

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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THOUGHT LEADERS

Extending the Life Sciences and Pharmaceutical Supply Chain

In the life science and pharmaceutical area, an inefficient supply chain can cause serious problems including product degradation and late deliveries of life-saving medications. Third-party logistics (3PL) providers specialize in streamlining their customers' supply chains, merging logistics expertise with state-of-the-art innovations. While manufacturers search for ways to distinguish products in a competitive marketplace, many do so by partnering with 3PL providers, who offer value-added services that extend supply chain operations and maximize efficiency.



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required supplementary materials as a value-added kitting solution into their regular warehousing and handling services.

- **Serialization:** Innovative 3PLs are in front of 2017 and 2023 serialization mandates, offering customized packaging and delivery solutions to easily integrate manufacturer-serialized units into the distribution process.
- **Foreign Trade Zones (FTZ):** FTZ status allows imported product arriving at a U.S. port to be immediately moved to secure facilities without waiting for customs clearance, a significant advantage when dealing with the delivery of sensitive pharmaceuticals.

Q: What are some of the benefits in adopting innovative approaches to the pharmaceuticals supply chain?

A: By extending customers' pharmaceutical supply chain through value-added services, 3PLs are building the foundations of a mutually beneficial relationship. There are many benefits in adopting innovative approaches to the life sciences and pharmaceuticals supply chain.

Q: In what ways has the pharmaceutical supply chain evolved to meet increasing demand?

A: In order for supply chains to remain efficient in a changing pharmaceutical industry, buyers and manufacturers are moving from a transactional to a process focus. Extending the pharmaceutical supply chain for special projects has become increasingly common. Some innovative 3PLs have evolved to offer the following service offerings:

- **Inourced Vendor Managed Inventory (VMI):** Insourcing VMI allows 3PLs to use their expertise, technology and infrastructure to solve customers' internal problems.
- **Repackaging and relabeling:** 3PL providers licensed by the Food and Drug Administration are able to relabel and repackage pharmaceuticals, ensuring the provider can adhere to crucial manufacturing protocols, protecting the product's integrity.
- **Kitting:** 3PL providers can seamlessly integrate
- **Cost optimization:** Partnering with a 3PL to integrate special projects into existing supply chain operations mitigates costs associated with developing and implementing new services.
- **Flexibility:** 3PL providers have the flexibility to integrate value-added projects as natural extensions of existing supply chains, ultimately growing them into long-term, value-added services.
- **Scalability:** 3PLs have an unmatched ability to scale and repurpose labor to address any time-sensitive needs such as recalls, relabeling or fulfillment.
- **Responsiveness and Resourcefulness:** 3PLs provide a ready and available workforce that can be flexed and scaled to meet a customer's needs in a timely manner as well as manage labor and handle additional requirements.

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Advantages of Digital Technology

Q: INTTRA recently celebrated its 15th anniversary. Can you describe how digitization in ocean shipping has evolved since 2001?

A: Some carriers and shippers moved to adopt standardizing form exchanges early on; then bespoke, single-process products (e.g., rates management), and later ERP systems. Cloud-based Transportation Management Systems (TMS) allowing shippers to avoid expensive in-house implementations are now a fast-growing market segment. Today, INTTRA believes that effective use of technology will be the major driver of transformation in ocean shipping – and the primary differentiator between competitors.

Q: How would you characterize the pace of digitization?

A: In an environment of low rates, fierce competition and rapid consolidation, the pace of digitization has passed a tipping point. It is accelerating rapidly, and we expect it to further accelerate. Digitization is no longer an “option.” It is a competitive necessity. At INTTRA, our main objective is making the adoption and use of digital technology as advantageous as possible, with constant improvements to the customer experience and portal functionality, and data analytics tools to help

informational. Operational interconnection encompasses space utilization, booking, tracking, intermodal, empties repositioning and other aspects of physical container movements. Financial flow includes rates management, letters of credit, invoicing and freight audit. Informational flow covers data exchanges accompanying cargo shipments – from trade compliance to customer services.



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customers harness the largely untapped power of data. INTTRA experienced 16-percent growth in ocean container orders in 2016, demonstrating strong demand for digitization that truly facilitates operational excellence.

Q: How do you foresee digitization evolving in the coming years?

A: We believe the use of networks, communication standards and interconnectivity will rapidly accelerate. Adoption and expansion of broader physical networks for data exchange and analytics, across multiple vendors in the same transportation chain, will facilitate optimization and increase velocity in logistics – powered by Cloud technologies and predictive analytics.

This networked environment will facilitate far greater integration and interoperability of the three workstreams of shipping – operational, financial and

Q: What technology trends will facilitate those breakthroughs?

A: Immutable, transparent smart contracts built with technologies like Blockchain and RESTful will enable integration across systems, applications, and partners. Traceable identity of shipments paired with tracking devices connected to the “Internet of Things” will provide real-time status of containers and cargo, and increase the amount and quality of data for more efficient shipment planning. Companies will move beyond “big data” to business analytics that is more accessible (e.g., through PaaS and SaaS models), predictive, accurate and rapid through artificial intelligence and machine learning.

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THOUGHT LEADERS

How to Meet Global Shipment Compliance Challenges

Q: What role does technology play in meeting today's challenges of global shipment compliance?

A: Today's complexities in managing export and import shipments are evident. When U.S. Customs announced the requirement of Sea AMS filing, which is also known as the 24-Hour Rule, it started a wave of technology enhancements throughout the globe requiring all ocean carriers and NVOCCs shipping goods to the United States to provide key shipment data. Since the initial requirement by U.S. Customs, many countries have adopted similar requirements.

International shipment operation and documentation managers and staff now face the challenge within their existing trade management system to complete and manage export shipments in the United States by confirming the automated export system (AES) ITN has been received for export shipments that meet AES filing requirements. The operations and documentation managers and staff must also determine if there are shipment compliance requirements at the ultimate destination



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Q: How has technology assisted in shipment visibility through the shipment supply chain cycle?

A: Consumers are able to track their packages from the time the package is picked up at the retailer's warehouse all the way through delivery. The real-time tracking is available from major carriers because of cost-effective advanced data capture devices that transmit package details.

As shippers, consignees, freight forwarders and other parties related to a specific shipment track their goods in much larger containers, there seems to be a "blind spot" where a container may disappear from tracking. One of the main reasons for this is the lack of a global tracking infrastructure. Freight forwarders and carriers may use low-cost third-party companies to pick up or deliver containers or packages. These third-party companies may lack GPS tracking capabilities on their vehicles and if they have GPS tracking capabilities, they lack the ability to transmit GPS coordinates.

A possible solution is to provide a form of Cargo Intelligence that utilizes all possible forms of shipment data capture functions. Most small to very large freight forwarders and mid-sized to Fortune 500 shippers utilize electronic booking requests and shipping instructions to transmit shipment details to the carrier or NVOCC directly or via portals such as GT Nexus, Intra, Descartes Network and SITA. In turn, the carriers or portals provide shipment tracking details back to the freight forwarder, shippers or consignees. The remaining chain of custody events through the supply chain shipment cycle would need to be accounted for by advanced data capture devices such as GPS, RTLS and Internet of Things while shipment is in transit. For those shipments stuck in Customs, an advanced trade management system with direct connections with Customs agencies throughout the globe can provide real-time disposition (status) events back to shippers and consignees.

and/or transshipment country. These export and import shipment compliance requirements will require trade management systems to be configured or enhanced to provide proper notification to the documentation staff member without disrupting the documentation process.

A key success story would be to provide a complete shipment visibility and chain of custody solution through the supply chain by harnessing all possible shipment and data capture processes and integrating into one unified solution.

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Most Mid-Market Supply Chains Are Under-Served

On average, mid-market supply chains (\$50M to \$150M) replace their supply chain providers every two to three years. The two overwhelming reasons why are because they don't realize continuous return on investment (ROI) improvement and they lack strategic account support.

Mid-market supply chain owners are caught in a conundrum: They're too big for the small supply chain operators who do not have the technology and processes in place to manage \$50M to \$150M in supply chain spend. They're also not large enough to garner the strategic attention from big industry players who instead focus on their largest, most profitable, customers.

Q: With all the focus on transportation, how can I truly understand what is missing?

A: According to a Gartner study, companies that pursue strategic supply chain outsourcing can experience up to 20 percent cost savings over a five-year horizon. Companies with a transportation spend between \$50-\$150 million find their cost savings peak at 8 percent during engagement with large 3PLs as they offer tactical, internally focused solutions. The 3PLs revenue ceiling is set by a tariff- or fee-based solution, while the floor is set by underlying and fluctuating carrier costs.

Q: Why am I stuck with inadequate technology?

A: The technology usually provided to mid-market supply chains simply cannot deliver complete visibility into the information and data required to focus on optimizing the supply chain. The systems being used aren't those in Gartner's Magic Quadrant for "Leaders," like Oracle and JDA, whose tools can flag orders for optimization or consolidation.

Many times the data being captured in the sub-optimal systems isn't real-time. Worse, the business



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As market conditions and carrier networks change, logistics providers' focus is drawn to the spread between customer revenue and carrier cost. With eyes squarely on their margin, the provider is not focused on strategic improvement in the customer's supply chain, where 80 percent of the cost savings lie. In effect, no value is provided beyond transportation.

After recently meeting with a mid-market customer whose inbound network is managed by one of the large industry providers, it was surprising to learn that the leading issue holding the customer's business back was supplier compliance. The gap between corporate objectives and the logistics provider's solutions was incredibly apparent as the provider has not developed any processes to address the issue or even realized they needed to. The customer went on to say that this was their third logistics provider in eight years. This is a story heard frequently when meeting with companies who have a mid-market supply chain.

intelligence data lacks the ability to complete inventory analysis, examine profitability by customer and complete business process redesign; all critical components when it comes to optimizing the supply chain and realizing true continuous improvement.

Q: What can I do to make sure my mid-market supply chain is supported, at the level it deserves?

A: Find a provider with a proven track record of success with mid-market companies. Ensure the case studies and stories support continuous improvement year-over-year for shippers of all sizes, and look for tenured relationships lasting through business cycles and measured in decades, not years.

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