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Summary

- Responding to the rise in e-commerce activity, meeting shifting customer demands, and addressing the challenges of COVID-19 in the workplace are putting increasing pressure on the US logistics sector.
- In this context, the sector is introducing automation technologies in warehouses, distribution centres, and fulfilment operations like never before.
- However, there are risks that the cost of adopting automation technologies will still be out of reach of many and too risky in a time of economic uncertainty.

Report/Findings

The rise of e-commerce activity brought on by the pandemic has set the scene for a significant expansion of the logistics automation market in the US. According to the [Global Logistics Automation Market report](#), the US\$49.2 billion sector in 2018 is expected to almost double to US\$96.2 billion by 2024.

Responding to Shifting Customer Demands

2. Stay-at-home orders in the US have led to a spike in e-commerce activity. Even as stores have begun to reopen, US consumers have continued to value contactless retail experiences as case numbers persist. Deliveries and click and collect, also known as 'curb side pickup', have become the new norm as consumers look to limit person-to-person contact wherever possible. FedEx Executive Vice President Brie Carere said that surging e-commerce this year drove significant FedEx volume and a shift from commercial business-to-business to home delivery business-to-consumer.

3. Businesses are turning to automation as a way to meet this increased e-commerce demand. Commonwealth Supply Chain Advisors President Ian Hobkirk expects logistics and distribution operations to invest in technology that will enable the efficient fulfilment of e-commerce orders. Warehouse execution software, order picking technology, and robotic solutions - currently three of the most widely implemented solutions - are expected to attract a lot of initial investment according to the [2020 Honeywell' Intelligrated Automation Investment Study](#).

4. The US logistic sector has also had to rework supply chains in order to meet customer expectations for quicker and simpler services. Most recently it has led to the development of networks of small, local fulfilment centres, located very close to consumers that can profitably complete same-day orders. With geographic demand now expanding beyond the Northeast region of the US, large supermarket chains have announced plans to build new robotic fulfilment centres across America.

5. The sector also faced the challenge of companies that weren't ready for increased demand outside peak purchasing periods (i.e. Thanksgiving and Christmas) let alone an overwhelming spike in online orders, particularly supermarkets. Many supermarkets didn't have the technology in place to provide detailed visibility into inventory needs on more granular intervals i.e. day-to-day instead of month-by-month. Without that visibility, sudden shifts in shopping trends can, and did, affect product availability. Companies also had traditionally siloed their retail, wholesale, and e-commerce channels into separate distribution centres which exaggerated the shortages.

Addressing COVID-Related Labour Challenges

6. Disruption to the supply of labour caused by the pandemic has greatly impacted the sector and is another factor prompting this move into automation. Before the pandemic, the US logistics sector was experiencing a labour crisis. Then distribution centres deemed non-essential by state and local authority regulations were closed. Many other distribution centres were voluntarily closed due to outbreaks in their facilities. While the sector experienced high rates of employee absenteeism due to health and safety fears and school closures.

7. While facilities have redesigned operations to allow for social distancing, the need to minimise person-to-person contact while ensuring efficiency is a key driver for automation or semi-automation. Hobkirk noted "Technology like case sealers, print-and-apply systems for shipping labels, in-motion scales for manifesting, and shipping sorters have been around for years, but again have had a high bar to clear in terms of return-on-investment. The math changes on some of that now, and this technology will be more attractive."

Cost Remains a Key Driver

8. However, the cost of logistics automation technologies are still significant and there is minimal automation in the majority of US warehouses and distribution centres so businesses are essentially starting from scratch. While products have improved over time and the market as opened up to more competitors, even entry level technologies are costly for small-medium sized businesses. The Honeywell study found more than half of the consumer-packaged goods industry sees the cost of implementation as a major barrier in further automation. Businesses also have concerns regarding the availability of skilled workers to effectively embed technologies into existing operations.

9. With the US experiencing high unemployment, immense economic uncertainty, businesses may decide to maintain their reliance on labour under these conditions.

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