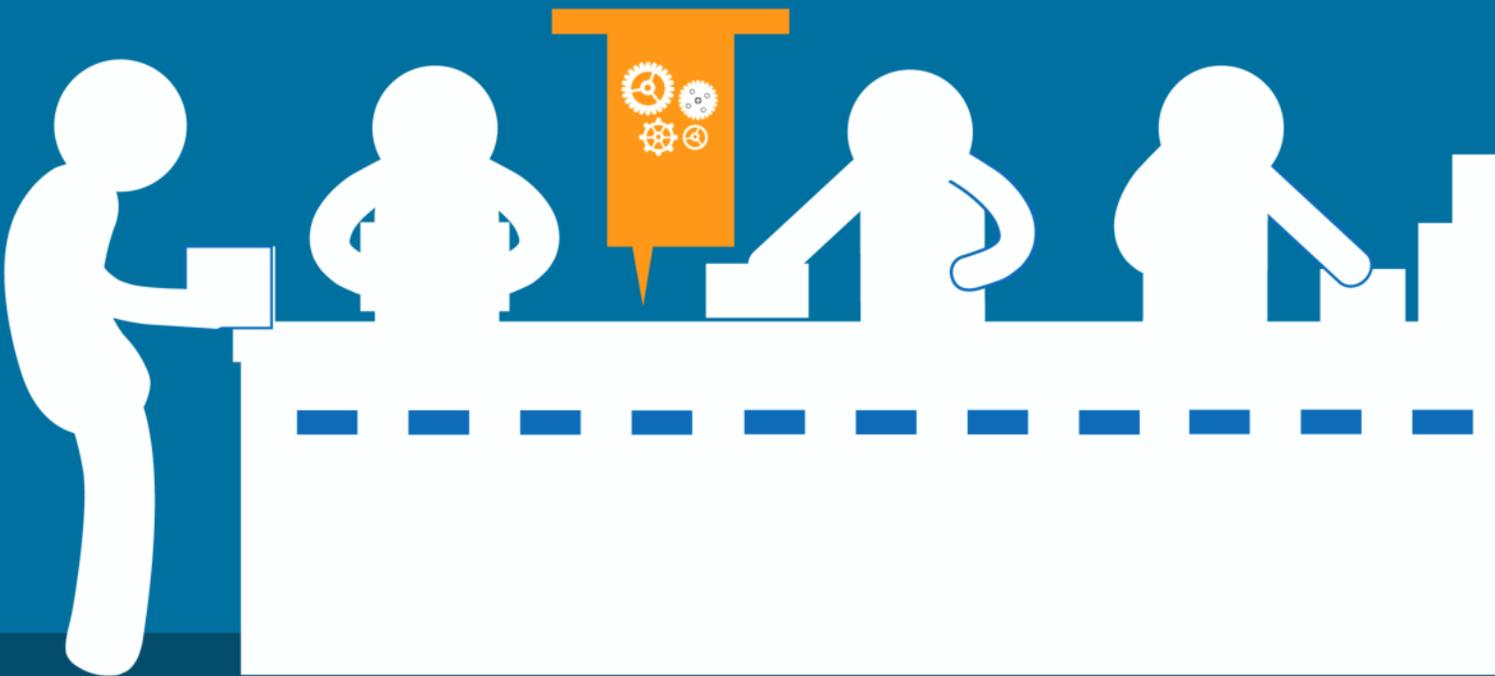


Transforming Your Supply Chain Operation with **TECHNOLOGY**



A Guide By 
Written By Laura Olson

Transforming Your Supply Chain Operation with Technology

Current and future technology innovations to help power your supply chain business

The pressure to reduce supply chain costs while continuing to increase performance and efficiency is tremendous. Supply chain executives are continually challenged to lower expenses while simultaneously bolstering capabilities and service in an increasingly changing and complex global industry.

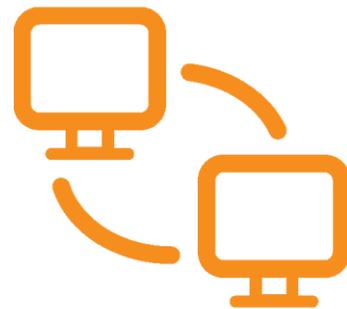


Today warehouse operations are powered by technology. From RF and RFID, mobile and wireless solutions and suites of supply chain software to pick to light, put to light and material handling solutions, warehouse operators have harnessed the technology beast of burden to extend the effectiveness of the workforce and better control warehouse costs.

3PLs and other warehouse operators have become smarter investors in technology and more attuned to selecting the proper level of technology for their respective business needs. Rather than trying to “rubber band” or “duct tape” existing solutions instead of investing in longer term solutions, more supply chain businesses are investing in more targeted solutions that can enable their operations to be more productive, efficient and competitive.

Today, warehouse operators must face the daily pressure of increasingly demanding, vocal consumers who want what they want, where they want it-all at the speed of “now”. To be able to meet consumer demands, supply chain operations are evolving. Today 30% of those who participated in the [2015 State of Warehouse/DC Equipment Survey](#) prepared by Peerless Research Group (PRG), support the “buy online, ship to customer” paradigm. This omni-channel retail trend is fueling the purchase of new technology to provide greater real time inventory and data visibility as well as for systems that can ensure faster more accurate order fulfillment rates. According to the [2015 Third Party Logistics Study conducted by Inbound Logistics Magazine](#), nearly one third of the retailers surveyed indicated that they were not prepared to handle omni-channel retailing. Many companies cannot support true omni-channel needs due to their existing infrastructure.

Retailers are working to improve space utilization, develop more in-store integration with online channels and facilitate online order pickup at brick and mortar store locations. Although ship to store options can help to reduce retailers’ transportation costs, most companies do not have the space needed to run a pick-and-pack operation from their stores. Being able to transform operations to support a variety of fulfillment options is complex and costly. Cross-channel fulfillment options require seamless execution. Retailers have been investing in technology including [warehouse management systems](#) to provide real time accurate inventory to consumers as well as data needed for better decision-making.



Retailers need real time information in order to be able to analyze consumer data, reduce operational cost and track products as well as for other purposes. Having the most accurate data visible whenever needed is essential to daily operations. For these purposes, automated data collection and [warehouse management software](#) is key.

According to the PRG survey of supply chain professionals, there is greater interest in mobile computing devices and wireless solutions. The survey results revealed that 57% of respondents are using or have plans to use [mobile solutions](#). 40% of survey respondents had purchased new information technology systems.

Customers Are Driving Supply Chain Technology Demand

The [2015 MHI Annual Industry Report](#) revealed that the top issues that challenge supply chain professionals the most are:

Customer pricing pressure:	51%
Demands for faster response time:	50%
Customer service expectations:	49%



In addition to altering existing fulfillment strategies and building more specialized facilities optimized to handle high-velocity, some supply chain organizations are implementing advanced inventory optimization tools. This technology can help warehouse operators make more informed decisions about where inventory buffers can be deployed most effectively. Tightly integrated planning and execution systems combined with warehouse automation and automatic identification systems are also being utilized in high-velocity distribution facilities.

Relying on automatic data collection systems including mobile computing devices and wearable devices and cloud based systems can help provide the enhanced real time data visibility needed today for increasingly fast paced, complex supply chain operations.

Supply Chain Technology and Equipment Innovation

In 2014, The U.S. Roadmap for Material Handling & Logistics thought leaders and partners stated that they anticipated that “traditional supply chain models will undergo dramatic transformational change due to technological innovation and changes in customer demand between now and 2025”. The survey included results from over 400 supply chain professionals from a wide variety of industries.

Traditional supply chains are being altered by innovative advances in technology. The early adopters of these technologies have noted dramatic improvements in performance and efficiency and in some cases, this has provided a competitive advantage.

The eight technologies that are anticipated to redefine the future of supply chains are:

Maturing technologies (currently with significant levels of adoption 35%+)

- Inventory and network optimization tools
- Sensors and automatic identification
- Cloud computing and storage
- Robotics and automation



Growth technologies (currently with moderate levels of adoption 20%+)

- Predictive analytics
- Wearable and mobile technology

Emerging technologies (currently with less than 10% of adoption)

- 3D printing
- Driverless vehicles and drones

Of those surveyed, 75% anticipate that in the next decade, at least one of these technologies will either provide a competitive advantage or be a disruptor in their industry. The accelerated pace at which supply chain technology is advancing is causing organizations to re-evaluate their selection, use and deployment of new technologies. Clearly how supply chain organizations adapt and innovate will be a determining factor in their future and in the future of their industry.

Supply Chain Operations Use Technology for Competitive Advantage

Using technology can give supply chain operations such as 3PLs a distinct advantage. With today's incredible pace of innovation, supply chain operations of all sizes are now evaluating the feasibility of investing in increasing amounts of technology

For many smaller organizations, using supply chain technology such as RF, [RFID](#), WMS and [labor management systems](#) can enable them to court and win new business over competitors with lackluster technology. Using these technologies can help businesses mitigate the risk of labor shortages, help to optimize the impact of their existing workforce and help keep warehouse costs under control.

Small or large, warehouse operators that have been successful in operating at lower costs while still being able to provide high levels of order fulfillment and customer service are more likely to experience growth. Having the technology to power a more flexible operation is often a key competitive advantage. For third party logistics providers, being able to customize contracts, billing, documents and processes is essential. Having the ability to collaborate with other supply chain businesses is also key.



Conclusion

A review of the recent history of the supply chain industry reveals the increasing pace of technology and innovation. From the advent of electronic data exchange (EDI) in the 1960s, development of the Universal Product Code (UPC) to the new wave of wearable devices and driverless vehicles, the supply chain has been continually transformed by innovation.

2015 industry surveys indicate increasing adoption of and investment in mature technologies such as RF, wireless and warehouse management systems. One of the primary forces for change in supply chain technology is the impact of consumer demand and the omni-channel retail revolution. Without new technology, supply chain operations would not be able to satisfy consumer demands for fast, accurate delivery and cross-channel fulfillment.

Traditional supply chains are being transformed by advances in technology. Recent studies indicate that eight maturing, growth or emerging technologies will make a dramatic impact on the supply chain industry. Supply chain businesses are re-evaluating their use and deployment of technology to be ready for this new wave of the future.

About Datex

Datex provides flexible, reliable supply chain technology solutions to help make businesses more profitable, including supply chain software, mobility solutions, professional services and mobile device management. In business for over 35 years, Datex has a wealth of experience in helping companies across the world meet these critical business challenges.

Datex Corporation
10320 49th Street North
Clearwater, FL 33762
datexcorp.com

For more information on Datex products and services, please contact us.

US Office – 1 800 933 2839
Canada Office – 1 800 998 8980

