SPECIAL REPORT

NAVIGATING THE CHALLENGES OF TODAY'S TECHNOLOGY INDUSTRY SUPPLY CHAIN

SUPPLY CHAIN | DEDICATED TRANSPORTATION | FLEET MANAGEMENT SOLUTIONS

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As customer expectations continue to rise amid growing supply chain complexity, technology companies face the challenge of keeping expenditures down while delivering stellar customer experiences. Risk mitigation is essential, agility is vital, and greater efficiency is the drumbeat of today's technology industry supply chain.

Supply chain executives know they have to create disruptions of their own to optimize operations and increase customer satisfaction. The resilient supply chain, one that can triumph over current and emerging challenges, requires a multi-phased approach that embraces the critical trends of warehouse automation, nearshoring, technology platforms, and talent management.

Warehouse Automation: Blending the Best of Humans and Technology

Warehouse automation goes hand-in-hand with talent management. The team's decision making and ability to respond quickly to changes are vital. The efficient warehouse of the future depends on combining the right mix of technology and people that implement automation to end bottlenecks–and leaves resources available for value-added tasks.

Warehouses involve various systems working together, and automation solutions are just as diverse. The challenge lies in sifting through the options to find what works best for your particular situation rather than automation for its own sake. Automation in the wrong places or with the wrong product can create more problems than it solves. Among the available technologies are:

GOODS-TO-PERSON TECHNOLOGY (GPT)

This solution involves robots or machines that deliver goods to workers to assemble or pack. Technology includes autonomous forklifts, tuggers, transporters, pick towers, conveyors, and assembly line vehicles. According to ReadWrite, employees use 30% of their shifts traveling the warehouse. This makes your warehouse ripe for technologies such as:

Automated storage and retrieval solutions (ASRS): This technology uses warehouse robots, cranes, and carousels to move, pick, and store items within the warehouse.

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Order-picking robots:
These robots enable workers to do more and do it faster, easier, and with fewer errors. Instead of traveling throughout the warehouse pushing heavy carts or walking behind slow-moving robotic carts, robots bring items to the worker. You can reallocate your workforce, creating new opportunities for them as they contribute more value to your business.

These robots boost productivity along with improving worker health and safety and are infinitely scalable, offering the flexibility that brings resiliency when needs change. And according to Gartner, 75% of large organizations will have robots in their warehouses by 2026.

Conveyor systems:
According to SEMCOR, this is where warehouse automation began in 1892. Today's designs are considerably improved; modern conveyor belts move materials along assembly lines to packing and shipping areas, among others.

Wearables:
Designed for use by warehouse workers, wearables connect to warehouse management systems (WMS) to provide information to speed up operations, enhance inventory management, and support core processes. Through glasses and head-mounted systems, employees get on-the-spot access to technology and information about shipping, receiving, routing, picking, inventory management, and replenishment. This results in fewer distractions and greater efficiency. Because workers can do more in less time, their time can be reallocated to more critical tasks.

Warehouse automation allows you to leverage technology to complete repetitive tasks with minimal human intervention. But today's warehouse automation technology does much more than that. Yesterday's conveyer belt has evolved into solutions that can perform a wide range of simple and complex tasks that can be tailored to your needs. In sum, the myriad benefits of warehouse automation mean:

- A boost in productivity
- Healthier workers
- Higher worker satisfaction and retention
- Reduced operating costs
- Improved accuracy

Evolve Your Technology

As early as 2017, according to Supply & Demand Chain Executive, thinking was shifting from a linear point of view to one informed by networked, systemic logic. It's a fundamental shift that points toward an adaptable and resilient supply chain powered by connected information and advanced analytics.

System integration from formerly disparate sources connects the dots to enable real-time analysis, informed decision-making, and more decisive, data-driven actions across the entire supply chain. Full transparency means you maintain complete control—inbound, inside the warehouse, outbound, and back.

INBOUND LOGISTICS

Logistics goals include reducing costs, improving service and compliance, optimizing loads and routes, and providing full visibility for all stakeholders. The right digital platform solves several pain points, including capacity and demand volatility, customs delays, security risks, and minimizing increasing freight rates.

STORAGE AND INVENTORY CONTROL

Successful inventory control requires improving inventory efficiency, order accuracy, and cycle times, and solve the material-flow challenge and the many related issues, such as SKU proliferation, tight delivery windows, change management, and inventory loss/detention. With a digital platform that is integrated into your supply chain, you gain more control of your operation.

OUTBOUND AND REVERSE LOGISTICS

Streamlined operations during this stage help you better meet customer needs by integrating warehouse management systems and providing real-time visibility for your shipments as they move through the supply chain.

You'll better meet customer expectations, avoid incomplete orders, and get a handle on increasing freight rates. You'll find returns management easier and identify lanes to bring inventory back to your distribution centers.

Consider Nearshoring

Container shortages, clogged ports, and delayed shipments highlight the disadvantages of manufacturing products in Asia and other distant destinations. Increasingly, technology industry supply chain executives are expanding their vendor base to include nearshoring. According to Forbes, Mexico is poised to become the next big global market.

Nearshoring–investing in manufacturing capacity closer to the customer–offers several advantages (including some over the competition), says Supply Chain Brain, especially during a supply chain crisis by creating a more responsive and resilient supply chain:

- Close customer proximity means faster, cheaper shipping
- Time to market decreases
- Intellectual property rights are stronger than in China
- Stable free-trade agreement
- Less currency fluctuation

Imports from Mexico increased 18% between 2020 and 2021, according to CreditRiskMonitor. Communication is also more efficient; fewer language barriers exist, and onsite visits are more practical. Honduras is also a suitable alternative to China for companies interested in nearshoring, according to the Center for Strategic and International Studies.

Nearshoring is a valuable tool for supply chain leaders; after all, there's no predicting when global supply chain issues will ease. This makes creating redundancies, and completely replacing suppliers when needed, important to strengthen and optimize supply chains.

Solving the Talent Shortage

Supply chains are suffering from a lack of both truck drivers and warehouse workers. According to Supply and Demand Chain Executive, while robots are a rising force in warehouses, most work is still done by humans, and a recent Deloitte survey says attracting supply chain talent is 36% more difficult today than it was five years ago. An older workforce (median age 44.2) doesn't help retention figures; those employees could soon retire or change industries.

Warehouse workers are demanding more benefits and higher pay, which is creating a competitive environment. They also want a career path, more job security, better safety, a more pleasant work environment, and respect for their rights.

The shortage of truck drivers eased a bit in 2022 after pay increased by an average of 10.9% in 2021, along with sign-on bonuses and additional incentives. However, that still left a huge number of vacancies–almost 78,000.

This is a temporary improvement. It's predicted that, as with warehouse workers, truck drivers are aging out of the workforce, but freight demand will keep growing. This means almost 1.2 million new drivers will be needed in the next decade just to replace retiring or departing drivers.

There are several causes for the talent and retention shortage. Higher pay and better working conditions help, but supply-chain leaders must still manage their talent pipeline. According to Warehouse Ninja, the best recruitment and retention strategies include:

- Post your jobs where your competitors post
- Post your jobs on suitable sites with a targeted audience, such as warehousegig.com, where you'll likely find higher quality, experienced candidates
- Use social media to post your jobs
- Create referral incentives
- Make the job application process simple

Creating Success Amidst Many Challenges

The landscape of supply chains for technology companies is fraught with challenges that demand innovative solutions and adaptable strategies. As you navigate this intricate terrain, you are well aware of the pressing need to balance cost-effectiveness with customer-centricity. Rising customer expectations, intricate supply chain dynamics, and escalating operational costs demand strategic thinking that can bolster your business in a rapidly evolving market.

The imperative to optimize operations and enhance customer satisfaction necessitates proactive measures that can steer your supply chain towards resilience and efficiency. Embracing warehouse automation stands out as a crucial step forward.

The synergy of technology and human expertise within an automated warehouse not only streamlines operations but also frees up valuable human resources for value-added tasks. Goods-to-person technology, automated storage and retrieval solutions, order-picking robots, and advanced conveyor systems redefine productivity, accuracy, and worker satisfaction, laying the foundation for a more agile and responsive supply chain.

However, the path to a robust supply chain does not end with automation alone. Evolving your technology infrastructure is equally paramount. Comprehensive supply chain management platforms empower you with real-time insights and analytics, transforming the way you perceive and manage your supply chain. The shift from linear to networked thinking allows for adaptability and resilience, fortified by integrated systems that offer end-to-end visibility and informed decision-making.

Considering the complexities and vulnerabilities of global supply chains, nearshoring emerges as a strategic lever for overcoming disruptive challenges. Diversifying your vendor base to encompass nearshoring partners not only mitigates risks associated with global disruptions but also brings advantages such as reduced shipping times, robust intellectual property protection, and stable trade agreements.

In the midst of these multifaceted challenges, the potential of third-party logistics providers (3PLs) shines brightly. Collaborating with a proficient 3PL like Ryder can deliver the expertise, resources, and scalability necessary to navigate the intricacies of modern technology supply chains. From optimizing warehousing and distribution to ensuring robust end-to-end visibility, a 3PL partner can serve as a linchpin in your pursuit of an agile, efficient, and customer-centric supply chain. The journey ahead demands strategic innovation, and the right partnerships can propel your technology supply chain towards a future defined by resilience, efficiency, and exceptional customer experiences.

About Ryder

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