

WHITEPAPER

Holistic supply chain

An end-to-end provider is essential

Supply chain industry trends and challenges

Customer expectations are through the warehouse roof

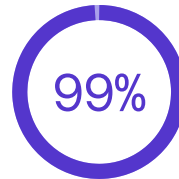
Warehouse managers around the world are facing rising customer expectations, specifically faster delivery times and ever-decreasing delivery costs. At the same time, they're being asked by board-level executives to do more with less, not just in the warehouse but across the entire supply chain.

This trend is set to continue, but for how long? Surely there comes a point when these demands are no longer economically viable. Today, the best way for warehouses and distribution centers to create a truly holistic supply chain is through the integration of new technologies.

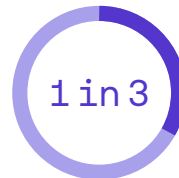
Voice, vision and mobility

We have seen the proliferation of voice, vision and mobility solutions brought in to replace manual, paper-based systems in warehouses all over the world. These technologies, which are designed to increase supply chain efficiency and productivity, are also helping to address customers' delivery expectations today. So, it follows that new advances in technology will be applied to address their increasing expectations in the future.

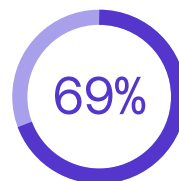
According to recent customer research carried out by courier company Dropoff in the US:¹



99 percent said fast delivery is “important” when they make an online purchase.



1 in 3 feel “frustrated” when a company doesn’t offer same-day delivery.



69 percent would not purchase from a retailer again if their delivery was late.



Digital fitness

Supply chain operators are under mounting pressure to do more with technology, especially in terms of digitization and the Internet of Things (IoT). But compared to other sectors like manufacturing, the supply chain industry is more risk-averse, meaning it's less inclined to embrace innovations in technology. The traditional measurements of the fitness of a warehouse are cost and reliability.

Digital fitness of the supply chain is an issue because many operators see technology as a risk creator, rather than a risk manager or a risk mitigator. Today's companies need to move away from this mindset and apply new technologies, such as IoT, to generate powerful value propositions.

The role of IoT

In the logistics world, IoT typically allows organizations to monitor inventory, automate stock reordering and keep track of deliveries, all in real time. Sensors can predict wear and tear on equipment, allowing timely ordering of spare parts and increasing supply chain transparency.

Yet there is such a huge disparity in the rate of IoT deployment for manufacturing versus the supply chain sector, partly due to how these industries are perceived. People tend to associate warehouses with

products, storage space, and a workforce. So, the technology—RF scanners, voice and so forth—is all about enabling humans to manage the products and storage more efficiently.

On the other hand, manufacturing is highly mechanized. (Consider an automotive manufacturing plant.) In this environment, industry tends to take the view that it is better to use IoT capabilities to monitor the machines and provide valuable data.

Therefore, IoT is not considered overly important by supply chain companies. However, we predict that this perception is set to change dramatically, as businesses apply IoT to location technology in order to enhance the speed and efficiency of workforce traffic and the movement of materials.

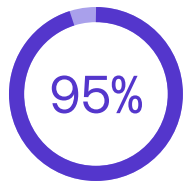
Gartner predicts

According to Gartner, 50 percent of large global companies will use AI, advanced analytics and IoT within their supply chain operations by 2023. This will help them to generate process transparency, and analyze data to predict requirements and optimize inventory levels, while reducing friction and costs across the entire supply chain.²



Workforce challenges

The growth of eCommerce is increasing the pressure on the already strained supply of labor in the supply chain industry, and this is set to continue.



According to Nasdaq: by 2040, 95% of purchases worldwide will be made online.³

Increasing online sales are generating more and more job opportunities for workers throughout the supply chain, from warehouse operatives to HGV drivers. But one of the main challenges facing the industry is how to fill these new roles during what has been dubbed the ongoing “talent crisis.”

There is a serious shortage of labor, as organizations struggle to attract and retain people, especially digital native Millennials and Gen Z workers. As well as warehouse workers, there is also a shortage of supply chain managers to fulfill more senior roles.

The problem is exacerbated by the increasing customer expectations discussed earlier. Instead of exclusively trying to recruit extra staff to address these expectations, businesses should be looking to increase automation levels in their warehouses.

Automation and connected mobile voice- and vision-based tools are also key to attracting digital natives. Today, recruiting and retaining talent is as much about promoting a digitally progressive environment as it is about reducing the barriers to employment.



Reverse supply chain

The rising consumer demand for free and fast product delivery correlates with a massive surge in product returns. Market disruptors such as US clothing online retailers Stitch Fix and Trunk Club are prime examples of disruptors to traditional industries that are leading the trend of using returns as a strategic differentiator.

In response to the additional pressure generated by increasing returns, warehouses need to identify their critical differentiator. This is where so-called “durable differentiation” comes into play, because the one thing that most disruptors cannot compete with is the traditional supply chain excellence that many companies have spent years building up. Such companies have garnered a wealth of expertise and understanding of exactly what their customers want, when they want it, and how best to deliver it. These qualities are much more difficult to compete with for new entrants looking to disrupt the supply chain industry.



“A decade ago, a returns rate of around 10 percent was the norm. Today, new businesses are emerging with up to 80% returns as their expectation.”

Sean Elliott

Chief Technology Officer,
Supply Chain Software, Infios

Increasing automation

Robotics

Today, many organizations depend on traditional conveyance, sortation, and automated storage and retrieval-type technologies. We are also seeing an increase in the adoption of robotics, which—as well as offering the benefits of traditional technologies—is more flexible, faster to implement, and easy to reconfigure for use in different parts of the warehouse.

In addition, there is a significant financial benefit: robotics is an operating expenditure, as opposed to capital expenditure, particularly when it comes to 3PL and AMR technologies. The recent shift from licensed products to a cloud-based subscription-as-a-service model is helping organizations running warehouses and distribution centers to generate positive financial outcomes.



AI

Whereas robotics can automate the physical processes in the warehouse, AI can automate the logical decision making for the machines. Plus, it plays a key role in the provision of smarter support systems to make humans faster, more efficient and more productive.

In other areas, such as enterprise resource planning and customer relationship management, AI is being used to automate decision-making processes with no need for any human interaction whatsoever. Although this level of AI development is only just beginning to reach the supply chain industry, there is every possibility that it could become a future trend.

Another important observation is that flexibility and adaptability are essential for today's warehouses. In a world of rapidly changing market conditions, organizations are looking for agile AI technology that will make them nimble enough to adapt to any scenario. With global crises happening more frequently than ever, the ability to adjust at a moment's notice is essential.

How do you generate a holistic supply chain?

The need for speed

With the rise of eCommerce and the instant-gratification mindset of customers craving faster delivery, speed is the number one requirement for all warehouses.

Many warehouse managers will argue that reliability is their main priority. That's still very important but speed is more vital. Flexibility is also a major consideration. Without speed and flexibility, supply chains start to experience challenges at certain key points, which we refer to as friction. The macro-trends and challenges discussed previously can all cause friction at multiple points across the supply chain.

If an organization is facing significant amounts of friction, it is usually because they are not leveraging technology correctly. For instance, they are not using technology to differentiate against the disruptive forces deployed by companies such as Stitch Fix, Dollar Shave Club and Hello Fresh.

The importance of an end-to-end provider

To achieve a holistic supply chain, organizations need a single-source provider that can offer them with end-to-end solutions covering all aspects of the warehouse.

Again, it's all about reducing friction, especially when it comes to identifying and implementing the right technology. However, by far the most important element that needs to be frictionless is the integration of all the various strands of technology, which culminates in a holistic supply chain.

Integration is essential

The various systems used within a warehouse and the wider supply chain should not be considered as separate entities. Instead, think of all that technology—automation, robotics, warehouse management, voice, warehouse control, labor management—as one integrated entity that serves a single purpose: to run the holistic warehouse at maximum efficiency. That means getting products into the warehouse, then storing and shipping those goods as quickly and efficiently as possible.



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Sean Elliott
Chief Technology Officer at Infios

Gartner's Magic Quadrant

Gartner recognized Infios's exceptional vision and comprehensive portfolio by including us in their Magic Quadrant. We are very proud of this accolade, which highlights the fact that Infios is a top-tier provider of warehouse management systems in the supply chain space.



THE INFIOS DIFFERENCE

Infios is the only supply chain system provider with all-encompassing solutions that cover both automation (electromechanical) and software elements. We offer the most adaptable solutions on the market, which will give you the most flexibility and business agility.

We can provide comprehensive solutions for all your future warehousing requirements, or we can deliver the targeted solutions you need right now.

Our cloud-based solutions are futureproof, and continual investment in supply-chain-focused research and development keeps our products at the leading edge of supply chain technology.

See how Infios's Holistic supply chain can help your business:

Find out more

Learn more about our voice solutions:

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Learn more about our AMR solutions:

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References

1. [https://cdn2.hubspot.net/hubfs/1818776/I Want It Now Retail Ebook March 2018.pdf](https://cdn2.hubspot.net/hubfs/1818776/I%20Want%20It%20Now%20Retail%20Ebook%20March%202018.pdf)
2. <https://www.gartner.com/smarterwithgartner/gartner-predicts-2019-for-supply-chain-operations>
3. <https://kinsta.com/blog/ecommerce-statistics>