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100 GREAT SUPPLY CHAIN PARTNERS

Weathering the Storm Through Supply Chain Partnerships

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Gartner, in collaboration with SupplyChainBrain, presents a five-part webinar series on "Five Keys to Unlocking Supply Chain Value In a Time of Crisis." Join Gartner's expert team of analysts as they delve into the five most critical areas of global supply chain management today:

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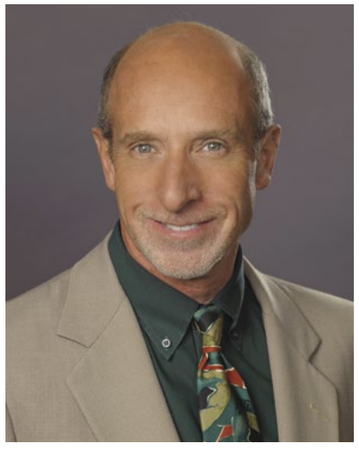
Program 4: E-Commerce Fulfillment/Last Mile

Program 5: Procurement & Sourcing

The series will run throughout 2022. Watch for more details, and don't miss what promises to be the year's most important forum for insights into how to survive the current supply chain crisis and the years ahead!

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Weathering the Storm Through Supply Chain Partnerships



Robert J. Bowman
Editor-in-Chief
SupplyChainBrain

Supply chains never catch a break. When economic times are tough, they struggle to keep costs down, while maintaining the flow of product to depressed markets. When times are good, they scramble to ramp up manufacturing and secure enough capacity to handle the surge. But what do they do when their problem is all of the above?

The conundrum of COVID-19 is that manufacturers, retailers and distributors have had to cope for more than two years with shuttered factories, congested supply lines, a dearth of labor, inadequate warehouse space and demand patterns that skew in both directions, depending on the product and industry. More recently, they've been clobbered by record inflation and soaring fuel prices. For the beleaguered supply chain professional, the word "unprecedented" doesn't begin to describe the pain.

No supply chain is an island, however; by definition, the term describes a complex assemblage of partners striving toward the common goal of transforming raw materials into finished goods and getting them to the customer in the most efficient manner possible. The story of precisely how that happens varies from company to company, depending on industry, country, region, logistical requirements and the nature of the product itself. But with the coming of the pandemic, certain similarities — call them instances of shared pain — have become evident. And that's what we're exploring in this latest edition of our annual roster of 100 Great Supply Chain Partners.

The list is made up of supply chain service and technology providers that have been nominated by satisfied customers — on-the-ground proof of their effectiveness. We've said many times that it takes solid partnerships to weather crises — or, for that matter, the day-to-day business of supply chain management. In this issue, we present instances of true collaboration in the face of enormous challenges.

A couple of common themes emerge. One is how companies today are managing dramatic growth in a time of constrained resources. Another is the need to cut costs while simultaneously boosting customer service — two goals in theoretical opposition. Yet each case study also has its own unique angle. You'll learn how:

- Coyote Logistics, with the help of Vector, managed parcel delivery drivers under a redefined notion of "peak season."
- E.D. Etnyre, with Tada Cognitive Solutions, overcame the limitations of legacy systems to deal with a massive influx of data.
- Farmer's Business Network, with SnapFulfil, scrapped the manual processes that were hampering efficient warehouse management.
- Fruit of the Loom, with OneStream, brought its financial management system up to date.
- HJI Supply Chain Solutions, with Alpine Supply Chain Solutions, overcame roadblocks to implementing a new warehouse management system.
- Horizon Hobby, with Jones Lang Lasalle, dealt with an expected doubling of business while enhancing both supply chain efficiency and the customer experience.
- Inova, with Logility, shook off the "curse of the spreadsheet" by undertaking digitization of its planning capabilities.
- Levi Strauss, with TGW, running out of room in its European distribution centers, consolidated operations and embraced the omnichannel model.
- Palo Alto Networks, with Anaplan, acquired technology that simultaneously addressed supply issues and its sales and operations planning (S&OP) process.
- Parts Town, with Bastian Solutions, managed to keep high amounts of inventory on hand while controlling costs.
- Philipp Plein, with 7Bridges, turned to artificial intelligence to manage logistics for its high-end luxury brand.
- Plant Shop Seattle, with Circuit, pivoted to direct delivery when the pandemic locked down customers and kept them out of the store.

All creative solutions — and all accomplished through strong partnerships. Which, as you'll see from what follows, is the hallmark of any successful supply chain, in good times and bad.



LIVE WEBINAR

Deloitte Consulting

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Webinar Description

Deloitte and **SupplyChainBrain** collaborate on a yearlong, 6-episode, LIVE webinar series investigating what it takes to truly create a Resilient Supply Chain.

Episode 1: Innovations in SC Planning & Optimization (Network Optimization and Digital Twinning)

Episode 2: Smart Warehousing (Robotics & Automation, Sensors & Auto ID, Block Chain)

Episode 3: Smart Transportation ((Autonomous Vehicles & Drones, Green fuel, etc.)

Episode 4: Supply Chain Resilience & Risk Management – A Top Post-Pandemic Priority

Episode 5: Strategic Supplier Management – The Balance Between Breadth and Depth

Episode 6: Innovations in SC Planning & Optimization (Data Managment, Cloud Computing & Storage, IoT, AI)

The series runs through the Spring of 2023. Watch for more details.

Don't Miss This! It promises to be a powerful, information and application rich series.

The Supply Chain Must Become Resilient!

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100 GREAT SUPPLY CHAIN PARTNERS

6 River Systems	www.6river.com	The real win is how quickly we got everything up and running.
7bridges	www.the7bridges.com	Has continually opened up new opportunities to deliver a better quality of service to customers.
Aera Technology	www.aeratechnology.com	Provides game-changing solutions for creating a self-driving supply chain.
AFS Logistics	www.afs.net	Helped us with UPS negotiations by having such an incredible reporting dashboard available.
Agistix Inc	www.agistix.com	They're always happy to explore creative ways to meet our customer's data requirements.
Alithya	www.alithya.com	As our partner, Alithya took the time to understand our business.
Alpine Supply Chain Solutions	www.alpinesupplychain.com	We are impressed with the level of expertise of the Alpine staff.
Amware Fulfillment	www.amwarelogistics.com	The only fulfillment center that can meet the demands of our industry.
Anaplan	www.anaplan.com	Anaplan has been a great partner in helping us to develop solutions to business problems.
Avetta	www.avetta.com	They have made a significant impact on our supply chain efficiency.
Barcoding	www.barcoding.com	We're seeing a real boost in productivity.
Bastian Solutions	www.bastiansolutions.com	The switch to AutoStore occurred without a single hour of downtime.
Baxter Planning	www.baxterplanning.com	Support is timely, accurate, and super valuable for our business needs.
BlueGrace Logistics	www.mybluegrace.com	They provide a valuable service to all of our cross functional teams in support of the business.
Blue Yonder	www.blueyonder.com	We believe the project will significantly increase visibility into future risks and constraints.
Cascade Columbia Distribution Co.	www.cascadecolumbia.com	Saving us a ridiculous amount of money and logistical hassle.
Century Distribution Systems Inc.	www.cds-net.com	Great compnay to work with, fast and accurate replies and always very kind and helpful.
C.H. Robinson	www.chrobinson.com	Excellent customer service, competitive rates, and offers a multitude of services.
Circuit Routing Limited	www.getcircuit.com	It's a service that not a lot of other shops in the area are offering.
Coyote Logistics	www.coyote.com	Does a great job in helping to find loads that match our company's needs.
Crane Worldwide Logistics	www.craneww.com	They have great customer focus and attention to detail. They are an excellent business partner.
Descartes Systems Group	www.descartes.com	We've not only streamlined our fulfillment process, we've added a new level of visibility.
DHL	www.dhl.com	Enabled us to scale up our B2C business in line with our needs and strategic priorities.
Dimerco	www.dimerco.com	They really understand the APAC market and have solid relationships with Asia-based carriers.
e2open	www.e2open.com	We are really in control of channel data.
EdgeVerve	www.edgeverve.com	The people are talented; they have great expertise and much experience.
Enveyo	www.enveyo.com	Hands down, the most personable tech company I have ever had the pleasure to work with..
FedEx	www.fedex.com	Has been a great service provider.
FourKites	www.fourkites.com	All of our carriers, as well as our customer, were up and running on the platform in a month.
Freightgate	www.freightgate.net	We avoided hundreds of thousands of dollars in duties and freight costs.
GEODIS	www.geodis.com	Provided a scalable and flexible integrated solution.
GEP	www.gep.com	Has the ability to operate like somebody wearing our name badge.
HAI Robotics	www.hairobotics.com	Their flexibility sets them apart from their competition.
HERE	www.here.com	We were able to provide our customers with enhanced safety solutions.
Honeywell	www.honeywell.com	Helps us add value to our properties for our investors and increase their appeal to tenants.
Hub Group	www.hubgroup.com	Company is excellent at communications and putting customers' needs first.
Infor	www.infor.com	Enabled us to better support contract compliance and standardization in supply areas.
Inmar	www.inmar.com	We will be able to provide a more individualized, impactful experience for our guests.
Innover Digital	www.innoverdigital.com	Has been extremely adept in adjusting to our constantly changing requirements.
John Galt Solutions	www.johngalt.com	The end-to-end visibility we need to anticipate and react quickly to volatility and uncertainty.
Johnson Stephens Consulting	www.johnsonstephens.com	Most notable accomplishment is guiding us through an overwhelmingly successful RFP.
Jones Lang LaSalle	www.us.jll.com	All project objectives were met. Very pleased with the methods of execution and results.
Kinaxis	www.kinaxis.com	Great tool, great team!
Körber Supply Chain Solutions	www.koerber-supplychain.com	Helped to guarantee that orders are ready on time with minimal human effort.
KPI Integrated Solutions	www.kpisolutions.com	Solid system integrator brings multiple vendors together to create the best solution possible.
Locus Robotics	www.locusrobotics.com	Allows our facility to leverage our current employee base to get much more product out the door.
Logility	www.logility.com	We're committed toincremental improvement and are well supported by Logility to do so.
Lucas Systems	www.lucasware.com	No way we could have processed the volume of orders we had prior to partnering with Lucas.
Made4net	www.made4net.com	We have always found the team at Made4net willing to go the extra mile to support our clients.
Manhattan Associates	www.manh.com	The system was the only one we saw that solved our problem.
MPO	www.mpo.com	The platform is ideal is helping us increase our chain-control reliability.
Netstock	www.netstock.com	They have turned our business around.
Newcastle Systems	www.newcastlesys.com	Goes out of their way to partner with resellers like us and support our mutual clients.
Nulogy	www.nulogy.com	Has brought visibility and analysis capabilities to identify focus areas.
Old Dominion Freight Lines	www.odfl.com	Carrier is trustworthy, and drivers are courteous and professional.
Oliver Wight	www.oliverwight-americas.com	The framework allows you to respond very quickly.
One Network Enterprises	www.onenetwork.com	Has allowed us to streamline and centralize our transportation and appointment scheduling.
OneRail	www.onerail.com	OneRail takes care and helps their partners grow along with them.
OneStream	www.onestreamsoftware.com	OneStream is constantly looking to add value to what we have.
Open Sky Group	www.openskygroup.com	They come to our rescue on short notice, when something needs to be fixed for a business-critical process.
Overhaul Group	www.over-haul.com	Gives our customers more visibility into and control over their freight.
Paccurate	www.paccurate.io	Allows us to optimize every touch point in the order-to-cash process.
Parsyl	www.parsyl.com	Supports end-to-end visibility and data-driven decision making.
Pathguide Technologies Inc.	www.pathguide.com	We have been impressed with the responsiveness of their support team.
Peak Technologies	www.peaktech.com	When we faced difficult circumstances such as COVID, they were the first to call.
Penske Logistics	www.penskelogistics.com	Provides visibility, enhances supply chain optimization and drives business results.
project44	www.project44.com	Allowed us to better evaluate lanes by improving orgin, carrier and destination performance.
Prosponsive Logistics	www.prosponsive.com	Great rates, great performance, and the team is very friendly and willing to help.
Purolator	www.purolatorinternational.com	They have fast-responding customer service and are willing to work hard when any issue arises.
Redwood Logistics	www.redwoodlogistics.com	Allowed our internal team to focus on their day-to-day business.
Return Logic	www.returnlogic.com	A great platform for managing my client's returns and exchange flow.
riskmethods	www.riskmethods.net	We are able to mitigate any risk in our supply chain by almost 100%.
Ryder	www.ryder.com	We rely on them to bring thought leadership, strategy and commitment to the table.
SAP	www.sap.com	It's giving all of our staff real-time access to line-of-business data.
Scanwell Logistics	www.scanwell.com	Very attentive, and always notifying our team about delays.
Schneider National	https://schneider.com	Allowed us to make informed decisions about how to optimize shipping.
Setlog	www.setlog.com	Reduced procurement times, lowered freight costs and improved delivery promise.
Shippeo	www.shippeo.com	Helping us to get information faster and more effectively.
Slync	www.slync.io	A flexible platform that can be molded to solve complex supply chain problems.
SnapFulfil	www.snapfulfil.com	With each go-live, we saw increased speed and ease of implementation.
Spinnaker SCA	www.spinnakermgmt.com	They are a trusted adviser, respected by my management and reliable in delivery,
St.Onge Company	www.stonge.com	Would recommend them to any company looking for network optimization.
TA Services	www.taservices.com	Excellent customer service. They ensure that our customers receive their orders on time.
Tada Cognitive Solutions	www.tadanow.com	It's enabled us to make data-driven decisions.
Tecsys	www.tecsys.com	Enabled us to grow at a very aggressive rate and achieve sales and customer service goals.
Teklynx	www.teklynx.com	The software was a game-changer for our labeling needs.
TGW Logistics Group	www.tgw-group.com	We are pleased to have had the opportunity to collaborate with TGW.
Thomson Reuters	www.thomsonreuters.com	Helps professionals make confident decisions and run better businesses.
Tive	www.tive.com	A leading-edge provider of IOT container-tracking devices.
Total Quality Logistics	www.tql.com	The highest levels of customer service that I have experienced.
Transplace	www.transplace.com	One of the largest managed transportation and logistics networks in the world.
TrueCommerce	www.truecommerce.com	Based on our work with TrueCommerce, I don't see any problems for the future.
Universal Logistics	www.universallogistics.com	Great customer service, history of excellence and innovation.
UPS	www.ups.com	They keep making improvements in our logistics and supply chain processes.
Vecna Robotics	www.vecnarobotics.com	AMRs help streamline material handling and logistics operations.
Vector Inc.	www.withvector.com	Helped us manage peak-season volume with a team of only about 11 people.
Viadex	www.viadex.com	A fantastic organization with strong leadership and structure.
Wen Parker Logistics	www.wen-parker.com	They make importing a seamless operation for our company.
Zebra Technologies	www.tecsys.com	Zebra devices are designed for our environment and were the obvious choice.
Zencargo	www.tecsys.com	They are helping us to find practical solutions to our business-level aspirations.

100 GREAT SUPPLY CHAIN PARTNERS

Heavy-Equipment Maker Tears Down Functional Silos With a Digital Twin

E.D. Etnyre & Co., the venerable manufacturer of heavy equipment for road maintenance and preservation, looks for a way to share data from multiple legacy systems across the organization.



Manufacturing supply chains that consist of multiple independent partners are by their nature a challenge to operate. But vertically integrated entities can be no less difficult to manage.

E.D. Etnyre & Co. is a 123-year-old family-owned maker of heavy industrial equipment used mostly for road maintenance and preservation. Based in Oregon, Illinois, the company builds product virtually from scratch, performing everything from cutting steel to machining, painting and final assembly.

One might assume that doing all those tasks in-house would mean Etnyre has easy access to all related data. Until recently, though, that was far from the case.

Veteran companies often are running on antiquated information systems. In Etnyre's case, that meant supporting applications that were several decades old, many of them homegrown and created to address narrowly defined needs.

"We were good at taking in data, but not good at sharing it or giving it back to the end user in a way that allows you to make good decisions," recalls Justin Nelson, senior director of I.T. and corporate strategy with Etnyre International Ltd. (That unit oversees multiple brands, including Rayner Equipment Systems, Bearcat Manufacturing and E.D. Etnyre.)

Drawing on a mountain of data, Etnyre could assess where it stood at certain milestones, such as the end of a financial period. But weekly or daily status reports about production schedules and parts availability eluded the company. "Those systems were very siloed operationally," says Nelson. "Different parts of the business couldn't see data that was relevant to them."

Etnyre couldn't just swap out all 15 or so legacy systems overnight, in favor of a shiny new I.T. infrastructure that spanned all functions and departments. "There was definitely an urgency," says Nelson. The company needed to acquire immediate decision-making power, while reserving the option of changing out the old systems at a later date.

Etnyre turned instead to Tada Cognitive Solutions, provider of a single digital platform for company-wide visibility and collaboration. Tada's application sits atop Etnyre's existing systems, drawing input from from all of them and outputting it "in easily digestible bits of decision-making data so that people could see and share it across the business," Nelson says.

The Tada platform builds a digital twin of the customer's entire organization, layering it on top of multiple applications, says Paul Singh, the vendor's chief revenue officer. "Even though they had their own version of an ERP [enterprise resource planning system], they wanted the unique opportunity of a digital twin that connected not just their ecosystem's siloes, but also those of their partners — their dealers and outside networks," he says.

It took about six months to validate all relevant data, some of which was accessible to Etnyre for the first time. But primary views of major pain points, relating to operations and the supply chain, were available within two months. "Complexity didn't come from delivering the data," explains Nelson. "It was getting it into a form where it could start to be used."

Tada quickly brought on additional functionality, overseeing such key areas as inventory, sales and marketing, and human resources. "We were able to tie it all together for an executive viewpoint," says Rohan Parambi, Tada's director of emerging markets, dealerships and mid-sized businesses.

The digital twin provided Etnyre with both a current state and historical map of production, generating "what-if" scenarios that prepared the company to deal with unanticipated production shortages or demand surges. "It allows them to move people, parts and products around," says Parambi.

With the Tada platform in place, Etynre was able to move away from "a period-end rear-view mirror focus," Nelson says. "It's enabled us to make data-driven decisions. And it's facilitated a cultural transformation, where silos go away and functional areas are talking to one another."

From Tada's perspective, "we saw an extremely positive partner to learn and build with," says Parambi. "Etnyre was able to create visibility into every aspect of their business, through the supply chain, factory floor, production and sales, that was factual instead of gut-based or hypothetical."

For Etnyre, says Parambi, Tada's focus now is on connecting the manufacturer to outside partners in procurement and the supply chain, as well as dealerships. Nelson adds that Tada is helping the company to start thinking about applying analytics, machine learning and artificial intelligence to enable predictive learning, and "anticipate trends based on what the data is telling us."

"This is a partnership," adds Nelson. "It was never intended to be a one-time purchase of discrete functionality."

Resource Links:
Etnyre, www.etnyre.com
Tada Cognitive Solutions, www.tadanow.com

100 GREAT SUPPLY CHAIN PARTNERS

Enhancing the Customer Experience While Boosting Cost Savings

How luxury fashion powerhouse Philipp Plein uses AI technology to improve international shipping, increase products shipped, and reduce costs — without compromising customer service.



Philipp Plein, one of Europe's most distinguished and innovative luxury fashion brands, is bringing a similarly creative approach to its global supply chain.

German designer Philipp Plein founded his namesake luxury fashion brand in 2008. Based in Switzerland, the collection comprises men's, women's and children's clothing and accessories. They are sold in boutiques and department stores worldwide, as well as in more than 250 mono-brand stores in cities such as Milan, Paris, New York, London, Los Angeles, Hong Kong and Las Vegas.

The company views data as a means of improving both its supply chain and the customer experience. Among its tools for achieving those goals is an artificial intelligence-driven logistics platform from 7bridges.

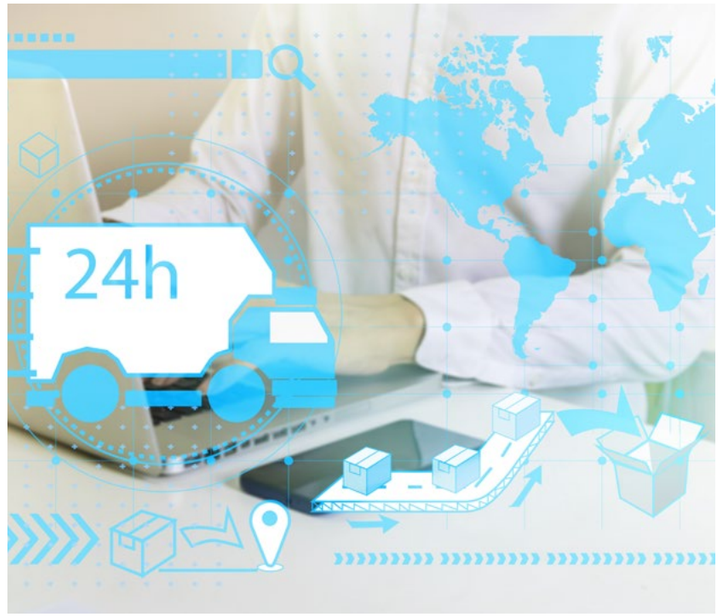
Phillip Plein has relied on the technology to better serve customers, implement ship-from-store, improve procurement processes and identify opportunities for more cost-effective warehousing. To date, the company says, the system has saved it more than more than €2 million a year, approximately 17 times its investment.

Philipp Plein is now expanding its use of the 7bridges platform, with the goal of saving an additional 3% to 5% through improved invoice auditing, eliminating erroneous and disputed invoices. It's looking to increase the volume of both B2C and B2B transactions, while implementing automated export declaration functionality for high-value goods.

Looking to the future, Philipp Plein hopes to achieve additional efficiencies by automating its supply chain serving B2B and B2C customers alike. It sees the 7bridges platform as a way to further enhance delivery and logistics performance to business and end consumers.

While traditionally steeped in luxury, the fashion house has also identified the need for cost reduction and optimization in key areas of the supply chain. Implementation of automated export declarations will ensure faster and cheaper international shipping for customers.

"Our time working with 7bridges has continually opened up new opportunities for us to deliver a better quality of service to our customers while still optimizing and improving our logistics," says Sergey Mityagin, chief operations officer at Philipp Plein. "By increasing the number of customers we're pushing through 7bridges, as well as seizing opportunities for further enhancements around exports and internal auditing, we will be able to create cost savings and efficiencies while still offering enhanced delivery to our customers."



Philip Ashton, chief executive officer of 7bridges, calls Philipp Plein "almost a foundational customer for us, embracing our vision and continually pushing us to be a better partner, as we use AI and automation to revolutionize the logistics space."

"I'm very excited that they've committed to delivering further enhancements to their service, which will result in improved customer service alongside new opportunities for cost savings and efficiencies across their operations," Ashton says.

Resource Links:
Philipp Plein, www.plein.com
7bridges, www.the7bridges.com

100 GREAT SUPPLY CHAIN PARTNERS

Fruit of the Loom Gets Up to Date on Financial Tech

A new platform for automating and managing financial processes has helped the company to consolidate multiple environments and gain access to billions of key data points.



With business growth comes the need to update key information systems — especially those for managing financial processes.

It's a state of affairs that every company strives for, but it can cause severe operational headaches in the transition. Fruit of the Loom, the big American manufacturer of activewear and underwear that is part of the Berkshire Hathaway Inc. empire, was on a steep growth curve due to a combination of acquisitions and sales increases. The company's financial management system wasn't keeping pace.

The old multi-tier financial tool kept running into data problems, requiring the rewriting of multiple systems. "Every time we'd try to do an update, it was a full-on project needing consulting with weeks of upgrade," recalls John Alsobrook, Fruit of the Loom's manager of financial systems. "We had a very sizeable project cost."

From a systems perspective, the company came to a crucial decision point: Should it invest in the next version of its existing application, or see what else was available in the software market? In the end, it chose the latter course, tired of struggling with a complex and disjointed system, spanning up to a dozen environments, and burdened by servers that weren't talking to each other. "We're not infrastructure experts — we're financial experts," says Alsobrook.

After reaching out to a number of solution providers, Fruit of the Loom settled on OneStream Software LLC, maker of a platform for automating financial processes for planning, budgeting and close consolidation. Fruit of the Loom was already familiar with OneStream founders Bob Powers and Tom Shea, who had previously invented Hyperion Financial Management, which was later acquired by Oracle Corp. They launched OneStream as a replacement for Hyperion, according to OneStream account manager Lee Ramey.

Hands-On Support

Fruit of the Loom was attracted to OneStream in part because of the latter's high level of customer support. "It was knowing who we were working with, instead of our former experience of being with a faceless corporation," says Alsobrook. As for the product itself, Fruit of the Loom was drawn to its all-inclusive design. Key financial processes such as budget forecasting, actuals and account reconciliation existed within a single platform, eliminating the need to port data between modules, and sharply reducing maintenance cost.

Ramey says implementation of the OneStream system at Fruit of the Loom was "typical yet complicated," involving the migration of multiple environments into one solution. Alsobrook cites the challenge of swapping out a major financial validation system while the business is running at full steam. "Things are moving," he says. "You're shooting at a moving target."

With every new technology adoption comes the need to manage the human element. "People are creatures of habit," says Ramey. "You've got to make sure there's a clear understanding and executive sponsorship. Why the change in solution? And what are the desired benefits for all team members?"

Rather than undertake a full deployment of the tool at the outset, Fruit of the Loom elected to approach the project in phases. It began with planning and budgeting, with the aim of eliminating those multiple environments. Once the proper structure and content for planning was in place, it moved on to close consolidation.

Getting Up and Running

The new tool was tested and ready to go within four months, Alsobrook says, although Fruit of the Loom ran parallel systems for another four months to assuage the anxieties of a conservative user base. "Adoption went very well," he says. "We were able to give them a lot more functionality in the way we loaded data into OneStream."

The scope of the company's financial operations is vast. The initial consolidation and reporting application included some 1,200 accounts, 137 legal entities, 353 locations, 243 departments and 195 brand codes. In all, the system was processing more than 2.9 billion data points, 100 times the number that the company had collected and analyzed with the former application.

Ramey cites three main benefits to Fruit of the Loom by adopting the OneStream application: reduced technical debt, greater efficiencies and improved overall effectiveness of financial processes. The company no longer needed multi-level point solutions to satisfy various use cases, or heavy involvement by I.T. in making the system work. Users gained access to correct data and could make decisions more quickly without undertaking "heroic efforts" to consolidate. And with access to more accurate analytics for selling, general and administrative (SG&A) expense, financial managers could spend time on high-level responsibilities instead of worrying about "the mundane movement of data from multiple environments in a legacy solution."

Alsobrook says Fruit of the Loom is looking at implementing additional functionality of the OneStream system. "They seem to be ahead of the curve on what financial areas we're looking for. OneStream is constantly looking to add value to what we have."

Adds Ramey: "Great brands matter to us, and Fruit of the Loom is certainly that. "They've been a part of the OneStream family."

Resource Links:
Fruit of the Loom,
www.fruit.com
OneStream,
www.onestreamsoftware.com

100 GREAT SUPPLY CHAIN PARTNERS

Hands Off: Inova Pharmaceuticals Scraps Manual Processes to Improve Planning

A collection of divergent planning models and inefficient spreadsheets was preventing the company from realizing ambitious growth plans. The solution: a digital supply chain platform.

Inova's 500-plus employees deliver a product portfolio spanning weight management; cough, cold and flu treatment; pain management; health supplements; dermatology; sun care and female health products. Under new ownership since 2017, the company has taken steps in recent years to further expand its offerings.

Inova knew that achieving its ambitious growth goals meant unifying and synchronizing its approach to supply and demand planning, sales and operations planning (S&OP) and inventory management. Excel-based spreadsheet methods created planning models that differed sharply across geographies, hampering the company's efforts to promote global sustainability.

"Our business is complex," says Rowan Seccombe, Inova's S&OP manager.



"In addition to accounting for widely dispersed geographies, our planning processes have to reflect and synthesize different market dynamics. For example, consumer products are promotion-sensitive, and in pharmacy are also driven by ranging and grading. The prescription product portfolio relies heavily on statistical forecasting, a limitation for us in the Excel environment."

As Seccombe explains, the company's divergent planning processes hosted in Excel were proving to be a significant impediment to growth, and with continued reliance on manual tasks, the problem would only have grown worse. "Planning in Excel isn't sustainable due to the personalized nature of the tools used," he says.

Inova turned to a digital supply chain platform from Logility to implement a flexible, "future-proof" technology that could support its expansion plans. Previously, the company had been relying on spreadsheets, integrated enterprise resource planning (ERP) and data warehousing, and a third-party analytics tool to plan and measure its business. These patchwork solutions would be highly inefficient to manage under the best of circumstances, but proved especially challenging given the company's large geographical footprint, multiple business units and rapid growth.

Inova drew on Logility's integrated set of tools for data management, demand and supply planning, replenishment planning and analytics. What was once a fragmented and time-consuming operating framework became greatly streamlined, enabling cohesive planning across the business and a level of process automation that saved planners time. The use of a statistical forecast allowed Inova to free up resources to concentrate on high-volume and volatile A-class SKUs.



With the Logility digital supply chain platform in place, Inova now enjoys consistency in planning and reporting across all regions. The collaboration has reduced "misfires" and enhanced communication and decision-making across the enterprise. Further efficiencies have been realized as Logility moves Inova away from manual processes and toward greater automation.

For example, automating purchase order creation between the Logility platform and Inova's ERP system has resulted in a 40% decrease in manual PO creation, making PO data maintenance far more efficient. In addition, the Logility platform offers user-defined multi-level forecasting, a critical technique for Inova in supporting its S&OP processes, as well figuring out where the business fits within the fast-moving consumer goods (FMCG) sector.

The newfound forecasting capability saves times by automatically updating group-level forecasts when changes are made to individual SKUs, and vice versa. The "pyramid" approach also aggregates demand history into logical groupings, resulting in more stable and accurate statistical forecasts. The results can then be pushed down the pyramid via a "fair-share" method to the item level if needed.

The use of statistical models for forecasting Inova's relatively stable SKUs has freed up planners' time to think creatively about managing the more volatile SKUs. The models for the more stable items have reduced demand error by more than 50%, and provided better methods for optimizing safety stocks, the company says.

"We benefited from the industry expertise at Logility, and their local partner Demand Management Systems, as well as the platform," says Seccombe. "Our implementation consultants constantly challenged us to justify and reconsider current processes, and that was healthy in the end. The implementation went quickly and wasn't without some challenges, but we're committed to a journey of incremental improvement and are well supported by Logility to do so."

Resource Links:
Inova, www.inovapharma.com/
Logility, www.logility.com

Farmer's Business Network Undertakes a Multi-Site WMS Implementation

Looking to expand its distribution network in line with "exponential" business growth, FBN adopts a "self-implementation" tool for automating slow and inefficient manual processes.



Headquartered in San Carlos, California, Farmer's Business Network is a global farmer-to-farmer network and agriculture tech company. With FBN Direct, it has built what it describes as "the world's first comprehensive online store offering a wider array of products so farmers can compare prices and weigh risk." Most of the seed, farm chemicals and livestock feed moving through the service are shipped direct to customers from the warehouse.

Demand for FBN's products and services was soaring, but with only a NetSuite enterprise resource planning (ERP) system acting as an interim warehouse management system (WMS), the company's pick policy was neither efficient nor consistent enough to facilitate a rapid multi-site rollout.

FBN was relying heavily on established labor knowing which items to pick and where to pick from, utilizing inefficient manual loading. The company needed to adopt fully automated and standardized processes to save time, money and resources, and reduce the risk of inaccuracies.

In addition, FBN's ability to remotely implement and self-configure the new and improved WMS was essential to overcoming the challenges of the global pandemic, decreasing rollout time and providing greater control, independence and internal system expertise.

The answer came in a partnership with SnapFulfil, developer of a remote WMS implementation tool. FBN cites the model's rapid return on investment, along with its ability to scale with growth, as key reasons why it chose SnapFulfil.

FBN was also keen to explore how the tool might facilitate its own on-site implementation. It offered its distribution center in Newton, Iowa, covering 186,000 square feet, as a blueprint for subsequent engagements, with a tailored "self-implementation" program developed to guide FBN in both project control and execution.

The initiative drew on detailed technical support upfront, making possible seamless integration of the new WMS with NetSuite. In addition, it allowed for bespoke order transfer and stock-management functionality, giving FBN the essentials for seamless rollout across its DC estate.

The Newton DC saw rapid benefits, with improved picking and space-saving efficiencies in the range of 30%, FBN says. The automated approach allowed for the elimination of manual tasks and set out a model for future implementations at additional sites.

New radio frequency (RF) guns made possible rapid and easy integration, both for current staff and newcomers who lacked previous DC knowledge and experience. They were picking by the pallet load within 30 minutes of instruction, the company says.

Darci Fluit, FBN's system engineer, implemented the environment setup, rules engine and required training via web conferencing. In the process, she and her team were able to install and configure the WMS in the new DCs on their own. Using the new self-implementation documentation, they proceeded with data gathering, configuration of the technical infrastructure, user preparation and verification to data migration, stock take and validation, and go-live support.

"The SnapFulfil team were strong partners who provided clear instruction and advised me on how best to interview our operational staff about their specific order volume and storage requirements, then map out the intricacies of the processes needed and phased implementation from the very beginning," Fluit says.

"With each go-live, we saw increased speed and ease of implementation" she continues. "After the first three DCs were handled remotely and seamlessly, we moved on to three simultaneous sites coming onstream, just a week apart. The program we had in place made that possible, and the economies of scale implications were obvious. We were also able to handle more complex integrations."

With the self-implementation program in place, FBN was able to fast-track its expansion plans, and within a year saw 15 new DCs made fully operational and supported by the SnapFulfil WMS.

Volumes have increased "exponentially," the company says, even in its micro-DC operations, which have resulted in faster and cheaper shipping and supported FBN's rapidly expanding business.

FBN says it has also built its transportation management software (TMS) system around the SnapFulfil tool. Further rollout of the distribution network is underway in Australia and Canada, aided by the use of custom application programming interfaces (APIs), the company says.

Resource Links:
FBN, www.fbn.com
SnapFulfil, www.snapfulfil.com

100 GREAT
SUPPLY CHAIN
PARTNERS

Levi Strauss Invests in a New European DC to Keep Pace With Omnichannel Demand

Maxed out on capacity at its European distribution centers, the iconic denim brand uses the opportunity to consolidate operations and respond to market demand with greater speed and efficiency.



Founded in San Francisco in 1853, Levi Strauss & Co. today is one of the largest apparel companies and a global leader in jeans. The iconic denim company employs approximately 16,000 people worldwide and houses several big-name brands, including Levi's, Dockers, Denizen, Signature and Beyond Yoga under one roof.

Levi Strauss has seen significant growth in recent years. The retailer reached capacity limits in its European distribution centers, which were organized in a decentralized manner. In addition to those increasingly severe fulfillment bottlenecks, Levi Strauss was dealing with growing demand in e-commerce orders.

The company set out to invest in a highly automated omnichannel distribution center that would be capable of serving all distribution channels from a single location. It consolidated the European fulfillment processes into a 1.6-million square-foot distribution facility. To design, engineer and implement the new model, Levi Strauss engaged TGW Logistics Group.

The goal, the company says, was to respond to market requirements with greater speed and efficiency, shorten delivery times, and accelerate growth for all sales channels.

The project is split into two phases. In the first phase, scheduled to go live by April, 2024, Levi Strauss aims to achieve a throughput of up to 33 million units per year. In the second phase of the project, additional storage capacity and picking work stations will grow that number to 55 million annually.

At point of receipt, Levi Strauss receives cartons from its international production sites, as well as returned items. After inspection and repackaging, returned goods are placed into an empty mixed container that is then stored in an eight-aisle shuttle system with more than 170,000 storage locations. Up to 70% of the incoming cartons will be reused later as order cartons, saving money and reducing waste. An innovative robotic system by TGW automatically repacks the cartons into totes.

New items move from receiving to storage in either an automatic mini-load warehouse or in a shuttle warehouse with a total of 1.3 million storage locations. The mini-load facility has two functions: it's both the supply storage for the shuttle system and the buffer storage for ready-to-ship cartons, which are directly forwarded to the shipping area via a cross-docking process.

For order fulfillment, Levi Strauss relies on TGW's smart piece-picking system, known as FlashPick. It enables the company to fulfill both small and large orders, regardless of order channel, from just one distribution center. As a result, the complicated batch processes that were previously required are now rendered obsolete, and the long walking time spent filling orders is eliminated.



FlashPick is based on a single-order management approach, intended to significantly boost Levi Strauss's throughput. The fully automated shuttle system supplies sixteen PickCenter One picking work stations with SKU totes. At the high-performance locations, items are picked directly into target order cartons that have already been built in another fully automated process. As an added environmental bonus, because orders are picked directly into cartons or paper bags, Levi Strauss can avoid using plastic polybags. Both supply and disposal of destination and source cartons and totes are handled and sequenced automatically.

After the picking process, orders are directly passed on to packing and shipping. The average lead time from the moment an order comes in to its being ready for shipment is just 10 minutes. Here, order cartons are automatically closed, strapped, labeled with the destination shipping label, and routed to the docks for shipping.

"We are pleased to have had the opportunity to collaborate with warehouse automation specialist TGW Logistics Group in setting up our material-handling execution MHE systems," says Torsten Mueller, who is responsible for Levi Strauss's distribution and logistics processes, and is the owner of the project.

Resource Links:
Levi Strauss, www.levistrauss.com
TGW Logistics Group,
www.tgw-group.com

100 GREAT SUPPLY CHAIN PARTNERS

Horizon Hobby Hones Its Distribution Real Estate Strategy

The leading seller of radio-controlled hobby products undertakes an in-depth evaluation of the location, size and type of its U.S. distribution facilities.



Started by its founder in his basement in 1985, Horizon Hobby has grown over the years to become a leading international developer, marketer and distributor of radio-controlled hobby products. The company brings to market model aircraft (airplanes and helicopters), ground vehicles (cars and trucks), boats and trains, as well as radio transmitters, receivers and other accessories.

Horizon Hobby was operating two U.S. distribution facilities, one in the Midwest and one on the West Coast. The company was serving customers in both the business-to-business channel and its more rapidly growing business-to-consumer segment.

Horizon Hobby was experiencing substantial sales growth, driven by even higher demand during the pandemic, and business was expected to double again in three years. Additionally, the swift evolution of e-commerce has changed customer expectations and shifted material handling needs within the distribution facilities. Horizon's changing sales and operational profile, along with solid growth projections, required an increased focus on the need to develop a long-term supply chain network strategy to cope with capacity and fulfillment pressures on the two existing U.S. distribution facilities.

To position itself for future demand, Horizon Hobby sought an experienced consulting partner to objectively explore the cost and service implications of alternative distribution operating models. The company was looking to increase the efficiency of its supply chain without sacrificing customer service.

In addition to better understanding how its current network was positioned for growth, Horizon Hobby was looking to assess multiple network alternatives with respect to the location, size and type of each facility, including implementation of a hub-and-spoke operating model. Other considerations included alternative port options resulting from changes in manufacturing sources, the potential for transloading and less-than-containerload consolidation, requirements for the handling of product returns, and risk mitigation.
Horizon Hobby turned for help to Jones Lang LaSalle Inc., which undertook a network analysis of the company's supply chain in three areas:

- Data collection and baseline development. JLL provided Horizon Hobby with a structured data request outlining the information needed for the project. The project team conferred with various functional experts across the company (including sales and marketing, transportation, distribution operations and finance) to gain a more comprehensive understanding of the client's business objectives.

- Operating model and scenario analysis. JLL drew on sophisticated modeling tools to analyze various "what-if" scenarios, and measure their cost and service performance relative to the current baseline. The effort was accomplished through frequent communications with Horizon Hobby's supply chain leadership, with which JLL shared the progress of the initiative and sought alignment on direction.

- Recommendations and high-level implementation planning. At the conclusion of the project, JLL reviewed the results and made recommendations to Horizon Hobby in a series of executive-level working sessions to facilitate understanding of the various operating scenarios, as well as craft a plan for implementation.

JLL was asked to perform a network-strategy study that utilized supply chain optimization modeling techniques and other analytics to evaluate the cost and service implications of multiple operating scenarios. In the end, the work provided Horizon Hobby with a fact-based supply chain strategy and vision to guide its growth for the future.

Based on the results of the supply chain consulting analysis and past experience in working with JLL, Horizon Hobby is now evaluating real estate-related advisory and brokerage services to support implementation of the future-state plan.

"From our initial meeting with JLL, it was clear they wanted to understand our business and operational objectives in detail," says Michael Ritter, senior vice president of supply chain management with Horizon Hobby.

"They engaged with whiteboard working sessions in a collaborative approach with our leadership team, and demonstrated their expertise in the process.

"JLL's hands-on approach resulted in clear recommendations on how to optimize our current and future distribution footprint," Ritter continues. "All project objectives were met, and we were very pleased with the methods of execution and results delivered by the JLL team."

Resource Links:
Horizon Hobby, www.horizonhobby.com
JLL, www.us.jll.com

100 GREAT SUPPLY CHAIN PARTNERS

A WMS Implementation Stumbles, Then Finds Its Footing

HJI Supply Chain Solutions was having trouble implementing a new warehouse management system, to the point of considering scrapping the whole project. Then it found a partner that helped make the initiative work.



HJI Supply Chain Solutions is a growing logistics services provider based in Louisville, KY. Founded in 1994, HJI initially provided warehousing services to Tier 1 and Tier 2 supplier automotive clients, including the Ford Motor Company, Yanfeng, and Martinrea. Since then, it has extended its offering to address the needs of additional industries, including food and beverage, consumer goods and healthcare.

As HJI continues to grow, it faces new operational challenges. In 2019, it made the decision to implement a warehouse management software (WMS) system from Körber, in order to maximize facility space, improve efficiencies and boost productivity across the business.

HJI initially tapped internal resources to lead the initiative, but the team member charged with overseeing the project was quickly consumed with day-to-day operational challenges. As a result, the Körber implementation stalled, and HJI began to question whether the tool was the right fit for its operations.

"The application felt unstable, and appeared to require resources and processes that [HJI] lacked," the company says. At that point, it was considering starting all over again with an entirely new WMS system.

Instead, HJI called in Alpine Supply Chain Solutions, which had years of years of experience in implementing the Körber WMS, to evaluate next steps. Alpine conducted a best-practice analysis to determine the client's current and future WMS requirements, and quickly devised a plan for HJI to get back on track with the Körber implementation.

Alpine then re-engaged with Körber and led the execution of multiple client-side responsibilities, including:

- Providing technical and operations direction on gap discovery and system configuration.
- Developing a full acceptance test plan to assist with execution and documentation of the user acceptance testing process.
- Documenting work instructions and standard operating procedures.
- Serving as the communication conduit between Körber WMS, ERP providers and the HJI team.
- Pinpointing, soliciting training and conducting train-the-trainer sessions to fill knowledge gaps and provide education on new functionality.
- Directing Körber WMS to resolve requirements leading to configuration, and making minor customization adjustments.
- Providing operational support for technical training.

The implementation was a success, according to HJI, which says it was able to deepen its knowledge base of the WMS in the process. It has since successfully rolled out the Körber tool to a larger distribution center in Louisville and two additional facilities in Memphis. Both are working to fully link all clients and warehouses on the application.



"Alpine proved to be the right partner at the right time," says Shane Allgeier, HJI's chief operating officer. "They quickly assessed our situation and got our WMS implementation back on track. In the end, they helped us maximize the investment we had already made in our supply chain technology, saving us both time and money."

Adds Allgeier: "By having Alpine take a leadership role in the implementation, we were able to focus on our daily operations and what matters most to us — providing peace of mind to our customers."

HJI is now relying on the system to deliver daily order fulfillment and numerous value-added warehousing activities, including pick, pack and ship of both B2B and B2C orders, e-commerce omnichannel order fulfillment, an order management system (OMS) and WMS with track-and-trace functionality, contract packaging, kitting and assembly, and reverse logistics.

"We continue to grow, with a focus on enriching the lives of our people, supporting their community, and providing peace of mind to customers while providing 3PL solutions to meet today's greatest supply chain challenges," Allgeier says.

Resource Links:
HJI Supply Chain Solutions,
www.hjisolutions.com
Alpine Supply Chain Solutions,
www.alpinesupplychain.com

100 GREAT SUPPLY CHAIN PARTNERS

Palo Alto Networks Enhances Forecasting and Demand-Planning Function

Global cybersecurity leader Palo Alto Networks, Inc. needed to implement a new tool for supply as well as sales and operations planning functionality — and time was of the essence.



Palo Alto Networks (PAN) is a global provider of cybersecurity services, focusing on next-generation firewalls, appliances, cloud, end-point and analytics products. The company was approaching the end of the license period with its then-current software-as-a-service (SaaS) provider, and needed a new and improved solution by the time the agreement expired. The new tool needed to replicate the capabilities of its existing system — including demand planning, forecast disaggregation, supply planning and component forecasting — while improving its integration of sales, supply chain and financial processes. And it needed to achieve this transition within a tight (and non-negotiable) timeframe.

After evaluating numerous candidates, PAN chose Anaplan Inc., whose SaaS platform connects teams, systems and insights for scenario modeling, forecasting and planning. To the customer, Anaplan offered flexibility, scalability and an intuitive user interface, all on schedule and on budget.

Implementation of Anaplan's system proved just as critical as the solution itself. As part of the user acceptance testing process, the company chose to involve the software's users as early as possible.

"We started by training all the users in Anaplan," says Nikalaus Satish, senior sales and operations planning (S&OP) analyst with PAN. "This helped them to get really familiar with the tool as we went. Even though we had consultants, we tried to do the model building with our in-house developers. And we made sure that we were constantly doing demos and getting feedback almost daily."

Involving in-house users from the get-go reaped benefits both during the implementation process and as the company approached its deadline. PAN ultimately avoided last-minute surprises and was able to make a smooth transition to go-live and deployment, thanks to early-stage feedback and user familiarity.

Jonathan Morgan, senior director for demand, inventory and spares planning at PAN, recalls the lessons learned from the process. "One of the key things we took away was to not replicate functionality that existed in an Excel model or a prior tool, and just copy and paste this into the new tool," he says. Instead, PAN followed the Anaplan method and let the technical experts develop new solutions that would serve the right business outcomes.

"Don't just build something that satisfies you for the next two quarters of the fiscal year," Morgan advises. "Think about where the business is going to be a few years out, and try to build that scale."

Satish cites the importance of foundation-building as another key takeaway from the transition to Anaplan's software. "It's important to build a strong backbone, because as you keep using the tool, you're going to keep building more modules, add more data, and your processes are going to change," he says. "If you build a strong backbone, you save time down the road."

Once the deadline was met and Anaplan's software was deployed, the benefits of the transition became evident. For Morgan, improved flexibility was pivotal. The ability to adjust models quickly, adapt to business changes and automate previously manual processes opened up a host of new opportunities.

"Over the two and a half years or so that we've been running Anaplan, we've added a ton of functionality," Morgan says. "We actually run our S&OP forecast meetings in Anaplan. We don't do it offline. We don't do slide decks and everything else. We just do it live in the tool."

As PAN continues to grow as a company, Anaplan's solution will likewise expand. Planned improvements include business connectivity. "Connected planning is something we haven't taken advantage of yet across the business," Morgan says. "Connecting into finance and sales operations and budgets is definitely on the roadmap to keep scaling."

On the tech end, Satish looks forward to using CloudWorks, Anaplan's data-integration software, which he believes will streamline certain processes through automation and improved scheduling, as well as continue to improve the overall user experience.

All of the principals consider the relationship between PAN and Anaplan to be a huge success. "Since the transition, PAN has been able to drive from a single S&OP use case to basically full end-to-end advanced planning," says Evan Quasney, vice president of solutions marketing with Anaplan. "That's what we believe is really compelling about this — that the software helps our clients and customers enable the business outcomes they're looking to achieve."

Resource Links:
Palo Alto Networks, www.paloaltonetworks.com
Anaplan, www.anaplan.com

100 GREAT SUPPLY CHAIN PARTNERS

How a Seattle Nursery Survived the Shift to Online Business

The pandemic forced Plant Shop to transition quickly to a delivery model. A software application was the solution to optimizing the daily routing plan.



When the "walk-in" experience is no longer feasible, even small neighborhood businesses must adjust.

Founded in 2017, the Seattle-based Plant Shop spent its first three years relying almost entirely on foot traffic and personal visits by customers. Then came COVID-19, and like virtually every retail operation of any size, it had to shift to online sales to survive.

"In the span of a week or so, we had to go from being 95% in-person to 100% online," recalls owner Ryan Tansey. "It was the only opportunity we had to keep the lights on."

In the early months of the pandemic, few customers were interested in ordering online and picking up at the nursery, so Plant Shop had to gear up its delivery service. The operation was limited in scope, involving just two vans staying within Seattle city limits — but that didn't mean it was easy to pull off.

Tansey calls the shop's early efforts at fulfilling online orders "a nightmare." The process was entirely manual and paper-based, and "it was taking us the better part of an hour every morning to figure out a roughly optimized route."

Tansey struggled with the improvised system for two or three weeks, before deciding that he needed a technology solution to figure out the most efficient routing. After researching the possibilities online and soliciting user recommendations, he settled on Circuit, a vendor of route-planning software.

Other options were either too complex and expensive, or couldn't accommodate multiple vehicles. Circuit, says Tansey, "hit the sweet spot."

Circuit wasn't that much older than Plant Shop; it was launched in the United Kingdom just five years ago. The focus from the start was aiding in last-mile deliveries, says chief executive officer Jack Underwood.

Even the smallest fleets can run into complications when trying to serve multiple customers, Underwood says. Information needs to be served up to drivers on a timely basis, including drop-off points, time windows, location of packages in the vehicle, and special instructions.

Circuit's software is largely self-service, so there wasn't the need for a lengthy person-to-person sales process. Plant Shop needed to ramp up quickly to hold on to its customer base and compete with other businesses that were also going online.

The software allows the user to create a daily route plan that calculates the best order of deliveries for businesses with up to 70,000 drivers, states Underwood. Plant Shop was far from being in that class, but it faced its own set of challenges because it hadn't relied on deliveries prior to the pandemic, and was essentially "starting from scratch," Underwood says.

Tansey says the software was "pretty much functional day one, minute one of trying it out." Even so, the business struggled to meet customer demand in the early days of implementing the application.



At the beginning of each day, Plant Shop inputs all order data into the application, which then auto-generates the best route for making multiple deliveries. The system takes into account the relative proximity of customers, as well as recommended detours around potential traffic blockages. In addition, Plant Shop can see where drivers are at all times — information that comes in handy when customers enquire about the status of their orders.

As the pandemic subsides, Plant Shop has been able to return to servicing walk-in sales, although up to 20% of its orders are still placed online. Tansey expects to keep using the Circuit software to handle the delivery portion of its business. "It's a service that not a lot of other shops in the area are offering," he says. "It's a very helpful advantage."

Resource Links:
Plant Shop Seattle, www.plantshopseattle.com
Circuit, www.getcircuit.com

A 3PL Sheds Manual Processes to Streamline Communications With UPS Drivers

With the concept of a "peak season" melting away during the pandemic, Coyote Logistics sought a better way to manage UPS drivers at the parcel giant's hub facilities.



Given the surge in consumer demand over the past year, and the resulting pressure on carriers to deliver product in a timely manner, one might be excused for thinking that the old notion of a "peak season" is defunct.

What does "peak" mean when congested ports, a severe shortage of trucks and overflowing warehouses become the status quo? For a big third-party logistics provider like Coyote Logistics, there's no let-up.

Coyote is doubly challenged to live up to customer expectations because of its commercial relationship with United Parcel Service, one of the dominant players on the front line of the e-commerce boom. It provides UPS with real-time communications and shipment visibility, by interacting directly with UPS drivers and employees as well as physically staffing most of the parcel giant's nationwide hubs. "That's a lot of e-mail communication, and a ton of organization," says Emily Lockhart, Coyote's strategic planning manager. Business has exploded over the past year and a half, she adds, due to a massive increase in the number of people shopping from home during the COVID-19 pandemic.

The volume of activity grew to such an extent that Coyote found itself in need of a more efficient way of tracking and communicating with the army of UPS drivers. "We were doing a lot of manual work and had been looking for I.T. solutions," Lockhart says. "But we hadn't found the correct fit."

If the Shoe Fits

Then, in 2018, "the stars aligned," in Lockhart's words. That's when a former UPS executive suggested Vector, a San Francisco-based provider of software for streamlining communications and achieving transparency into logistics and field service operations. "They were able to provide granular information to us," she says. "It was a Cinderella shoe that fit."

Vector chief executive officer Will Chu describes Vector's offering, which connects distribution centers with trucking companies and drivers to expedite pickup and delivery, as "like building a TSA PreCheck for freight." For Coyote, the task was especially challenging, given that the 3PL was also dealing with large numbers of non-UPS trucks to meet end-of-year holiday season demand. Such carriers were unfamiliar with UPS facilities and were relying on Coyote to handle driver check-in, dispatch and routing.

At its height, the operation might see a line of up to 50 trucks waiting for trailers. Coyote, says Chu, needed a system for conveying pickup and delivery information to drivers ahead of time, to speed up processing.

Arriving at a designated facility, the driver checks in through the app and clicks on the correct route load. Upon receiving a trailer, they take a photo on their phone. Vector then applies a GPS tag and timestamp, digitizes the trailer number and relays that information to UPS headquarters, so that the parcel carrier knows precisely which trailers are being moved and when. A similar process is carried out for deliveries.

The system "allows Coyote to move more freight with less manual intervention," says Chu. "Upon checkout, drivers don't need to wait in line. They just go on their way."

A Phased Rollout

Coyote first tested Vector's technology at one location in Southern California back in 2018, Lockhart says. Initial setup took place at a time when volumes were relatively low. An early challenge was getting drivers used to the system, which required the use of smartphones.

"A lot of our drivers were still using flip phones," recalls Lockhart, calling the situation "a unique hurdle that we had to get a little bit creative with." Adds Chu: "Getting drivers to adopt a new way of doing things can be tough." Vector helped out by sending some of its own reps to UPS locations to demonstrate use of the tool. That level of preparation proved essential to rolling out the application to a wider geographic area.

The Vector system offered a natural incentive to drivers, by allowing them to avoid long lines and wait times. For Coyote, "there are huge benefits in not having to answer as many phone calls," says Lockhart. "Before, we were confirming a ton of data over the phone." With volumes last year reaching more than 155,000 thousand loads, the savings in time quickly add up.

Coyote subsequently expanded the Vector app to 15 UPS hubs, which customarily require staff of around 175-200 employees in peak periods. During the pandemic, however, "Vector helped us manage peak-season volume with a team of only about 11 people," Lockhart says.

Coyote is open to making greater use of Vector's technology in future. This year, Lockhart says, the system is acquiring a more user-friendly driver interface. The 3PL also wants to devise a more formal set of key performance indicators "so that we can see the improvements that Vector's been giving us."

Chu envisions being able to help Coyote in supporting additional accounts, including retailers that already rely on Vector's app. "Together," he says, "we're going out to the broader market and partnering for all of Coyote's other customers."

Resource Links:
Coyote Logistics, www.coyote.com
Vector, www.withvector.com

100 GREAT SUPPLY CHAIN PARTNERS

How a Major Restaurant Equipment Supplier Weathered the Pandemic

With a policy of keeping large amounts of inventory on hand, Parts Town was ready for any supply disruption. But it was also aided by having previously installed a goods-to-person system in the warehouse.



Few businesses took a bigger hit from the COVID-19 pandemic than restaurants — and, by association, the companies that supply them.

Parts Town LLC is a major distributor of equipment and replacement parts to original equipment manufacturers in the foodservice sector. With a product list of around 1.8 million SKUs and a ship rate of 7,000 orders per day, it supports hundreds of thousands of restaurants and commercial kitchens across the country.

Parts Town had one advantage during the pandemic over other businesses that experienced severe supply chain disruption: it keeps a lot of inventory on hand. The goal is to "satisfy our customers as a one-stop shop," says chief operating officer Rony Kordahl. Customers can order up until 9 p.m. Eastern and have their items shipped on the same day.

The company wasn't immune from the staffing problems caused by COVID-19. But it was helped by a flexible approach to labor deployment. "Everyone is hands-on and into the details," says Kordahl. "They're willing at any point to jump in. In times of stress, you would find our senior leadership team working shoulder to shoulder with everyone in the DC to get things done, if we couldn't find the staff levels that we needed."

Throughout the 2000s, Parts Town found itself grappling with the challenge of maintaining high levels of customer service in the face of vibrant growth. The pandemic temporarily interrupted an annual growth rate of around 20%, according to senior director Kenny William. "When you grow that fast, you get the doubling effect," he says. "Everything gets more complicated exponentially."

As it swapped out legacy warehouse-management software, and upped staffing levels in line with growing demand, Parts Town began searching for creative solutions to speeding up order processing in the DC. William approached Bastian Solutions, a provider of storage and order-fulfillment systems, about the possibility of acquiring a robotic pallet stretch wrapper. Upon further discussion with Bastian, however, he was drawn instead to the integrator's goods-to-person system, beginning with a pack conveyor that was ideal for operating safely in small spaces with dozens of people on the warehouse floor.

Going for Goods-to-Person

Following acquisition of that system, the product that next caught William's eye was AutoStore, Bastian's goods-to-person system from Bastian that was a relatively recent offering at the time. Joe Campbell, Bastian's regional manager, says it was clear that Parts Town couldn't support expanding operations with existing resources.

It wasn't a difficult pitch. "A lot of times customers that don't have a lot of automation are afraid to change," says Campbell. "But I could tell in my conversations with Kenny that Parts Town's appetite for automation has always been very strong."

Kordahl says Parts Town's affinity for technology extends throughout its distribution, marketing and e-commerce functions. He believes it's especially important to be able to marry the company's physical distribution system with its marketing and inventory strategies. "Without all of those working in harmony," he says, "it's just a bunch of robots in the warehouse."

Parts Town was drawn to AutoStore in part because the system integrated well with its new warehouse-management software from HighJump (now Körber). But the results of implementation were even more impressive: a fourfold increase in picking speed, automatic slotting capability, greater storage density, and a flexible configuration of robots and bins.

The system's overall flexibility, coupled with an intense focus on worker safety, helped Parts Town to weather the inevitable downturn in business caused by the pandemic, as restaurants shut down virtually overnight. Within just a few months, however, orders began to rebound, and operations returned to previous levels without a hitch. "We were ready to serve," says Kordahl. "We never laid off anyone, we had the inventory, and we kept our relationships with manufacturers and suppliers intact."

How It Works

AutoStore equipped Parts Town with a system that integrates with robots driving around a grid among stacks of bins, picking those needed for a given order, then delivering to an operator at the perimeter. William says the setup shrinks the footprint of inventory within the facility, allowing for the stacking of bins up to 18 feet high. Compared with traditional grocery-style shelving, that amounts to a 70% savings in space. And the pick rate goes from between 30 to 40 lines per hour to more than 200.

Even so, Parts Town ended up moving to a distribution facility with twice the space, one that was more conducive to the AutoStore technology. The switch occurred "without a single hour of downtime," recalls William. "We were running a night operation, doing moves while Joe was building AutoStore in the middle of this giant building." In keeping with the requirements of the much larger space, and to minimize the need for human travel within the facility, it added around 5,000 linear feet of conveyor.

Parts Town used the brief downturn caused by the pandemic to make further modifications to the facility, including the addition of mezzanines, high-bay racking and wire-guided picking.

Parts Town is open to further automation in its warehouse, including additional capability from Bastian. The goal, says William, is to ensure resilience in the face of multiple disruptive events. In all possible cases, he asks: "Is your system robust enough to absorb those issues and keep people moving?"

Resource Links:
Parts Town, www.partstown.com
Bastian Solutions,
www.bastiansolutions.com

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FDA Prepares to Broaden Traceability Requirements for Food Supply Chains

By Robert J. Bowman, SupplyChainBrain

The U.S. Food and Drug Administration is cracking down once again on food producers, with a new and tougher requirement for product safety and traceability.

The Food Safety Modernization Act (FSMA) came into effect in 2011. It laid out a series of specific actions to prevent contamination of food products at all points along the supply chain.

Now, FDA is proposing to implement additional recordkeeping and reporting requirements for "persons who manufacture, process, pack or hold foods the agency has designated for inclusion on the Food Traceability List." The FTL consists of food items that FDA deems to bear the highest risk to consumers, based on criteria such as frequency of outbreak, severity of illness, likelihood of contamination and potential for pathogen growth.

A key part of FDA's New Era of Smarter Food Safety blueprint, announced in July, 2020, the new proposed rule would implement FSMA's section 204(d), which covers food traceability. It identifies 24 specific categories that the agency wants industry to be able to track and trace to an unprecedented level of detail, according to Dean Wiltse, chief executive officer of supply chain software vendor Mojix.

Current law requires only that entities in the food industry be able to declare from where they directly bought something, and to whom they directly sold it — "one up and one back," as the agency describes it. The implementation of Rule 204 would impose a much broader standard, identifying specific items "that now need to be tracked and traced by everyone that touches them," Wiltse says.

The reporting requirement is similarly strict with regard to time. Where it might have previously taken food producers and sellers up to 10 days to access that level of detail, they will now be required to respond within 24 hours.

Barring FDA's request for a delay, Wiltse says, the agency is likely to submit the new rule to a federal judge in November of this year, at which point it will go through the process of being codified into law.

The rule, if implemented as proposed, provides a grace period of two years within which companies unable to supply the required information would not be subject to penalties. There's also an exception for what FDA terms "certain small originators," such as smaller produce and egg farms, but it's not entirely clear where FDA is currently drawing the line, Wiltse says.

Penalties for non-compliance could amount to substantial fines or even jail time, notes Mojix marketing director Hélène de Lailhacar.

Food producers and retailers need to begin preparing for the new rule now. "We see a real need not just for traceability, but for transparency and visibility into the [entire] supply chain," says Jim Hardeman, chief purchasing officer and chief marketing officer with CMX, vendor of a software platform for managing quality, risk and compliance.

Many food sellers, including retailers, grocers and restaurants, currently lack visibility beyond their tier 1 suppliers, says Hardeman. Now they'll need to cite the specific origin, all the way back to the farm, of all products, ingredients and formulations that go into manufacturing.

Standards already exist to help them achieve that degree of visibility, most notably the Global Location Number (GLN) system established by GS1 US. It provides a unique key in the form of a 13-digit number for identifying all parties and locations in a supply chain.

An estimated 70% of the food industry in the U.S. has adopted that standard, says Wiltse, but it's not as widely employed in other countries, which account for 20% of the nation's food supply. A GS1 US-compliant barcode can identify everything from the specific farm, product type and harvest date to ship date — information that becomes instantly available to every entity that handles the item along the chain. At the grocery or restaurant end, software allows sellers to scan the applicable information and determine whether a given product is being subject to recall. The technology makes the process relatively straightforward even for a restaurant chain with thousands of locations and an extensive list of ingredients to manage.

By being able to access the precise origin of a contaminated food item during a recall, producers wouldn't necessarily have to destroy all product that came from a particular farm or region. (That has often been the case with sensitive items such as romaine lettuce.) "Now the cost is pinpointed down to the lot level," says Wiltse.

As onerous as implementation of Rule 204 might seem to the food industry, it will bring benefits to end consumers. "More of them are wanting transparency," Hardeman says. "They want to know where the food they're buying is coming from. "That's super beneficial for brand loyalty."

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Will War in Ukraine Force Permanent Change in Global Procurement Strategies?

By Robert J. Bowman, SupplyChainBrain

Russia's invasion of Ukraine is causing severe shortages of the building blocks of industrial production the world over.

The two countries turn out to be prime sources of essential chemicals and other raw materials that go into everything from catalytic converters to breakfast cereal.

Take carbon black, found in batteries, printing inks, cables and automotive tires, among many other products. An estimated 30% of the material comes from Russia, Belarus and Ukraine. Then there's palladium, one of several metals used in the production of catalytic converters. Russia is responsible for about 40% of the world's supply.

The list goes on. Other critical metals sourced in large amounts in Russia include platinum and rhodium. Ukraine furnishes half the world's supply of neon, a key ingredient in the lasers used to make semiconductors. Ukraine's breakaway Donbas region possesses large reserves of lithium, essential to the batteries used in electric cars. And Russia supplies Europe with between 25% and 40% of the contents of ammonia found in fertilizer, leading to shortages in basic food stocks.

All of this is causing the price of raw materials to skyrocket, and serving as a major driver of the record inflation that's currently plaguing the U.S. and other industrial nations. Manufacturers that previously changed prices perhaps once a year are now forced to reexamine pricing on a monthly basis, if not even more frequently, notes Garth Hoff, principal of industry solutions with Pricefx. Those who can't keep pace are seeing their margins erode, he adds.

The supply crisis is having additional ripple effects on global commerce, Hoff notes, including a rise in the theft of catalytic converters, and producers circumventing some price increases by selling into the gray market.

In such a volatile environment, manufacturers and producers must do more than just pass along increases in the cost of their raw materials. They should be thinking about alternative sourcing, and even developing new products and methods that rely less on the elements that are in short supply. Some farmers, for example, are considering rotating their crops in a manner that requires lower levels of nitrogen-driven fertilizers. Or they're switching to new types of cattle feed involving different protein products.

On the retail end of the food supply chain, Hoff says, merchandisers are deal with the higher cost of materials by shrinking the size of packages. In the process, they're raising prices on the shelf without the perception of doing so.

Some economists believe the current inflationary cycle is peaking, and markets could begin to see some relief by the end of this year, with a "very slow return to normal," Hoff says. But don't expect to see manufacturing return to its old procurement model anytime soon. Stung by the bitter fruit of Russia's latest aggression toward Ukraine, producers are reevaluating their dependence on that country for a broad range of materials and products, such as grain and natural gas. The same exercise is taking place among companies that have leaned on China for decades as the main source of manufactured goods sold in the West. The trade war that erupted between China and U.S. over the last several years served as a wakeup call to supply chains driven entirely by the lure of low-cost production. (Or not so low, when you figure in rising Chinese factory wages, the cost of shipping finished goods over long distances, and the fallout from factory closures and port congestion triggered by the COVID-19 pandemic.)

Countries such as Mexico and Vietnam could be the beneficiaries of reshoring strategies that seek to minimize China's role in global goods production. The U.S., too, could see the return of some manufacturing capacity, as producers seek to localize supply of materials such as microchips.

But such moves could take years to complete. In the meantime, the supply crisis in sectors such as electric vehicle production could grow worse, prompting manufacturers to explore both long- and shorter-term solutions.

"Whether you're a manufacturer or distributor, as you're thinking about your pricing and procurement strategy, you can't go back to being complacent," Hoff says. "You need to be smart, not just about your pricing perspective, but a lot of things around core pricing discipline."

Chief among those factors, he says, is gaining certainty of supply, whether that means exploring alternative markets or taking advantage of gray-market and cross-border opportunities.

"After two to four years of repeated black swan events," Hoff says, "we all have to realize the need to be prepared for the next one — to be prepared for anything."



The $35 Billion Challenge: Using Supply Chain Intelligence to Improve Pharma Operations

By Mahesh Veerina, president and chief executive officer of ParkourSC

In the pharmaceutical industry, there's a cold hard truth about supply chain operations: The industry loses roughly $35 billion annually because of failures in temperature-controlled logistics. Amazingly, those losses are almost entirely preventable — provided that we reimagine the pharmaceutical cold chain to become more digital and agile.

Today's pharmaceutical cold chains are complex logistics networks with a large ecosystem of suppliers and transportation partners. Each part of this network, comprising suppliers, distributors and more, has unique requirements. To deliver as promised for patients, they must work in strict synchronicity, with seamless handoffs occurring at every stage of the journey.

While the task at hand might seem daunting, new technologies for supply chain visibility and control can mitigate cold chain losses resulting from missed handoffs, product spoilage, re-testing and compliance issues.

In recent years, the pharmaceutical industry has faced highly visible challenges, particularly relating to the development and global distribution of COVID-19 vaccines. The era has brought into sharp focus longstanding concerns around managing and monitoring every part of the supply chain, especially when it comes to ensuring cold-chain integrity.

One of the key historic challenges in pharmaceutical cold chains has been a lack of information needed to make the right decisions across the entire journey of drugs and therapeutics, from development to patient. This shortfall of insight into why excursions occur, and the inability to prevent them, can lead to any number of problems, including poor planning, inaccurate predictions and delayed decision-making.

Given the value of products moving through the pharmaceutical supply chain, consistency of the cold chain is paramount. The slightest temperature variation in transit and storage can wreak havoc in pharmaceutical cold chains, spoiling entire batches of product and costing the industry billions in lost revenue.

It's critical to have in place a system for accurately monitoring product location, dwell time, condition, movement history and more. Data must continuously realign between planning and real-time operations, to reflect what's happening on the ground. This is crucial to enabling companies to reduce spoilage and waste, enhance security, and comply with regulations.

Tracking Hard and Soft Attributes

Companies seeking a proven framework for cold chain operational efficiency needn't start from scratch. Many of the best modern-day approaches involve systems that extend well beyond visibility. They can track so-called "hard" and "soft" attributes within the supply chain, to achieve stronger quality control and faster resolution of issues before they affect cold-chain integrity. They also provide the ability to model supply chain processes or deviations before they occur, reducing unwanted surprises.

To track hard attributes, companies need visibility into the location and condition of goods and supplies in real time. Soft-attribute tracking, by contrast, involves granular knowledge of business processes and the identification of any exceptions or organizational bottlenecks.

When pharmaceutical enterprises track both types of attributes together, they gain an exponentially more detailed view of the entire cold chain. Hard attribute-based tracking provides on-the-ground truth from sensors gathering information on raw materials, components and finished goods in real time. It answers questions like whether temperature excursions or excess delays happened in transit, or whether a component at rest in a warehouse or factory is damaged in any way. Such insights are then combined with soft-attribute tracking of business processes, such as whether a pricing discrepancy or paperwork issue is holding up the flow of materials in the cold chain. In the process, companies acquire a fuller picture of cold-chain health — one that enables faster identification and resolution of issues. The result is a more agile and resilient supply chain, drawing on data from many more sources.

Reaping the Benefits

Successful implementations require that hard and soft attributes not only be identified, but also carefully orchestrated. Doing so involves combining data flows into a comprehensive picture of the overall health of the cold chain.

To make this a reality, information on location, condition, count, timestamps and more needs to be clearly visible and easily understood. It must flow in real time, allowing companies to flag and remediate issues almost as they occur.

Modern real-time supply chain operations platforms, which pull together all the required knowledge in a cohesive fashion, can be deployed without the need for large-scale IT spending. The best are cloud-based and equipped with state-of-the-art sensor, internet of things, digital twin, artificial intelligence and machine-learning technologies. They can be scaled easily and securely in line with the operation's needs, while remaining agnostic to hardware, unstructured data sources and rapid technological evolution.

Technology innovations such as the introduction of digital twins into real-time operations enable the entire supply chain to be digitized and constantly monitored from multiple data sources. The result is a level of transparency that enables collaboration across all partners in the ecosystem. Digital twins can also help organizations improve their infrastructure and response time when hiccups do occur.

To address modern cold-chain challenges, pharmaceutical companies need to move from siloed operations and reactive approaches to real-time insights and continuous orchestration. They must remove legacy barriers to enhance the management of data at every stage of the supply chain. Such an approach enables intelligent digitization throughout the ecosystem. Done properly, this approach eliminates "blind spots" and facilitates seamless control across suppliers, logistics, factories, warehouses, distribution centers and last-mile delivery.

By modeling supply chains, embedding intelligence into operations and models, and deploying digital twins for collective insight and collaboration, pharmaceutical supply chains can align planning and execution with ground truths to improve service levels amd maintain security, quality and compliance standards, including those relating to environmental, social and governance (ESG) goals. The result is better business outcomes, including more efficient operations, higher profitability, less waste and better product quality.

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Quantum Computing Is Delivering Novel Solutions to Complex Logistics

By Murray Thom, vice president of product management at D-Wave System, Inc.

Forward-looking organizations are increasingly embracing new technologies to navigate the ever-challenging business environment and stay competitive.

In a recent Gartner survey of supply chain technology users' wants and needs, 34% of respondents said they expect to adopt new technologies over the next five years. As manufacturing executives think about honing their digital strategies in the age of Industry 4.0, quantum computing promises to become a valuable part of the chief information officer's toolkit.

Quantum computing is emerging as an important means of helping companies solve their most complex business challenges. In simplest terms, quantum computing harnesses the power of quantum physics to solve hard (often know as NP-hard) problems. While a classical computer uses bits, which represent a 0 or a 1, a quantum computer uses qubits, which can represent a 0 or 1, or both at the same time.

Say you're looking for the best path to cross a valley, and want to use a computer to help you navigate. A classical computer would scan the valley and try every single route, one at a time, to see which is best. That's a time-consuming process, and it will be a long while before you figure out the most efficient way to get across. A quantum computer, by contrast, can try every single route at the same time, and quickly report back the most optimal path. It can also take in additional information quickly (like changing road conditions) to provide improved options in real time.

Most commercial quantum computation will be hybrid, meaning that problems will be solved using both classical and quantum resources. Much like the value of a graphical processing unit (GPU) in classical computation, quantum computers are accelerators. A quantum hybrid approach offers the best of classical and quantum solvers, automatically determining which parts of problems are more suited to classical or quantum solutions and, in turn, enabling businesses to see early quantum value on their current computational problems, while preparing them to address more complex problems in the future.

There's a specific type of quantum computer tuned for optimization problems, known as an annealing quantum computer. Annealing is the only quantum computing model that, as part a quantum hybrid approach, can efficiently solve large combinatorial optimization problems at enterprise scale, tackling problems involving large numbers of variables and constraints. These types of problems make up a large part of the manufacturing problem space across every part of the supply chain, such as distribution center bottlenecks, materials procurement, bin packing, aircraft loading, plant maintenance, route optimization, pricing, staffing and scheduling.

Enabling Port Flexibility

The Port of Los Angeles is known as America's busiest port, and at a time when the world is facing a multitude of supply chain challenges, it's essential that the port operate at the highest possible level of efficiency. SavantX, a quantum analytics company, created a quantum application specific to the port's third largest terminal, Pier 300, deploying the HONE (Hyper Optimization Nodal Efficiency) quantum-powered AI engine to optimize cargo handling and truck scheduling using an annealing quantum computer.

The goal of the work was to expedite delivery out of the terminal while increasing the amount of cargo that can be handled. The terminal handles more than a million containers a year, and up to 5,000 trucks a day. It's constrained in acreage, so the only way it can get more cargo through its gate is to increase speed throughout all stages of the process.

This optimization had three major components: reduce the back-and-forth movement of the gantry cranes, create more efficiency for truck appointments, and optimize the process of calling trucks into the delivery area. SavantX created a digital twin of the port operations and ran thousands of simulation runs, testing out optimization schemes against a wide range of terminal conditions such as truck appointment methods, queuing variations, traffic patterns, the number of trucks in the terminal, and the number of no-shows.

HONE runs continuously to optimize crane movement, decide which trucks are called into the terminal and when, and set upcoming truck schedules. With HONE, truck drivers use an app that directs them to the right container based on a crane's current location, reducing crane movement while increasing crane productivity. The result is a reduction of wait time for truckers, and increased movement of containers out of the port. Deliveries per day per crane went from 60 to 97 following HONE implementation, a 62% increase in productivity.

Fueling Traffic Flow Efficiencies

Drivers routinely rely on the comforting voice of a GPS navigation system to guide them to their destination, but many of us also have had the experience of ending up in interminable traffic jams. Volkswagen demonstrated an efficient solution to this challenge using quantum hybrid approaches, steadily guiding drivers along routes that are optimized in real time in response to traffic conditions.

The company selected an intensive test-case for traffic: managing a fleet of buses carrying attendees of the Web Summit conference in Lisbon, Portugal. Volkswagen's solution was to develop an Android-based app that regularly communicates with a cloud-based quantum web service (QWS) platform. This was in turn directly coupled to a quantum computer, which supplied bus drivers running the app with the best route to their destination given current traffic conditions.

Over the four days of the conference, the nine buses in Volkswagen's Quantum Shuttle fleet completed 162 QWS-guided trips. Using a quantum hybrid approach in planning these routes, solving a total of 1,275 optimization tasks, researchers noted that none of the three bus lines consistently followed the same path — highlighting the importance of QWS guidance in adapting to current road conditions. With this real-time guidance, the buses were able to achieve consistent travel times regardless of the time of day. Quantum traffic optimization tools such as this can be integral to easing the movement of goods.

Given the abundance of complex optimization problems in the manufacturing, logistics and supply chain space, the category is ripe for realizing the benefits of quantum computing. Orchestrating the more efficient movement of goods is a problem set that's well-suited for quantum computing. The technology is beginning to demonstrate that it can determine how to transport more products with fewer trucks, a crucial capability given the ongoing truck driver shortage. It also can be used to unlock bottlenecks in regional distribution centers, identify optimal shipping and transit routes when inclement weather hits, and find optimal aircraft cargo loading as fuel prices skyrocket.

Forward-thinking manufacturing, logistics and mobility businesses can secure a first-mover advantage today by beginning to explore specific problems that can benefit from quantum computing. In combination with classical computing, there are limitless possibilities as to what businesses can achieve with quantum technology in all areas of supply chain management. From scheduling to routing to bin packing, there are many potential areas that quantum computing could revolutionize. It's up to businesses to take advantage of this promising technology before others catch up.



Creating Localized Supply Chains: Dream Versus Reality

By Robert J. Bowman, SupplyChainBrain

Much of the conversation around supply chain sustainability today focuses on the localization of sourcing, to cut down on emissions caused by moving product over long distances. But however laudable that goal might be, it's not so easy to accomplish.

The issue of sourcing invariably gives rise to the key question: Sourcing of what? Finished goods? Components and assemblies? Raw materials? Rarely can a global supply chain rely on just one country or region for all of the content that goes into a given product — nor should it, given the risk of disruption caused by any number of unexpected events.

That said, environmental concerns are front and center in supply chain managers' thinking today. Increasingly, the decision on where to source parts and finished goods is based on both bottom-line cost calculations and "green" considerations.

Hologenix LLC is acutely aware of the complexities of managing a global supply chain. The Southern California-based manufacturer describes itself as "a material sciences company producing innovative responsive textile products that energize all aspects of life — home, work and play."

Central to Hologenix's offering is Celliant, a textile containing infrared-generating minerals that are processed and manufactured in the U.S., then sold to brands around the world. The ingredient can be embedded into fibers, yarns and fabrics to produce "bio-responsive" textiles, which the company says regulates body temperature and promotes circulation and tissue oxygenation. Applications include apparel, sleepwear, bedding, upholstery, uniforms and medical supplies.

Hologenix chief supply chain officer Courtney OKeefe urges brands to partner with "like-minded companies or brands who are real about sustainability, and to be local-for-local, so that the full production of the textile product happens in one country whenever possible. This can really help minimize the footprint of the supply chain, and also helps with potential trade disruptions, cost and lead time."

All well and good, but OKeefe also acknowledges that reality doesn't always make that goal totally achievable. Drawing on a single country for all production makes a manufacturer vulnerable to natural disasters, pandemics and geopolitical disputes within that region — in other words, the very trade disruptions that she seeks to avoid through a "local-for-local" strategy.

What's more, Hologenix is by necessity a global supplier that must meet the varying requirements of brands in multiple countries. Final conversion of a product might take place close to the source of consumption, but ingredients and raw materials often must come from far away, despite the fact that "the logistics of moving minerals to the U.S. is ridiculously expensive in the current environment," OKeefe says. (China, for example, commands a near-monopoly on certain rare-earth minerals that are essential to many high-tech products.)

There are certain instances where local sourcing is mandated, especially when it comes to sales to the U.S. military and other purchasers who are determined to "buy American." In such cases, OKeefe strives to ensure that the yarn that goes into finished fabric is produced domestically.

Increasingly, supply chains are waking up to the need to embrace sustainable practices, driven by growing customer awareness of climate change. "The brands we tend to work with have a little bit higher standards for all corporate social responsibility activities," OKeefe says.

Hologenix isn't immune to the logistical impact of the COVID-19 pandemic, not to mention a host of recent natural disasters and other global issues. Notwithstanding OKeefe's commitment to streamlining and localizing supply chains, "we are deliberately making sure that if one plant has issues, we can ship to another for business continuity," she says, adding that "we have not been forced to adjust our basic daily processes, other than expecting things to run slower."

Regardless of where product is being sourced and sold, recent events — especially economic uncertainty — have heightened awareness of supply chain risk. "Contingency planning has always been a key factor," OKeefe says, "but it definitely is harder now. I've been in supply chain for over 30 years, and this has probably been the most challenging in terms of inflationary pressure."

Hologenix continues to support manufacturers with both localized and overseas sourcing strategies, with the final decision often resting on the cost of labor, opportunities for automation, scale of production and nature of the products themselves.

"I address it the same way as someone balancing a financial portfolio," says OKeefe. "We have pockets of opportunity that respond to the business at large. We're just an ingredient. When we think about how we service our brands, the evolution of the product can have a downward ripple [effect] on where we're sourcing."

Five Challenges and Solutions to Market Pressures on Industrial Real Estate

Sponsored by Liberty SBF

It might not seem like a very attractive time to own real estate in the warehousing, distribution or manufacturing business. Not only have the last two years turned real estate, across the board, into an incredibly uncertain investment, but the Federal Reserve is also in the middle of a series of interest rate hikes that will make real estate financing more expensive.

And yet, it's still true to say that owning a warehouse, distribution center or factory can be an excellent investment for a small or medium-sized business. People are going to continue to shop online, and retailers are going to need to store inventory in strategic locations to get to customers. Often, Amazon sellers don't own real estate – they fulfill orders through Amazon and finance everything through it as well. Now, many businesses are realizing they can get to the "buy" box on Amazon and still cut costs by buying a piece of real estate.

Smaller business owners commonly use Small Business Administration (SBA) 7a loans for these acquisitions, which have typically been a safe bet, since they're backed by the U.S. government and offer extremely high loan-to-value (LTV) ratios.

However, with interest rate increases, the market is changing for SBA 7a borrowers. 7a loans typically have floating interest rates, which fluctuate based on actions taken by the Federal Reserve. Due to the ongoing series of rate hikes predicted for 2022 and 2023, 7a loan payments are potentially hundreds of dollars more expensive per month than they were this time last year. This poses a huge risk to SBA 7a borrowers, as increased mortgage payments can drastically affect their bottom line. However, in order to mitigate this risk, the SBA recently introduced the SBA 7a-to-SBA 504 refinancing program, which allows SBA 7a real estate borrowers to refinance into a low-cost, fixed-rate SBA 504 loan.

Here are five key issues to consider when evaluating an SBA 504 refinance for the industrial sector.

1 You need working capital now.

If you're doing well in e-commerce, for example, you have an insatiable need for cash to get more inventory to sell. Refinancing from an SBA 7a to an SBA 504 loan can release cash for working capital of up to 20% of the appraised property value. The greater need for working capital to fund growth in e-commerce has led many companies to turn to Amazon Lending or similar services that make it easy to buy inventory and get money fast, but this is an expensive option. An SBA 504 loan lowers the cost of getting capital out of your business. Instead of paying 10%-12% interest over a year, you're paying 6%-7% over 25 years. Further, if you've owned a property for a couple of years, it has most likely increased in value. This is a cheap source of getting access to that capital so your business can grow.

2 Interest rates are rising.

We're currently experiencing a precipitous rise in inflation, and the only way the Fed knows to fight inflation is by raising rates. Until they get a grip on the situation or see that they're slowing down the economy, it's hard to know how high they'll go. It's better to refinance now, rather than later on when rates are even higher. Refinancing from SBA 7a to SBA 504 locks in your interest rate for the lifetime of your SBA 504 loan, which is typically 25 years. Consider this: For every million dollars of loan, a 1.5% rate rise means an extra $15,000 in payments per year. If, as predicted, the Fed puts up rates a further 2%, that's $35,000-$40,000 per year in extra repayment costs.

3 Real estate values are declining.

Basic fact: It's harder to borrow money on a declining asset. For sure, homeowners applying for loans may have a harder time qualifying in the current market. But industrial borrowers have outside cash flow from their business, and they're not solely dependent on the value of their real estate assets to produce income. This makes it easier for lenders to underwrite industrial real estate-related loans. All the same, a drop in the value of your real estate will impact your ability to release capital. If you feel like the declining market is depleting the value of your property, or that increased interest rates are going to lead to higher payments, it's best to lock in the loan now rather than wait.

4 Get approved quickly with a non-bank lender.

Most traditional banks require two years of tax return information before they'll even consider giving you a loan. A non-bank lender specializing in industrial real estate financing might require only one year of documentation and is better equipped to accurately assess your business. Furthermore, a lender specializing in SBA 504 loans will be experienced in walking you through the necessary application procedures and will speed things up. Banks, with a wider range of potential borrowers and scenarios to assess, often take many months to approve a loan. Non-bank lenders that have the process down to a science can typically close the deal in 45-60 days.

5 Businesses with limited track records of cash flow can still qualify.

Non-bank lenders can quickly build a credit profile of the business or the borrower and tend to have a much more forgiving "credit box" — the range of risk they're willing to take on — than most banks. This often means you won't be penalized for experiencing disruption to cash flow because of COVID-19, or if your company has been in ramp-up mode and has only just hit profitability. With specialized technology and protocols that allow specialist non-bank lenders to closely understand the true risk profile of the business owner, the business model and the real estate, these lenders can confidently make decisions on credit that most banks would not be comfortable financing.

Liberty SBF is THE lender for small business real estate borrowers.

Liberty SBF offers low-cost financing for small-balance commercial real estate and term loans for working capital. Loans of $500,000 to $15 million are available, with a loan-to-value (LTV) ratio of up to 90%. We have a flexible credit box and can underwrite deals for businesses that have only one year of cash flow, as opposed to traditional institutions that require two to three years. We see a lot of inexperienced business borrowers going with conventional lenders and opting for a floating rate loan; however, those borrowers could see their interest rates double this year. An SBA 504 loan fixes your interest rate for 25 years, allowing you to take the risk and uncertainty of changeable loan repayments off the table.

We are seasoned experts in identifying businesses that qualify for these favorable loans, and we can guide clients through the entire SBA loan application process. These loans can be complex to process and secure because there are multiple parties involved – including SBA state representatives, the SBA and Liberty SBF as a lender. Because we stay with you every step of the way, we're able to get these loans closed quickly. In general, we can get you a quote within 48 hours and provide a commitment within two weeks, subject to receiving all the required documents. From there, it typically takes 30-45 days to close. We can streamline the process and get deals done in 60 days, whereas a typical bank timeline is 120 days or more.

When a business approaches us, the first step is to look at the options – identifying if they qualify for an SBA loan or if it's more appropriate to look at a conventional loan option. Critically, we have the expertise to understand the scenario, the business model and the property, then select a loan type that we think makes the most sense and stick with the business every step of the way.

So Where's My Freight? Five Essentials for a Predictive Supply Chain

Sponsored by HERE Technologies

Disruption is the new normal for global supply chains, making reliable estimated times of arrival (ETAs) and shipment visibility top of mind. Granular geolocation capability and quality underlying data are central to a truly predictive supply chain. Here are five key indicators of predictive performance:

1 Resilience against disruption.

Most conventional strategic planning for growth has gone out the window in the past two years of pandemic, climate and supply disruption, forcing businesses to focus instead on building supply chain resilience. End-to-end shipment visibility — both in real-time and predictive, through analytics — forms the core of any resilience strategy, from procurement to supply management to middle mile and last mile delivery.

The ability to respond in real time to sudden shifts in retail demand, input shortages or congestion has taken on new urgency amid increasing market volatility and heightened customer expectations, as more freight has shifted to B2C delivery models. The answer is better visibility.

"Visibility means different things for different companies," explains Bart Coppelmans, global head of industry solutions at Amsterdam location-based solutions platform HERE Technologies. "Real-time monitoring of fleets and shipments helps identify disruptions and respond proactively. Accurate multimodal ETAs can make better decisions and coordinate with real-world events." Early notifications allow customers to reduce idle time, optimize staffing and workflow, and better meet service-level agreement (SLA) commitments, avoiding claims.

Layering current and historic shipment data along a specific route or for a specific customer can reveal insights that help inform route planning and schedule improvements, resolve potential claims, and track system performance and compliance. But at the end of the day, location solutions are only as effective as the data is reliable.

Telematics and sensor data tracking goods at the vehicle and SKU levels is just the baseline for today's complex supply chains. Constructing an accurate, real-time ETA involves layering variables like weather, road and traffic conditions, stops, loading/unloading times, rules & regulations and matching all of them to vehicle specifications. Other vehicle data — speed, fuel consumption, stops, diversions, truck-specific attributes like toll, bridge heights, environmental zones, driving patterns — assists with route planning, verifying key performance indicators (KPIs) and managing costs.

2 Meeting customer expectations.

COVID-19 has blurred the distinctions between traditional B2B logistics and the fast-growing B2C e-commerce model. B2C continues to expand, as many people delay returning to brick and mortar and as small, cloud-based retail and services businesses proliferate. Time-definite parcel delivery surged from $15 billion to $23 billion over 2019-2021, initially as a workaround to transportation gridlock, and over time to meet customer demand. That in turn has forced downstream changes to picking and put-away, cartonization, load and route optimization, scheduling and last-mile delivery, all of which figure into ETA.

Business and retail survey respondents increasingly insist on three primary delivery metrics: faster delivery; time-definite, reliable ETAs and ongoing communication about shipment status, especially closer to destination and as ETAs are refined. Location intelligence, real-time visibility and accurate ETAs are the building blocks for predictive visibility, layering current and historical shipment data with external mapping and locational context for richer, more accurate scenario planning. As processes and workflows are automated, real-time end-to-end visibility will become essential to resource planning, SLA fulfillment and customer satisfaction.

3 Supply chain orchestration.

Supply chain complexity has steadily increased in the past two years, in terms of sourcing, stages of production and partners. Resilience strategies — reshoring and near-shoring, safety stocks, alternative product inputs and suppliers, relocating or reconfiguring warehouses, allocating freight to third-party logistics providers — have only accelerated the challenges.

Sensors, scanners, robots and mobile devices will eventually add billions of new data points to current and future supply chains. Most of these data points will add new granularity about shipment location, status and condition. The insights they provide help to balance cost against performance, while improving service reliability and ensuring more accurate ETAs.

Dealing with the proliferation of new data sources isn't simple. Internal and external data from many sources must be normalized and structured for real-time sharing and analytics. A secure onboarding system with restricted permissions is needed to ensure that only the right people have access to the right data. An effective feedback loop is essential to tracking performance and optimizing workflow across the network. Finally, a location platform must be easily scalable, modular and available to open-source components, with user-friendly mapping and visualization tools. The goal is a single, shared, scalable source of truth across the enterprise.

4 Fast, data-enabled decision making.

Data quality is critical to rapid response when a shipment needs to be redirected or replaced. Unfortunately, a lot of internal data isn't always available where and when needed. Often, it's generated to serve the limited needs of a particular division or group, with little quality control involved, and resides in data silos under varying systems and processes. To be truly enterprise-grade, location data must come from trusted sources, be regularly refreshed in at least near-real-time and be coded to a standard specification.

Even with those capabilities, many disruptive events — COVID-19, war in Ukraine, China supply chain disruptions, the Texas freeze, a grounded containership blocking the Suez Canal — have been neither predictable nor solvable. Manish Govil, global supply chain segment lead for Amazon Web Services, a HERE strategic partner, insists that in situations such as Suez, access to the right data is even more important.

"When we talk about visibility and predictability, it's really about speed of insights," Govil says. "I need to figure out if my container is stuck on that ship or a ship behind it, and what is in that container and where it's headed. Can I redirect freight headed for Suez around the Cape of Good Hope? Do I have similar product coming from Thailand or Vietnam that I can redirect via the Indian Ocean or across the Pacific? What is the added cost, and is it worth it? If I can get that information quickly, I can begin to make those kinds of decisions."

5 Sustainability.

Delays, changes in weight or temperature, and sudden shock raise questions of diversion or substitution. Shipment fuel consumption assessments require a layer of data across transportation modes, adjusting for the impacts of terrain, weather, congestion, use of temperature-controlled equipment, even vehicle condition and performance.

Commercial fleet analytics tools that leverage location intelligence can help shippers and fleet operators predict the amount of carbon dioxide emissions per route, considering factors such as vehicle and fuel type, traffic conditions, and the road networks' physical attributes to then recommend the commercial vehicle with the most appropriate engine — diesel, electric, biogas or hydrogen — to produce the least carbon dioxide for any given route. Investigating the environmental impact of a company's fleet drives the transition from diesel vehicles to alternative fuel options, helping to reduce CO2 emissions and achieve climate change regulatory commitments.

HERE Enables Next-Gen Visibility, Seamless Tracking and More Accurate ETAs

HERE Technologies is the world's leading location data and technology platform. Customers across industries leverage the HERE platform to achieve better outcomes – from helping a city manage its infrastructure or a business optimize its assets to guiding drivers to their destination safely.

HERE draws on 30 million vehicles, access to 2.5 million API developers, its global network of more than 50 original equipment manufacturers, satellite mapping and its fleet of hundreds of mapping vehicles worldwide. It maintains detailed map coverage, of more than 200 countries, which can be integrated with vehicle and partner-generated contextual data. HERE technology is embedded in more than 160 million vehicles worldwide.

Supply chain solutions include HERE Asset Tracking, which tracks the outdoor or indoor location and condition of mobile supply chain assets, including containers, roll cages, material handling equipment such as forklifts, and heavy machinery. HERE Tour Planning creates cost- or time-optimized tours for all vehicles in a fleet, incorporating vehicle type and capacity, current traffic, and truck-routing attributes, to maximize utilization. HERE Last Mile is an end-to-end software-as-a-service (SaaS) application for managing last mile and urban deliveries. It comes with a web-planning dashboard, mobile driver app, and real-time tracking for more accurate ETAs. HERE also enables shipment tracking, warehouse and yard management, and predictive ETA calculations.

Five Critical Steps to Avoid Violating New Uyghur Anti-Slavery Import Law

Sponsored by riskmethods

If your company is importing anything solely or *partially* created in the Xinjiang Uyghur Autonomous Region (XUAR) of China, it became in violation of U.S. law effective June 21, 2022. This will be the presumption by U.S. Customs and Border Protection unless it is determined that the imported goods were not produced using forced labor, under the Uyghur Forced Labor Protection Act (UFLPA) that was signed into law by President Biden late last year.

This sets a high compliance standard for companies that source goods made — or contain components made — in this area of the world. The UFLPA is comprehensive in scope and seeks to prevent trading partners — foreign and domestic, first tier and sub-tier — from circumventing the law by working with middlemen, indirectly sourcing goods and products from this region, or simply claiming ignorance of the law.

There is an immediate need for companies to develop plans to assure and *prove* compliance with this new law. This is not, however, the only reason to uncover sources, gain transparency into business operations and determine if trading partners are ethical. There are many other environmental, social and governance (ESG) regulations coming into effect around the world.

There are five key steps your team should take as it develops processes and procedures to avoid unwitting involvement in slave labor and other unacceptable practices.

1 Centralize supplier data.

The foundation of successful compliance can only be built with reliable and comprehensive supplier data. Because information originating in the Xinjiang Uyghur Autonomous Region is not always reliable, it is important to develop data from a variety of sources to build a credible assertion that your company's products are not produced through the use of slave labor. Data sources can include your suppliers, their suppliers, your historical supplier scorecards, media reports, analyses by legitimate forced labor and child labor advocacy organizations, and even your anecdotal in-country experiences.

Once the available sources of data have been identified, it's time to step back and prioritize data-cleansing activities that will yield the most reliable results. If a company lacks the IT infrastructure to do this, there are effective systems available.

This process will bring clarity to the potentially duplicative or overlapping data that can come from multiple sources. The goal should be to have a unique identifier for each part, product, component or resource that is sourced in the Xinjiang region. This might seem laborious, but it is critical to providing data that regulators are more likely to accept.

2 Visualize your supply chain.

Each company's supply chain needs to be viewed both holistically and at a granular level, to understand where it is threatened by the use of forced or slave labor. Only an interconnected digital model will provide reliable and up-to-date proof that your company understands what's happening across its entire supply chain and right down to the specific sites where each individual component is sourced.

Existing manual processes are probably not up to this task. Now is the time to either adopt a fully integrated supply chain management system or assess the capabilities of the existing system. Be sure to incorporate a risk management component, which will minimize the business impact of risk by assessing supplier criticality and detecting vulnerabilities at the category level.

3 Collaborate with suppliers.

Establishing trust across your company's supplier ecosystem is a challenge, especially in commercial activities that involve the Uyghur region. The fact that forced or slave labor practices are endemic to this area makes it necessary to demonstrate that supply sources are beyond question. It's important to stand firm in this regard, even if it means having to abandon suppliers who are unable or unwilling to collaborate.

Fortunately, that undesirable outcome can usually be avoided in two ways: with an upfront discussion explaining the necessity for full disclosure about sources, and an offer to help facilitate the development of this data so that it doesn't impose an unacceptable burden on business partners. In the end, if all parties benefit, trust can usually be established.

To some extent, very large organizations can pressure suppliers to cooperate. Collaboration, however, will be much more effective when supported by reasonable and clear expectations that make good business sense.

4 Gain sub-tier visibility.

The importance of establishing a transparent relationship with suppliers becomes even more apparent when information is needed about their suppliers (your sub-tier suppliers). There is a natural reluctance by suppliers to share their sub-tier sources. Concerns include the exposure of proprietary sources, costs and overall competitive advantages.

No "magic bullets" are available to gain this visibility. Rather, it is necessary to proceed carefully, step by step, to develop a mutual agreement that sharing sources is necessary and that each party's legitimate proprietary information will be protected and not shared outside the supply network.

The execution of non-disclosure agreements is a basic step that will help. Beyond that, effective technology will be needed because monitoring the complex web of supply sources is simply beyond human capability. A supervised deep learning algorithm, powered by artificial intelligence, accelerates the detection of risk in the massive volume of data generated by your supply chain. Incorporating this level of visibility can provide all trading partners with the information and confidence they need to work as truly engaged partners.

5 Create proactive mitigation plans.

Even after all steps have been taken that are realistically available to avoid risk, there will still be exceptions that cause disruptions. These risks can be reduced, too, if action plans have been developed for significant contingencies that facilitate collaboration across your organization and with your suppliers to proactively manage risk.

Such action plans are crucial so that immediate action can be taken to mitigate a sudden disruption to reduce potential reputational, financial and geopolitical risks.

They also provide your team with confidence at a time when they might otherwise have little option but to hit the "panic button." By reducing stress at these moments, the development of rational and effective actions can be accomplished. It also prioritizes risks, allowing focus on those that are most important and deferring actions on less important issues.

Take the First Step

It's time to take the first step to avoid the new import penalties. The riskmethods Risk Radar maps and monitors your supply network to reveal risk in real time. Take immediate action to assure that your goods and commodities sourced in the Xinjiang Uyghur Autonomous Region of China do not include any product of slave labor. The riskmethods Risk Assessment, the professional collaboration tool, performs supplier risk surveys quickly, provides the data in the format you need and enables collaboration that lets you perform supplier risk surveys quickly.

Adapt a fully integrated supply chain management approach or assess how risks affect your entire category, not just individual suppliers. Be sure to incorporate a risk management component, such as the riskmethods Impact Analyzer, to get the big picture.

Invest the time to work with suppliers to explain the necessity for full disclosure about sources and to help facilitate the development of this data to avoid imposing an unacceptable burden on business partners.

Robust technology will be needed to gain sub-tier visibility. Monitoring the complex web of supply sources is simply beyond human capability. The riskmethods Supply Risk Network system can provide all your trading partners with the information and confidence they need to work as truly collaborative partners.

Even if you've taken all the steps that are practically available to avoid risk, there will still be exceptions in the real world that cause disruptions. The riskmethods Action Planner module taps into some 100 indices, providing options to deal with a wide range of situations. It also prioritizes risks, allowing you to focus on those that are most important and to defer actions on less important issues. It provides an action plan before you need one.

Five Reasons Perishables Supply Chain Managers Hate Their Data Loggers, and How to Do Better

Sponsored by Parsyl

Is your data logger living up to its potential? Most fall short in providing actionable data analytics and supply chain insights — they are dinosaurs in the current, rapidly evolving supply chain technology marketplace. It's time to expect more. Here are five key reasons managers of perishable supply chains hate data loggers, and how swapping in a modern risk management solution can serve them better.

1 Data is trapped in PDFs, or worse, thrown away.

Stop throwing away valuable data. If you go through the trouble of collecting data, you might as well use it. The problem with many loggers is that the data is only used when there's a problem. Most of the time the devices are just thrown away. Best case, the data is stored in PDF files where it is never to be used again.

When a shipment arrives and appears spoiled, the receiver points the finger at the shipper and attempts to use data from the logger to determine blame. But absent an overt problem with the shipment, the logger is thrown away – and the data along with it. This is a missed opportunity. Real insights come from understanding data from all shipments – the good, the bad and the near misses. This is more easily accomplished with devices that automatically transfer data from all shipments into a cloud-based risk management platform.

Quality falls along a continuum and is not as simple as a good vs. bad binary choice. For example, problems resulting from suboptimal temperature control call for nuanced approaches that go beyond choosing between keeping or discarding the inventory. A data-led approach reduces waste, enhances supply chain performance and lowers costs.

2 On its own, logger data is incomplete.

Most data loggers reveal a product's temperature at various stages of a voyage or as it sits in storage, but the data lacks context. Layering in other elements for more complete supply chain insights can help tell the full story.

For example, a supplier could learn about the optimal packaging for different types and lengths of shipments by using an analytics platform to combine that information with time and temperature data.

These insights can pinpoint areas for improvement and inform future decision making.

3 Data is not readily sharable or usable.

Effective supply chain management involves a great deal of cooperation among supply chain stakeholders — especially in the cold chain where pharmaceuticals efficacy and food safety may hang in the balance. But PDF files from traditional loggers are not easily digestible by data analytics systems nor readily shareable with supply chain partners.

By automatically transferring data from smart devices and presenting it on a common, web-based platform, supply chain stakeholders can work together to navigate today's advanced supply chains. If, for example, data analysis reveals that a temperature excursion occurred on an airport tarmac, stakeholders can unite to pressure airport operations to get perishable products into cold storage quicker.

In effect, supply chain managers can replace an adversarial approach to problems with a more collaborative one.

4 Data loggers are not customized to your product.

Most data loggers these days are inexpensive, but when users realize how difficult it is to derive value from them, they're quickly disappointed. Data from the typical logger is not easily configurable to support the unique requirements of different commodities, limiting the device's utility.

A better alternative is an inexpensive, configurable device that transfers data automatically to ensure that the data is not only accessible but is of value to a particular supply chain, in effect getting more bang for your buck.

5 Logger data isn't used to improve processes or performance.

Supply chain managers are using data loggers reactively — to validate complaints and shipment rejections — when they should also be using them proactively to mitigate risk and prevent issues.

The transactional approach means the logger is used to obtain data on one problem instead of studying data over an extended period of time to gain insights. This also explains why the PDFs generated by these low-level loggers are often discarded, never to be seen again.
More innovative systems utilize analytics to promote collaboration and create a better understanding of supply chains and their gaps. Taking advantage of greater supply chain insights mean improved processes and performance — and, with that, reduced insurance claims and insurance premiums.

Parsyl — Strengthening and Insuring Perishables Supply Chains

Parsyl's revolutionary products and services sit at the intersection of technology and insurance. Its low-cost sensors gather data to power its risk management solutions and inform its tailored insurance offerings. Parsyl helps ensure that cold chains are maintained and that perishables arrive unspoiled — making financial protection and responsive insurance coverage possible.

"Data is at the core of our risk management offerings and powers our insurance products," says Alex Haar, Parsyl's co-founder and Chief Product Officer. "Rather than just insure against risk, we actively work with our customers to help them reduce it." Parsyl's smart sensors transfer data wirelessly to the cloud at set intervals, waypoints or via a mobile QR code scan. "Our risk management products and services," says Haar, "allow customers to gain better visibility into shipping and storage conditions and improve supply chain performance, thereby saving cost and reducing risk. All of this also allows us to offer them better insurance and pay claims quickly and efficiently."

Parsyl has become integral to supply chain management and food safety at Ultco, a seafood shipper. "Parsyl's data loggers provide verification of safe handling from processor to customer and are traceable to specific products," says Jeff Ort, the company's director of quality assurance, North America. "Whether creating and monitoring a shipment in the web platform or activating and including a device for shipment, Parsyl's technology is easy to use."

By providing essential knowledge of conditions throughout the supply chain, Parsyl's integrated solution helps prevent claims and contributes to better supply chain performance, more satisfied customers and lower costs. Parsyl's integrated approach is the wave of the future.

Five Ways Autonomous Vehicles Can Impact Last- and Middle-Mile Delivery

Sponsored by Argo AI

Supply chain managers are facing unprecedented challenges, including volatile market conditions, sudden logistics disruptions, scarce labor, and spiraling costs.Autonomous vehicles (AVs) are emerging as a new and significant source of relief for these issues. The vehicles are poised to play a major role in improving both middle- and last-mile logistics. Middle-mile covers the movement of inventory between distribution centers (DCs) and retail locations or micro-DCs, positioning products for the final leg of delivery. Last-mile is the direct delivery of goods to consumer homes and businesses.

When the demand for same- or next-day delivery exploded with the onset of the pandemic, businesses scrambled to patch together solutions. In many ways, the scramble continues. Traditional inventory management systems weren't built for today's reality. Instead, businesses have adopted on-the-fly tactics that have disrupted operations. This has resulted in negative impacts on both financial performance and customer satisfaction.

Following are five opportunities for corporate managers to consider as they examine how AVs can play a role in meeting the demand for fast and predictable delivery while optimizing financial performance.

1 Scaling supply operations while facing driver shortages and rising labor costs.

The pandemic fueled a surge in e-commerce sales that include direct-to-door delivery. According to the Annual Retail Trade Survey, e-commerce sales grew 43% in the first year of the pandemic, hitting $815 billion in 2020 compared with $571 billion in 2019.

That explosive growth put tremendous pressure on retailers and logistics providers, who were dealing with stretched supply chains as they attempted to keep up with demand. On top of that, driver shortages are putting greater pressure on shippers. More than one-third of logistics companies report that their biggest problem is finding qualified drivers, which impacts costs for both shippers and customers. Increased shipping costs can eat into business margins and lead to inflated costs for consumers.

AVs give businesses, such as retailers and logistics providers, flexibility and additional capacity to better balance supply and demand. They can supplement human driver workforces and allow them to focus on higher-value tasks, like packing, sorting, or customer service, which ultimately enables businesses to more effectively scale their supply chain operations.

2 Solving urban middle-mile use cases as the supply chain becomes increasingly complex.

Logistics providers and retailers are decentralizing their supply chains, placing goods closer to consumers for inventory optimization and faster delivery. Businesses are moving inventory out of traditional DCs to micro-fulfillment locations and even individual stores, which is creating a new subset of middle-mile use cases in urban environments.

The emergence of urban middle-mile deliveries can add logistical complexities — introducing more routes and on-demand dispatching requirements — at a time when the supply chain is already at capacity. In some cases, businesses are pulling sales associates off the brick-and-mortar sales floor to move inventory in their own vehicles to a nearby location that has a shortage. Such short-term fixes may address an immediate need, but they are not sustainable or scalable.

AVs are ready to fill in gaps here because they can be deployed on-demand across urban middle-mile areas, enabling flexible delivery operations without disrupting business operations. Automating repetitive middle-mile routes could increase operational efficiency, allowing retailers and shippers to scale delivery operations and meet rising demand.

3 Meeting consumer expectations for delivery speed and predictability.

The traditional retail maxim continues to apply: the customer is always right. A key point to remember is that as consumers' requirements evolve, shipping is no longer viewed as an afterthought. Rather, it becomes a deciding factor for consumers and a differentiator for retailers. Many consumers now make buying decisions based on available shipping options. They might avoid any offer that doesn't include free shipping, and they'll even abandon in-process purchases if the delivery options aren't satisfactory.

To satisfy consumer requirements, retailers need to turn upstream. Putting effective middle-mile solutions into place could eliminate much of the chaos now associated with last-mile services. This is where the use of AVs becomes attractive, because they can increase predictability and speed.

Predictability improves with the consistent performance of AVs, leading to better route planning and more accurate ETAs. Businesses can develop reliable operating plans around this dependability. In addition, AVs offer fleet-wide control without the variations that can be caused by individual drivers. For example, AVs have the flexibility to operate on the same route all day, or to go on standby to be dispatched on-demand. It's difficult to do this as effectively with a workforce of human drivers, who have individual preferences, constraints, etc.

Speed improves with AVs operating around the clock in middle-mile use, rebalancing inventory, and shuffling products closer to the consumer in support of faster and more efficient last-mile deliveries. People continue to play an important role, loading/unloading vehicles, sorting goods and dealing with exceptions. By shaving even just a small amount of time off of every trip, more efficient delivery operations result.

4 Improving transparency and traceability across the supply chain.

Though the drive to digitize most enterprise activities has been strong, the movement of goods in the middle- and last-miles lags significantly. When expectations are built around quick delivery, products must always be in place according to plan. Otherwise, it can be nearly impossible to get them to the right place at the time they're needed. As currently structured, segments of the middle- and last-mile delivery models incorporate little or no tracking of what happens to products once they're in the delivery vehicle. This is especially true for retail deliveries performed by drivers using their own vehicles.

AVs effectively support middle- and last-mile logistics because they incorporate accurate, real-time data about the location of products in transit. This is important for any retailer, and even more so for providers of perishable goods, such as grocery stores. AV technology is inherently designed to close this data gap. AVs are fully connected in real time and — due to the need to navigate safely on public roads — they have highly precise positioning data. Not only does this allow for accurate package tracking, it also provides important analytical data that enables optimization of vehicle utilization, route planning and overall system performance. AV service providers can play a critical role in integrating this information into enterprise resource planning (ERP) systems to provide businesses with more actionable data.

5 Increasing safety leads to fewer delivery disruptions.

Safety isn't just important to the people in the vehicle, but also to the range of actors on the road including other drivers, pedestrians, and bicyclists. The results of highway crashes can be devastating, and there is a continued need to reduce the incident rate. Safety also impacts many aspects of supply chain operations where failures can result in delays, downtime, and unplanned maintenance costs. Certain products are particularly vulnerable, such as food, both from spoilage and the risks of package tampering.

A key advantage of AVs is their promise of greater road safety. AVs never get tired, are not subject to distraction, and their skills will not deteriorate with age. In fact, with experience, the safety performance of AVs is continuously improving as the technology accumulates more data and the machine learning and AI algorithms strengthen. As safety performance improves for AV road operations, that naturally supports fewer delivery disruptions and a better customer experience.

Bringing Automated Vehicle Technology to Market Today

Using sophisticated sensors and advanced machine learning, Argo AI's technology enables vehicles to safely navigate through cities and on highways without a human driver. Together with its commercial partners, Argo AI is operating fleets of AVs in multiple cities across the US and Europe. The Argo Autonomy Platform is currently integrated into the Ford Escape Hybrid and the all-electric Volkswagen ID Buzz van, offering flexibility to support a variety of applications.

Argo AI is bringing together the technology, the operational footprint and the commercial partners to build a scalable autonomy business that has the potential to serve a broad array of customer needs.

In Miami, FL, and Austin, TX, Argo AI operates AVs for last-mile grocery delivery in conjunction with a leading retailer. The service encompasses a large part of each metro area, with AVs successfully navigating the cities' wide variety of expressways, arterial roads, and city streets in traffic conditions that can be quite challenging.

Argo AI has a commitment to make the world's streets and roadways safer, more useful, and accessible to all. With its partners, Argo AI has begun implementing AVs across the supply chain today and is paving the way for the future of logistics.

Five Supply-Chain Challenges and How Process, People, and Technology Can Help Overcome Them

Sponsored by Barcoding Intellitrack

With business norms shifting in the face of world events, changing consumer behaviors and more assertive workforces, supply chains are challenged to operate accurately and efficiently while retaining employees and implementing the right technologies. Here are five challenges facing supply chain managers today, with guidance on how a partnership approach that combines process, people, and technology can help.

1 Accurate inventory data from across the enterprise is hard to come by.

Many companies still manage inventory using outdated processes and legacy software like Excel spreadsheets, making true inventory visibility next to impossible. Without accurate visibility into available inventory, companies find themselves facing a dilemma: They can risk losing customers by over-promising and under-delivering, or they can spend more on extra inventory. Neither alternative is very attractive.

Poor visibility makes accurate forecasting difficult and places a financial burden on companies. Insight into accurate inventory information is important to successful planning in a fluctuating demand environment.

Without a single asset-management platform, each facility within an organization may be entering and reporting on data differently. C-suite executives need systems that allow them to view inventory positions throughout their companies on a single screen, so they can make enterprise-wide decisions. With solutions that consolidate inventory positions across an enterprise, supply chains have the ability to adjust to unexpected developments by drawing from alternative sources.

2 Employee retention has become a problem.

The pandemic-spurred Great Resignation has left industries with a shortage of frontline workers. Employers need to make tasks easier, more efficient and more satisfying if they expect to retain employees and grow their workforces.

Employee retention is not an isolated issue; it's also important to making money. Labor challenges make it difficult for companies to meet customer expectations.

Employee dissatisfaction often stems from being sidetracked from their jobs to deal with technology issues. Retail store managers, for example, need to be focused on customer experiences, not troubleshooting system outages.

Too many businesses don't provide the opportunity for employees to voice their perspectives and pain points to company decision makers. Part of the solution is to build a culture in which end users are provided a pipeline to higher-ups and are given feedback so that employees know their problems are being heard.

3 Communications over tech issues frustrate workers.

Related to the overall employee work experience is the issue of internal company communications over technology and process issues. Workers find it difficult to perform their assigned tasks if they spend too much time hassling with IT over technology problems.

A retail employee's performance, for example, may be measured on the basis of sales. That metric will be adversely affected if the employee is bogged down complaining about their issues to IT. The employee's frustration level will rise, and their manager's evaluation as well as their self-perception will plummet.

User experience is important to employee satisfaction with technology implementations. Conducting reviews by bringing together IT, operations, leadership and end-users improves user experiences and employee satisfaction. Enhancing communications goes hand in hand with improving employee experiences and employee retention.

4 Poor application usage and adoption slow supply chain progress.

It's impossible to build systems and applications that improve business-process effectiveness without knowing the problems they're supposed to be resolving. Worker surveys are often much too superficial to gain any meaningful insights.

IT folks tend not to want to slow down at the beginning of a project to gather detailed requirements and have exhaustive conversations with end users. But the alternative is to spend money on an application that no one wants to use. The result of such a debacle is that the process will have to be redone, with lots of time and money gone to waste in the interim. It's better to get the process right the first time.

When companies do deep dives on employee experiences, thoughts and feelings about the applications and devices they're asked to use at work, they often find that workers aren't properly trained on the technologies, and that these training flaws are passed down from one generation of users to the next. In order to get to the bottom of things, the employer needs to ask the right questions, gathering specific information about workers' actual experiences.

5 IT resources are overworked.

The flip side of the fraught relationship between frontline workers and the devices and apps they use at work is the burden often placed by companies on their IT departments. Tech folks tend to be overworked, and there was a shortage of IT human resources nationwide even before the pandemic struck. The growth in IT openings continues to outpace the growth in the pool of qualified candidates, leading to higher levels of competition for talent.

Tech people should be put to use implementing company digitization and innovation strategies. But all too often they get caught up in the process of updating data in systems and helping others to do so. This suboptimal use of IT resources results in high opportunity costs for companies. IT can be and should be a strategic asset for their companies — and they can't be expected to do everything.

Outsourcing functions like data management and inventory and asset tracking might make sense for many companies. Instead of getting sidetracked managing data and systems, frontline workers, supply chain managers, IT personnel and company executives alike all simply receive clean and normalized data that establishes a single source of truth and delivers visibility, on platforms that harness the power of artificial intelligence and automation and leverage the cloud for agility and responsiveness.

Barcoding Inc.: Delivering Custom Automation Solutions Focused on Process, People, and Technology

Barcoding is a supply chain automation and innovation company specializing in helping organizations be more efficient, accurate, and connected. The company operates on a philosophy that connects process, people, and technology to build technology-based solutions that are custom-fit for clients.

"Our PPT approach focuses on talking to customers about their challenges," says Keri Corbin, the company's vice president for client solutions. "Our customers use our expertise to build strategies and processes to meet their pain points."

Companies spend too much time and money merging data across separate asset-management systems for facilities, devices and inventories. That's why Barcoding recently launched their enterprise cloud platform IntelliTrack.

"With a single login, users know where assets, devices and inventory are located, within a facility or a geographical area," says Corbin. "The cloud infrastructure makes it easy to integrate, and the microservices architecture enables fast development and deployment of services."

Besides delivering a consolidated technology platform, Barcoding provides a single contact point for any data issue. "There's one person to call when you have a problem," says Corbin.

Five Last-Mile Delivery Challenges and How to Tackle Them

Sponsored by OneRail

Shippers tread on dangerous ground if they don't deploy a comprehensive solution to tackle shipment visibility, capacity, returns, brand reputation and cost challenges associated with last-mile deliveries. These holistic solutions combine data and technology that automate processes with human teams that manage exceptions and capacity and provide customers with personal service when problems arise.

Last-mile deliveries often represent the most difficult aspect of supply chain management. Pound-for-pound, they are certainly the most costly element in the delivery process. They are also fraught with the danger of delay, damage, and loss—all while end customers anxiously wait for their often-critical shipments. Following are five challenges shippers face when managing last-mile deliveries and how they can tackle them holistically with a combination of technology and people.

1 Last-mile shipment visibility is impossible without a comprehensive solution.

Too many companies these days still keep track of shipments with Excel spreadsheets, or even with paper documents. It's fair to say that those companies have zero real-time visibility to last-mile deliveries and can do little to provide customer service to those whose shipments may go awry.

Even those that deploy technology have difficulty because they usually will need to log in to multiple systems to ascertain the status of shipments — so they don't have a bird's-eye view of the overall deliveries situation. That's better than doing things manually, but it doesn't aggregate all shipment data, nor does it address the problem of reducing end-customer anxieties when shipments are delayed.

From a technology standpoint, what is required is a comprehensive system that can track all shipments. But technology doesn't provide a holistic final-mile solution. Visibility alone can't make sure that deliveries get where they are supposed to go and keep customers informed personally.

For that to happen, shippers need, in addition to technology, a team of human beings to monitor shipment exceptions, such as delays and damages, and to communicate directly with customers to alleviate their concerns. Total visibility plus live tracking of couriers is a game changer.

2 Shippers take the blame for faulty deliveries.

Most of the time, whatever the cause of shipment delay, damage, or loss, the customer will blame the shipper. Customers will often refuse to order from a shipper again and the shipper loses crucial repeat business.

Keeping customers satisfied, on the other hand, boosts the shipper's Net Promoter Score — a metric that gauges customer willingness to recommend a vendor to others — and can increase same-store sales between 20% and 190%. Recent research shows that consumers worldwide are less than thrilled with the state of last-mile deliveries — so companies that perform well have a competitive advantage. When it comes to last-mile deliveries, a shipper's brand reputation hangs in the balance.

A holistic solution combines technology and the personal touch to alleviate problematic shipments. The technology automates the monitoring of shipments and generates "exceptions." Those are monitored by a human team that communicates directly with customers. Most customers won't mind dealing with a shipment delay if they are personally kept informed of the shipment's status.

Besides relieving the shipper of the burden of performing such tasks, last-mile solutions help create a great buying experience for the customer — which will positively impact a shipper's top and bottom lines.

3 Supply and demand never match existing last-mile capacity.

Whether a company has its own fleet of delivery vehicles or relies solely on outside providers, delivery will vary on any given day. Existing capacity will rarely be able to accommodate all deliveries efficiently — which is why access to additional outside capacity helps to make sure that all deliveries are dealt with properly.

Shippers often have deliveries to make at divergent locations, making it difficult to optimize routes — and making it more efficient and cost effective to place some deliveries with other outside carriers. Access to an aggregated and connected network of logistics providers helps shippers optimize deliveries and lower costs.

Comprehensive last-mile delivery solutions provide electronic access to a marketplace of providers and human management of those suppliers to vet them for proper insurance, licenses, and service quality, and to coach and counsel them when deliveries go south. Proper management of such a pool also means that the team works to constantly grow it, making sure that capacity is available in advance for specialized requirements and that the network includes national, regional and local entities, in order to play on the strengths of each.

4 Most last-mile systems fail to account for returns

It's useful to think of last-mile systems as an extension of a shipper's customer service organization. That's why it's crucial to deploy a solution that accounts for customer returns. The returns process is an important element of the overall customer experience.

Shippers that ease the returns process for their customers have a leg up on the competition. Other things being equal, customers are likely to do business with vendors that pick up their returns directly, rather than requiring the customer to deliver the return to a shipper or carrier location.

Facilitating the returns process also benefits shippers. Once an item is to be returned, it reverts to the shipper's inventory. If customers have 30 days to return an item, they may take their time getting to a returns location. By making the returns process easy, shippers can retrieve their inventory more quickly.

Advanced last-mile delivery solutions are agnostic to when, where, and why pickups and deliveries need to be made. Deploying a system that sees returns as just another pickup and delivery and elegantly addresses scheduling issues has the obvious advantages of saving time, cost and hassle to end customers and shippers.

5 The last mile represents the costliest leg of the delivery process.

Think about what it takes to get a product from an overseas manufacturing facility to an end-customer in the United States. The first leg of the journey will likely involve a voyage in a container on an ocean vessel to a coastal seaport, followed by inland movements by rail and/or truck. The transportation costs associated with any individual item in a container or trailer are minuscule when compared to the value of the product.

Not so for last-mile deliveries. Take the example of a home improvement company with its own delivery fleet. It might load two pallets of lumber weighing thousands of pounds along with two boxes of nails on the same flatbed truck to be delivered to two separate customers. Each delivery will cost about the same — but by taking the nails off the flatbed and putting them into a rideshare, the delivery cost for that shipment can be halved. It's not hard to calculate the savings when costs are slashed for multiple deliveries on a daily basis.

Comprehensive last-mile delivery solutions can perform other magic as well, such as holding orders in the system for a short time in case the customer places another, optimizing internal delivery fleets by removing shipments that take drivers off the beaten track, and allowing shippers to promise next-day delivery at second-day rates when shipments move within the same zone.

The solutions also reduce the environmental costs of last-mile deliveries. Selecting the right vehicle for a given delivery has an environmental impact — so, delivering a box of spark plugs, for example, would be better accomplished by a Toyota Prius than a Ford F150. By helping companies meet their sustainability goals, comprehensive last-mile delivery solutions can generate enormous customer loyalty benefits, which, along with cost reductions, add to a shipper's sales success and profitability.

OneRail: A Complete Last-Mile Delivery Solution

OneRail offers shippers an advanced last-mile deliveries solution that combines technology supported by dedicated human teams. OneRail's platform automates last-mile processes, while the company's exceptions management team provides 24/7 delivery support, and its logistics partners team interfaces directly with couriers.

"Along with the artificial intelligence in the platform," says Lisa Catania, OneRail's co-founder and executive vice president, "our team monitors conditions like traffic and weather and can predict when shipments might be late."

OneRail's marketplace includes access to 9.5 million couriers, from national delivery companies to small local outfits. All of them enjoy the benefits of connected transportation management systems — and OneRail provides them a TMS for free if they don't already have one.

OneRail's logistics partnerships team looks for new couriers to bring on board daily. That way, when new customer needs come up, whether it's for deliveries of food, medicines or hazmats, OneRail's connected marketplace is prepared to provide the necessary capacity.

"This is where a third party works best," says Matt Schultz, OneRail's vice president of Logistics Partnerships. "We provide a scale of delivery capacity that is impossible for shippers to develop on their own."

The value derived by OneRail's shipper customers is reflected in their lower operating and transportation costs. "A small auto parts dealer was able to reduce its delivery fleet by 15%, through access to the capacity offered by OneRail's connected marketplace," says Jeff Flowers, OneRail's chief operating officer. "That's going to decrease their maintenance and fuel costs, as well as their impact on the environment."



A Hot Take on Insuring the Cold Chain

By Connor McKim, senior manager of business development, Parsyl

Ask perishable shippers what they think of cargo insurance, and they'll often call it "a necessary evil."

Insurance today is based on perceived risk, and insuring freight can be tricky because of the unknowns involved, many outside the shipper's control. Cold chain shipments are a particular challenge due to the relatively high value of the cargo and the special monitoring and handling requirements, both in storage and transit.

Understanding the conditions of perishable goods is critical. When perishable cargo is compromised by out-of-spec temperature or humidity variations, it's a race against time. Knowing the extent and severity of the variations makes it possible to take corrective steps to salvage the product and prevent an insurance claim that can lead to higher premiums. Not knowing adds enormous risk.

COVID-19 and recent supply chain disruptions amplified risks: Cargo was stranded aboard ships at anchor and in congested terminals; cargo flights were grounded, and lane imbalances left empty containers collecting in the wrong locations far from return loads. The Agriculture Transportation Coalition, an exporter trade group, reported 20% of confirmed U.S. agricultural export sales were lost to carrier capacity and pricing issues in 2021. Only about a third of completed shipments arrived on time, compromising shelf life and quality.

Resilience and the ability to respond and adjust quickly is a top priority for all supply chains, but particularly for the cold chain given the potential losses at stake. Resilience depends on supply chain visibility.

There's finally a better way.

Until recently, insurers haven't had the expertise or capability to assess clients' actual cargo risk, let alone help them mitigate it. Insurers without adequate supply chain data rely on an opaque mix of shipment volume and general characteristics, company claims history and industry actuarial risk values to construct premiums. Perceived risk and coverage levels are often inflated to cover contingencies. In the event of a claim, insurers retain a surveyor to investigate and mitigate exposure, which could cost clients as much as $1,500 a day, all adding to processing time and undercutting the value of coverage.

Advances in sensor, wireless and cloud-based platform technology are now bringing end-to-end cold chain visibility to a broader cargo market. Better data and visibility mean customers should expect more from their insurer — it is now easier to price risk, spot and correct out-of-range events, and manage claims. In short, better data can turn the customer relationship with cargo insurance into a partner relationship.

How data is used is just as important. Sensor data is often only transferred when things go wrong. But how useful is that data without putting it into context? And what about near misses or the shipments that went right — and why? Clients and insurers can learn from good and bad shipments. The FAA, for example, investigates near misses at airports, not just plane crashes.

With more complete data collection, insurers can and should begin to tailor coverage to actual risk. Clients can use the data and related analytics to measure and improve performance, increase stakeholder accountability and make route, vendor, packaging, and other improvements to better manage risk and lower premiums over time.

The Insurer, your new supply chain partner.

From there, it becomes possible to construct tailored coverage models around actual customers, shipping patterns and commodities. Each commodity can have parameters set on sensors to establish acceptable temperature ranges and fluctuations over specific times, with exception triggers tied to potential claim events.

The result is a shared, transparent record for all relevant parties of the time and duration of a temperature breach, indicating cause and potential responsibility. This allows for an expedited claim process and quick payment, freeing up working capital and keeping operations flowing.

Customers can aggregate and analyze historical shipment and storage data to spot patterns and identify areas for improvement, including route, equipment, supplier, vendor, and operations improvements. Those improvements help to reduce future risk and can be applied to adjust premiums as policies renew. Insurers can further refine underwriting standards and risk pricing models by using anonymized, aggregated industry-wide data.

More complete and accurate supply chain visibility can redefine the customer relationship in cargo insurance. Technology presents partnership opportunities to drive continuous improvement and value creation, both in cold chain operations and insurer risk management and service offerings - all using the same data. As product visibility and accuracy improves, consumers of perishable foods and medicines benefit from fresher, healthier products in-store and on pharmacy shelves.

Resource Link:
www.parsyl.com

INMAR

Inmar Intelligence and Doddle Launch Inmar Post-Purchase Solutions



Inmar Intelligence has formed a joint venture with Doddle, an international provider of e-commerce solutions.

Retailers used to stand out using the in-store shopping experience, location and price, but e-commerce has changed the game. Now, merchants are turning to the customer experience (CX) to compete in the digital marketplace.

The post-purchase experience is often where a company's CX strategy delivers its greatest value. To maximize this value, commerce data solutions company Inmar Intelligence has formed a joint venture with Doddle, an international provider of e-commerce solutions.

Operating under the Inmar brand, the new company offers end-to-end, post-purchase solutions and analytics for brands, omnichannel retailers, pure-play e-commerce retailers and parcel carriers. By combining Inmar's technology and nationwide network of returns processing centers with Doddle's returns platform and experience in developing pick up/drop off (PUDO) networks, this new entity promises frictionless delivery and returns experiences for shoppers and merchants, while offering carriers new growth opportunities.

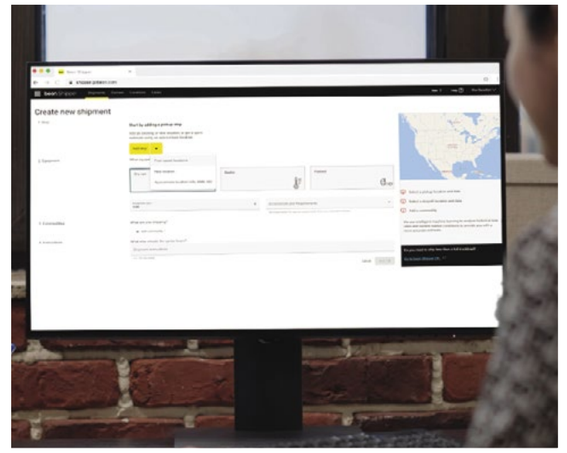
Benefits include:

- **Transforming superior customer experience into a key competitive differentiator** Retailers can offer shoppers more options for deliveries and returns, ensuring a positive experience and improving customer loyalty.
- **Adding value across the supply chain through cost reductions** Prevent margin erosion through intelligence-driven returns dispositioning while improving visibility and insights into the returns process.
- **Improving sustainability** The end-to-end process keeps returned goods in commerce and out of landfills while reducing the consumption of fossil fuels and carbon emissions through its nationwide network of returns processing facilities.
- **Accelerating time-to-value** Retailers and carriers take control of returns without diverting resources from their forward-moving supply chains.

The solutions will run on Inmar's ProductLifecycle Cloud.

TRANSPORTATION INSIGHT

Unveils Beon Digital Logistics Platform



Beon Digital Logistics Platform: the new transportation management system — or "TMS lite" — from Transportation Insight Holding Co.

No supply chain has been sheltered from the slew of logistics challenges over the past two and a half years, but small and medium-sized businesses have been hit especially hard. A North American logistics giant is offering them a free tool to help source capacity and manage shipments.

A new transportation management system — or "TMS lite" — from Transportation Insight Holding Co. gives SMBs access to the company's network of 80,000 carriers and features such as instant quoting, simplified order creation, rate comparison, automated tendering, tracking and financial tools. Shippers can also onboard their own carriers into the product with flexible integration.

The TMS comes with support from Transportation Insight (TI) and Nolan Transportation Group's (NTG) team of 2,500 professionals, who utilize the platform to manage over $15 billion in logistics spend across all modes — including drayage, truckload, less-than-truckload, expedited, final mile and parcel.

"This free TMS was built for an underserved market we specialize in, the small-to-mid-sized shipper, giving them intelligent technology to better utilize their own carrier network while also tapping into our larger network providing scale and density, with data and intelligence to make smarter, more informed decisions," said Geoff Kelley, president and chief operating officer of TI Holding Company, in a statement.

The tool is available within TI and NTG's Beon Shipper suite. Its launch will be followed later this year by a multimodal enterprise version with more robust feature functionality, including visibility and control across the first, middle and final mile.

Location Intelligence: Where Is It Now and Where Is It Going?

Sponsored by HERE Technologies

The Basics

Location data is familiar to just about anyone who uses a smartphone. Location intelligence is the process of creating meaningful insights into the whereabouts and movements of assets, products and workers. Location intelligence is only possible when you combine location data and technology with internal and external data sources — such as Internet of Things (IoT) devices, carrier, vessel, air cargo and rail data, internal enterprise systems and external logistics systems. This intelligence is then used to optimize business processes — including transport planning, the inbound and outbound flow of materials and products, ETA predictions, the movement of physical assets and human resources within facilities, and all the way to last-mile deliveries. Location technology provides a layer of data that unifies enterprise data silos. Real-time location data and insights are key to building a "resilient" supply chain and managing supply chains from end to end.

The Future

It's not here quite yet, but the world of business has embarked on a journey toward predictive supply chains. Location data, technology and software are going to play a key role in bringing that vision into reality. Enhanced visibility will contribute directly to supply chain predictability.

Although there has been some progress on this front, most supply chain managers have limited insight into the locations of assets and goods. End-to-end visibility is a struggle because location data is only available when shipments pass through certain staging points. For example, manufacturers will record when goods leave a factory but the location of those shipments is unknown until they arrive at the next supply chain gateway. Without access to consistent real-time information, manufacturers, distributors, and retailers often don't find out about delivery problems until shipments, often worth millions of dollars, fail to turn up. With the application of location technology and real-time visibility, systems can predict delays before they occur and companies can proactively mitigate their effects.

Similarly, companies today are challenged to provide accurate estimated times of arrival (ETAs) for multi-modal shipments, and often opt to buffer their ETAs by building in extra time to compensate for potential delays. With precise, end-to-end tracking and accurate data, shippers and logistics service providers will be able to create leaner and more cost-efficient shipment flows, along with ETAs that reflect the ground truth of asset and product locations. With location intelligence, companies will be able to optimize and automate workflow and decision support across different stakeholders.

For example, supply chain leaders can optimize operations within facilities such as warehouses, yards and distribution centers. With real-time visibility into the location, movement and productivity of workforces, zones and machines, users can make proactive decisions that reduce costs and boost service levels.

As sustainability becomes a greater focus for manufacturers and service providers, location intelligence can provide a clearer understanding of a supply chain's transportation carbon footprint. Understanding this carbon footprint enables operators to optimize accordingly to achieve sustainability goals.

The results: smarter supply chains, informed by the visibility of assets, the ability to react in real time, and the availability of insights to optimize processes and improve operational efficiencies. By replacing isolated data with end-to-end visibility, location intelligence will contribute to the development of predictive supply chains — yielding operations characterized by collaboration, responsiveness, risk mitigation, agility, and optimization.

For more information visit www.here.com/solutions/supply-chain

Returns Management SaaS Saves Retail Giant $4 Million Monthly



Challenge: A top-10 big-box retailer needed to consolidate returns processing and improve returns management, vendor returns consolidation and liquidation yield. They were sorting returns at more than 450 store locations, and sending single packages in small shipments to vendors receiving returns. The company wanted returns data visibility to aid forward-focused planning and warehouse management.

Solution: Inmar Intelligence developed a SaaS solution built to meet the retailer's specific supply chain infrastructure — including vendor interlocks, processing needs and business rules for disposition of returns and overstocks.

Results: With improved visibility, merchandisers could analyze returns trends in various categories to better inform buying decisions. The retailer moved returns consolidation from its hundreds of back-store locations to 13 distribution depots — saving $4 million monthly in labor and transportation costs. Vendor returns are now consolidated and shipped more frequently in truckloads vs. individual packages, improving overall inventory visibility.

About the Solution Provider: **Inmar Intelligence,** with its ProductLifecycle Cloud, is an industry leading provider of technology-driven reverse logistics, supply chain and customer experience solutions for brands, manufacturers, distributors, merchants and carriers. Our comprehensive offerings improve margins and increase customer satisfaction. Solutions include Post-Purchase Experience Solutions, Returns Management, Liquidation and Supply Chain Performance Analytics.

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