inbound logistics

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One key step to finding answers to any logistics, supply chain, or technology challenge is knowing the right questions to ask.

Inbound Logistics assembled a team of supply chain and logistics technology leaders, and asked for their perspectives on the important logistics challenges and opportunities impacting your business.

More importantly, these logistics thought leaders can give you guidance when considering improvements to your business processes.

Thought Leaders

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Deploy a Robotics-Driven Fulfillment Solution to Reach Peak Productivity

Currin McCarty
Enterprise Sales Executive, 3PL Segment
Locus Robotics
info@locusrobotics.com
www.LocusRobotics.com

Q 3PLs and retailers are planning for volume surges ahead of peak season. What is driving this?

A This peak season, as consumers regain financial confidence, e-commerce is expected to exceed a level of volume that exacerbated the supply chain the previous year. Warehouses are already experiencing painful labor challenges including high turnover and shortages that affect throughput. Labor reports show these challenges will continue throughout the upcoming peak season and stunt productivity at warehouses across the country. Forward-thinking 3PLs and retailers are making moves now to digitize their operations and prepare for possibly their best peak season yet.

Q What is the average time necessary to plan and deploy a robotics-driven fulfillment solution?

A Every business team has its own requirements for making the decision to automate. From our experience, though, it doesn't have to be an arduous process. We have incredible operation design engineers that create a business case for the integration, implementation, and deployment of a multi-bot solution at a facility. Ideally there is a 1- to 3-month planning phase before signing the contract.

We're looking at a 4- to 12-week deployment depending on certain factors. So 3PLs and retailers looking to go-live before peak should have agreements signed by early September. After that, the entire process goes smoothly. Evo, an e-commerce retailer, signed a contract with us to bring the Locus solution into their fulfillment facility and were up-and-running in just 53 days. The best way to get started is to reach out to us sooner rather than later so we can help create the business case that brings the automation plan across the finish line.

Q How does a robot automation solution increase fulfillment during peak volume spikes?

A Traditional picking involves workers pulling carts around a fulfillment site between pick locations. A multi-bot solution separates the cart from the worker by assigning workers to a zone while a fleet of robots travel between pick locations; this allows the associate to walk less and pick more.

Locus technology optimizes tasks using proprietary algorithms to determine the most efficient mix and release of work for robot missions. This minimizes the distance traveled by the robot, which in turn speeds up cycle times when volumes spike.

Locus's Robotics-as-a-Service (RaaS) model offers considerable flexibility as volumes and workflows change. When peak occurs, management can choose to meet surging demand by renting more robots rather than find, hire, and train temporary labor.

Embedded AI and machine learning allow additional robots to be up and running almost instantaneously—no extensive reconfiguration or complicated setup. RaaS gives operators the flexibility to quickly scale up to meet peak demand by allowing them to rent more bots when they need them and send them back when volume returns to normal.

Technology Can Supercharge Your Supply Chain, Here's Where to Start

Matthew Telesca
President & CEO
MGN Logistics, Inc.
mgnlogistics.com
800-645-0727 x6

Q **What are the most important technology trends in the supply chain?**

A With the COVID-19 pandemic still impacting global supply chains, real-time product and shipment visibility has become paramount to disruption planning and customer expectations. According to the most recent Gartner study, "By 2023, 50% of enterprises will have invested in a real-time transportation visibility platform."

Unfortunately, the majority of these platforms will be utilizing last-generation technologies that solely rely on partner carriers' data. And while a shipment status of "in transit" is better than nothing, detailed real-time information is always preferred.

Let's face it, in today's customer-centric environment, it's not sufficient to simply let your customer know their product has shipped. Customers demand more, and not the generic statuses of the past, but rather, real-time shipment visibility.

Q **How can shippers gain this level of shipment intimacy?**

A It is not achieved through any singular technology, but instead through a comprehensive mix of metadata and input sources including vendor APIs, GPS, ELD, cellular, and RFID to name just a few. The most advanced systems, like MGN Logistics' Tracking and Tracing module, combine machine learning and artificial intelligence, along with travel and weather advisory data, to supercharge the customer's peripheral experience, providing near seamless transparency. This experience can be further customized to the customer's desired level of automated notifications and alerts.

Q **What other technology trends should shippers be aware of?**

A The trifecta integration of traditional business intelligence, transportation data, and traditional KPIs is another important trend. Most enterprises have data silos in operations, customer service, accounting, and transportation; therefore, they struggle with mining this valuable information. The bigger the enterprise, the greater the challenge in viewing this data organizationally.

Often decisions that improve performance in one department, negatively impact another and therefore, the enterprise in its entirety. However, with the introduction of artificial intelligence in today's most advanced TMS platforms, once nearly impossible calculations are being easily solved, providing insights not previously obtainable.

The complex data integration between business intelligence, freight data, and traditional KPIs creates sophisticated visualization reporting tools that provide easily translated actionable data. This inevitable trend of utilizing artificial intelligence in the supply chain has already started to pay forward.

Advanced TMS platforms such as MGN Logistics are heavily investing in this next-generation technology with substantial current market applications. The complex crossroads between departmental silos and actionable organizational data have been simplified. Sophisticated visualization tools with real-time data have begun to replace static KPI charts. Metrics that often seemed to contradict, now make sense as complex algorithms are being rapidly calculated in the background to provide the best organizational outcomes possible. The future of logistics is here today.

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Rail Transportation:
What Shippers Need to Focus On

Bob Tuchek
President
RSI Logistics
info@rsilogistics.com
rsilogistics.com
517-349-7713

Q How have the recent rail mergers changed the rail landscape for shippers?

A Shippers have been averse to rail mergers due to concerns of a reduction in competition, imposed routing limitations, and an increase in service disruptions. The two most recent mergers between the CSXT-Pan Am Railway and Canadian National-Kansas City Southern are still under review by the Surface Transportation Board (STB), so their impact has not registered yet; however, shippers should be investigating the impact of each proposed merger to their business and voicing their concerns to the STB.

Q How would you describe the current level of rail service, and do you see any emerging trends?

A For those rail carriers that implemented Precision Scheduled Railroading (PSR), the most pronounced result is more consistent and reliable transit times. PSR has allowed shippers to reduce their fleet size; previously, shippers would have to size their railcar fleet to accommodate erratic transit times.

During the implementation of PSR, service levels were jeopardized to the point that the STB required each Class I rail carrier to submit weekly metric reporting, including yard dwell, train delays, and cars held. Since PSR was rolled out, shippers could clearly see improvements in each of these reporting categories. However, the one thing that has not been captured in this data is the switching performance of each Class I carrier.

First and last mile service has been, and continues to be, a struggle for shippers. As the railroads reduced switching frequency and manage through reduced labor, shippers have had to deal with railcar bunching and inconsistent switching service. We expect to see many of the Class I carriers abandon local switching by outsourcing to lower-cost third-party operators.

Q What advice would you give to help rail shippers control their rail spend?

A Shippers must focus on their rail rates. This is the one area that shippers, through proper management, can yield cost savings and minimize typical rail rate increases. A shipper needs to understand which lanes are competitive versus non-competitive. Competitive lanes typically possess routing options, alternative interchanges, and reciprocal switching. Once competitive lanes are identified, a shipper can build a business case around the information and negotiate with carriers, often yielding positive results.

In many cases, shippers maintain their own railcar fleet, and proactive management of equipment can reduce overall turn times, thereby reducing the number of cars needed. Although often overlooked, railroad accessorial charges, which include charges such as demurrage and storage, are typically realized a month after the expense was incurred.

RSI's customers rely on RSInet® to gain shipment visibility of their rail shipments and to mitigate excess demurrage and storage charges. Establishing good communications with your rail carrier can also provide measurable benefits in controlling costs and improving service.

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Adopt an Integrated TMS to Tackle Supply Chain Complexity

Dave Maddox
Senior Vice President
Sales, Supply Chain
nVision Global
dmaddox@nvisionglobal.com
www.nvisionglobal.com
770-474-4122 x265

Q Why should I consider a transportation management system (TMS) now?

A Rates and capacity in all modes will be volatile for months to come. Without the ability to manage rates and carriers, you'll likely pay more for shipping than you should. Manual tracking or relying on forwarders, brokers, or carriers for updates means you'll have many surprises when shipments are delayed.

With so much complexity and volatility for the foreseeable future, it's never been more important to be able to have a holistic view of your supply chain.

Q What's the benefit of an integrated TMS?

A You can use one solution for planning, executing, and analyzing your shipments—both inbound and outbound. Many small to medium shippers still rely on outdated or homegrown systems and processes that may require moving data between spreadsheets and applications and lots of manual inputs. Everything takes longer and is prone to error.

You don't have deep visibility into rates and the ability to monitor performance in real-time. Many companies don't realize how much of the process can be automated, allowing their staff to focus on more strategic activities.

Q How can an integrated TMS impact operations?

A A TMS uses a single source of data for the entire shipment—inbound shipments start with the purchase order from the ERP as the foundation of the process. You can manage scheduling because an early load can be as much of a problem as a late one. Automated freight audits and payments compare the bill of lading and proof of delivery to ensure they match. Finance can track freight spend in real-time to manage cash flow. There's much less manual labor, and you have a comprehensive view of your situation for execution and planning. You can manage the process from a single application, and if you use a cloud-based solution, you can do it from anywhere.

Q How can I use a TMS to uncover better rates and capacity?

A One of our clients used the spot auction tool to find a cross-Europe rail route instead of an all-ocean move from Asia to the United States. The rate was about half, and the transit was only a week longer, and the ocean move would have been delayed by that much or more anyway.

Q What if I'm not ready for a full-scale TMS implementation?

A Look for a solution that allows à la carte selection for the functions you need. Maybe you want to concentrate on outbound execution first or use a spot auction tool to find capacity. You can automate a lot of back-office tasks with freight audits and payments to get started and then expand the use as you get comfortable with the solution.

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Supply Chain Continuous Improvement Requires Collaboration, Trust, and Tolerance for Failure

Ryan Frederiksen
Vice President, Operations
Ruan
ruan.com

Q How can a 3PL affect continuous improvement of their partners' supply chains?

A Ruan's approach to effective continuous improvement (CI) is centered around creating value within our partners' businesses. CI begins with a clear understanding of each unique supply chain and baseline performance measures. Although tools and techniques vary, the first steps involve analyzing supply chain data, applying proven best practices, and altering the supply chain process to incorporate the improvement. Measuring performance after implementing the process change determines the value created.

In some cases, value creation can be realized quickly, but often, CI takes patience, creativity, and a strong commitment to the cause. The desired technology doesn't always exist, or there may be an operational or cultural shift needed before the proposed initiative can be put into practice. Eventually, improvements either become feasible to implement or the problem becomes obsolete.

Q What results have you achieved?

A Together with our partners, Ruan teams achieve millions of dollars in hard savings each year. That work begins with collaborative, strategic planning to counterbalance potential instability of network changes, market variability, and global events that wreak havoc on supply chains. Improvements in network design, route optimization, and robotic process automation, for example, are ongoing and easily measurable initiatives due to the transactional natures of our partners' supply chains.

We have solved partners' challenges with creative equipment specifications that offer enhanced payload, safety, strength, accuracy, or efficiency qualities. Examples of equipment improvements include deploying high-capacity super tankers for milk operations, robotic picking within warehouse operations, and pallet jacks with scales certified for trade within retail delivery environments. Generally, the benefits of these solutions include at least a 10% improvement.

Q What is the key to a successful partner-provider CI program?

A Collaboration is an obvious component to CI, but the most critical success factor is trust within the partnership. Trust enables the collaboration, providing the foundation for the team to try new things and explore highly complex "What if?" initiatives, which can produce value-creating improvements.

Partnerships with a high degree of trust are willing to try and fail together, in order to improve.

Trust is earned over time, and in many cases, Ruan quantifies the level of trust by the partnership's longevity. Our dedication to creating value for our partners is consistent, however, whether they are just beginning to work with us or have been a partner for decades. We are intentional when choosing vendors and clients who desire a true business partnership and who will dedicate resources to CI that benefit all parties involved. Choose partnerships carefully, build trust, and be willing to fail as you succeed.

Reducing Inbound Freight Costs and Improving Accounting

Nick Fisher
Director of Sales
AR Traffic Consultants
nfisher@artraffic.com
www.artraffic.com
732-213-5081

Contact us at AR Traffic Consultants to see how we can help you lower your inbound freight costs and improve your accounting.

Q How can our company account for inbound freight costs on our month-end accrual reports? We prefer to route our own freight and use our own third-party carriers for these collect orders.

A Unfortunately, you are experiencing an industry-wide issue. Pre-rating based on purchase order information can pose a real risk. Your purchase order may include the vendor shipping origin as well as the products.

However, you do not actually control your vendor-supplied shipments. As such, it's common to discover your vendor has shipped from one of its sourcing locations that is not in your system. In addition, the vendor may split your order and ship from multiple locations on multiple dates. Further complicating the issue is determining the actual ship weight and commodities of the product on the shipment.

Your vendor has different priorities in carrier selection for your inbound collect shipments. The cost is irrelevant to them. They would rather tender the load(s) to their preferred carriers, as they often pick up loads daily, decreasing loading dock utilization and time spent booking loads.

Given the above, attempts to pre-rate inbound shipments based upon purchase order information lead to too many required corrections/adjustments and an improper month-end accrual.

One solution is to have your internal TMS carrier rate engine pre-rate advanced shipment notifications provided by your vendors.

Q Very few of our vendors are sending us their shipments with the data necessary to pre-rate them. How can we optimally route, track, and accrue the shipment information?

A Optimally the shipper will provide shipment details and request a routing, but this almost never occurs. Another solution is to use a web-based Vendor Routing Portal. Suppliers log in to a portal rebranded with your company's logo to process shipments.

The suppliers' purchase orders are visible for their selection to ship partial or full orders. Shipment details are entered for routing by the vendor. Your rates and preferences are then used to determine optimal carrier selection based upon your criteria (price, transit time, carrier preference). Loads are then tendered to the selected carrier, assuring carrier selection compliance. This lowers your inbound freight spend and automates the carrier selection process.

Once the shipment leaves your vendor, it is tracked and added to your accrual file. This provides your accounting department with an immediate and accurate cost of the freight and true month-end accruals.

Q How good is vendor compliance?

A As a supplier, you already work with similar tools to route freight to your clients. This is not uncommon and your company will be penalized for noncompliance. Similarly, when a supplier is noncompliant, a few charge-backs of the freight differential will quickly change their priorities.