

DECEMBER 2020

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# Info **SNACKS**

BITE SIZED SUPPLY CHAIN/LOGISTICS INFORMATION

“If there’s a cargo van out there, we’re trying to buy it.”

—Brendan Keegan, chief executive officer at Merchants Fleet, which provides vehicles to package delivery companies such as FedEx and UPS. Delivery companies are experiencing a van shortage, driving an unexpected cost squeeze that’s cutting into profits during a record surge in package volumes.



PHOTO: RANDOM RETAIL-BEST BUY



**+175%**

Growth in Best Buy’s Q3 digital sales, which benefited from the retailer’s online and omnichannel shopping options. Best Buy CEO Corie Barry attributes the spike in sales to the company’s “unique capabilities, including our supply chain expertise.”



“We’re going to be able to respond in this instance better than we did in the first half of the year, although we’re still—as a total supply chain—stressed in some places.”

—Walmart chief executive officer Doug McMillon, discussing shortages of high-demand items as consumers embark on another round of panic-buying while COVID-19 surges and states curtail economic activity.

## BLACK FRIDAY WINNERS & LOSERS

Shopper trips to brick-and-mortar stores on Black Friday dropped off significantly, down 52.1% from 2019. Online sales, meanwhile, hit a new record at \$9 billion, up 21.6% from 2019. With many retailers opting to close on Thanksgiving Day, physical traffic on the holiday fell nearly 95%.

—SENSORMATIC SOLUTIONS, ADOBE ANALYTICS



## ONE BILLION DOLLARS

The amount of money U.S. companies importing from China could be missing out on in refunds via Section 301 tariff exclusions. The deadline is approaching for companies to collect Chinese tariff relief. With two-thirds of Chinese imported goods subject to 301 tariffs, businesses may be leaving a fortune on the table if they don’t take action.

—C.H. Robinson



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*Sustainable food innovations are hitting the shelves*



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Buddha Brands, a provider of plant-based food and beverage products, has seen tremendous growth. To keep pace with omnichannel expectations, the company used TrueCommerce's platform to achieve a more robust integration between its electronic data interchange solution and enterprise resource planning system.



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*This was a year like no other. We take a look back.*

# LINKS

DECEMBER 2020



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### CREATING A SMART ASSET-TRACKING SOLUTION FOR PALLET MONITORING

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### OPTIMIZING COLD CHAIN FOR VACCINE DELIVERY

When will a COVID-19 vaccine be ready, and how will it be distributed? Those questions are on everyone's mind. A successful global vaccination requires a sophisticated approach. Leveraging these supply chain strategies and new technologies can optimize the process.  
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# CHECKING IN

## Think Big, Act Small



Keith Biondo, Publisher

Business disruption is creating disproportionate opportunity for mid-size forwarders, logistics solutions providers, and 3PLs. The maxim “He who is closer to the customer wins” is in play here.

Says who? A recent survey by Barclays/BOD on the state of logistics confidence levels finds that “larger companies have generally found things more difficult than smaller ones, despite being more likely to benefit from a more diverse customer base, as they may have

found it harder to adapt quickly to the changing market.”

Reasons are threefold: 1) COVID-19 relationship disruption, 2) the explosive growth of e-commerce, and 3) the reconfiguring of global supply lines. Those trends bring customer service front and center.

You might think that, given their size, scope, and available resources, large multi-national forwarders and providers hold the advantage over mid-size solutions providers. Not in this business climate, say some observers.

Inertia of the huge is a disadvantage. Large players are not as agile, and therefore much slower to react to the moving target of this minute’s customer requirements, is the thinking. Smaller providers position themselves as high-touch, with more personal service. Keeping in constant contact with customers, when many work in a distributed personal environment, leverages the human side of business relationships.

Rapidly evolving technology and visibility offerings undercut legacy IT investments and prices have come down for many solutions. That leaves an opening for mid-tier forwarders and providers to adopt newer and cheaper logistics technology solutions.

Is smaller better? You might get a different perspective from sector gargantuans, but consider that monster XPO recently announced its intention to split the company into two smaller entities—one dedicated to outsourced warehousing, essentially contract logistics solutions, and the other to truck brokerage and LTL shipments.

Was XPO’s move in recognition of the need to be more agile and responsive to ever-evolving customer service demands? No, it is to recognize stock market demands, says CEO Brad Jacobs, who reasons that the stock market value of pure-play companies is greater than “a complex company.” Is the stock market recognizing the reported trend toward smaller, and valuing companies accordingly?

One thing is certain. This past year painfully taught many enterprises they need to diversify suppliers, supply chain solutions providers included. Laying off your supply chain needs on several smaller providers inoculates you against further business disruption.

What’s your take? Do smaller logistics solutions providers have the upper hand in this COVID-created business environment? Or are huge multi-nationals doing just fine, or at least as good as everyone else? Let us know: [editor@inboundlogistics.com](mailto:editor@inboundlogistics.com) ■

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# GOODQUESTION

Readers Weigh In

## What supply chain adjustment would you have made at the start of 2020 if you knew then what you know now?



**Focus on agile processes** for managing my supply chain with an emphasis on digitization, instrumentation, and end-to-end workflow. It is important to know not only which suppliers I am dependent on, but also to be able to quickly adapt to sudden change.

—Sean Chou  
CEO, Catalytic

**Advise shippers to rethink their inventories**, create supply chain flexibility, and consider a more flexible pricing construct for their transportation. Having a supportive, transparent logistics partner to help navigate the changing landscape has been paramount.

—Doug Waggoner  
Chairman of the Board of Directors  
and CEO  
Echo Global Logistics

**Audit vendors' cybersecurity practices.** Holding all suppliers and vendors to a minimum level of NIST 800-171 security standards is a safe bet to follow. This year, attacks have hit shipping giant CMA CGM and disrupted supply chains in South Korea. Find and fix your vulnerabilities before hackers do.

—Ara Aslanian  
CEO, Inverselogic  
Advisor to LA Cyber Lab

**Prepare for the projected 100% annual growth** in e-commerce sales and omnichannel demand fulfillment. I would also explore a real-time item-level inventory solution to control safety stock levels.

—Philip Calderbank  
RFID Consultant, BSN

**Transition to e-commerce processes and operations.** Consumer behavior changed over the course of 2020, even before the pandemic, so in hindsight I'd definitely have e-commerce order management and small parcel pick/pack/ship processes designed and ready. We saw challenges in meeting demand efficiently for those not prepared.

—Don White  
CEO, SnapFulfil

**Assess current software systems and upgrade where needed to**



assure the highest level of visibility. Visibility is the key to a successful supply chain. The ability to see freight arriving at ports and borders is critical to keeping goods moving to their destinations.

—Glenn P. Clinger III  
Supply Chain Consultant  
Clinger Group LLC

Businesses with global supply chains should **invest in digital technologies and services** to support international logistics execution, tracking, planning, collaboration, and freight spend management. Over-reliance on manual processes and spreadsheets was exposed as a critical weakness in worldwide supply chains in 2020.

—Monica Truelsch  
Senior Director, Product Management  
Infor

**We would have done two things differently.** First, we would have further diversified and nearshored our supply chain, which would have enabled us to avoid any delays or interruptions in our operations due to COVID. Second, we would have implemented technology that heightened visibility into our inventory and boosted operational efficiency sooner, which would have made planning and budgeting throughout the rest of the year easier.

—Gabe Grifoni  
Founder & CEO, Rufus Labs

**I would have procured more fixed capacity** under long-term agreements. 2019 was difficult for air freight. As 2020 was expected to be similar with global economic growth slowing, we reduced our fixed capacity and relied on the spot market to meet customer demand. COVID changed everything.

—Neel Jones Shah  
EVP and Global Head of  
Airfreight, Flexport

# GOODQUESTION



## HIRING SPREE

Start hiring earlier in anticipation of the volume surge we experienced. In April, we started seeing peak season-level volumes, largely driven by the rise in e-commerce as customers complied with stay-at-home orders. Since then, DHL has created around 3,000 new jobs to accommodate this growth.

—Greg Hewitt  
CEO, DHL Express U.S.

I would have doubled down on recruiting efforts, justifying the upfront cost as a long-term investment. Labor shortages facing the industry will linger long after life returns to normal.

—Frank Granieri  
COO, Supply Chain Solutions  
A. Duie Pyle

In hindsight, I would have expanded our plans for hiring and resource allocation. Like many companies, we planned for challenging scenarios when the pandemic hit. We didn't prepare for the possibility of rapid growth, though. In 2020, we've grown our business significantly and onboarded more than 65 new employees.

—Oren Zaslansky  
CEO and Founder, Flock Freight

**Focus more on interdependencies vs. individual tasks** in supply chains. It has become clearer as systems have been pressure tested that if something goes wrong in one piece of the operation it can hold the rest hostage. You need a holistic view that lets you rebalance resources as needed.

—Lior Elazary  
CEO & Chairman, inVia Robotics

**Ensure all logistics processes are defined, documented, and robust** enough to sustain disruptions with multiple contingency plans to guarantee continuity of supply within respective supply chains. In addition, I would continue to emphasize strategic relations with carriers/suppliers to ensure the flow of goods in constrained market conditions.

—Johnathan Foster  
Principal Consultant  
Proxima Group

**Investing in business applications and technology tools** like analytics to predict sales would have helped businesses gauge supply chain shortages and inventory overstock. Leveraging data to anticipate supply and demand and adjusting production levels lowers cost and increases efficiency, which would have benefited supply chains this year.

—Pete Zimmerman  
North American Software  
Sales Manager, VAI

**Get more visibility** into the earlier parts of the supply chain. With dramatic shifts in demand patterns, having visibility into the manufacturers and real-time tracking of inbound shipments would have helped to better respond to these rapid changes in demand.

—Krishna Prasad  
Chief Customer Officer  
UST Global

**I would scout second-source suppliers** across multiple regions—lined up and ready to be activated as needed. Being able to quickly and confidently onboard new suppliers whenever a primary supplier faces a lockdown, shortage, or cannot move goods across a border, is priceless to help you ensure robust delivery capability.

—Enno Lueckel  
VP, scoutbee

One adjustment: Given the pandemic and its impact on human capital, a strong investment in **automating processes and reducing human dependencies.**

—Gabriel Ruz  
Co-founder, Magaya Corporation

**Make sure operations teams are ready to adapt** with any change that could happen within the warehouse. Communication is key throughout any organization to allow for change—big or small. Preparing for change is just the start when it comes to overcoming unforeseen challenges.

—Jeff Huerta  
Senior Vice President, Sales  
Vecna Robotics

**I would have suggested that warehouses increase safety stock.** Supply chains were pushed to be lean, stripping out as much safety stock as possible to satisfy misguided business measures, but the pandemic has demonstrated that running our supply chains "too lean" is a mistake.

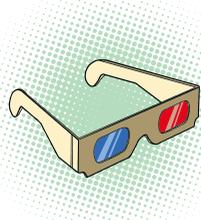
—Guy Courtin  
Head of Global Alliances  
6 River Systems

## Have a great answer to a good question?

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

If you were writing a book about supply chain management in 2020, what would you call it?

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



[INSIGHT]

# DIALOG

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## Quick TIP

Now is the time to reevaluate your supply chain network in preparation for a post-COVID world: Think faster, more agile, more efficient, and more sustainable.

—Neil Wheeldon

Vice President Products, BridgeNet Solutions

### Re. August Good Question: What's the most significant way COVID-19 has changed the supply chain?

[bit.ly/COVID\\_GoodQuestion](https://bit.ly/COVID_GoodQuestion)

The COVID-19 pandemic has prompted rapid shifts in culture, technology, spending habits, and workplace safety—evolutions that would normally take years. The biggest takeaway in 2020 is that both retailers and consumers must expect the unexpected, and be ready to adapt accordingly.

For retailers and distributors, success beyond the pandemic means being better equipped to forecast volumes, to respond to volatility in the supply chain, and to find new cost efficiencies in the face of narrowing profit margins. For many, this means identifying supply chain partners that can lower the total cost of business.

—Jeff Pepperworth  
President and CEO  
iGPS Logistics

If the uncertainty of 2020 has taught us one thing, it's that even the most reliable supply chains can be thrown into turmoil. We have worked with more and more shippers on developing alternative plans to handle current volumes and also to prepare for unforeseen future needs.

—Matt Huckeba  
COO, Spend Management Experts



### Re. How Cold Chains Can Be Optimized for the Delivery of a COVID-19 Vaccine

[bit.ly/vaccine\\_distribution](https://bit.ly/vaccine_distribution)

There is a huge potential crisis on the horizon for supply chain delivery of temperature-controlled vaccines. This has been dominating discussion recently, but pharmaceutical companies are not providing enough detail to get a handle on what is needed. I fear it is either going to be a horrible mess or, like Y2K, it will be sound and fury signifying nothing.

—Jay Johnson  
Senior Manager, Services  
Labelmaster

The role of the Internet of Things (IoT) becomes more critical when it comes to shipping and distributing vaccines, which need to be kept at certain conditions to ensure integrity. By attaching devices to shipment containers, vaccine manufacturers can get real-time insights into container conditions and shipment location so that hospitals or pharmacies can be alerted when doses arrive.

—Hussain Suleman  
VP of Sales, Sigfox USA

Beyond prioritization, identifying, tracking, and planning the distribution to target population groups will be a significant challenge. Moreover, providing security at all points of the supply chain to prevent theft or other nefarious activities will be critical.

Pfizer's vaccine requires on-site preparation and an ultra-cold supply chain at a scale that has not been seen before, presenting unique challenges in storage, distribution, and administration. It requires two doses within a set period of time. Tracking, communicating with, and compelling individuals that have received the first dose of the vaccine to come back to receive the second will be a challenge. Investment in processes, personnel, and training will be critical.

—Mike Piccarreta  
Partner, Kearney



## Fast TAKE

With UPS and FedEx heavily overloaded, getting creative with alternatives like new store options, SMS, pop-up warehouses, and microcenters could make a difference. This is the time to take some share back from Amazon while the traditional delivery mechanisms they rely on are strained. Delivery is the make or break for building customer loyalty.

—Rich Pedott  
Partner, Columbus Consulting

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# 10 TIPS

## Ensuring a Successful 3PL Partnership

With companies embracing a new normal and reimagining supply chains, many turn to third-party logistics (3PL) providers. Here's how to optimize your 3PL relationship.

### 1 KNOW WHAT YOU NEED.

*Take stock of your business and identify specific pain points so you know what to look for in a 3PL partner. Do you need help diversifying your sales channels with omnichannel and e-commerce fulfillment, flexing with changing market conditions, transitioning to a nearshoring model, or managing the increasingly complex world of reverse logistics? Also, ask how your needs may change during the next three to five years.*

### 2 CHOOSE A PARTNER WISELY.

In logistics, one size does not fit all. A good 3PL partner has the breadth of capabilities to custom design solutions that meet the unique needs of your business now and in the future, rather than try to force fit your supply chain into a prefabricated mold. Also, a 3PL with assets, such as vehicles and warehouses, can be critical to helping your supply chain adjust to seasonality or unexpected changes in the marketplace.

### 3 TALK TECHNOLOGY SOPHISTICATEDLY.

A crucial indicator of a provider's ability to help mitigate supply chain disruption is its level of technological sophistication. Does the 3PL offer real-time visibility across your supply chain, collaborative tools to prevent (rather than react to)

costly delays, and business intelligence and analytics to enable accurate decision-making? Also, consider whether a 3PL's overall commitment to investing in innovative technologies aligns with your goals for growth. Understanding this up front can avoid problems later.

### 4 SET CLEAR EXPECTATIONS, EARLY.

Defined rules of engagement are critical to the success of any partnership. Identify your exact needs and establish clear goals and objectives. Let's hope you've chosen a 3PL partner with shared values to ensure your goals and objectives align.

### 5 MEASURE PERFORMANCE.

Work with your partner to establish key performance indicators (KPIs) to measure performance and ensure

continuous improvement takes place on both sides.

### 6 GET EMBEDDED WITH YOUR 3PL.

Keep your 3PL partner close. Shippers must trust their partners with proprietary data and information in order for 3PLs to see across the entire business and determine how to drive overall supply chain efficiency. The collaboration can yield innovative solutions and unexpected benefits.

### 7 KEEP YOUR PARTNER IN THE LOOP.

Another way to get the most out of your partnership is to involve your 3PL in strategic

conversations and long-term planning, including discussions about possible acquisitions, new brands, and anything that could signal changes in volume.

### 8 PREPARE FOR THE UNKNOWN.

Supply chain disruptions—labor shortages/stoppages, technology outages, and other risks particular to your product line—can significantly affect your bottom line, so work proactively with your 3PL on disaster preparedness. Brainstorm what-if scenarios and plan for them.

### 9 COMMUNICATE REGULARLY.

With advanced technologies, dashboards, and KPIs in place, verbal communication can get lost. However, communication and collaboration are the keys to continuous improvement. Set a communication schedule and stick to it.

### 10 TRUST YOUR PARTNER.

*Your partner's success depends on your success, so you can rest assured knowing your partner's recommendations reflect your best interests.*

SOURCE: TODD SKILES, SENIOR VICE PRESIDENT, SALES & MARKETING, RYDER SYSTEM



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**Andy Person**, Cofounder, Baboon To The Moon



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# Food & Agriculture



## REIMAGINING THE FUTURE OF FOOD

The agriculture industry should consider these changes to prepare for inevitable future disruptions, a CropLife report says:

**Redesign.** An ultra-responsive supply chain is needed to keep up with changing trade policies and supply dynamics. One example: Nutella’s hazelnuts come from Turkey, its cocoa from Nigeria, and its sugar from Brazil. With global movement restrictions, Nutella may need to close facilities or source elsewhere on the fly.

**Digitize.** Companies must build digital food chains that rapidly adjust to disruptions. Much of the food industry still relies on manual processes, and this gap is more severe with a remote workforce. Visibility is critical to ensure minimal waste and help customers make informed decisions.



## RETAILERS, RESTAURANTS & GROCERS GO DIRECT

With physical retail and indoor dining halted, food brands find new ways to generate revenue by using e-commerce platforms to sell directly to consumers, says a CNBC report.

E-commerce platforms like Shopify are benefiting from stay-at-home requirements. Its stock is up 143% in 2020, and its revenue almost doubled to \$767 million in the third quarter. Other platforms, such as BigCommerce, are experiencing growth as well. Its revenue increased by 41% in the third quarter, the report says.

“My grandparents are now going to buy groceries online for the rest of their lives, which is something that never would’ve happened,” says Harley Finkelstein, president at Shopify.

Throughout the pandemic, food brands such as Heinz Ketchup, Lindt, Beyond Meat, Pressed Juicery, and Snickers—and big brands like Johnson & Johnson and Unilever—have set up online direct-to-consumer stores for the first time.

Canada’s Loblaws grocery chain started selling meal kits using Shopify. Chipotle launched a virtual farmers’ market on the platform, allowing farmers that were part of its supply chain to sell meat, grains, dairy, and other products directly to consumers across the country.

While large brands continue to join in, small businesses drive these e-commerce platforms. Whether they buy meal kits, a gift card from a local restaurant, or groceries, consumers look to support their favorite small businesses during the pandemic.

## DEMAND BREWS FOR AT-HOME COFFEE

Businesses in the coffee supply chain switch up their shipping strategies as more consumers make their coffee at home, says a ResearchandMarkets forecast. Highlights from the report include:

- Keurig Dr Pepper says its coffee machines will be in 3 million new households in 2020 compared to 2 million in any other year.

- Sales of all coffee makers, from espresso machines to Chemex pour-overs, are up 28% since the start of the pandemic.

- Sales of packaged coffee have grown faster in 2020 than in any year since Keurig machines for home use entered the market more than one decade ago.

- Because customers realized they can brew coffee at home for less than they spend at shops, Nestlé plans to release

products with a lower price tag and in bulk at a lower cost per cup.

- J.M. Smucker, which owns Folgers and makes Dunkin’ ground coffee, saw its U.S. coffee retail sales increase by 23% to \$571 million.

- The packaged coffee industry gained three years’ worth of new consumers in just seven months during the pandemic.

- Starbucks reports a 9% decrease in store sales in the Americas for its latest quarter, but benefits from higher sales of its packaged coffee.

- Dunkin’ returned to growth at its stores,



but closed hundreds of others. It plans to sell more drinks that aren’t easily made at home, such as lattes.

- The global coffee market will reach \$134.25 billion in 2024, with a compound annual growth rate of 5.32% in 2020-2024.

- The global out-of-home coffee market will reach \$29.55 billion in 2024, with a compound annual growth rate of 4.94% in 2020-2024.

- The market will experience surging e-commerce retail sales and technological advancements.

# \$134.25 BILLION

The anticipated size of the global coffee market by 2024. —ResearchandMarkets.com

**“IT’S A MISCONCEPTION THAT PEOPLE GO HUNGRY BECAUSE WE DON’T GROW ENOUGH FOOD. THE ISSUE IS INTERMITTENT SUPPLY AND AN INABILITY TO CONVERT PERISHABLE ASSETS INTO ECONOMIC VALUE.”**

—James Rogers, Founder and CEO, Apeel



## CLEANING UP FOOD WASTE

Nearly 25% of fruits and vegetables are lost globally, and North America is among the regions with the highest level of food waste, CNBC reports. With food markets and plants becoming hot spots for COVID-19 outbreaks, access to food has become more challenging, making food waste prevention even more critical for the agriculture and food sectors.

Apeel, a food science startup, launched a solution to help small-scale farms waste less and get more of their crops to market. The company makes natural coatings that extend the shelf life of produce such as avocados, apples, and lemons. It raised \$30 million in new funding from investors, and plans to expand globally.

The industry norm is to coat produce in wax to achieve a glossy finish and provide short-term preservation. Apeel’s new water-based coating is extracted from lipids that come from the same produce to which the coating is applied, extending shelf life by preventing oxidation and water loss.

This new solution will help establish supply chains in Sub-Saharan Africa, Mexico, Central and South America, and Southeast Asia, and will improve domestic supply chains by reducing food loss without the use of refrigeration. This gives farmers, retailers, and consumers in developing countries access to market opportunities previously out of reach without cold infrastructure or rapid transport.

Apeel’s coated produce is available in U.S. stores such as Kroger and Harps. In Europe, the produce is available in Denmark’s Salling Group and will be available in Germany’s Edeka stores.

## BLOCKCHAIN IS CROPPING UP

Largely due to growing food safety concerns, the global blockchain market in agriculture and the food supply chain is projected to reach \$948 million by 2025, a compound annual growth rate of 48.1%, according to a MarketsandMarkets report.

Blockchain technology plays a key role in keeping manufacturers, retailers, and consumers updated on the condition of their products. Food manufacturers increasingly work to detect contamination and food fraud as awareness spreads among manufacturers and retailers. Consumers also increasingly look for improved data after years of misleading food labels, the report says.

Blockchain helps track and trace raw materials, finished goods, and merchandise, and is widely adopted in the agriculture industry. Startups offering e-payments, e-commerce, data analysis, and smart contracts are emerging steadily, MarketsandMarkets says.

With strong support in the technology sector, North America is estimated to account for the largest share in this market through 2025, the report finds. Because of its robust supply chain infrastructure, the U.S. market for blockchain in agriculture and food will dominate the overall North American market, the forecast says.

### FROM SEED TO HARVEST

The TraceHarvest Network, a new blockchain-powered network developed by BlockApps with Bayer Crop Science, is the first solution to track the full life cycle of produce starting at the seed source. It provides insight into products as they’re sold, planted, harvested, and processed to drive sustainable practices, helping to establish new standards across the food chain. It help farmers access new markets, offer premium goods, and optimize operations.



The global blockchain market in agriculture and the food supply chain is estimated to reach \$133 million in 2020 and \$948 million by 2025.

—MarketsandMarkets Global Forecast

# READERPROFILE *as told to Karen Kroll*

## Tonya Jackson: Signed, Sealed, Delivered



**TONYA JACKSON** is senior vice president and chief supply chain officer with Lexmark, a creator of imaging solutions and technologies.

**RESPONSIBILITIES:** Worldwide supply chain operations, including supply planning, global sourcing, hardware and supplies manufacturing, distribution and logistics, and managing shared service centers.

**EXPERIENCE:** Vice president, global supply chain operations; vice president, supplies operation and engineering; all with Lexmark.

**EDUCATION:** MBA, Ohio University; M.S., Chemistry, Vassar College; B.S., Chemistry, Hampton University.

The pandemic has presented one challenge after another, but it has also offered some fantastic learning opportunities. For instance, as the virus made its way around the world, we had to shut down or greatly reduce operations in one area and shift to another.

First Mexico told China, “Don’t worry. We will back you up.” Then when Mexico went down, China covered for some of Mexico’s production. In April 2020, an industry report said Lexmark had the highest in-stock availability for printers. It was because we leveraged our global operations to cover production.

Geopolitical concerns are becoming an area of emphasis. More governments expect companies that distribute products in their countries to also manufacture there. Lexmark’s regional manufacturing model for cartridges allows us to be closer to the customer and more responsive. It has also served us well during the pandemic.

Lexmark’s printer side is more centralized because the volume is lower, and it’s not cost-effective to maintain multiple manufacturing sites. By keeping both a consolidated base and regional sites, we can be flexible with product delivery. We’re also better able to see trends around the world.

The biggest opportunity in supply chain is in product design. If products are designed to be easily manufactured and as common and flexible as possible, we have the best chance to control other metrics, such as availability, inventory, and delivery. So, Lexmark’s end-to-end supply chain encompasses

everything from partnering with research and development (R&D) to manufacturing to warehousing and distribution.

A collaboration between sales, product development, and supply chain has simplified and rationalized our models. We’ve reduced the number of factory models feeding our North America regional manufacturing operation by 45%. That allows us to reduce inventory by 15% to 20% and to be more flexible in our regional operations.

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*“Leveraging data analytics will be invaluable in helping us know where products are, where they should be, and how to move them.”*

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We’re also studying our logistics and distribution networks to both streamline operations and better serve our customers. In addition, to get data to all departments at the same time, we’re making greater use of business analytics. Leveraging data analytics will be invaluable in helping us know where products are, where they should be, and how to move them.

Earlier in my career, I was with IBM in a process development role in R&D. IBM sold the printer division, which became Lexmark. At that time, I was in the group of 15 people who were asked to design Lexmark’s first ink jet printhead cartridge.

This small team was composed of both R&D and supply chain team members. When I left R&D for supply chain, I was able to see the supply chain that I had built as an R&D person. It was about the ugliest thing you could have imagined, because I didn't make design decisions with an appreciation of sustaining this difficult supply chain over many years.

For example, I had chosen niche suppliers based on technology needs. This resulted in multiple single-skilled suppliers in various locations. There was no opportunity for supplier consolidation, dual sourcing, or risk mitigation.

But this experience helped me in my later conversations with R&D. I tell them, "We have to live with the things we're doing forever." My supply chain team integrates with R&D. We make informed trade-offs and everybody pulls together. ■

## Tonya Jackson Answers the Big Questions

### 1 What song title best describes your role?

One is "Signed, Sealed, Delivered" by Stevie Wonder. During the pandemic, I played "Don't Stop 'Til You Get Enough" by Michael Jackson nonstop.

### 2 Any words to live by?

One of my managers once told me, "As a manager, you will get far more blame than you deserve for your team, and way more credit than you ever deserve for leading a team. Learn how to accept both."

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

You do not have to be perfect. You just have to believe in yourself and whatever goals or plans you have. Don't try to do everything 100% because then it never gets done. But be honest with yourself. Know your risks and how you need to respond.

### 4 How would you describe your younger self?

One-hundred percent nerd. I'm a card-carrying nerd and proud of it. No wild parties in my youth.

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# NOTED

## The Supply Chain in Brief

### > SEALED DEALS



- **COVAXX**, which developed a synthetic peptide-based vaccine to fight COVID-19, partnered with **Maersk** for transportation and supply chain services to deliver the vaccine around the world once it receives regulatory approval.
- **BMW Manufacturing** selected **Penske Logistics** as the lead logistics provider at its South Carolina plant. Penske will help optimize inbound and outbound transportation of parts to and from the factory, and manage truckload and less-than-truckload carriers. Penske's predictive analytics and robotic process automation will provide increased transparency.
- Finland-based **Metsä Group** signed a contract with the **Maryland Department of Transportation** and the **Maryland Port Administration** to expand operations at the Helen Delich Bentley Port of Baltimore. The renewable products company will consolidate all its Mid-Atlantic volumes through the port.
- **Sesen Bio**, a late-stage clinical company developing targeted fusion protein therapeutics for patients with cancer, selected **Cardinal Health** as its exclusive third-party logistics provider. Cardinal will provide specialty pharmaceutical distribution services for Sesen Bio in the United States.
- **Tesco Lotus**, a retailer in Thailand, selected **DHL Supply Chain Thailand** to provide warehouse logistics and transportation of fresh and frozen food products at its distribution center in Surat Thani. The 51,500-square-meter facility houses its inventory of groceries for consumers in Southern Thailand.

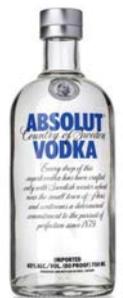
### > GREEN SEEDS

**Timberland** pledged to achieve a net-positive impact on the environment within one decade by committing to regenerative agriculture and the circular economy. The retailer will source 100% of its natural materials, such as leather and cotton, from regenerative sources and design all products for complete circularity.



**Ford** unveiled the E-Transit, an all-electric version of its Transit delivery van. The vehicle, which has connected technology to help commercial fleet owners better manage cargo operations, is the second major electric vehicle to be released as part of Ford's \$11.5-billion electrification efforts.

**The Absolut Company** plans to produce its vodka fossil fuel-free by 2025 and be carbon neutral by 2030 with no offsets needed. The company is also collaborating on green packaging initiatives with Paboco, a paper bottle company, and working with its supply chain partners to move toward circularity.



### > SHOVEL READY

Furniture manufacturer **Ashley Furniture Industries** plans to build a 1-million-square-foot warehouse in Etna, Ohio, investing \$70 million and creating 300 new jobs. The facility will serve as a regional distribution hub, expanding the company's network of eight distribution centers servicing the United States. The warehouse will handle global e-commerce fulfillment and store shipments.



> RECOGNITION

**Dayton Freight Lines**, a provider of regional less-than-truckload transportation services, received the **Ryder Carrier Quality Award**. This award is presented to top-performing carriers that are reliable, efficient, and safe when moving freight for Ryder customers. Patty Ash, Dayton Freight corporate account manager (*pictured*), accepted the award.



Logistics services provider **Schneider** was chosen among the **2020 Top Companies for Women to Work for in Transportation** by the Women in Trucking Association. The award recognizes companies focused on employing and advancing women in the trucking industry.



> UP THE CHAIN

**Phil Kelaart** joins **Ergotron** as executive vice president of global supply chain operations. He will manage the home office equipment retailer's supply chain, manufacturing, warehousing, logistics, and facilities, as well as environmental health and safety. Kelaart brings nearly 30 years of experience at Emerson, where he held roles of increasing responsibility in operations, supply chain, engineering, and general management.



> M&A

- **Hillebrand**, a forwarding, transport, and logistics provider for the alcoholic beverage industry and products that require special care, acquired **Braid**, a bulk liquids logistics provider.
- Logistics software-as-a-service solutions provider **Descartes Systems Group** acquired Canada-based **ShipTrack**, a provider of e-commerce final-mile shipment tracking solutions.
- Healthcare performance improvement company **Vizient** signed an agreement to acquire healthcare supply chain solutions provider **Intalere** from Intermountain Healthcare.
- **Pilot Freight Services**, a global transportation and logistics services provider, acquired its **Metro New York** franchise, which focuses on delivering heavy and bulky freight.
- **Americold Realty Trust**, a real estate investment trust focused on temperature-controlled warehouses, acquired South Plainfield, New Jersey-based **Hall's Warehouse Corporation**.

> GOOD WORKS

- Transportation provider **Leonard's Express**, based in New York, collaborated with Arizona-based craft kombucha maker Wild Tonic and The Breast Cancer Coalition of Rochester to help bring awareness to breast cancer and early detection efforts.
- **AIT Worldwide Logistics** donated more than \$45,000 to St. Jude Children's Research Hospital. More than two dozen fundraising teams took part in a virtual walk and raised \$22,621 for the hospital, and AIT matched the donation.
- **BYD** donated a clean-energy electric forklift and two electric pallet jacks to the AV Dream Center, a food bank serving Northern Los Angeles County. No special equipment is required for BYD forklifts, making them uniquely suited for operation at the Dream Center, where pallets of canned goods can weigh up to 3,000 pounds.



[IN FOCUS]

# TAKEAWAYS

*Shaping the Future of the Global Supply Chain*



## TOP 25 HEALTHCARE SUPPLY CHAINS

Johnson & Johnson maintains its No. 1 spot on the Gartner Healthcare Supply Chain Top 25 list, which recognizes companies that advance healthcare by improving patient outcomes and controlling costs. Baylor Scott & White Health, Johns Hopkins Health System, Indiana University, and Biogen join the ranking for the first time. The healthcare leaders in 2020:

1. Johnson & Johnson
2. CVS Health
3. Cleveland Clinic
4. McKesson
5. Banner Health
6. Walgreens Boots Alliance
7. Duke University Health System
8. Ochsner Health System
9. Mercy
10. Medtronic
11. Novo Nordisk
12. AmerisourceBergen
13. Becton Dickinson
14. Owens & Minor
15. Pfizer
16. Baylor Scott & White Health
17. Stryker
18. Johns Hopkins
19. Henry Schein
20. Spectrum Health
21. Roche
22. Scripps Health
23. Boston Scientific
24. Indiana University
25. Biogen

## DHL Shares Strategy For Peak Season and Beyond

E-commerce is up 65% year over year, and expected to surge more than 50% during the busiest peak week, according to Chet Paul, senior vice president at DHL Express; Kraig Foreman, president at DHL Supply Chain; and Craig Morris, chief information officer at DHL eCommerce Solutions.

In a media call, the DHL execs shared how the company adjusted to meet peak demand:

**Capacity.** DHL revamped operations to gain capacity, opening six annex facilities for spillover capacity in Dallas, Atlanta, Los Angeles, Chicago, New York, and Phoenix, and adding 6,000 associates.

**Forecasting.** Helping customers understand

what to expect is especially important during peak season. DHL worked with customers on forecasting strategies to understand the capacity levels needed. Understanding how consumers adjusted their buying habits during the pandemic and spreading out buying habits helped customers prepare.

**New technology.** On the fulfillment side, technology changed the game, moving away from large-scale investments to systemic intelligence on mobile robotics that allow for surge. DHL is encouraged by technology that allows for quick scaling based on consumer behaviors.

Some merchants were caught flat-footed working with only one carrier

and experienced high surcharges and volume caps. Software capabilities will automate the carrier decision process.

**Customer needs.** DHL expanded its on-demand delivery services so customers could control the final mile from a mobile device on the fly. Customers were more reliant on the 2020 peak season for success, so executing deliveries across the United States was crucial.

**Post office partnership.** DHL works closely with the U.S. Postal Service for final-mile delivery, especially during peak season. Most volumes were delivered to the destination delivery unit, the final stop in the USPS network, to ensure maximum efficiency.

## Intermodal Bounces Back

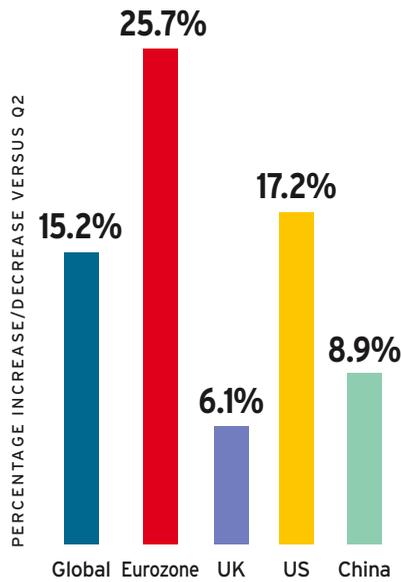
Strong intermodal volumes will continue as retailers replenish their inventories, says CSX Transportation and Canadian National Railway (CN).

Intermodal traffic, which halted with the rest of rail volume when the pandemic began, bounced back faster than carload volumes and is surpassing 2019 levels. U.S. intermodal volume was up 10% and CN's intermodal business was up 15% in October 2020, the company reports. CSX says its intermodal volumes are up 10% since October 2020, with trailer volume up 26% compared to 2019. Its trailers often carry e-commerce parcels and less-than-truckload shipments.



SOURCE: TRADESHIFT

### Global Transaction Volumes (Q2 vs Q3 2020 comparison)



## GLOBAL TRADE PLATEAU?

Order volumes in Western economies have grown significantly, but momentum may be slowing, finds Tradeshift's Index of Global Trade Health. The report finds:

- Global trade activity rose 15.2% in Q3 2020 compared to Q2.
- The Eurozone was the strongest performer in Q3.
- Transaction volumes in the United States

exceeded the global average, increasing 17.2% compared to Q2.

• Pent-up demand after lockdown sparked an 85.5% increase in orders in July 2020 compared to the monthly average in Q2.

• The U.K. had a more difficult Q3, with transaction volumes up only 6.1%.

• China showed signs of plateauing in Q3 with trade activity up 8.9% compared to a strong Q2.

• While order volumes grew 20.1% in Q3, the

## TAKEAWAYS

amount of money going to suppliers hasn't increased at the same rate. Invoice volumes grew 14.1% in Q3.

• Retail activity rose by the largest margin across all sectors. Transaction volumes rose 78% in July as stores reopened.

• The manufacturing and logistics sectors performed well throughout Q3.

• Activity in the healthcare sector dipped in Q3 as supply chains settled following a period of volatility.

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## TAKEAWAYS

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# Supply Chain Threats Beyond COVID-19

**While COVID-19 remains a primary concern, a number of additional disruptions and risks impact supply chains, finds a BSI report. Among the risks:**

- Cargo theft of pharmaceuticals and medical supplies globally.
- Increased warehouse and facility theft, particularly throughout Europe.
- U.S. Customs and Border Protection issued an unprecedented number of Withhold Release Orders for products believed to be produced with forced labor.
- Ongoing issues with food fraud due to global movement restrictions as a result of the impacts of COVID-19 on transportation.
- Continued transportation disruptions due to climate change and natural disasters.

• Natural disasters posed a significant risk to supply chains in the third quarter of 2020, disrupting utilities, halting operations, and creating ground transportation delays.

• Dry conditions in the Northwestern United States will likely continue to contribute to the risk of wildfires.

**Cargo theft continued globally throughout 2020, with the following trends influencing the third quarter:**

- Warehouse facilities were the most frequently targeted for cargo theft in Europe.
  - Food and beverage products were the most stolen commodities in Asia.
  - Thieves increasingly targeted medical supplies in the Middle East and Africa
  - India experienced an uptick in cargo thefts, regressing back to pre-COVID-19 levels.
- 



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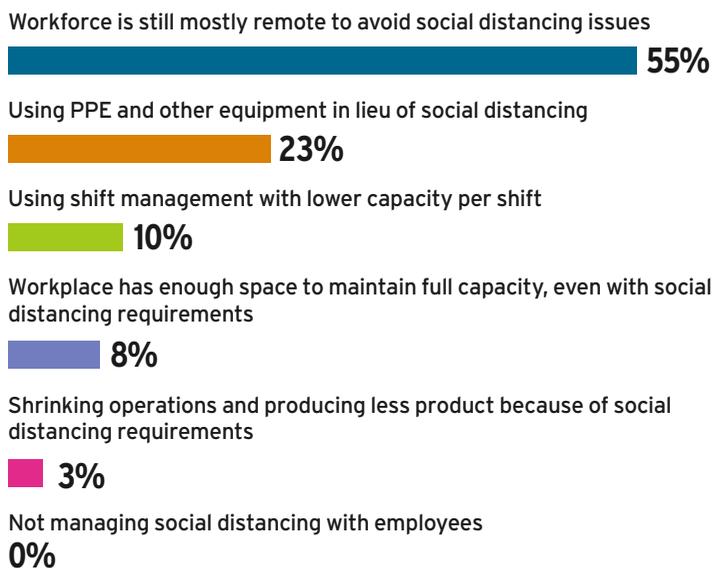
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## TAKEAWAYS

### How is your company managing through social distancing?



## Going the Distance

As we move into 2021, social distancing is a top priority for C-level executives. While they manage their business with social distancing, the protocols aren't ideal for productivity, finds a survey by consulting firm West Monroe. More than half say they primarily work remotely to avoid social distancing (see *chart*), and 40% say it's the biggest hindrance to employee productivity.

Mergers and acquisitions are another 2021 priority, with 43% of executives strongly considering acquisitions in the next six to 18 months, the survey finds.

Technology investment is also top of mind. Most (69%) executives say they will prioritize technology investments, even after 57% already tried new data and analytics technologies during the pandemic, the report says.



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## How to Prepare Your Warehouse for a Second Wave of COVID-19



**Robert Kriewaldt**  
Senior Vice President  
Phoenix Logistics  
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920-915-9746

*Warehouses and fulfillment centers should take these precautions to mitigate COVID-19 risks, keep the workforce safe, and avoid costly downtime.*

**M**ost warehouses and distribution centers (DCs) stayed open as essential businesses when COVID-19 restrictions were placed across the United States. Facilities that failed to implement appropriate preventative measures early went through a series of hurried closings, cleanings, and re-openings to combat COVID-19 outbreaks.

The United States continues to set new records for the number of active cases of the virus, suggesting a new wave is coming—if it isn't already here. This second wave coincides with the traditional flu season, which may cause as-of-yet unknown complications.

Warehouses and fulfillment centers must take precautions to mitigate the risks posed by coronavirus, influenza, and other contagious respiratory diseases. Here are some tips to keep your workforce safe and avoid expensive downtime.

**1. Shared surfaces.** Warehouse workers often touch the same shared equipment and surfaces, such as pallet jacks or carts. Recent data shows that SARS-CoV-2 can live on plastic and stainless steel surfaces for up to three days, so shared surfaces must be regularly cleaned with steam or chemicals between shifts. Supplement more thorough cleaning by providing employees with alcohol wipes to clean tools before and after use. Sanitizing wipes should also be provided in break areas.

**2. Handwashing and sanitation.** Simple handwashing is one of the most effective ways to prevent the transmission of viruses and bacteria. The CDC recommends handwashing for at least 20 seconds to prevent coronavirus transmission.

Warehouse operators should provide handwashing access to all employees by making all sinks available for handwashing, keeping soap stocked, and renting or buying additional handwashing stations if needed. Hand sanitizer containing at least 60% alcohol content should be placed throughout the facility.

**3. Masks** that cover the nose and mouth have proven effective at limiting the spread of COVID-19. All warehouses and fulfillment centers should implement a mandatory mask requirement to help prevent the transmission of the virus within the facility by workers who may be infected but asymptomatic.

N95 masks are best, but simple surgical masks or cloth coverings help to prevent viral spread. COVID-19 primarily spreads through respiratory droplets when someone coughs, sneezes, laughs, or speaks. Without a barrier to stop them, the smallest respiratory droplets may aerosolize and stay in the air for hours. A recent study at Duke University showed that neck gaiters may actually increase the risk of aerosolizing respiratory droplets, so it's prudent to prevent employees from using this type of covering.

**4. Social distancing.** Most facilities have some sort of social distancing policy in place. Simple measures include:

- Offsetting start and end times to avoid bottlenecks
- Designating specific doors for entering and exiting
- Eliminating time clocks in favor of digital time tracking via smart phones
- Staggering lunch and break times to avoid gatherings
- Adding plexiglass barriers between workstations

**5. Access control.** Even the most stringent social distancing measures won't be effective if outside drivers, vendors, or customers freely walk into the facility. Create separate waiting areas with restrooms for visiting drivers and implement contactless driver check-in/check-out processes to limit physical employee exposure to outside visitors. It's also best to limit or ban vendor and customer visits.

## Procurement Practices That Pay Off



**Ken Adamo**  
Chief of Analytics  
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*How do you know you're paying the right price for the right level of service? Accurate business intelligence will drive sound strategies that deliver on core business goals.*

**T**ransportation is a significant expense, which is why procurement is such an important process. Whether you're shipping food, electronics, heavy machinery, consumer packaged goods, or anything in between, you want to maintain the highest levels of service at the best possible price.

Today's teams solve complex problems daily, and the right business intelligence ensures they produce sound strategies that deliver on core business goals.

### Choosing the Right Strategy

There are a wide range of approaches to pricing and procurement, each with their own set of benefits and drawbacks. At the end of the day, it all comes down to the same question: How do you know you're paying the right price for the right level of service?

**Option 1: Internal Analytics.** Many shippers today have internal transportation analysts who review historical performance, creating forecasts and budgets based on supply and demand trends. This analysis can often get delayed for weeks or even months, depending on bandwidth and the number of available resources.

The biggest drawback to this approach is it doesn't provide a holistic view of the freight markets, so you may miss important market dynamics that are changing the business environment around you.

**Option 2: Conduct a Bid.** No matter how well you plan, preparing for a bid can take a lion's share of your transportation and procurement department's time and resources.

While you will get a good reality check on where the markets are, these bid-specific freight rates and capacity estimates represent only a cross-section of all available freight rates. They also only reflect your supply chain network's volumes and needs at that point in time.

By and large, conducting a bid is a good thing, but it does not guarantee you'll secure the best

possible freight rates and service levels, or help you adapt to changes in your network.

**Option 3: External Benchmarks.** Hiring outside analytical services can help you augment or even bypass internal analysis, but not all benchmarks are created equally. Many can be expensive, so when choosing a benchmarking tool, you'll need to take special care to make sure the data isn't biased.

If the benchmark is based on a small subset of market rates or heavily weighted by a particular industry, then the data will not improve your company's decision-making—in fact, it could do the exact opposite.

But robust, accurate benchmarking solutions created by DAT iQ are key to getting a clear, 360°-view of the freight markets, providing intelligence that wouldn't otherwise be available through internal metrics and bids.

**Option 4: A Hybrid Approach.** To get the best of each approach with minimal drawbacks, DAT iQ finds that a hybrid strategy—one that combines analysis of your own service requirements and carrier performance with a broader freight market view that uses credible, competitive business intelligence tools—helps most companies thrive.

The Freight Market Intelligence Consortium (FMIC)—formerly part of Chainalytics—offers external benchmarking and forecasting based on regular and timely econometric modeling of transactional markets and their underlying components, revealing the true cost drivers that influence freight rates.

Combining this information with your own internal data gives you a clear view of how your transportation operations compare to the market and your competitors.

This deep visibility into the freight markets allows you to take the guesswork out of your transportation budgets, with clarity that serves your core business strategies.

# Control Tower Capabilities—Redefined



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**Q:** *What is a control tower?*

**A:** There are many definitions of a control tower in the market today. Some are analytics overlays without a network to get data or application intelligence. Some provide one functional area (e.g. planning) and encompass internal operations and maybe tier 1 providers. These can sound helpful but won't get you very far.

Agility and resiliency don't call for a new piece of software named a "control tower." It should be part of the platform that runs your end-to-end operations and processes, powered by real-time data from a multi-tier network, allowing internal and external parties to understand exceptions, collaborate on the best decisions, monitor performance, and learn for next time.

**Q:** *When evaluating control tower vendors, what should companies consider?*

**A:** Look for a vendor that can deliver on four crucial fundamentals: **1)** A multi-enterprise network at the core that can pull data from any tier, function, or ecosystem and use that data within all applications. **2)** Decision-grade data that can be immediately used across all applications. **3)** End-to-end applications with intrinsic field-proven AI. **4)** Collaboration, which enables connection and communication with internal and external partners across multiple tiers and ecosystems.

**Q:** *What types of businesses are best suited to optimizing control towers?*

**A:** Control tower capabilities help companies make better supply chain decisions across all industries.

The larger the business, the more extended their supply chains, the more diverse their partner network, the more regulated the industry or products, the shorter their planning timeframes—all these factors come into play when evaluating control tower capabilities.

In short, any business that experiences supply chain disruption and wants fast, accurate, and predictive resolutions to benefit all parties, functions and ecosystems.

**Q:** *What problematic parts of the supply chain can a control tower smooth out?*

**A:** Two problematic areas are gaining E2E visibility from downstream, upstream, and logistics ecosystem partners; and using this data to make decisions and orchestrate E2E processes across all parties. While control tower initiatives often start in one functional like planning, logistics execution or procurement, the key is the ability to connect any and all supply chain processes, not just one area or ecosystem. This holistic approach is what helps you become more agile and resilient—and future proof for sustainable value.

**Q:** *Can control towers help manage disruption and/or sudden demand increases?*

**A:** Absolutely! Having an operating platform brings together all the data you need to see what's happening, combined with all the applications, artificial intelligence, and analytics necessary to understand what disruptions mean to the business, recommend the best course of action, put decisions into effect, and learn for next time.

# What Is the Best Method to Measure Customer Satisfaction?

**Q:** *How is Ruan's Customer Satisfaction Program structured?*

**A:** At Ruan, customer satisfaction is one of our five guiding principles.

Ruan believes in developing strong partnerships by understanding our customers' stories and continuing to improve our service as their needs evolve. And the best way to know if we are achieving that goal is to ask them.

Every year for the past decade, Ruan has relied on surveys to directly measure how satisfied our customers are with our performance. The questions are answered anonymously because we want frank, honest feedback.

Brief but comprehensive questions range from billing accuracy to technology services to driver safety and more. But we don't stop there. We use the annual survey as an opportunity to gauge the strength of the partnership as a whole by inviting our customers to tell us what's on their minds:

**What are their biggest concerns?**

**Where are the partnership successes?**

**How is Ruan helping, and how could we help more?**

The feedback and information we collect through our Customer Satisfaction Program help us better understand how Ruan's growing range of services can make things easier for our customers and add value to their supply chains.

**Q:** *How does Ruan's Customer Satisfaction program benefit your customers?*

**A:** One way that Ruan uses these surveys to create value is by creating action plans for customers each year. We have a strong participation rate in the Customer Satisfaction Program because we make sure our customers know we're really listening to what they're telling us.

Asking customers if you're doing a good job can be intimidating for many companies, which is why many simply don't. If we're falling behind in an area, we want to fix it. If we're doing well in another, we want to do even better. So, we take our scores back to the customer who evaluated us to discuss our strengths, our weaknesses, and develop a roadmap for an even stronger partnership in the future.

**Q:** *How do your results impact your goals going forward?*

**A:** It's an exercise in strategic planning, but also humility. We're extremely proud that since beginning our program in 2010, Ruan's overall customer satisfaction rating has increased more than 13%. And this year—throughout a global pandemic and monumental uncertainties across the board—we've had our highest scores yet, with a nearly 90% satisfaction rate.

It's proof to us that asking our customers for their feedback, and then doing something productive with that feedback, allows us to deliver better services, strengthen partnerships, and create greater value.

Because that's truly what's important.



**Tara Meier**

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# Rolling Out a Major Product Transition Across the Globe

For C3 Solutions, customer success equals company success. The industry leader in yard and dock management solutions eased the transition for users to a new HTML5 platform, providing exceptional support.



## THE PROJECT

C3 has been preparing its customers' transition from Flash to HTML5 for almost two years. This project is unique because it touches every customer using C3's products. Everyone had to make the switch, not just those wishing to upgrade to a faster and more robust platform. The project began in 2018 and will be complete at the end of 2020.

## THE CUSTOMER-PARTNER RELATIONSHIP

C3 Solutions is a supply chain and logistics optimization software firm, focused on offering best-of-breed customizable yard and dock management solutions. The globally recognized enterprise's mission-critical systems manage the yards and docks of companies across all industries. C3's clients rely on the platform's real-time visibility to keep their operations running smoothly and efficiently.

**T**he Dock Scheduling and Yard Management Solution industry leader has been preparing to shift all of its users from its Adobe Flash product version to a brand new HTML5 platform. C3's Customer Care Team Lead, Nataly Silva—who has almost 20 years in customer service—aimed to smooth out the transition process and ensure clear communication between both parties during what was sure to be a stressful project with a firm and non-negotiable deadline (Flash Player's end of life was announced for Jan. 1st, 2021).

## THE MAIN GOALS

- Ensure there are no surprises on the client's side.
- Customers would receive the necessary level of support, training, and documentation.
- Create and manage a clear and compelling line of communication, both internally and externally.

## CASE 1

- A customer's transition to HTML5 didn't reach the anticipated adoption due to lack of communication and support in the initial stages of the project. They continued to use the Flash version.
- This is a problem because Flash would stop working at the end of the year, creating significant issues across their organization, leaving them vulnerable and without a functioning system.
- Nataly noticed a lack of activity on the HTML5 platform during a routine checkpoint and followed up with the client to investigate further. With additional training, documentation, and fixing any glitches, the customer began using the portal.

## CASE 2

- A major retailer communicated concerns about how this transition could impact their suppliers and carriers.
- C3 realized this as a broader challenge for multiple clients.
- User Guide Packages were created to smooth out the transition for C3's customers, and provide extra support for their 3rd party suppliers and carriers. The C3 Team got to work and was able to provide in-depth support documentation and videos.

## CASE 3

- At key moments throughout the project, Nataly ran surveys to determine the level of satisfaction.
- During one of these one-on-one check-ins, a particular customer voiced dissatisfaction due to a miscommunication related to the timing of a specific HTML5 module delivery.
- Without this exercise, C3 could have been made aware of this particular client's issues too late in the process to ensure they would be operating successfully on HTML5 come 2021. Thanks to this open line of constant communication initiated by C3, they could make the necessary changes and revisit the rollout strategy and timeline.

Leveraging the Customer Care team in this massive project was considered an extension of C3's product mission statement, increasing the level of visibility and communication an organization should have to operate at maximum efficiency. Thanks to Nataly and her team, who created a transparent process, C3 is proud to report near completion of this project with very few critical circumstances.

.....  
**Visit [www.C3Solutions.com](http://www.C3Solutions.com) for more information.**



# Collaboration Provides Unification, Visibility, and Reporting on Key Factors

TForce Worldwide partnered with a large manufacturing client, building a system that met its needs and a unified platform that provides complex data to support better business decisions.

**W**hen an organization has a large, nationwide network, each with different software systems, methods, and management, it can be challenging to optimize the supply chain. Without integration, visibility, and the proper metrics, it is difficult to identify, let alone remedy, bottlenecks in the process. The team at TForce Worldwide understands these complexities to find a workable solution.

## TACKLING A COMPLEX NETWORK

A large industrial manufacturing client was experiencing challenges with their freight payment and auditing company. They had an immediate need for this role, but took it as an opportunity to standardize and streamline network processes and make better business decisions.

With a complex network of more than 50 distributors, they had difficulty getting their goals and objectives aligned under a single platform. They had made several previous attempts to implement a single solution across their network, without much success.

RFPs were sent to a number of logistics businesses to see who would be the best partner for them. Ben Manion, owner of the TFWW Office in Charlotte, and his team put together a solution that resonated with them.

TFWW's approach centered on understanding the client's unique challenges, goals, and key factors causing them to want to make a change. Their corporate proprietary system was not being utilized for supply chain, and

with the numerous, conflicting systems and methods across their network, they needed a partner who could merge everything in one system.

## A UNIFIED PLATFORM SUPPORTS DECISION MAKING

The TFWW Charlotte team held countless meetings with the client, and utilized TFWW's teams from operations, finance, and IT to build the system that met the client's needs and wants, while ensuring the solution met all systems and operational requirements. They collaborated to bring the client one, unified platform that is simple to use and provides complex data to aid in making better business decisions.

Using TFWW Connect, full system integration was recommended with their SAP. This would serve to provide them with unification from order placement through invoice payment, across their network, with the visibility and reporting they wanted.

KPI metrics were created based on touchpoints the client wanted to track in order to find where they had bottlenecks. This included reports such as "Days to Ship," which demonstrated the length of time from order receipt to shipment to delivery. This was something they were keenly interested in and had wanted to get data on for a number of years.

This solution was the result of a combination of continual communication and tremendous teamwork, especially from TFWW Charlotte. Said James Yates, VP of sales & business development in Charlotte,

"Through collaboration and partnership we implemented solutions that enabled a standardized methodology for managing all supply chain and transportation needs across the United States and Canada, provided a single point of accountability, integrated multiple IT systems while providing real-time tracking/traceability, leveraged the global spend from multiple modes of transportation to reduce cost, and reduced risk by enforcing a fully DOT compliant, certified, and insured carrier base."

## OPTIMIZING PROCESSES AND DELIVERING SIGNIFICANT SAVINGS

The integration of the client's SAP system and successful conversion of their network to TFWW Connect allowed them to identify strategic locations from which to ship their product, add distribution locations in order to optimize delivery, and discover bottlenecks to improve efficiency. They have also improved their freight payment and auditing processes, providing them the ability to reposition their own assets. Best of all, the client has saved nearly \$1 million over the prior fiscal year.

Ben and his team in Charlotte have provided continued support, and their ongoing relationship with the client has helped implement new features and improvements to the system.



## What Makes a Go-To Ecommerce Partner? Ask Baboon To The Moon

With command over inventory as well as every order, return and exchange in the bag, backpack maker Baboon To The Moon is over the moon about their e-commerce fulfillment partner Port Logistics Group.



### THE CLIENT

Baboon To The Moon: Best-in-class adventure essentials. Go-bags made of the highest-grade materials meant to survive everything from the zombie apocalypse to that guy at the airport hurling your bag across the runway. All products come with a lifetime warranty and all packaging is made from recycled materials.

### THE PARTNER

Port Logistics Group (PLG) enables established and emerging retailers to express their brands through exceptional order fulfillment, offering omnichannel logistics services including retail distribution, wholesale distribution, and ecommerce fulfillment. With a strategic mix of 6.5 million square feet of warehouse space backed by intelligent technology and automation, PLG provides the critical link between brands and consumers.

**B**aboon To The Moon, a rising direct-to-consumer and adventure brand and maker of fashion-forward carryalls, such as duffel bags and backpacks, tapped into the yearning for travel when it was founded in 2017 by entrepreneur Andy Person.

Challenged to keep up with demand for their colorful carryalls, the company began looking outside their space in Manhattan's garment district for help in fulfilling the crush of orders coming in and the SKUs that were multiplying as they added sizes, colors and accessories.

Baboon To The Moon needed to keep up with the demands of fast delivery. They had a brand image to protect; late deliveries or mistakes wouldn't do. As they grew, shipping had to be done right and customer service had to be impeccable.

### THE BABOON TO THE MOON - PLG CONNECTION

The growing brand ultimately chose PLG for a number of reasons. Chief among them was the value they saw in PLG's technology stack powered by its scalable, proprietary ecommerce platform Whiplash.

Since starting with PLG in July 2018, Baboon To The Moon has the logistics and fulfillment structures in place to continue its to-the-moon growth trajectory. "Port Logistics Group has added value at every stage of our adventure," says Andy Person, CEO. Sales in Baboon To The Moon's first year with PLG saw more than 4X year over year growth as a new startup. Even with pandemic restrictions, Baboon To The Moon sales continue to expand rapidly since spring 2020.

As a growing brand, Baboon To The Moon needed hassle-free integrations between their

systems and those of PLG. Setting up their account and systems was as fast and furious as a rocket launch. The Whiplash ecommerce platform easily integrated with Shopify, Baboon To The Moon's shopping cart platform.

Notably, Whiplash gives the company command over inventory as well as every order, return and exchange. "Baboon To The Moon can still be hands-on with inventory, shipment tracking and customer service," said Brian Weinstein, senior vice president of business development at PLG. "On Whiplash, it's all right there in front of them in a single, friendly system."

But what put Baboon To The Moon over the moon was PLG's commitment to support the company's outsource requirements on a comprehensive basis.

PLG's connections with carriers translate to priority for delivery and negotiated discounts. The omnichannel logistics provider's vast distribution network enables Baboon To The Moon to get their products out to customers across the U.S. within 24-72 hours using the market's lowest available shipping rates.

PLG has proven to be a right-fit, scalable solution for Baboon To The Moon, saving them from capital and talent investments. For example, PLG's use of LocusBots collaborative robots in its Secaucus, N.J., fulfillment center helps streamline warehouse efficiencies, including smoothing out shipping peaks.

As Baboon To The Moon leads the new wave of conscious and connected travelers, the company can worry less about details and delegate more, knowing PLG will provide the customer experience they've built and branded.

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[INSIGHT]

# COVIDRECOVERY

by Rob Harvey

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## Supply Chain 4.0 Needs Order-to-Cash 4.0

Industry 4.0 has been given a renewed sense of urgency following the pandemic. Industry 4.0 refers to the massive changes we see across every industry as a result of new technologies, such as smart sensors, predictive analytics, and artificial intelligence (AI). By extension, we see a technological shake-up with supply chain 4.0 and cash management 4.0.

The pandemic has exposed the weaknesses of the traditional order-to-cash process across the supply chain. Credit management teams found themselves working from home, often for the first time, without the right hardware, software, or communication channels to do the job.

Under such circumstances, customer relations and collection become a nightmare. With offices shut during a pandemic, who can you phone about an overdue invoice? Where do you send reminder letters? You quickly lose visibility of who is willing and able to pay.

### A COORDINATED EFFORT

Supply chain 4.0 has to go hand in hand with order-to-cash 4.0. For example, the digital supply chain is more efficient because it uses predictive analytics to anticipate customer demand.

A similar approach can be applied to digitized cash management. By using AI, finance managers can reduce collection time (also called DSO).

The latest AI technology can prioritize overdue accounts and recommend the most appropriate dunning strategies. What's more, this powerful technology can be accessed remotely, even by staff working from home.

### SHOW ME THE MONEY

Just as supply chain 4.0 creates greater visibility across the whole chain, order-to-cash 4.0 provides greater visibility around cash, with benchmark insights into credit terms and customer payment behavior. For example, AI technology can reveal how quickly one customer pays you compared to others.

These insights help to better manage credit terms and payment delays across the chain—creating a better payment

chain, synchronized with the digital supply chain. Going one step further, the future could see use cases where digital supply chain management and digital financial management systems are integrated to model correlation between payment behavior and demand for goods.

### CREATING A CASH CULTURE

The financial benefits of digitalizing the supply chain go hand in hand with a more efficient digital order-to-cash cycle, creating a “cash culture” across the board.

A May 2020 PwC survey carried out in the midst of the pandemic found that 48% of business leaders say they will accelerate automation and new ways of working. In the same month, industry analysts at Gartner found similar results. Forward-thinking business leaders know that digital transformation is essential for business survival.

The road beyond a crisis requires forward thinking. Now is the time to capitalize on the lessons learned from the pandemic, and harness new technologies in order to weather future crises.

Supply chain 4.0 and order-to-cash 4.0 are the way ahead. ■



# THE ROAD TO NEXT-GEN TRANSPORTATION SOLUTIONS



For over 25 years, Polaris Transportation Group has been providing expedited overnight LTL cross border service between Canada and the USA. Over the past few years, Polaris has underwent a digital transformation by significantly investing in the development of next-generation platforms and applications.

Since embarking on this journey in 2017, they have seen incredible success in the technologies developed, integrated and implemented. This has greatly increased the efficiency of straight-through processing which has enhanced both the speed and quality of service for their customers and employees.

Polaris President and CEO Dave Cox explains, “We were looking to effectively eliminate paperwork and manual, repetitive labour wherever possible, throughout every division of our operation. When we started, we had a team reviewing, sorting, and proofing thousands of various shipping documents every single day. Through the development and implementation of robotic process automation systems, we are now able to automate 80% of this workload and allow our team to focus their efforts only on the exceptions which require human expertise.”

Dave Brajkovich, Chief Technology Officer adds, “Where processing paperwork on the human level would take one to two minutes per, our AI is able to process in one to two seconds,

if not faster.” Dave continues, “It’s not just the speed that is so impressive but through machine learning, our systems are able to identify and correct errors on shipping documents which for our Customs department, has resulted in a 30-40% drop in customs clearance rejections.



Our investments into artificial intelligence and robotic process automation allows us to support fluid freight flow.



Dave Cox speaks to the enthusiasm surrounding this digital shift, “These advancements have been embraced with open arms by all parties. Our service continues to improve with instant ordering and processing, our employees are

being relieved from mundane or repetitive tasks, our freight is crossing the border without delay and clerical errors are reducing exponentially.”

The advancement in technology also allowed Polaris to create a virtual work from home environment during this Pandemic. It allowed 85% of their team to work remotely and took less than 2 days to set-up their secure remote access from home in March when this crisis began.

GPS and geo-fencing technologies are in place providing critical insights to Polaris Planning and Dispatch departments. They have developed and implemented a fully integrated tracking system to completely automate the dispatch, asset allocation and routing for all shipments. Polaris is also preparing to contribute further advancements by establishing a fully digitized paperless environment. The goal is to facilitate the full electronic processing of cross border freight between Canada and the USA for shippers, consignees and brokers.

Mr. Cox states, “Polaris continues to invest into the development and implementation of these technologies to solve real-world problems in the transportation industry and related verticals. We are the proof that these technologies, when integrated properly, create remarkable efficiencies.”



[INSIGHT]

## IT MATTERS

by *Andrew Bruce*

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# Blockchain Brings Value to Touchless Supply Chains

With supply chains forced to operate on thinner margins, digital transformation is leapfrogging business priorities. The time to act is now. But onboarding proven technology to confront COVID-19-related challenges can feel as daunting as the pandemic itself.

Let's look at digitizing existing logistics processes with blockchain from three angles: care, custody, and control. In all three categories, companies can replace and/or augment manual processes with an immutable system of record shared between supply chain counterparties.

**1. Care.** Commercial shippers are often plagued with supply chain security risks as they prepare to transport goods, with contingency plans constantly reworked and business owners lacking visibility within their own supply chains.

This lack of clear care in moving goods from point A to point B—and along the journey in between—is due to disjointed and inoperable information. Paper trails are messy, convoluted, and can hinder traceability and trust.

Blockchain solves this pain point by placing real-world events in an immutable, distributed ledger that can be easily shared through privatized, permissioned access. Automation streamlines time-consuming processes and ensures that

execution aligns with contractual terms. Remote workers can redirect efforts to bolstering business operations while smart contracts execute routine processes and flag exceptions—transactions outside of agreed tolerances—for human review.

**2. Custody.** Maintaining a chain-of-custody—a chronological paper trail of transactions that reveals who has what, when, and where—is invaluable to logistics. Yet companies remain tethered to existing legacy systems that digitize haphazard paper trails and lack operability and information sharing.

Blockchain serves as a secure record of truth with every movement or transaction of a commodity tracked. With data stored for auditability or to enable automated smart contract transactions between stakeholders, supply chain custody can be revised to near real-time execution.

Contract automation provides a record of transactional history that can help businesses track and optimize their digital supply chains.

**3. Control.** In 2017, nearly 4 million Americans worked in warehouses as supervisors, material handlers, and/or packers, according to the U.S. Bureau of Labor Statistics. With social distancing protocols now a significant challenge, many companies are at a loss as to how to proceed to meet current market demands.

Identifying business processes, such as invoicing, that lend themselves to automation is critical. As a secure digital twin that captures data to corroborate real-world physical events, blockchain powers smart contracts, taking multistep, multiparty business processes down to one or two tasks.

Smart contracts allow companies to seamlessly manage by exception when the technology flags an instance outside of agreed-upon tolerances instead of working hands-on every single step of the way.

### MAKE OR BREAK

Automating transactions with blockchain allows companies to digitize value while bringing transparency, visibility, and speed to commercial relationships. Right now, touchless supply chain is one of the many competitive differentiators that can make or break a business. ■



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# AMPING UP THE CX

**SHIPPERS AND  
THEIR LOGISTICS  
PARTNERS DEPLOY  
SUPPLY CHAIN AND  
CUSTOMER EXPERIENCE  
STRATEGIES TO  
ROCK THEIR  
CUSTOMERS' WORLD.**

**BY MERRILL DOUGLAS**

**W**hether you sell silk scarves or steel girders, your customers expect a few basic things beyond the actual product. They want an order to show up by the promised date, which should be sooner rather than later. They want the right product to arrive, and in good condition. They might want updates on the status of the order. And they want the transaction to unfold smoothly and easily.

Check off those boxes, and you've delivered a great customer experience.

Here's a look at some of the strategies that shippers and their logistics partners use to crank up the customer experience and make buying their products a pleasure.

#### **FLEX SPACE TO MEET DEMAND**

Early in the pandemic, as consumers went online to buy what they couldn't or wouldn't buy in stores, e-commerce retailer Chewy saw a big surge in demand.

"We quickly realized that we needed to build in some additional slack capacity for 2020," says Mike Gilbert, vice president of operations at the pet food and supply company in Dania Beach, Florida.

Chewy already had an expansion underway for 2020. In April, it launched a new fulfillment center in Salisbury, North Carolina, and it opened another in Archbald, Pennsylvania, in the fall. But in a highly unusual year, to give customers the service they expect, the company needed to do more. "We wanted to add some slack capacity for this year to make sure we could meet our commitment around customer experience," Gilbert says.

So Chewy opened a temporary distribution center in the Kansas City area, stocking it with a limited product assortment. "We picked the highest-velocity SKUs that



make the most sense for the building, and put processes behind it that are simple to manage,” Gilbert says.

The goal was to get things up and running quickly, with limited automation and simple training for associates. The extra capacity would help Chewy meet the demands of the year-end holiday season on top of the COVID-19-induced surge.

By putting the new facility in the middle of the country, Chewy gained a source it could draw on if fulfillment centers in other regions had trouble keeping up with orders. Also, the temporary building is close to the site in Belton, Missouri, where Chewy will open a permanent fulfillment center in

**“PERISHABLE GOODS, BY DEFINITION, HAVE A SHORT SHELF LIFE, PUTTING A LOT OF PRESSURE ON TIMING AND DEPENDABILITY.”**

**-CRAIG CALLAHAN, EXECUTIVE VICE PRESIDENT AND CHIEF COMMERCIAL OFFICER, WERNER ENTERPRISES**

2021. When the time comes, staff from the temporary building can move to the new one.

Chewy expects to enhance customer experience even further when the Archbald fulfillment center—the company’s first fully automated facility—comes online. “It will include high-speed sortation and robotics,” Gilbert says. Several miles of conveyance systems will let Chewy move product from one end of the building to another with little manual involvement.

By eliminating much of the lifting and walking, Chewy expects to enhance safety, shift employees to more value-added tasks, and reduce fulfillment time.

#### **BOPIS DONE RIGHT**

For retailers, another strategy to please customers with faster fulfillment is buy online, pick up in store (BOPIS). If executed well, BOPIS can also make the purchase a smooth and convenient experience.

Companies that ship to homes face challenges now, as increased e-commerce traffic, spurred by the pandemic, strains the capacity of parcel carriers. “It is ideal when you have an opportunity to bypass that, utilizing your own fleet or full truckload to go to your facility, or even use your inventory to pick the shelves, and then have the customer come in to pick it up,” says Todd Bengé, vice president of parcel operations at Transportation Insight, a third-party logistics (3PL) company in Hickory, North Carolina.

Customers enjoy the speed and convenience BOPIS offers. “Many times,

they can place an order online and pick it up in the store the same day,” Bengé says.

BOPIS is a good alternative for consumers who are discouraged by later-than-promised deliveries. This sales channel has grown more popular since the start of the pandemic, when more consumers started ordering groceries for curbside pickup. “Now they’re using it in a lot of different areas, like home improvement, furniture, and sporting goods,” says Robyn Meyer, partner, enterprise solutions at Transportation Insight.

To make sure the BOPIS purchase provides a good experience, a retailer needs to communicate with the customer effectively. “That means giving customers updates about when the product is picked and when it’s ready at the front of the store,” Bengé says.

The merchant should also provide a chance to make special requests, such as help loading the purchase into a car, he adds.

The retailer needs a good inventory system, so when a customer buys an item, employees can locate it quickly, whether it’s on the store floor, in a back room, at a fulfillment center, or at another store in the retail chain, Meyer says.

It’s also important to adjust the compensation system, so managers don’t get more credit for in-store sales than for BOPIS fulfillment. Faced with a difference in compensation, employees could be tempted to hoard items for in-store purchase.

Such hoarding can lead to split orders—when customers are told that



**Third-party logistics provider Werner helps shippers boost the customer experience by offering extensive solutions for temperature-controlled product shipments.**

they can pick up some of the items in an order right away but will have to wait for the rest to arrive from a different location, Meyer says. One retailer solved that problem by adjusting the credit it gave for BOPIS sales in its compensation arrangement.

“With one quick call to make all of that revenue equal, they dropped their split order percentages considerably,” she says.

### PERFECT PERISHABLES

When businesses buy from other businesses, one element of great customer experience is reliability: Orders need to arrive when customers expect them, and in good condition. For companies that sell perishables, “good condition” depends on an unbroken cold chain.

Perishable goods, by definition, have a short shelf life. “That puts a lot of pressure on timing and dependability,” says Craig Callahan, executive vice president and chief commercial officer at Werner Enterprises in Omaha, Nebraska, an asset-based 3PL that does a good deal of temperature-controlled business.

The shipper and its transportation partner need access to enough high-quality refrigerated equipment to transport the product where and when it’s needed while maintaining the right temperature. Because many perishable products, such as fresh produce, are seasonal, shippers and their carriers need to scale their transportation plans up and down as volumes fluctuate.

“Produce that’s consumed in the United States comes from all over—not just this country but from other countries as well,” Callahan says. For example, as produce season in the United States slows down in the fall, Mexico’s season goes into high gear. So shippers need their carriers to shift capacity around.

“We have to have equipment in several regions of our country, as well as regions in Mexico, to accommodate that,” Callahan says.

To help shippers please their customers with prompt deliveries of market-ready produce, one tool Werner



**Pet supplies e-tailer Chewy estimates its new, fully automated fulfillment center in Pennsylvania will improve operational efficiency and picking accuracy, leading to an enhanced customer experience.**

uses is a large crossdock facility in Laredo, Texas. Opened in 2019, this 20-door facility eases the transfer of trailers from Mexican power units to U.S. units. It also provides electrical outlets that drivers can use to power their refrigerated trailers while the perishable cargo clears customs. “They plug in and they’re not burning fuel,” Callahan says.

### TELL ME WHAT YOU SEE

For many companies that ship and receive perishables, a good experience includes the ability to monitor the condition of their loads. This is partly because of the pressure to get product to market with ample shelf life left, and partly to make sure the shipment complies with government regulations.

“They want the ability to see the product while it’s en route, with constant GPS updates—not just on location, but on the temperature setting as well,” Callahan says.

Werner provides that visibility while also using tracking technologies to head off equipment problems that might endanger the load. When a driver and dispatcher get an alert that a refrigerated trailer is having problems, they can arrange for a quick repair.

Drivers and dispatchers started communicating even more closely in late 2020, when Werner finished replacing

onboard computers in most of its fleet with wireless tablets. Now, drivers can send and receive information, including reports on the progress and condition of their loads, whether they’re in their trucks’ cabs, outside the rigs, or grabbing a meal at a truck stop.

Information drivers can send from the tablets includes documentation to assure end customers that the shipment is proceeding as expected. “Drivers take pictures of seals, of temperature readings, of paperwork,” Callahan says. “Those pictures can be uploaded and shared electronically almost instantaneously, allowing us to make decisions quicker.”

Another 3PL, Rhenus Logistics, also uses visibility and strong communication to help shippers enhance the customer experience.

“It’s critical that our customers have full visibility to their products, and we must be proactive and not reactive with their communications,” says Mark Landsiedel, chief commercial officer at Rhenus in the United States. Based in Holzwickede, Germany, Rhenus has its U.S. headquarters in Miami, where its logistics facility includes a foreign trade zone.

Insight into the disposition of their products, whether in a Rhenus warehouse or on the road, helps shippers manage their operations while



**Potted plant e-tailer Bloomscape will invest in converting its centralized distribution model into a regional network, with an eye toward enhancing customer service.**

also pleasing their own customers. “It’s essential that their end client or consumer knows exactly what’s happening, and where their product or commodity is,” Landsiedel says.

Rhenus’ proprietary IT systems, including its warehouse management system, provide that visibility, not only keeping shippers and their customers informed, but giving them the chance to make corrections when problems emerge that could delay a delivery.

“If there’s a break in the supply chain, Rhenus has the ability with air, ocean, or road transportation to expedite the shipment, as well as work hand in hand

## **“IT’S ESSENTIAL THAT THE END CLIENT OR CONSUMER KNOWS EXACTLY WHAT’S HAPPENING, AND WHERE THEIR PRODUCT OR COMMODITY IS.”** **-MARK LANDSIEDEL, CHIEF COMMERCIAL OFFICER, RHENUS**

with our client, and their client, to ensure they get it as close to on time as possible,” Landsiedel says.

This ability to provide a plan B has been especially important during the pandemic, when shippers have sometimes seen delays due to tight transportation capacity, Landsiedel says.

As a decentralized company, Rhenus can help its customers make decisions and mitigate problems quickly. “If we need to react to a client’s needs or demands, we don’t have to go through multiple layers of approval,” Landsiedel says.

### **TIME TO BRANCH OUT**

Bloomscape, an online store that sells potted plants and plant accessories, is banking on another kind of decentralization to enhance the customer experience.

Based in Detroit, Bloomscape currently operates a greenhouse in Grand Rapids, Michigan. Its plants start their lives with foliage producers around the United States, who grow them to Bloomscape’s specifications.

“These plants are then matured in Bloomscape greenhouses,” says Justin Mast, the company’s founder and chief executive officer. When a customer orders a Norfolk pine, a pot of mint, or other living product, Bloomscape ships it via UPS directly from its own greenhouse.

The plants are larger and healthier than plants sold by big-box stores because they spend no time in a warehouse, where lighting, humidity, and care can be less than ideal. “We also use a proprietary, innovative packaging design to hold plants in place during the shipping process,” Mast adds.

After the sale, customers can get advice about plant care by posing questions to the customer care team or using a mobile app.

Bloomscape received \$15 million in new funding, some of which it will use to convert its centralized distribution model into a regional network, with an eye toward enhancing customer service.

“We’re a customer-focused company, but behind the brand, we’re really a plant logistics company,” Mast says. “We will use this new round of financing to refine our regional fulfillment strategy with the goal of installing regional centers and systems that shorten transit times, leading to faster shipping.”

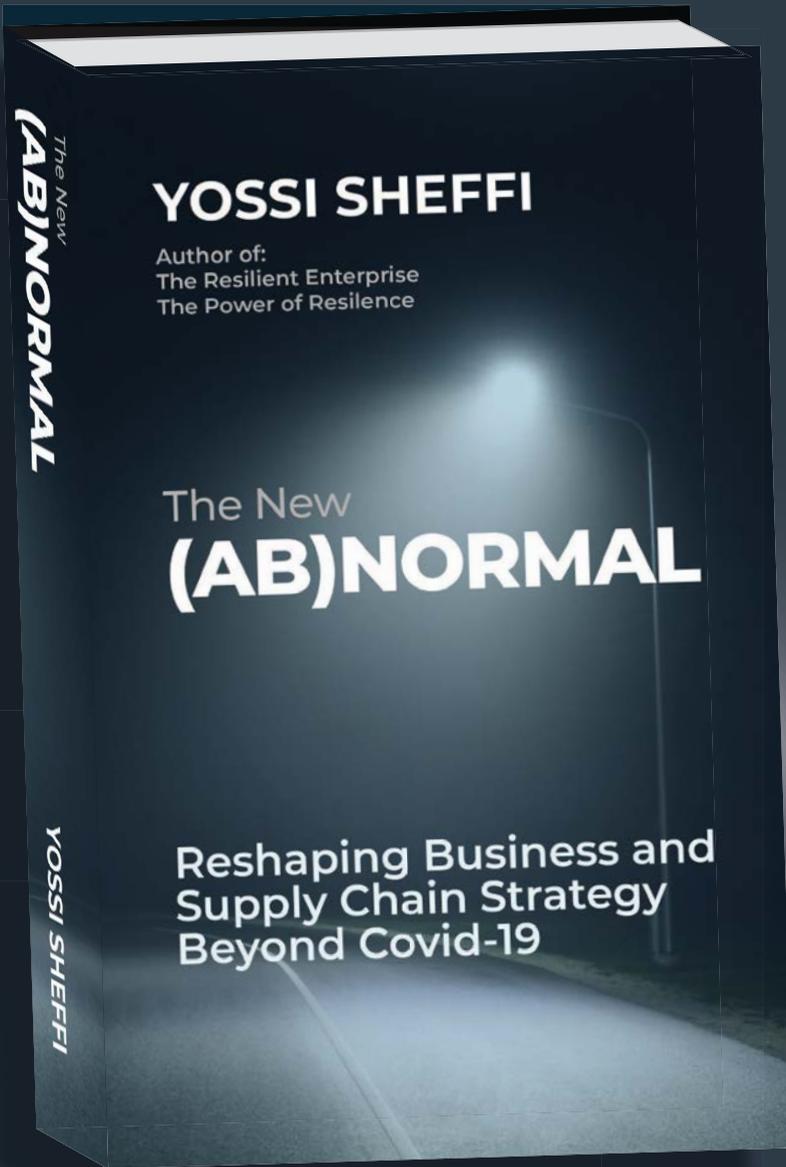
Each regional facility will have its own greenhouse. “For us, it’s critical that plants are held in an ideal greenhouse environment until the minute someone clicks ‘buy’ on the website,” Mast says. “With more fulfillment centers around the United States, we expect to reduce shipping times down to two days, increase the quality life of plants, and expand the types of plants we’re able to offer.” ■



**Rhenus Logistics recently opened its first regional warehouse and headquarters for the Americas in Miami. The 3PL established its footprint in the Americas to expand customer service in the region.**

# WELCOME TO THE NEW (AB)NORMAL

## LEARN HOW TO NAVIGATE THE PANDEMIC TODAY AND TOMORROW



What is the supply chain's role in helping companies manage and recover from the pandemic?

In his new must-read book, *The New (Ab)Normal: Reshaping Business and Supply Chain Strategy Beyond Covid-19*, MIT Professor Yossi Sheffi explains how companies grappled with the chaos of the pandemic and how they can survive and thrive as the crisis subsides.

The book covers:

- The emergence of a “new normal” supply chain, where the acceleration of technology trends during the crisis could profoundly influence the future performance of supply chains.
- A post-pandemic outlook where technological advances inspired by the crisis could level the playing field between small and large companies.
- The essential lesson: flexibility and agility are critical to managing the pandemic's disruptions and the pivot toward a changed future.

Supply chains will be at the core of the recovery. As *The New (Ab)Normal* highlights, supply chains served humanity during this global crisis and will continue to do so when the pandemic subsides... and beyond.

The New (Ab)Normal is available as  
an e-book on Amazon.com  
Find out more:  
[bit.ly/TheNewAbNormal](https://bit.ly/TheNewAbNormal)



#### ABOUT THE AUTHOR

Dr. Yossi Sheffi is Elisha Gray II Professor of Engineering Systems and Director of the MIT Center for Transportation and Logistics, a world leader in supply chain management education and research for nearly 50 years. Sheffi is an expert in supply chain management and the author of five award-winning books.



***Food  
Packaging:  
That's a  
Whap***

**By Karen Kroll**

***Environmental impacts, cost concerns, and technology advances drive a hunger for food packaging innovation.***



***From food packages*** constructed of cornstarch and plant-based coatings that extend fruit freshness to liquor bottles made of paper, traditional food and beverage packaging is undergoing an overhaul.

“Numerous initiatives in the United States and Europe fund work on alternative plastics,” says Carson Meredith, executive director with the Renewable Bioproducts Institute and a professor at the Georgia Institute of Technology.

Behind this innovation is growing recognition that the convenience of traditional single-use packaging imposes significant environmental and economic costs.

“Single-use packaging relies on the continuous extraction of limited raw materials to keep up with market demand,” says Bridget Croke, managing director with Closed Loop Partners, a New York-based investment firm focused on building the circular economy. This degrades ecosystems and emits greenhouse gases.

Moreover, because materials are thrown away rather than recaptured at the end of their use, their economic value ultimately goes to waste, too. Disposal fees and processes also add costs.

Growing consumer concern about the environmental impact of food and beverage packaging also has an impact. Consumers’ top concerns about food packaging are, understandably, hygiene and safety, according to a recent McKinsey & Company survey (see chart, next page). At the same time, 55% of those surveyed indicate they’re extremely or very concerned about the environmental impact of packaging.

Advances in technology also play a role. “Technology is a game-changer in enabling more reuse opportunity,” says Tim Debus, president and chief executive officer with the Reusable Packaging Association.

One example comes from RM2, which embeds Internet of Things (IoT) sensor technology in its composite pallets. The sensors capture and transmit each pallet’s location, temperature, and shock and tilt events.

**Beverage giant Bacardi is developing what it calls the world’s most sustainable spirits bottle, which will replace 80 million plastic bottles each year.**



**Liviri Fresh is a reusable cold-shipping box that keeps temperature-sensitive e-perishables chilled during ground shipping from the distribution facility to the consumer’s front door.**

“Customers know exactly where their pallets and product are, what temperature they’re experiencing, and whether any damage-causing events occurred—and when and where—in real time,” says Mark Gordon, senior vice president of business development at RM2.

The sensor technology is less expensive and easier to use than the mix of location trackers, temperature and vibration sensors, and accelerometers that would otherwise be needed to capture the same amount of data.

#### REUSABLE PACKAGING

Innovation makes it easier to reuse food packaging. For instance, OZZI has developed a closed-loop system of reusable meal containers along with a patented collection system.

OZZI’s bright green containers have the same basic shape as many Styrofoam to-go containers. However, they’re made from BPA-free plastic that can be cleaned and reused hundreds of times and then recycled, says Tom Wright,

chief executive officer with the North Kingston, Rhode Island-based firm.

Just as important as the containers themselves is the collection solution. For reusables to work, you need a “user-friendly” collection system, Wright says.

With the OZZI system, dubbed O2GO, diners check out their containers, enjoy their meals, and then return the containers to a collection device that looks similar to a vending machine. Typically, these are located at multiple places around a facility or campus. When they’re getting full, the machines alert the staff, who can then empty them and move the containers for cleaning. OZZI averages a return rate of about 98%, Wright says.

The company launched its solution on college campuses and has since expanded to other campus-type environments, including healthcare facilities, senior centers, and office buildings.

Another venture, Brooklyn, New York-based Returnity Innovations, focuses on reusable packaging for e-commerce deliveries. The company has developed packaging solutions for other products, including clothes and furniture, and is working on solutions for food and beverage companies, says chief executive officer Mike Newman.

Each solution is tailored to the company and product, and follows what Newman calls the “3P” framework:

**1. Process.** What process will be used to get the package back? It should be easy and low cost.

“The biggest, most important thing for companies looking at reusables is the cost of packaging return,” Newman says. If a company’s existing logistics model doesn’t include the return of the package, adding this function can impose a significant new expense.

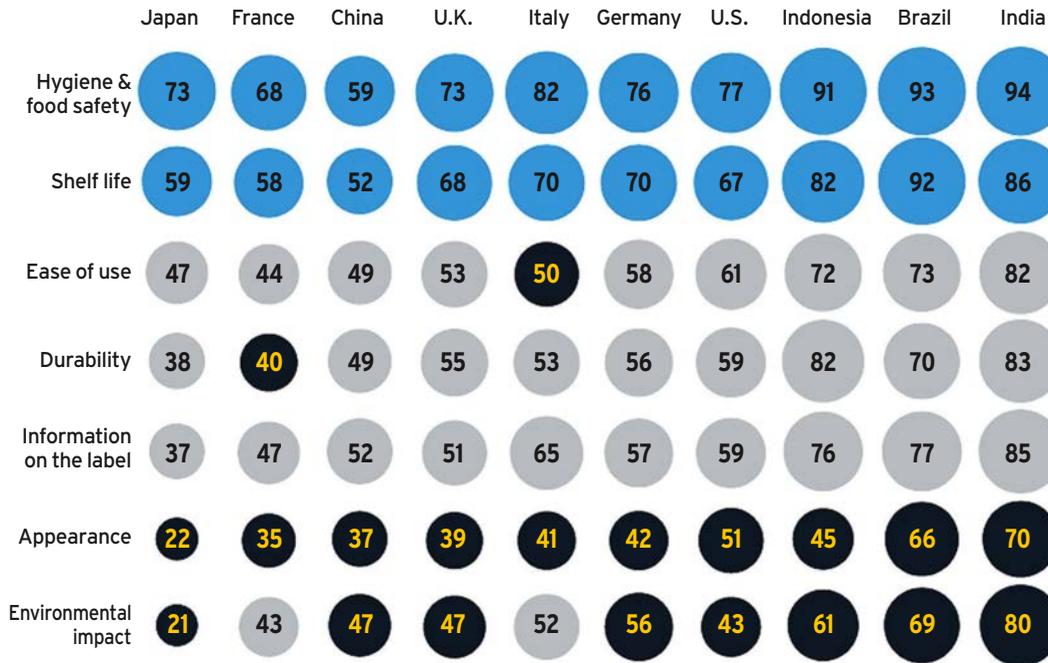
“There are ways to make return costs low enough, but you have to start there and integrate an efficient returns process or it will not scale,” he adds. A returns process added as an afterthought will likely be harder to scale.

**2. Participation.** How can you entice the customer to follow through? For

## HOW IMPORTANT IS PRODUCT PACKAGING AROUND THE WORLD?

% of respondents who indicate "extremely" or "very strong"

RANKED TOP 2 ■  
RANKED BOTTOM 2 ■



In a survey looking into what U.S. consumers expect from product packaging, McKinsey finds that hygiene and food safety, shelf life, and ease of use are the top-ranked factors. Environmental impact is one of the lowest of seven, after appearance and durability. Forty-three percent of surveyed U.S. consumers cite environmental impact as extremely or very important for packaging, compared with 77% for hygiene and food safety, 67% for shelf life, and 61% for ease of use. The relatively low importance U.S. consumers attribute to environmental factors is not unique; the McKinsey survey finds similar sentiments in China, France, and the U.K.



Peel-and-place StixFresh stickers are an all-natural way to extend the shelf life of apples, pears, avocados, mangos, oranges, and other citrus fruits by up to 14 days.

instance, can consumers return their packages at the same place they make other returns?

**3. Packaging.** Finally, what packaging will meet the requirements identified in the previous two steps?

Typically, Returnity's packages use fabric, often manufactured from recycled bottles, rather than plastic molding. One reason: Fabric is usually more

cost-effective in small quantities. It also tends to work better for items that are not stacked on pallets, but instead are transported in a bike messenger's bag.

Any e-commerce package also has to "win the doorstep experience," Newman says. With online purchases, the package is often the only physical connection between company and consumer, he notes. It needs to create a favorable impression.

The Liviri Shuttle, designed for local grocery delivery services, is lightweight, insulated, and reusable, says spokesperson Logan Martinez. Because the Shuttle can keep perishables in a safe temperature zone for 12-plus hours, it makes unattended deliveries possible, increasing route efficiency.

After a shipment is received, consumers simply take their perishables out of the box, close the lid, attach the included return shipping label for pickup, and return it via FedEx or another shipping service.

*"Technology is a game-changer in enabling more reuse opportunity."*

**-Tim Debus,  
President and CEO,  
Reusable Packaging Association**

### RETHINKING TRADITIONAL PACKAGING

Some companies are devising ways to use traditional packaging materials in more environmentally friendly ways. Beverage giant Bacardi, for instance, is developing a paper bottle as well as a biodegradable biopolymer bottle, both scheduled for commercial availability in 2023, says Jean-Marc Lambert, senior vice president, global operations. These will help replace the 80 million plastic bottles Bacardi currently produces each year.

Both types of bottles will biodegrade in roughly 18 months, versus the more

## Johnnie Walker Puts It on Paper

Traditionally, there are two main materials options for manufacturing bottles: glass and plastic. Plastic is cheap, light, and easy to recycle, but it takes an extremely long time to degrade. Glass is more resilient, more premium, and is near-infinity recyclable. But it takes more energy to recycle glass, and its extra weight adds more emissions to its shipping. Both options have their ups and downs in emissions and pollution.

However, Diageo, one of the world's largest producers of beer and spirits, says it has a solution for this issue. The company found that it produces much of its carbon footprint early in its supply chain, including from raw materials and packaging. These are classified as scope three emissions, which the company does not directly control.

In an attempt to change this, Diageo is set to launch a new paper-based bottle for its Johnnie Walker whiskey brand in 2021.

Diageo worked with venture company Pilot Lite to create Pulpex, a company that will produce bottles from sustainable wood pulp. Other

companies in noncompeting industries were invited to take part.

Pulpex claims its products will have a carbon footprint 90% smaller than glass, and instead of the standard plastic-based lining, the inside of the bottles will be sprayed with a coating to stop them from becoming soggy. Diageo is also working with suppliers on optimizing its glass bottles, such as increasing their recycled content and decreasing their weight.

— Matt Hoyer, *Thomas Insights*



Some companies are developing packages made from renewable resources that aren't traditionally used as packaging materials. ClimaCell from TemperPack, for example, is made from a mix of cornstarch and kraft paper, and can help reduce the use of Styrofoam, says Jed Dutton, vice president of marketing with the Richmond, Virginia-based company.

The result of numerous experiments with hundreds of formulations, ClimaCell is lightweight, strong, and traps air so it doesn't let the cold out, nor the heat in. It can protect overnight and two-day deliveries for meal kits, prepared foods, medicines, and other products.

It can also be manufactured at scale, compete with Styrofoam on price, and can be shipped flat. Just as important, it offers "a nice presentation," Dutton says.

### NONPACKAGES PROVIDE PROTECTION

Some packaging innovations aren't technically packages. Apeel, based in Goleta, California, offers a plant-based coating that can double the shelf life of produce, reducing reliance on plastic packaging and the need for refrigeration, the company says. It does this by creating an edible "peel" on the outside surface of fresh produce that retains moisture and resists oxidation, helping to slow spoilage.

The Apeel formula is distributed as a powder and then mixed with water at the packaging center, where it can be applied by spraying, dipping, or brushing. Currently, Apeel is available to organic and conventional suppliers of many varieties of produce, including avocados, oranges, limes, cucumbers, and apples.

The company is also working to develop formulations for other items. Because the factors that determine the shelf life of produce, such as water loss and ripening rates, vary with surface properties like roughness and porosity, different formulations are needed for different types of produce.

In a similar vein, StixFresh uses a sticker that's placed on fruit to deliver a compound that releases a protective barrier, slowing the ripening process and making it less susceptible to rotting, says

than 400 years plastic bottles require to decompose. "It's a major step toward the company's goal to be entirely plastic-free by 2030," Lambert says.

What's more, Bacardi has committed to sharing the technology used to make its biopolymer bottle after its launch. "We want to help move the needle for the entire industry," Lambert says.

As more companies swap plastics for biodegradable alternatives, production costs will decline, making it a viable option for even more companies.

Recart, a new product from Tetra Pak, a food processing and packaging solutions company, offers an alternative to cans and bottles. The paperboard used in Recart can cut carbon emissions generated with traditional glass and

aluminum packages by 81%, the company says. In addition, one truck's worth of empty Tetra Recart cartons, delivered flat, is equivalent to nine trucks' worth of empty cans, says Lars Holmquist, executive vice president, packaging solutions and commercial operations with the Lausanne, Switzerland-based company.

Recart packages weigh 20 grams (less than one ounce) versus 50 grams (1.8 ounces) for a can; the difference grows even bigger when compared to glass jars. "The overall cost of production when using Tetra Recart packages instead of cans offers a 15% to 20% savings," Holmquist says. The rectangular shape of Recart packages also makes them well suited for shipping.



Apeel uses materials that exist in the peels, seeds, and pulp of fruits and vegetables to create a protective extra peel that seals moisture in and keeps oxygen out. That extra peel keeps produce fresh twice as long, and also means less produce goes to waste throughout the supply chain—from grower to retailer to consumers at home.

chief executive officer and co-founder Moody Soliman. The sticker can be applied at any point after harvesting, including by consumers, although it offers the greatest impact when applied at the distribution stage. That's also when many branding stickers are applied, making it easy to incorporate into the process.

For berries and other fruits that often come in clamshells, StixFresh can be dispersed through a sachet that's dropped into the package.

The company, which has its U.S. headquarters in Kirkland, Washington, has tested its solution with a European retailer. StixFresh reduced the losses on blueberries by 25% after seven days

**Tetra Pak developed processing and packaging technologies that facilitate the distribution of products to the consumer and minimize the use of raw materials and energy.**



and on nectarines by 30% after seven days, Soliman says.

Along with produce, StixFresh is looking to expand to other types of food, such as baked goods. To get there, the company's research and development team identifies the diseases impacting the foods, as well as the compounds that can target the diseases. "We develop the formulations and can apply them to a variety of surfaces," Soliman says.

**WEIGHING CHALLENGES AND BENEFITS**

While these innovations have already shown substantive benefits, all new packaging solutions face challenges. These packages will reshape how materials flow through supply chains.

"These solutions are designed with entire recovery systems in mind, taking into consideration where materials go after use and how they can be kept circulating in our economy for as long as possible," Croke says. While these are all positive changes, they still require adjustments.

Because packaging is incorporated within many companies' processes, shifting from one type to another can require significant operational changes.

Most food companies will require testing of new packaging. Along with confirming that it keeps food safe and clean, they'll want to check whether it affects the taste of the product, says Tom

***"There is no panacea to the complex issue of global waste mitigation."***

**-Bridget Croke,  
Managing Director,  
Closed Loop Partners**

Porter, vice president, industrial projects with real estate firm JLL.

And, changing long-standing consumer behaviors won't happen overnight. "There is no panacea to the complex issue of global waste mitigation, and a wide range of solutions that fit different contexts need to be thoroughly tested over time, in the lead up to widespread use," Croke notes.

At the same time, it's possible to make a solid business case for many types of reusable and sustainable packaging, even before considering the environmental benefits.

For instance, reusable packaging is often sturdier than single-use options. That may mean more packages can be stacked on top of each other, allowing for more efficient—and less expensive—shipping. Reusable packaging also can cut disposal costs.

"Walk through how reusable packaging will drive efficiencies at your company," Debus recommends. ■

# CAREER MOVES That Pack a Punch

**Here's your ring-side seat to knockout advice from supply chain professionals who boosted their careers by coming out swinging.**

**By Karen Kroll**

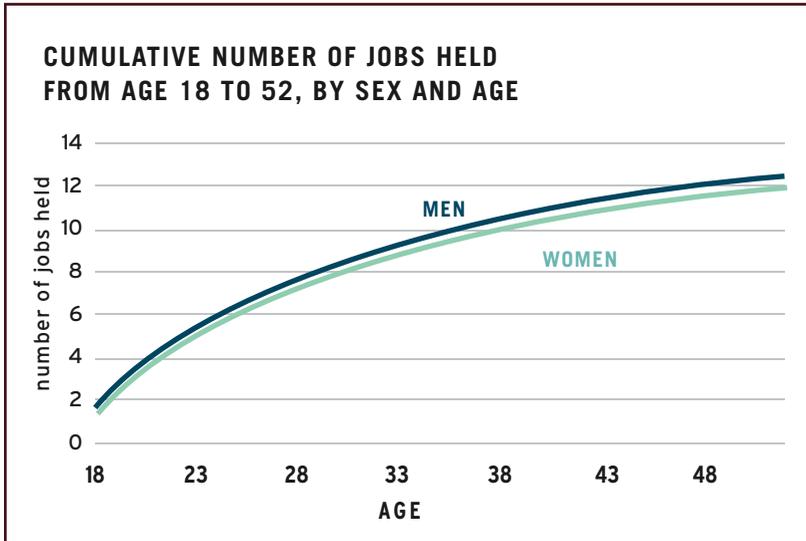
Considering the number of positions many professionals will hold throughout their careers, what makes a particular career move more impactful than another? We asked several supply chain professionals to share the moves that proved most significant.

While the specifics vary, many moves share a common trait: They yanked the individual out of their comfort zone, propelling them into a period of growth and learning. Moreover, the knowledge gained in soft skills, such as communication and leadership, often proves more critical than the technical skills they acquired.

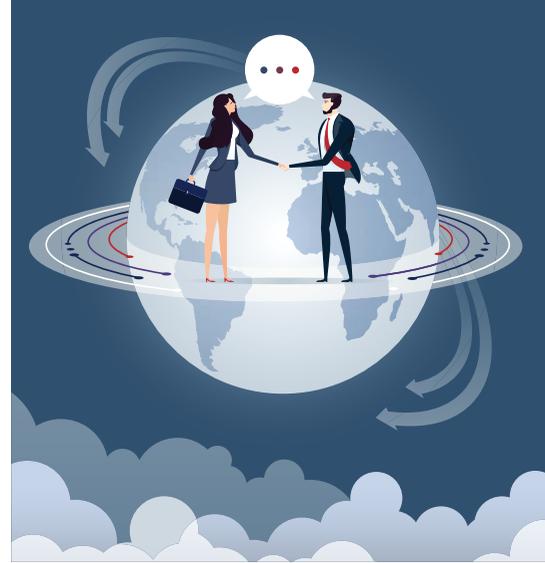


## If baby boomers are any indication, most people work at about one dozen different jobs in their lifetimes.

SOURCE: BUREAU OF LABOR STATISTICS



Individuals born between 1957 and 1964, or the tail end of the baby boomer era, held an average of 12.3 jobs between the ages of 18 and 52.



## Focusing on a Common Goal

Early in my career, I was part of a team starting a joint venture, and I headed logistics. I was in my 30s and had to learn to work with individuals from two different companies with two different approaches. It forced me to develop different leadership skills and focus on influence management.

Everyone in the joint venture had stayed with their parent company. In forming my logistics team, I wanted members from both organizations, because I could see the strength in each. But everyone wanted it to be clear-cut, so all team members came from one organization or the other.

No one on the teams reported to me, and yet I had to get everyone to focus on a common goal: what was best for the joint venture. It's uncomfortable. I had to get folks to buy into my skill set. Communication was huge.

Yet by the third meeting, the teams were intertwined. While the joint venture lasted only a few years, the company president told me the logistics strategy was one of its most successful aspects. The position was tough, but it changed the trajectory of

my career. It gave me new confidence and helped me realize I wanted to run a business.



—Denise Kopko  
Senior Vice President,  
Operations, Veolia  
North America

## Learning from Adversity

I was about two years out of college, in a leadership program in operations quality supervision with a Fortune 50 company, and training with a gentleman who passed away suddenly. Initially, I was going to have a smaller quality supervision role, but I was the only person who'd trained with this gentleman. So, as a college kid, I began managing 40 employees across three shifts—the company's most experienced blue-collar workforce.

I couldn't lead by my knowledge of manufacturing quality. I had to learn from my team without worry or shame.

It was my first exposure to the truth that it's humans first, process second. It's easy to commit to a goal, but are you also preparing the team to succeed? For instance, do they have the training needed to accomplish the goal?

To communicate with employees on all shifts, I'd work on the operations floor at 2 or 3 a.m. I moved my desk out of the office and onto the shop floor. It made for some long days, but once the camaraderie was built, it didn't feel long. It felt like one team across all the shifts.

It was a unique moment of adversity, but an opportunity like this keeps you level-headed and helps free you from bias. The lessons stuck with me and allowed me to succeed and mentor.



—Qadeer Parekh  
Director, Global Supply Chain and Continuous Improvement,  
Talent and Development Logistics, Dover Corporation

## It's About Them, Not You



I've been very fortunate to have made many career moves that influenced my career. The most significant was when we first moved abroad after I was asked to run the supply chain for an international food and beverage company in Zurich, Switzerland.

There is a level of preparation involved in this type of move, but you can't really know what it's like until you're in the environment and experience it every day. You don't know what don't know.

British, Italian, German, French, and Spanish employees reported to me. I had to learn how to lead when people came from different backgrounds, and they learned and received leadership differently. It was such an opportunity.

One key to success: You can't go in with a big ego and think you know it all. You have to remind yourself you're in another country, and be willing to learn and adopt their norms, while still helping and leading people. It's not about you, it's about them—you have to adjust your leadership to them.

—Debbie Lentz

*President, Global Supply Chain, Electrocomponents*

## Going Mobile

Early in my career, my decision to relocate several hundred miles away for a position as a plant superintendent had a profound impact. That may seem both obvious and trivial, but I think the willingness to move to where the greatest opportunity was within the company, regardless of location, had the most positive impact on my career.

I learned so much about how to use data and analysis to drive decision-making. To this day, I use many of the tools I learned during my first “big move.” I'd also never worked in such a structured, process-driven environment. This was my first introduction to lean manufacturing, and I probably learned more about creating organizational value through manufacturing excellence than at any other time in my career.

Career mobility also shows the company you are willing to serve where and when you are needed, even if it's not in some glamorous location. Most importantly, being exposed to different leadership styles and seeing what works within different business cultures can accelerate your growth as a leader.



—Darrell Edwards

*Senior Vice President and Chief Operating Officer,  
La-Z-Boy Incorporated*

## ROLLING WITH THE PUNCHES

**With the unemployment rate hovering just below 8%—more than double the rate in January 2020—how much luck can job hunters expect?**

While job hunting may be more challenging in the current economy, opportunities remain. Even during difficult economic times, people need to hire people. **“Persistence will pay off,”** says Darrell Edwards, senior vice president and chief operating officer, La-Z-Boy.

At the same time, job hunters need to be mindful of structural shifts within the economy. **“Ask yourself, what has changed as a result of seismic global concerns such as the pandemic?”** Edwards says. What new technologies are being utilized and what new business needs are emerging? Then, identify how your skills can support companies experiencing these structural economic shifts.

When opportunities appear limited in your own industry, look around. **“In your industry, probably a lot of people know what you know. Step outside it,”** advises Lori Fellmer, vice president of logistics and carrier management for BassTech International. This might be an industry adjacent to the one in which you've been working.

When building a resume or preparing for an interview, focus on areas where you drove improvements. **“When possible, demonstrate how your accomplishments and activities have translated to tangible results,** especially in terms of cost savings or revenue generation,” says Richard Diaz, vice president, operations and supply chain for Avnet.

Some brave souls may decide to take a leap and form their own companies. The current upended environment can **“be one of the best times to try looking at the problems in the world—after all, there's no shortage—and figure out how to solve them,”** says Stephanie Benedetto, chief executive officer and co-founder, Queen of Raw.

“Being an entrepreneur is a roller coaster,” she adds. “If you're willing to do it during a pandemic, and you're still passionate, you're probably born to do this.”

# BOBBING AND WEAVING

**Supply chain professionals offer insight on assessing career moves, when it might make sense to decline a proposed shift, and the merits of lateral moves.**

Moves that broaden your experience can be key to a successful supply chain career. **“I’ve found that getting broad experience is key,”** says Jan Axt, head of automotive supply chain management, strategy, and innovation with Continental AG, which develops mobility technologies and services.

Working in a range of areas—logistics consulting, production, and supply chain management in both manufacturing and service companies—provided a breadth of experience that helped Axt understand the three pillars of supply chain:

- People
- Process interfaces
- Technology

When a new opportunity appears, someone has likely seen you demonstrate some skill set, says Qadeer Parekh, director, global supply chain, Dover Corporation.

Understand the expectations and your skill set—and just as important, what you lack. **“How much of what you’re missing does the job require?”** he asks. Determining this helps

you identify where you’ll need help.

Find out if the move requires immediate firefighting, or if you’d be helping a mature team move to the next level. “Allow enough time to take inventory of the role so you can understand the sins and wins of the past,” Parekh advises.

**“Identify the risks and your risk tolerance,”** says Thomas Mayfield, head of operations, North America, at Newark Technologies, a high-service distributor of technology products, services, and solutions. If your tolerance is high, you might consider a bigger move, such as changing fields.

“Conversely, smaller lateral moves that allow you to test the waters may be a better fit if your risk tolerance is low,” he adds.

While professional considerations understandably weigh heavily when evaluating career moves, most people also need to assess the impact on their personal lives. In 2011, Denise Kopko’s husband passed

away. **“I’d been on a career trajectory, but had to step back, and balance work and my personal life—I had young children,”** says Kopko, senior vice president, operations, Veolia North America.

Kopko made some lateral moves that allowed her to continue to develop, while also balancing her family’s needs. “Now, my kids are mostly grown, and I can refocus on my career,” she adds.

While Debbie Lentz, president, global supply chain, for Electrocomponents has said yes to most opportunities, she has turned down a few.

**“It wasn’t about the job itself, but whether it integrated with my life appropriately,”** she says. When she took an opportunity in Switzerland, her daughters were 10 and 12. “It was the perfect age. They were sponges and learned to be more international,” she says, adding that the position was an adventure and education for her whole family.

“But it has to fit with your life,” Lentz says. “Your career impacts others.”



## Sideways Steps

I worked for 25 years on the shipping side of supply chain and transportation. Then I left to work for a manufacturing company. It opened a whole new area of career opportunity for me.

While I had learned a lot and knew the details of shipping, until you sit at a desk on the manufacturing side, you realize

you don’t understand all the considerations that go into the flow of materials and sales and production schedules.

My new job gave me excellent exposure to these processes.

I wasn’t opposed to staying on the transport side, but knew I needed to broaden my horizon and skill set. I gained information from collaborating with planning, sales, production, and plant operations. At the same time, I brought knowledge and value into the company. It was a great career move—a classic sideways step that takes what you know and puts you in a different industry.

—Lori Fellmer

Vice President of Logistics and Carrier Management, BassTech International



## Active Listening

I started my career in component distribution, but then moved and spent more than 20 years in the supplier community before returning to distribution (with Avnet) in 2020. If you're not familiar with the technology supply chain, it may not seem like a big deal to move from the supplier side to the distributor side. But as much as all supply chain players share goals and obstacles, there are also significant differences.

After working with distributors from the supplier side, I thought I understood what component distribution was all about. Now, I realize how many moving parts must be perfectly aligned to accomplish something that, from the supplier perspective, seemed relatively simple. In reality, it was just Avnet's expertise that made it appear that way.

A commitment to active listening—both with my new colleagues and with the supplier community, with whom I now engage in a very different way—is the skill that has served me most throughout my career, and particularly with this career move. It is critical that we keep an open mind with each engagement, give ourselves the opportunity to learn and expand our perspective, and most importantly, ensure we demonstrate respect for our counterparts.



—**Richard Diaz**  
Vice President,  
Operations and Supply Chain, Avnet

## Staying Involved

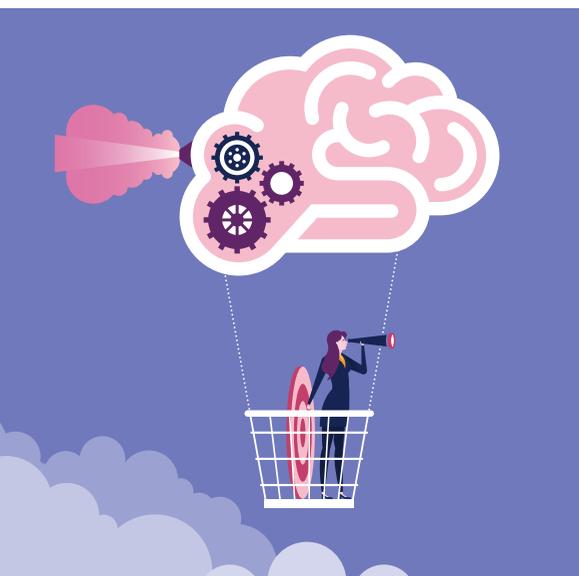


I relocated to our corporate headquarters to take on a new position. This position led to additional responsibilities

and exposure to other departments and opportunities that have brought me to my current role.

By being close to our corporate functions and leadership, I was able to be more involved in the strategy and day-to-day execution of decisions, and increased my involvement in different areas of the business. This allowed others to see my potential and opened up different opportunities.

—**Andrew Vermilion**  
Vice President of  
Replenishment and Logistics,  
Southern Glazer's Wine & Spirits



**“One key to success: You can't go in with a big ego and think you know it all. It's not about you, it's about them.”**

—**Debbie Lentz, President, Global Supply Chain, Electrocomponents**

## Changing the World

While I come from a family with a background in textiles and fashion, I wasn't planning to get into the family business. I was an attorney working on Wall Street, although specializing in fashion, technology, and sustainability. So in a way, I'd gone back to my roots.

I'd also seen the waste in textiles. Today, more than \$120 billion worth of excess fabric languishes in warehouses around the globe, often ending up burned or buried.

When the market crashed in 2008 and 2009, it was a dark period on Wall Street. It was also a time to see that many of the old ways of doing things weren't sustainable. I took the opportunity to go on my own and build a business to change the world. That led to Queen of Raw. This move defined who I am today.

Several skills were key. One is public speaking. From an early age, I went to an all-women school and gained formal instruction in public speaking. Getting your idea or game-changing solution into 60 seconds is the hardest thing, but it helped me win a 60-second pitch with Ashton Kutcher.

Another skill is financial modeling. Especially in a sustainable impact business, you need to show how you'll achieve profitability, as well as how the solution helps people and the planet. You need to articulate the problem and how you'll solve it. Businesses that can solve real-world problems can dominate.



—**Stephanie Benedetto**  
CEO and Co-Founder, Queen of Raw



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# IT TOOLKIT

## Buddha Brands Embraces the Philosophy of Supply Chain Integration

### THE CUSTOMER

Buddha Brands is a market leader in plant-based, healthful food and beverages, and creator of Thirsty Buddha beverages and Hungry Buddha snacks.

### THE PROVIDER

Cranberry Township, Pennsylvania-based TrueCommerce, which offers a unified commerce platform linking customers, suppliers, channels, and systems to help users focus on customer experience and keep pace with omnichannel expectations.

*by Karen Kroll*

Buddha Brands, a provider of plant-based food and beverage products, including Hungry Buddha keto bars and Thirsty Buddha coconut water, has seen tremendous growth during the past decade. To sustain its success, however, the company needed more robust integration between its electronic data interchange (EDI) solution and enterprise resource planning (ERP) system.

Previously, employees downloaded purchase order information from the EDI solution and then had to key the same data into the company's ERP system.

"It was double data entry and it was not efficient," says Johanne Pilon, supply chain manager with the Montreal-based company. Over time, these inefficiencies could hinder Buddha Brands' growth trajectory.

Many larger retailers expect—or even demand—their suppliers to connect with them through EDI, or the transfer of data from one computer system to another using a standard message formatting. For some companies, however, integrating EDI capabilities with their other financial and operating systems proves difficult. Some implementations only partially succeed.

EDI, in theory, streamlines communications between companies, helping them leverage growth opportunities without having to continually add staff. One hitch? "Although people would suggest EDI is a standard protocol, everybody uses it

differently," says Ross Elliott, president of TrueCommerce, which helps companies connect across the supply chain.

He provides an example: The payment term of "net 30" may also be written as "n30" or "net30," among other variations. These small differences can wreak havoc with the automation EDI is trying to achieve.

### TRANSPORT, TRANSFORM, TRANSLATE

To compensate for the myriad ways in which different companies can name the same process and to accurately transmit EDI information to the companies using it, three steps often have to occur: transport, transform, and translate.

First, the system must move or transport information between two companies—in this case, Buddha Brands and its customers. Then, it needs to be able to transform the customer's document type to the document type required by the companies' ERP systems. Finally, the system may also need to translate the contents to ensure, as in the above example, that the terms are in a common format.

## CASEBOOK STUDY

# Buddha Brands Attains Enlightenment

### THE CHALLENGE

Buddha Brands wanted to establish an effective connection between its EDI solution and multiple ERP solutions to reduce manual work and enhance supply chain visibility.

### THE SOLUTION

Buddha Brands chose to:

- Partner with a third-party company that focuses on establishing connections between its EDI solution and ERP solutions.
- Test the new solution, including its ability to handle unusual transactions, such as overages and shortages.
- Convert one warehouse to the new EDI solution.

### THE RESULTS

- Eliminated re-keying of data from the EDI solution to the ERP solution.
- Now able to handle the growing volume of EDI transactions without continually adding more staff.
- Have earlier visibility into orders, which enhances planning and shipping.
- Processes including purchase order fulfillment and customer invoicing are automated.
- Reduced external charges for late order confirmations.

### NEXT STEPS

Convert two other warehouses in Toronto and California to the new EDI solution.

For several years, Buddha Brands had been working with another EDI vendor to integrate its EDI solution and automate its order entry, invoicing, and related processes. Pilon and her colleagues also wanted to connect through EDI with the company's third-party logistics (3PL) partners so they could more quickly dispatch orders and receive fulfillment.

Their efforts failed to bear fruit. In part, this was because the integration was complex; the resulting solution would need to handle multiple types of taxes as well as recycling and deposit fees, among other charges. In addition, the company "lacked the proper guidance, consultancy, and help through this project to move forward," Pilon says.

Pilon began exploring other EDI providers that had experience with NetSuite, the company's ERP solution. To assess potential partners, she asked them to review a range of costing scenarios and tax calculations and explain how their systems would handle them.

TrueCommerce "always came back to me with a consultant who knew exactly what I was talking about and could make it happen," she says.

### BUSINESS IN EVERY DIRECTION

"Our catchphrase is 'do business in every direction,'" Elliott says. TrueCommerce, based in Cranberry Township, Pennsylvania, focuses on connecting companies to more than 100 channels and partners. That

includes online marketplaces like Amazon, eBay, and Walmart to leading e-commerce platforms like Shopify and Magento, and dozens of ERP solutions. The goal is a "single-pipe approach," Elliott says, so companies don't need multiple vendors to make connections.

While TrueCommerce works with companies of all sizes, its sweet spot is those with annual revenues of between \$10 million and \$500 million. Its cloud-based solutions can securely establish connections and pass information back and forth across the web.

Once Buddha Brands and TrueCommerce decided to work together, Pilon set a deadline of three months for the first EDI implementation. It was an ambitious goal, but the two companies were able to convert a warehouse in Langley, British Columbia, from the previous vendor to TrueCommerce on schedule. "The system is fully integrated and working like clockwork," Pilon says.

One key to the implementation's success was comprehensive testing. "We tested every single transaction with every scenario that we could think of," Pilon says, including errors such as shortages and overages.

Now, when a purchase order comes in, Buddha Brands verifies its accuracy and approves it. Then it's automatically acknowledged and dispatched to the warehouse. Once the order has shipped, the warehouse sends Pilon's



Buddha Brands sells its clean, plant-based bars through multiple channels, including Amazon. Its EDI/ERP integration system reduces manual data entry and errors, and frees workers to focus on value-added functions.

department the bill of lading or shipment documents, which are populated with order shipping information, such as lot number and quantity. The order shifts to an item fulfillment or shipment document, with an advance shipment notice automatically issued to the customer. After that, the customer is invoiced.

In addition, Buddha Brands receives credit and remittance advice and forecasts from some customers. "It's all touchless," Pilon says.

### THE GIFT OF TIME

The automation saves time. "Since most of our major customers use EDI, orders and all related documents come in automatically and we don't spend any more time keying in orders or doing long and manual advance ship notices," Pilon says.

This shift has boosted morale, as employees no longer spend their days re-keying information, but can concentrate on communicating with customers and the company's warehouses, and conducting analyses.

"The value-added work, not the data entry, is what stimulates my teammates," Pilon says. "I have a happier team and one that works to service the customer rather than punch data."

The instructional approach TrueCommerce consultants take has also been key to the solution's success. For instance, TrueCommerce showed Pilon and her colleagues how the EDI database works, enabling them to incorporate future changes in pricing or taxes without having to engage a third party.

"You become a lot more independent and a lot more knowledgeable about the technology that you're using," Pilon says.

Pilon adds that Buddha Brand's partnership with Amazon would not have been possible without a solid EDI integration that reduces data entry. Absent an effective EDI integration, Buddha Brands likely would have had to expand its workforce to manually process the orders.

Buddha Brands is now able to manage these orders by exception within its



Orders for products such as Thirsty Buddha coconut water are instantly visible in Buddha Brands' ERP system, which speeds fulfillment and shipping.

NetSuite ERP solution. The EDI solution runs more or less on its own and in the background.

"Amazon produces an order and Buddha Brands sees it in their NetSuite order inquiry," Elliott says. "We do everything in the middle."

Incoming orders are instantly visible in NetSuite, facilitating shipping and planning. The automated work processes also reduce errors, providing more opportunity for value-added work.

Another feature, the TrueCommerce Scheduler, automates the import and export of EDI transactions at prearranged times. For instance, it can be set to pull documents from NetSuite and send them to a 3PL or customer at scheduled intervals, freeing Buddha Brands employees from having to take time to complete these jobs manually.

Buddha Brands has also been able to cut some external order processing fees. Previously, some customers would issue fines if the company couldn't confirm orders within 24 hours. Now, many of these fees have been eliminated because many orders, along with supporting documentation, enter the systems automatically. Employees no longer need to key in orders to complete manual and lengthy advance shipping notices.

Just as important, when Buddha Brands adds a customer that requires EDI capabilities, Pilon and her team can be confident that meeting this

requirement won't strain the order processing and logistics functions. This is key, given the pace at which Buddha Brands launches products and signs new customers.

Buddha Brands plans to convert two other warehouses in California and Toronto to the TrueCommerce solution. Both of those schedules have slowed because of the pandemic, Pilon says.

### WORTH THE EFFORT

Pilon notes that many companies postpone changing their EDI solutions, concerned about the upheaval it will likely cause. Instead, they make do with systems that only sort-of work. That strategy can become an obstacle to effectively leveraging growth opportunities.

While switching EDI partners often imposes some temporary pain and extra work, it's usually easier to tackle this initiative while a company is smaller.

"The bigger the project implementation, the harder it is to switch suppliers," Pilon says. "Cut the ties and go for a supplier that you know will bring you to the finish line." Not only does this help support the organization's success and growth, but employees will be happier and more productive.

"I can't imagine going back to the way things were before," Pilon says. "I now rely on how easily the information flows through to our customers and our warehouses."

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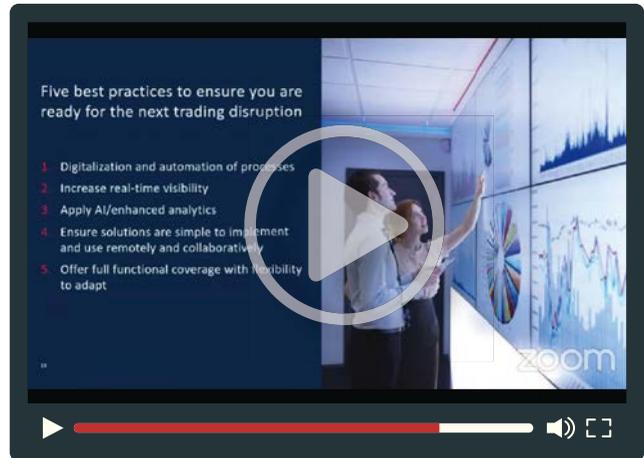
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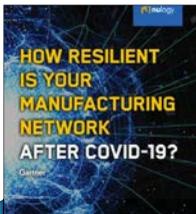
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# Supply Chain Insights

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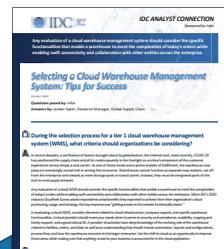
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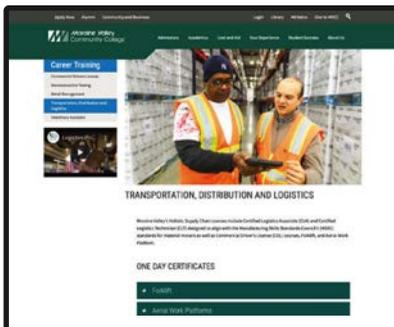


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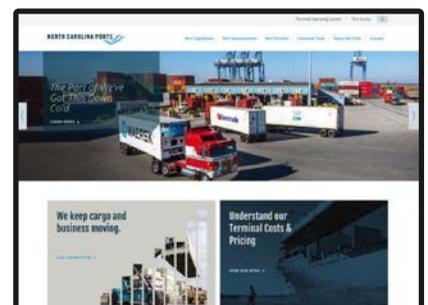
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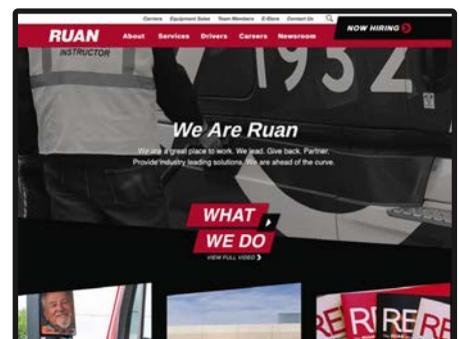


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### TRUCKING



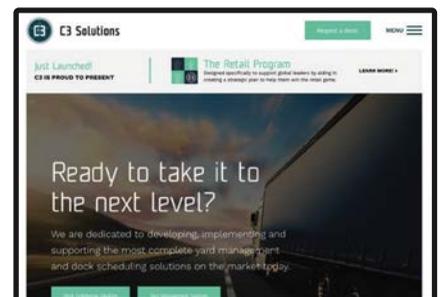
#### OLD DOMINION FREIGHT LINE • [www.odfl.com](http://www.odfl.com)

Old Dominion Freight Line is a less-than-truckload carrier providing complete nationwide service within the continental United States. Through its four product groups, OD-Domestic, OD-Expedited, OD-Global, and OD-Technology, the company offers an array of innovative products and services to, from, and between North America, Central America, South America, and the Far East. The company also offers a broad range of expedited and logistical services in both domestic and global markets.

### YARD MANAGEMENT

#### C3 SOLUTIONS • [www.c3solutions.com](http://www.c3solutions.com)

C3 Solutions is an information technology company specialized in yard management (YMS) and dock scheduling (DSS) systems. Since its founding in 2000, C3 has gained the confidence of clients around the world and across many industries including retail, grocery, distribution, manufacturing and parcel post. Headquartered in Montreal (QC), Canada and privately owned, C3 is dedicated to developing, implementing and supporting the most complete yard management and dock scheduling products on the market today. For more information on C3’s products, schedule a free online demonstration.



[IN FOCUS]

# INBRIEF

*New Services and Solutions*

## > PRODUCTS



> The new XG4 rugged mobile computer from **Janam Technologies** is designed for scan-

intensive applications. The lightweight device is ideal for workers performing supply chain functions, including inventory management, stocking and replenishment, shipping, receiving, and cross docking.

> The OpteBulk from **ORBIS** consists of a pallet, sleeve, and top cap to keep product loads safe and secure. Allowing for maximum cube utilization, the collapsible bulk container is designed for lighter-weight loads. The sleeves can be fabricated from plastic corrugated materials.

## > SERVICES

> **A&R Logistics** opened a South Carolina facility to package, export, and import plastic resin and other products for chemical companies. Near the Port of Charleston, the 615,000-square-foot facility has two high-speed packaging lines, sea bulk operations, liquid transload capability, and rail service via CSX.

> Ocean shippers now have a range of services to help analyze their environmental footprint, use cleaner alternative energy sources, and offset emissions generated during goods transport through the newly launched ACT with CMA CGM+. The offering, which consists of four services, is available throughout the **CMA CGM Group's** shipping subsidiaries.

> **AirBridge Cargo Airlines**, a unit of Volga-Dnepr Group, now offers ThermoSafe's new Pegasus ULD bulk temperature-controlled container. Designed for pharmaceutical use, the passive bulk temperature-controlled container is an FAA-approved unit load device.

> **Fetch Robotics** partnered with VARGO, a provider of materials handling systems integration, warehouse execution software and equipment solutions, to launch an integrated fulfillment solution. The new offering combines Fetch's autonomous mobile robots with Continuous Order Fulfillment Engine, VARGO's warehouse execution system, to enable optimized piece, batch, and case picking workflows with payloads up to 1.5 tons for e-commerce, retail distribution, and omnichannel operations.



> **Southworth Products'** air cargo lifts speed and simplify the transfer of loads to and from transport vehicles to cargo terminals and off-site warehouse and distribution

center facilities. Standard lifts have a load capacity of 15,000 pounds with higher capacities available and are equipped with inverted casters placed in a uniform grid pattern to allow cargo containers and unit load devices to be moved across the deck in any direction.



> Designed for high-density storage configurations in e-commerce warehouses, **Yale Materials Handling's** new narrow-aisle reach truck can lift heavier loads to greater heights and storage depths. Available in 3,000 to 4,500-pound load capacities with single or double reach capabilities, the Yale NR/NDR-DC/EC reach trucks use optical-based sensors, not pedals, to detect operator presence and let operators adjust their stance for increased comfort.



through both an online portal and mobile app. Negotiation-free prices are published with available loads.

> Shippers can monitor the financial health of their supply chains with **Avetta Financial Risk**, a new tool from Avetta, a provider of supply chain risk management solutions. Integrated with the global information services company Experian, the tool provides a supplier risk rating, displaying financial insights on a dashboard.

> Digital freight network **Convoy** enhanced its drop-and-hook freight service, Convoy Go, to provide increased visibility into equipment availability. Convoy Go is available to shippers that move at least 250 full truckloads per year in the United States.

**>TRANSPORTATION**



> **Alaska Air Cargo** introduced an in-seat package stowage system to allow full use of an Alaska Airlines passenger aircraft in a cargo-only configuration. As the North American launch customer for aircraft engineering service provider HAECO's design, Alaska Air Cargo can fill the main cabin passenger seats with an additional 13,500 pounds of cargo with the interior package stowage containers.

> **ZIM** launched a second China-to-Australia express line, which calls on major Australian ports. The new service, which commenced on Dec. 4, 2020, offers 11-day transit time from Yantian to Sydney for e-commerce shippers and deploys 6X2500 TEU vessels with capacity and plugs for refrigerated cargo.

> **Union Pacific** opened its Twin Cities Intermodal

Terminal in Minneapolis in November 2020 and will launch intermodal service to the Minneapolis-St. Paul metropolitan area in January 2021. Letting shippers reach key Upper Midwest markets, the new domestic intermodal service connects the Twin Cities and Los Angeles.

> **OOCL** will expand its North Europe-Turkey (NET) service in January 2021. The

updated NET rotation will include Felixstowe, Hamburg, Bremerhaven, Antwerp, Piraeus, Gebze, Istanbul, Gemlik, Aliaga, and Valencia.

**>TECHNOLOGY**

> **Schneider**, a provider of transportation and logistics services, launched Schneider FreightPower, a digital marketplace that connects shippers with carriers

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# CALENDAR

## Logistics Events 2021

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



**JAN  
11-15,  
2020**

### Retail Innovation Week

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

Industry experts and startups share opportunities and actionable ideas along the customer journey at this five-day virtual conference for brands and retailers. Attend sessions focused on next-gen digital commerce, the new role of the store, and retailing with purpose.

### VIRTUAL

**JAN 12-14, 2021  
NRF 2021**

[virtualbigshow.nrf.com](http://virtualbigshow.nrf.com)

The world of retail is transforming at an unprecedented rate. In chapter one of the National Retail Federation's virtual show, attendees can access robust content combined with a digital expo. This new online platform makes it easy to connect with colleagues and build new partnerships remotely.

**JAN 25-27, 2021  
Jump Start 2021**

[smc3jumpstart.com](http://smc3jumpstart.com)

This three-day virtual event facilitates deeper knowledge and collaboration between logistics and transportation professionals from carrier, shipper, logistics service provider, and technology verticals. SMC<sup>3</sup>'s Jump Start is one of transportation's most strategic educational and networking events, featuring forward-thinking sessions, presenters, and networking opportunities.

**JAN 27, 2021  
AirCargo 2021**

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

To continue the air cargo conversation throughout 2021, this five-part webinar series addresses a range of issues

affecting the airfreight industry. Presented in a nonpartisan, energetic style, the first session focuses on the direction of trade policy, changes to logistics infrastructure, and their impact on the global economy.

**FEB 22-25, 2021  
Logistics  
Business Exhibition**

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

This virtual exhibition is a platform for connecting the logistics, technology, transportation, warehousing, and materials handling industries. Exhibitors present their solutions to potential customers and participate in scheduled and spontaneous video meetings. Choose from six virtual hall categories, including automation systems, packaging and pallets, software and computing, and warehousing equipment.

**MAR 23-26, 2021  
Anuga FoodTec**

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

Anuga FoodTec's hybrid format offers food and beverage professionals both an in-person trade show and a virtual learning experience. Join in personal exchange and intensive networking to bring your business and the industry forward. Explore the latest solutions and technologies for long-term success.

**MAY 18-20, 2021  
ISM World**

[ismworld.org](http://ismworld.org)

This virtual procurement and supply chain conference is an immersive three-day experience that provides a 360-degree view of what the future could hold for professional development and organizational success. Global industry practitioners and thought leaders network, collaborate, and discuss future trends in the profession.

**JUN 8-10, 2021  
GS1 Connect: Digital  
Edition 2021**

[gs1connect.gs1us.org](http://gs1connect.gs1us.org)

GS1 Connect's live-streamed and on-demand digital content focuses on adapting to current supply chain and e-commerce challenges. Industry leaders share success stories leveraging GS1 standards and how to solve specific business challenges. The expanded program features a pitch competition, discussion groups, and a virtual classroom.

### IN PERSON

**JAN 27-28, 2021  
NEW ORLEANS, LA  
Healthcare Supply  
Chain Summit**

[bit.ly/HCSummit](http://bit.ly/HCSummit)

Healthcare operations are in a unique position to streamline the supply chain in an evolving

value-based system. Attend this in-person event to discuss best practices for optimizing your contracting, logistics, and value analysis operations as well as benchmarking strategies for conquering the next frontier of supply chain operations.

**APR 12-16, 2021  
CHICAGO, IL  
ProMatDX**

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

Discover innovative solutions to move your business forward as the industry's thought leaders showcase their latest manufacturing, distribution, and supply chain equipment and systems at this in-person event. Manufacturing and supply chain professionals come together to take their supply chain to the next level of success.

**JUN 23-24, 2021  
BONITA SPRINGS, FL  
Supply Chain  
Visibility Conference**

[bit.ly/SupplyVisibility](http://bit.ly/SupplyVisibility)

This unique working conference brings together healthcare manufacturers, distributors, group purchasing organizations, and providers to discuss how to ensure product availability, improve forecasting, and better support patient care. Learn how collaboration can improve demand planning and reduce shortages, disruptions, and waste in the supply chain.

*These events were scheduled to proceed as of press time.*

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## 3PLs

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

**Lynden** *Cover 2*  
lynden.com 888-596-3361

**Phoenix Logistics** *pg. 24*  
phoenix3pl.com 920-915-9476

**Polaris** *pg. 33*  
polaristransport.com 800-409-2269

**Port Logistics Group** *pg. 13, 30*  
portlogisticsgroup.com 877-901-6472

**Ruan** *pg. 27*  
ruan.com 866-782-6669

**Syfan Logistics** *pg. 22*  
syfanlogistics.com 855-287-8485

**TForce Worldwide** *pg. 29, 35*  
tfwwi.com 877-744-3818

**UTXL** *pg. 31*  
utxl.com 816-891-7770

## ASSOCIATIONS

**MHI** *pg. 7, 21*  
mhi.org 704-676-1190

## CAREER DEVELOPMENT/ EDUCATION

**JobsInLogistics** *pg. 54*  
jobsinlogistics.com 877-562-7678

**Michigan State University** *pg. 55*  
execed.broad.msu.edu/  
open-programs 517-355-8377

**Moraine Valley  
Community College** *pg. 54*  
morainevalley.edu/  
supplychain 708-974-5735

**University of Denver** *pg. 54*  
transportation.du.edu 303-871-7449

## CONTENT PROVIDER

**IEN** *pg. 69*  
ien.com 203-938-2418

## FREIGHT MARKETPLACE

**DAT** *pg. 25*  
dat.com 833-681-1555

## INTERMODAL

**Alliance Shippers** *pg. 17*  
alliance.com 800-222-0451

## LOGISTICS IT

**C3 Solutions** *pg. 28, 56*  
c3solutions.com 514-315-3139

**E2open** *pg. 26*  
e2open.com 866-432-6736

## OCEAN

**Maersk** *pg. 5*  
maersk.com 703-351-9200

## PACKAGING

**ULINE** *pg. 67*  
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## TRUCKING

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# REVISITING 2020

**THIS WAS A YEAR LIKE NO OTHER FOR SUPPLY CHAIN AND LOGISTICS MANAGEMENT. HERE'S WHAT WE'LL REMEMBER ABOUT 2020:**

## **1** SUPPLY CHAIN FRONT AND CENTER

The term "supply chain" burst into public consciousness as pandemic-related product shortages highlighted the delicate balance of supply and demand and the factory-floor-to-shopping-cart journey consumers often take for granted. Truck drivers earned some overdue recognition.

## **2** E-COMMERCE ACCELERATION

2020 accelerated e-commerce penetration by two to five years, depending on who you ask. E-commerce sales accounted

for about 14.4% of all U.S. retail spending in 2020, a share it was not expected to reach until 2022, according to eMarketer. This massive shift hastened the demise of some retailers and rewarded the tech savvy and direct-to-consumer ready, making digital initiatives imperative.

## **3** LAST MILE LOOMS LARGER

The last mile became trickier and more important than ever as the shift to online shopping accelerated and home delivery swelled. In fact, Amazon nearly tripled the number of U.S. warehouses used for last-mile

deliveries in 2020, according to logistics consulting firm MWPVL International.

## **4** FINDING FULFILLMENT

Retailers that solved the online order fulfillment puzzle came out on top. For instance, Best Buy and Target doubled e-commerce sales in 2020, driven in large part by their curbside pickup offerings. In fact, Target used its stores to fulfill more than 95% of digital orders.

## **5** GETTING IT DOWN COLD

With vaccine development in high gear, we took a cold, hard look at the cold chain that

underpins worldwide dissemination. From fast-track distribution to maintaining product integrity, the complexity of the cold chain came to the fore, and cold chain stakeholders tackled chain-of-custody and track-and-trace solutions.

## **6** AMAZON REIGNS

Amazon's hiring spree in 2020 drew comparisons to major historical events such as shipbuilding at the onset of World War II and home building after the war. Amazon added 427,300 employees between January and October 2020, swelling its workforce to more

than 1.2 million people globally, up more than 50% from 2019—a pace unequaled in U.S. corporate history.

## **7** PIVOT!

From passenger airplanes reconfigured as all-cargo carriers to manufacturing lines redeployed to make medical supplies, supply chain pivots in 2020 addressed shuttered channels and displaced demand. As disruption became the norm, these stopgap measures represented a coping mechanism in 2020, as well as a way to move forward—with agility and resiliency more prized than ever.

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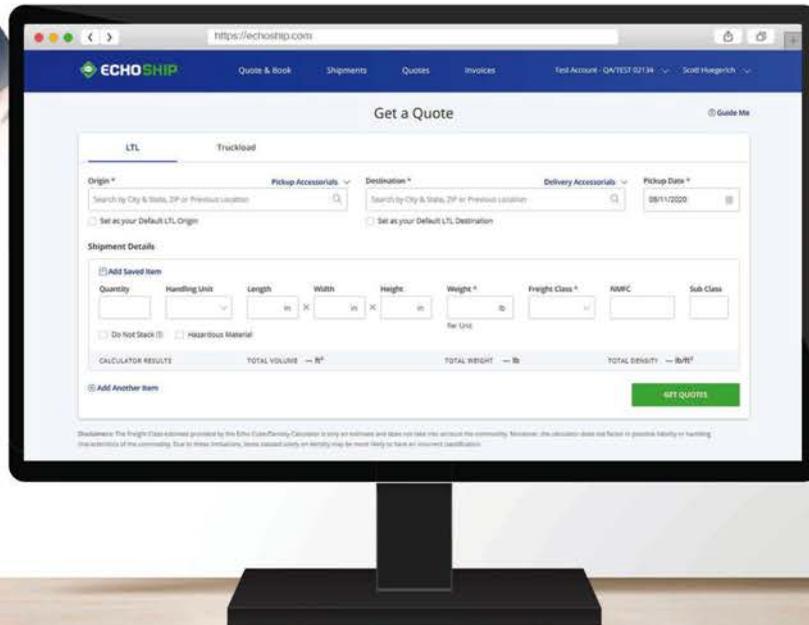
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