://www.transportationinsight.com)

Transportation Insight Holding Company (TI Holding Company) is the parent company of industry-leading 3PL logistics providers Transportation Insight (TI) and Nolan Transportation Group (NTG). TI Holding Company brings over two decades of multi-modal expertise and technology to the logistics industry and ranks amongst North America's top 10 largest logistics companies.

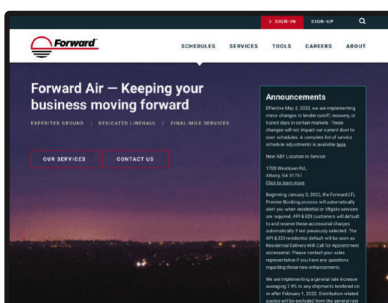
## TRANSPORTATION

LYNDEN • [www.lynden.com](http://www.lynden.com)

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



## TRANSPORTATION MGMT/FREIGHT MGMT

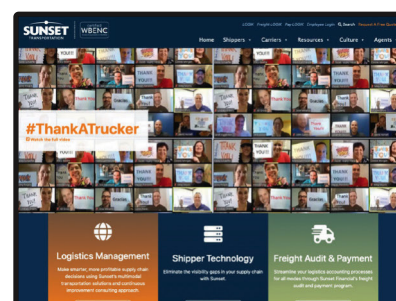
FORWARD AIR • [www.forwardair.com](http://www.forwardair.com)

Since 1990, Forward Air has been a leading provider of ground transportation and related logistics services to the North American air freight and expedited LTL market. We offer surface shipping on an accelerated "time-definite" basis, delivering cargo at a specific time, but under less time-sensitive situations—supplying you with a cost-effective, reliable alternative to air transportation. We work with companies of all sizes to develop tangible advantages and build the best products to meet your specific needs.

## WAREHOUSING

SUNSET TRANSPORTATION • [www.sunsettrans.com](http://www.sunsettrans.com)

Sunset Transportation isn't just another 3PL. We are driven by the right-size fit for each business, using all levels of global and domestic supply chain resources and services. Our culture allows customers to feel like family, while offering advanced TMS solutions, reporting, and shipment reliability. Our approach is simple: through analysis of historical shipping data, we identify opportunities for optimization, service improvement, and technology enhancements. All this is done with five promises we make to every customer, every day: savings, visibility, data-driven decisions, continuous improvement, and relationships. Sunset is the right size 3PL for your growing business.



[IN FOCUS]

# INBRIEF

## New Services and Solutions

### >TRANSPORTATION



> **Atlas Air**, a subsidiary of Atlas Air Worldwide Holdings, and **Cainiao Network**, the logistics arm of Alibaba Group, increased capacity on routes between China and the Americas by adding a Boeing 747-8 freighter under a long-term agreement. The new aircraft enters service for Cainiao in the second quarter of 2022, linking China with the United States, Brazil, and Chile.

> **Dimerco** introduced an air and road solution via the United States for China-to-Mexico shipping. The door-to-door solution uses Dimerco's direct freighter service from China into the United States and combines it with bonded trucking service that transports cargo directly to the international airport in Mexico that is closest to the consignee.

> **Sea Lead Shipping** launched the Sino Australia Express service to connect ports in China directly to ports in Australia. The weekly service from Sea Lead marks its first entry into the Australian market and is served by six ships with an average

> The Infinity ASRS solution from **OPEX** is a goods-to-person warehouse automation technology designed for companies handling micro-fulfillment, omnichannel distribution, store replenishment, and e-commerce operations. The Infinity solution features an interlocking system to store totes and wireless Infinity iBOT robotic vehicles that access inventory and port stations.



capacity of 3,900 TEUs. The ships will be deployed in a vessel-sharing agreement partnership between Sea Lead, Pacific International Lines, T.S. Lines, and Yang Ming.

> **ZIM Integrated Shipping Services** updated its Asia-Pacific Northwest and Asia-East Mediterranean services. The Asia-Pacific Northwest is served by a new loop called ZIM North Pacific which calls on Kaohsiung, Yantian, Ningbo, Shanghai, Pusan, and Vancouver. The Asia-East Mediterranean is served by a new loop called ZIM Med Premium Service, which calls on Pusan, Qingdao, Ningbo, Shanghai, Da Chan Bay, Port Kelang, Haifa, Ashdod, Istanbul, Yarimca, and Xiamen.

### >SERVICES

> **DHL** opened a facility in St. Petersburg, Florida, its second facility in the Greater Tampa Bay region, to enable faster shipment processing. The new facility addresses increasing B2C and B2B e-commerce shipment volumes by splitting volume with the company's other facility in Tampa to boost service for customers across Tampa, St. Petersburg, and Clearwater, and enable first deliveries to go out for delivery 30+ minutes earlier.

> **East Coast Warehouse & Distribution**, a temperature-controlled logistics provider to the food and beverage industry, is building a new facility located near the Port of Baltimore in the Tradepoint Atlantic Logistics

Center at Sparrows Point. Expected to be complete in June 2022, the temperature-controlled facility offers 175,000 square feet of warehousing space on nearly 18 acres of land.

> **DSV** opened a 1-million-square-foot-plus warehouse near Copenhagen, Denmark. The new warehouse includes DSV's largest AutoStore installation—an automated storage and picking solution utilizing robotics—as well as certified cooling and freezing facilities for products with stringent storage requirements.

> **Hellmann Worldwide Logistics** introduced a new e-commerce service facilitating order fulfillment for international businesses seeking to enter the U.S.

market without the need for a domestic fulfillment center or storefront presence. Utilizing the new informal Type 86 customs entry that enables importing of merchandise valued up to \$800, the solution allows manufacturers of fashion apparel and fast-moving consumer goods to leverage the freight forwarder's network.

> **Performance Team – A Maersk Company** is opening a cold storage facility in Houston, Texas, to serve imports and exports. Scheduled to open in August 2022, the facility will feature a 90-foot loading dock that is temperature-controlled and protected from the elements—a design that was based on customer input and supports the handling of frozen and fresh commodities.

> **Trailer Bridge** opened a logistics branch in Kansas City to expand its reach into the central parts of the United States. The new location offers end-to-end supply chain solutions for shippers and provides intermodal and drayage options.

> **Armstrong Commercial Services** constructed a 116,000-square-foot warehouse facility on Gulf Bank Road in Houston, Texas. The new facility, which is a designated pick-and-pack location, allows the asset-based provider to minimize supply chain disruptions for clients across the West and Midwest.

## >PRODUCTS

> **GMR Safety's** new Powerchock e-commerce vehicle restraint system secures different types of vehicles at the loading dock, including semi-trailers, straight trucks, and delivery vans. The new solution secures the rear wheel of the vehicle and helps prevent accidents in the dock area, including unexpected departures and trailer creep.

> **ORBCOMM**, a provider of Internet of Things (IoT) solutions, launched its CT 3500 IoT telematics device, which tracks refrigerated containers and their cargoes, enabling visibility into containerized assets and shipments. Users get remote, two-way control of reefers to monitor critical parameters and adjust settings.



> TruckWings—**TruckLabs'** flagship product, now on its third generation—is an aerodynamic system that fits class 8 tractors from Kenworth, Freightliner, International, Volvo, and Peterbilt. When a truck hits highway speeds, TruckWings automatically deploys panels from the back of the cab to cover the tractor-trailer gap. The panels automatically retract at slow speeds, allowing for trailer clearance in turns.

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## INBRIEF

### >TECHNOLOGY

> Freight carrier **Estes** launched the Pickup Visibility application to help shippers manage their freight. The solution provides detailed pickup data, with a visual progress bar that displays pickup milestones in real time, including exceptions.

> **FarEye**, a delivery management platform, unveiled new capabilities to help companies boost delivery efficiency and gain visibility into outcomes of sustainability initiatives. For example, its vehicle route planning capability lets

shippers design and plan last-mile delivery of products with a mix of green options such as cargo bikes and foot delivery.

> **Ryder System** unveiled the latest version of its visibility and collaborative logistics technology RyderShare. Initially focused on the transport of goods, RyderShare now includes a warehouse management solution for end-to-end visibility as goods move inbound on trucks to warehouses and distribution centers and outbound to their final destinations.



> The new Wilgard XT Series Guard Rail Gate from **Wildeck** increases worker safety and improves warehouse traffic flow by providing entry and exit points along guardrail systems for forklifts and personnel. It can be configured with customizable swing gate components.



**CPO summit**  
chief procurement officer

a **marcusevans** event

**May 12-14, 2022**

**Four Seasons Resort and Club Dallas  
at Las Colinas | Dallas TX**

It was a great summit with lots of new information and new trends/insights. Closely net working with many one-on-one meetings. Productive and informative.

**VP, Supply Chain  
Focus Brands**



**marcusevans**



# LEVEL UP

**2022 Conference**

Gaylord Palms Resort

Orlando | June 5-7, 2022



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Are you in sales or marketing in the logistics and transportation industry? Get recognized for doing trailblazing, mountain-moving work to grow your company! Submit for a TMSA Trailblazer award at:

[www.tmsatoday.org/recognition](http://www.tmsatoday.org/recognition)



Then, blaze a trail straight to Orlando on June 5-7 for TMSA LevelUp!, where Trailblazers unite for an Awards Party unmatched in the industry. Register today at:

[www.events.tmsatoday.org](http://www.events.tmsatoday.org)

# CALENDAR

## Logistics Events 2022

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



**JUNE  
5-7,  
2022**

ORLANDO, FL

### TMSA Logistics Marketing and Sales Conference

[bit.ly/TMSA\\_2022](http://bit.ly/TMSA_2022)

The TMSA conference provides supply chain professionals with the tools and knowledge they need to boost their marketing and sales strategies. Topics delve into public relations, advertising, generational marketing, CRM, automation, CX, and sales training.

**MAY 12-14, 2022  
DALLAS, TX**

### CPO Summit

[www.sl.cpo-summit.com](http://www.sl.cpo-summit.com)

This event brings together leading senior procurement executives and innovative suppliers and solution providers. The content is aligned with key procurement challenges and interests, relevant market developments, and practical and progressive strategies adopted by successful pioneers. Key topics include adapting your workforce post-pandemic, recruiting tactics, and how technology continues to transform procurement.

**MAY 16-18, 2022  
VANCOUVER, BC**

### World Ports Conference

[worldportsconference.com](http://worldportsconference.com)

This event assesses the indispensable role ports play in global maritime trade and brings together key industry stakeholders for learning, information sharing, networking, and collaboration. The conference explores topics such as climate and energy, data collaboration, risk, and resilience.

**MAY 18-20, 2022  
VIRTUAL**

### Container Shipping Conference

[container-shipping-conference.com](http://container-shipping-conference.com)

This virtual conference brings together more than 650 senior delegates from the container, transport, and logistics industry

to probe and explore winning strategies and technologies, as well as innovations in dealing with the current and future logistics challenges of the container industry.

**MAY 22-25, 2022  
VIRTUAL or ORLANDO, FL**

### ISM World 2022

[bit.ly/ISM22](http://bit.ly/ISM22)

ISM World brings together thought leaders, supply chain and procurement professionals, and the suppliers that support them, focusing on the key topics that impact supply management professionals today and the trends coming in the future. ISM World offers a smaller, more in-depth, networking-rich, in-person experience with an opportunity to also get break-out sessions on-demand.

**JUNE 7-9, 2022  
SAN DIEGO, CA**

### GS1 Connect

[gs1connect.gs1us.org](http://gs1connect.gs1us.org)

Recharge your "adaptability batteries" with your network to share stories of trials and triumph. Learn how your peers have adapted to overcome challenges in order to thrive in uncertain times—with GS1 Standards at the heart of their strategy. This two-day conference highlights user stories and leadership insights for supply chain optimization. Share and learn with live sessions, networking opportunities, trading partner roundtables, and more.

**JUNE 27-29, 2022  
SAN DIEGO, CA**

### Connections 2022

[smc3connections.com](http://smc3connections.com)

Connections 2022, an SMC<sup>3</sup> event, explores emerging trends, current challenges, and innovations in today's modern, complex supply chain. Industry experts and thought leaders dissect the current state of the industry and provide predictions for the remainder of 2022. This one-of-a-kind experience blends informative panels and keynotes with ample networking opportunities.

**JULY 15-16, 2022  
FORT WAYNE, IN**

### Expedite Expo

[expediteexpo.com](http://expediteexpo.com)

People from all over North America learn about the newest expedite trucking industry news, equipment, career opportunities, and products geared specifically to expedite owner-operators and drivers. Dedicated workshops meet the needs of every type of attendee, whether a fleet owner, owner operator, someone looking to get into the industry, a CEO, or a driver.

**AUG 31-SEPT 1, 2022  
PHILADELPHIA, PA**

### Home Delivery World

[bit.ly/HomeDelivery22](http://bit.ly/HomeDelivery22)

This conference and exhibition for global last-mile logistics is dedicated to uncovering innovative solutions for retailers, grocers, CPGs, and 3PLs facing challenges across the supply chain, from warehousing to

fulfillment. Covering everything from route optimization and reverse logistics to grocery delivery, parcel spend, and white glove service, this is the premier event for the e-commerce retail supply chain.

**OCT 7-8, 2022  
VIRTUAL**

### Supply Chain Digitalization 2022

[supplychain-conference.com](http://supplychain-conference.com)

The Supply Chain Digitalization Conference creates opportunities to boost profitability and sharpen strategies to maximize efficiency in supply chain transformation. The conference brings together the supply chain, transportation, and logistics sectors under one roof.

**OCT 10-12, 2022  
CHICAGO, IL**

### Parcel Forum

[parcelforum.com](http://parcelforum.com)

Join parcel shipping and distribution supply chain professionals to learn how to better streamline your warehousing operations and delivery models to remain competitive in an evolving landscape. Learn how to ship more packages, more cost effectively, as the industry undergoes tremendous change, largely driven by e-commerce and growing customer demand.

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



# Why Should You Attend Connections 2022?

**C**onnections 2022, an SMC<sup>3</sup> event, offers collaborative supply chain intelligence, covering the year's most pertinent topics and trend forecasting for the rest of the year.

Take a second to think about everything that's changed in the supply chain over the past two years. Dramatic changes in automation, driver shortages, dynamic pricing, new legislation and regulations, digital insights, final mile, e-commerce—just to name a few. Does your company have a strategy for continuous acclimatization for the rest of 2022 and beyond? The supply chain is on the cusp of a bold new future and SMC<sup>3</sup>'s Connections 2022 supply chain conference is where you can prepare to meet it head-on.

This year, Connections 2022 takes place in sunny San Diego, California, June 27-29, and is aimed at helping constituents across the industry keep up with the rapid developments within the supply chain ecosystem. Even as the effects of the pandemic continue to normalize in coming years, more changes are right around the corner—and preparing for them will be critical to securing your place in the industry.

## CONNECTIONS 2022:

### WHAT WILL YOU LEARN?

Everyone involved in the supply chain needs a bigger toolset, deeper insights, and an open mind to tackle what's coming next. Connections 2022 brings together shippers, carriers, 3PLs, and supply chain thought leaders to dissect a wide range of topics that will shape shipping and logistics for the remainder of 2022 and beyond.

This year's sessions and keynote speakers have something for everyone, including topics like:



- Current supply chain trends, challenges and opportunities, and best practices to help navigate the “new normal.”
- Regulatory and administration priorities that are shaping today's supply chain and how they affect the world of freight.
- Leveraging relationships with 3PLs to better serve customers and uncover new growth avenues.
- Leadership and diversity in the supply chain. How is the supply chain evolving? How can you support those changes professionally?
- How carriers and shippers are keeping up with the e-commerce boom. Consumer shopping trends have pushed the supply chain industry to rethink and redefine their final mile and reverse logistics strategies.
- How dynamic pricing is shaping LTL contracts. Technology is revolutionizing how LTL shippers and carriers navigate pricing and annual contracts.
- Automation, big data, AI, and the

efficiencies and insights they offer. Data doesn't belong in spreadsheets anymore. Learn how huge amounts of data and analytics can help carriers improve efficiency and shippers make better choices.

- Dealing with driver shortages and attracting new blood. Openings for drivers skyrocketed in 2020. What will it take to fill those crucial positions?
- The effects of infrastructure legislation on the freight industry and when we might see them in action on U.S. highways. How long will it take, and what could new funding and regulations mean for your company?

Connections 2022 is your expert resource for networking, gathering insights, and helping your business be more successful. This industry-leading, supply chain-focused event will help you take on the challenges and opportunities that lie ahead in 2022. ■

**Don't miss your chance to join this exclusive event. Learn more about the event and register today at:**  
[www.smc3connections.com](http://www.smc3connections.com)

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### 3PLs

#### Alliance Shippers

[alliance.com](http://alliance.com)

#### Echo Global Logistics

[echo.com](http://echo.com)

#### Hub Group

[hubgroup.com](http://hubgroup.com)

#### Kenco

[kencogroup.com](http://kencogroup.com)

#### Penske

[penskelogistics.com](http://penskelogistics.com)

#### Polaris Transportation Group

[polaristransport.com](http://polaristransport.com)

#### R2 Logistics

[thebest3pl.com](http://thebest3pl.com)

#### Sunset Transportation

[sunsettrans.com](http://sunsettrans.com)

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# DRONES: READY FOR TAKEOFF

The latest drone innovations include wind farm duty, last-mile stints, and an end-to-end middle-mile cargo system.

## END-TO-END AIR CARGO SYSTEM

California Bay Area-based **Elroy Air** is building the first end-to-end autonomous vertical take-off and landing aerial cargo system and has a major partner in the endeavor: FedEx Express.



FedEx Express will develop plans to test Elroy Air's Chaparral autonomous air cargo system within the company's middle-mile logistics operations, moving shipments between sortation locations. FedEx and Elroy Air will begin flight testing in 2023.

Elroy Air launched its Chaparral autonomous aircraft in January 2022. The Chaparral aircraft is an electric vertical take-off and landing (eVTOL) aerial cargo system that can autonomously pick up 300 to 500 pounds of cargo and deliver it by air up to 300 miles.

## SAILING INTO THE WIND

German drone manufacturer **Wingcopter** signed a deal for its aircraft to be used in offshore deliveries. The Zeitfracht Group and its subsidiary German Airways ordered 17 Wingcopter delivery drones and signed an option to purchase another 115 until 2023. The aircraft will take flight in 2024, delivering spare parts to wind farms.

German Airways selected the aircraft because of its wind- and weather resistance and payload-to-range ratio. Wingcopters can carry a payload of up to 11 pounds, covering distances between 46 and 68 miles. Relying on electric propulsion, they take off vertically, without additional infrastructure, and then move forward horizontally in flight like conventional aircraft.

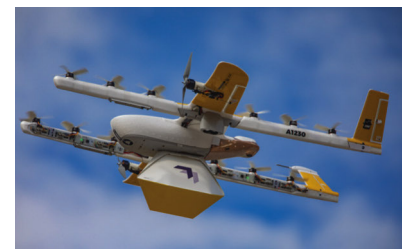


Source: TechCrunch

## LAST-MILE HIGH

Last-mile drone delivery in the United States is gaining ground. Two drone companies—Israel firm **Flytrex** and Alphabet subsidiary **Wing**—have both recently launched drone delivery services in the Dallas-Fort Worth area. Flytrex started operating outside of Granbury, Texas, while Wing added two towns—Frisco and Little Elm—in the Dallas-Fort Worth metroplex.

Using an app, customers can select small items, from first-aid kits to baked goods from the drone makers' retail partners, for delivery to their homes. The Flytrex drones can carry up to 6.6 pounds (say, a family dinner of burgers and drinks) while Wing's drones can carry up to 3.3 pounds (e.g. over-the-counter medicine from its largest U.S. customer, Walgreens Boots Alliance).



Wing, a unit of Google parent Alphabet, started drone deliveries in the Dallas-Fort Worth area on April 7, 2022.



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