

ALL THE WAY



The Changing Shape of E-commerce Logistics

Stay Connected

Stay Connected

The Changing Shape of E-commerce Logistics

Executive Summary



With millions of consumers switching online amidst stay-at-home measures and the forced closure of non-essential stores, retailers have had to pivot their logistics to meet the extraordinary rise in e-commerce demand. However, the impact of COVID-19 has made e-commerce logistics more complex than ever before with even the most established online retailers being pushed to the limit.

In this report, we examine COVID-19's impact on e-commerce logistics and interview Martin Holme, Maersk Global Head of Supply Chain Management and E-commerce Logistics and Christoph Stork, Maersk Global Managing Director of E-commerce Logistics to explore what it means for supply chains now, and in the future.



Key learnings

- Social distancing measures and closure of non-essential retailer outlets has drastically increased e-commerce demand while simultaneously increasing the complexity of e-commerce supply chains.
- Long-term, COVID-19 is likely to accelerate the growth of online sales and omnichannel solutions and retailers need to be prepared to integrate e-commerce logistics into their business strategies.
- The priority for retail supply chains in the future is likely to shift away from cost towards resilience, flexibility, and sustainability.

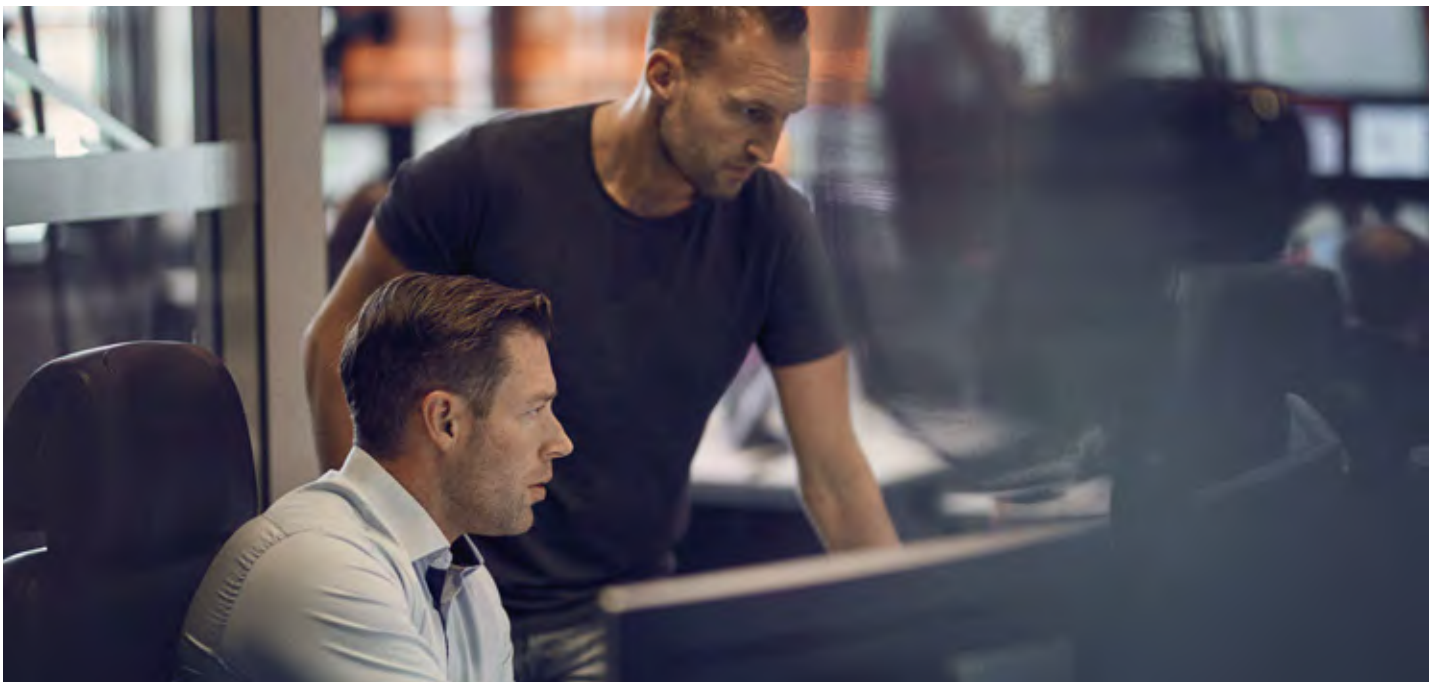
The Rise of E-commerce Logistics

E-commerce sales have been growing rapidly with online consumer purchases, almost doubling its share of global retail sales in the past five years. Last year saw Amazon surpass Walmart as the biggest retailer in the US¹ with global online sales accounting for 14.1%² of the market and projected to reach 22% by 2023.³

As a result, retailers have been slowly shifting their focus away from physical outlets. In the first half of 2019, large US retail chains collectively closed 7,062 stores, more than during the 2008 financial crisis. In the UK, 2018 saw a net closure rate of 37% of brick and mortar outlets as the ease of purchasing online has drawn more customers to digital solutions.

Nonetheless, the overall trend for retailers has been towards an omnichannel mix of online and offline that maximises last-mile delivery points for the consumer. Similarly, e-commerce retailers are embracing physical locations for the same reason and key players have started investing in brick and mortar strategies with the likes of "Amazon Go Grocery". Indeed, Alibaba has acknowledged that "pure-play" online operators face tremendous challenges if they remain 100% online.⁴

COVID-19 aside, the need for all retailers to enhance their online offerings and adopt an omnichannel approach is only likely to gain momentum in the future and, as a result, lead to the further evolution of retail supply chains and supply chain visibility.



¹ <https://www.verdict.co.uk/electronic-payments-international/comments/e-commerce-growth-covid-19-too-much/>

² <https://www.statista.com/statistics/534123/e-commerce-share-of-retail-sales-worldwide/>

³ <https://www.logisticsmanager.com/logistics-manager-analysis-e-commerce-logistics-i-want-it-my-way/>

⁴ <https://www.retaildive.com/news/alibaba-ceo-pure-play-e-commerce-faces-tremendous-challenges/428285/>

Stay Connected

The Changing Shape of E-commerce Logistics



How pandemics can boost e-commerce purchasing

In the past we have seen that pandemics such as COVID-19 can have significant impacts on consumer behaviour. Globally, the single biggest driver of global e-commerce growth has been China. In 2019, e-commerce accounted for just 10.9% of total retail revenue in the US. In China, it was 35.3% and that figure is projected (pre-COVID-19) to reach 64% by 2022.⁵

But it wasn't always this way. A key turning point was the SARS outbreak in 2002-2003 which sparked a significant shift in consumer behaviour. At the time, Chinese e-commerce was still in its infancy. However, as millions of people were forced to shift online, supply chains had to rapidly evolve to compensate, catapulting the industry forwards at an unprecedented rate. After the virus was defeated, this trend continued and today, China is seen as having one of the most advanced e-commerce logistics networks.^{6,7}

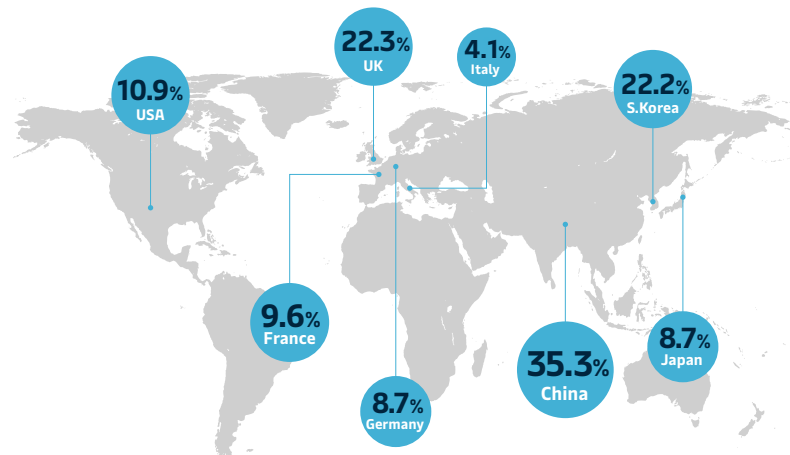
Today, as retailers and customers alike are forced online, the question is whether COVID-19 will trigger similar changes in the West. With millions of consumers in isolation worldwide, unsurprisingly, we've seen a sharp overall increase in global e-commerce sales. Global online retail transaction volumes rose by 74% in March compared to the same period last year⁸ and between January 1 and April 12, online retail revenue was up 70% in North America, while APAC was up 60%, and in Europe, brands are seeing an average of 40% to 80% YOY growth. In contrast, Sweden, which as yet has not implemented any isolation measures, has seen a steady

decline in e-commerce growth.⁹

As isolation measures are relaxed, the signs are that these numbers may drop again, they will nonetheless remain significantly higher than before the pandemic. According to a study by Kantar media, the number of people who undertake 50% or more of their total purchases online has grown by between 25-80% since the outset of COVID-19 and 6 out of 10 consumers intend to continue buying online once the pandemic is over.¹⁰

As such, retailers need to be prepared for a shift in consumer habits that is not just a temporary change in operations but one likely to accelerate the evolution of logistic networks

E-commerce market share by country (2019)¹¹



⁵ <https://www.statista.com/statistics/379087/e-commerce-share-of-retail-sales-in-china/>

⁶ <https://www.digitalcommerce360.com/2020/02/05/how-sars-contributed-to-the-birth-of-china-ecommerce/>

⁷ See also Alibaba: The House That Jack Ma Built, Duncan Clark, HarperCollins (2016)

⁸ <https://www.aciworldwide.com/news-and-events/press-releases/2020/april/covid-19-crisis-drives-changes-in-ecommerce-sales-aci-worldwide-research-reveals>

⁹ <https://ccinsight.org/#regional-trends>

¹⁰ <https://www.essentialretail.com/news/covid-19-shift-ecommerce/>

¹¹ <https://www.chandlernguyen.com/blog/2019/04/22/japan-e-commerce-is-lagging-behind-other-g7-countries-and-china/>

Stay Connected

The Changing Shape of E-commerce Logistics



The Impact of COVID-19

So far, COVID-19 has been something of a mixed bag for online retailers with the emergence of a new dichotomy; essential vs non-essential items. Demand for the former has sky-rocketed to unprecedented levels while almost completely dropping away for the majority of the latter. One of the hardest-hit sectors, for example, has been the clothing industry. In the US, clothing and clothing accessories sales dropped more than 50% YOY in March.¹² Inditex, the world's largest fashion retailer, said sales plunged 24% in the first half of March.¹³ A poll by Euratraz, the European Apparel and Textile Confederation, found that 80% of fashion companies have laid-off workers as a result and more than half expect a drop in sales and production by over 50%.

¹² https://www.census.gov/retail/marts/www/marts_current.pdf

¹³ <https://www.theguardian.com/business/2020/mar/18/profit-warnings-from-firms-across-europe-mount-as-covid-19-bites>

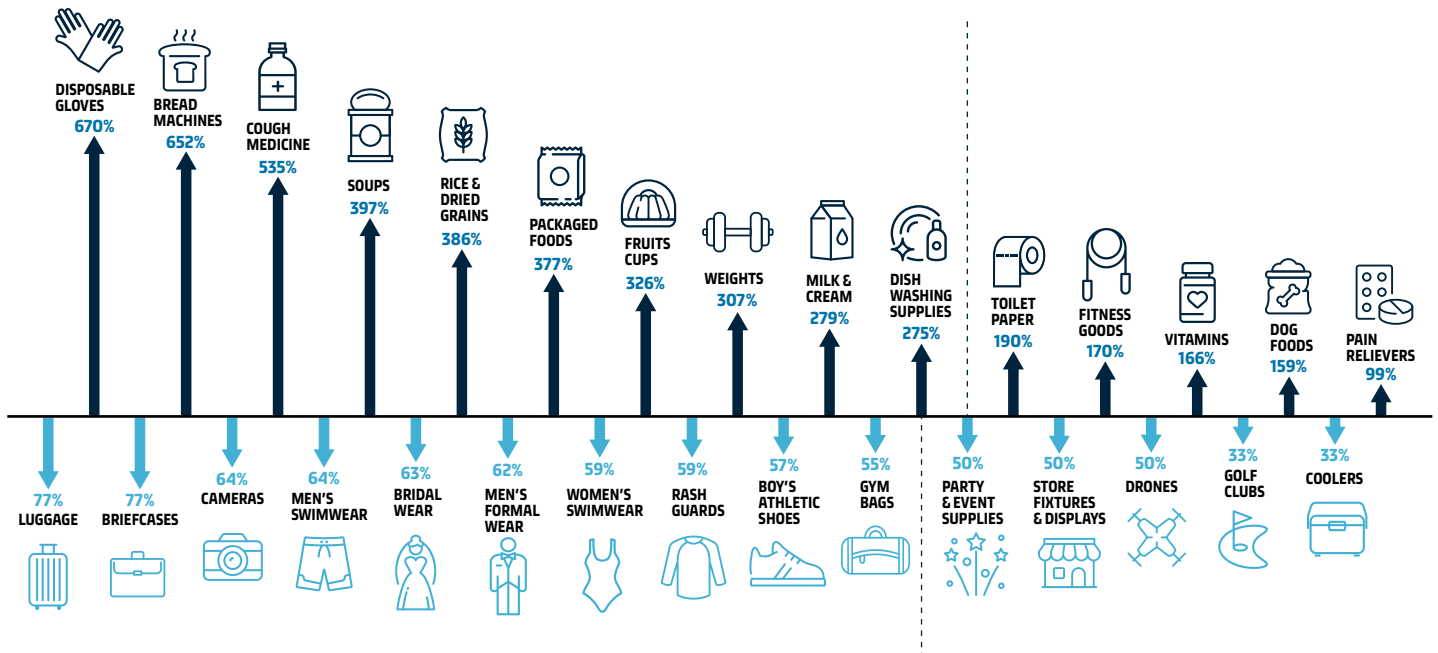
Stay Connected

The Changing Shape of E-commerce Logistics

High Demand Items vs Low Demand Items (March 2020 vs March 2019)*

Top 10 fastest growing e-commerce product categories

Other fastest growing categories



Top 10 fastest declining e-commerce product categories

Other fastest declining categories

Source: Stackline, Amazon, Business Insider, Euro news, CNBC, Visual Capitalist
* across U.S.

Brick & mortar retailers pivoting online

Government-mandated store closures are having an enormous impact on retail outlets, and non-essential businesses that rely heavily on physical outlets are facing enormous losses. While, according to the US Census Bureau, total US retail sales were down 8.7% in March compared to last year, department stores have seen sales drop by more than 24%.¹⁴

For retailers with no online capacity, there is simply no channel to sell their stock, and they have been forced to adapt quickly to the new situation. Mostly this has been smaller businesses¹⁵ who are able to pivot faster, however some big names have also embraced online sales for the first time including German discount supermarket chain Aldi alongside other supermarkets including Marks & Spencer and Morrisons.



Some big chain stores like Aldi (German discount supermarket chain), Marks & Spencer and Morrisons have embraced online sales for the first time due to this pandemic.

¹⁴ <https://qz.com/1838497/retail-bankruptcies-from-covid-19-may-just-be-beginning/>

¹⁵ <https://www.rte.ie/news/business/2020/0407/1129150-covid-19-prompts-hundreds-of-businesses-to-move-online/>

Stay Connected

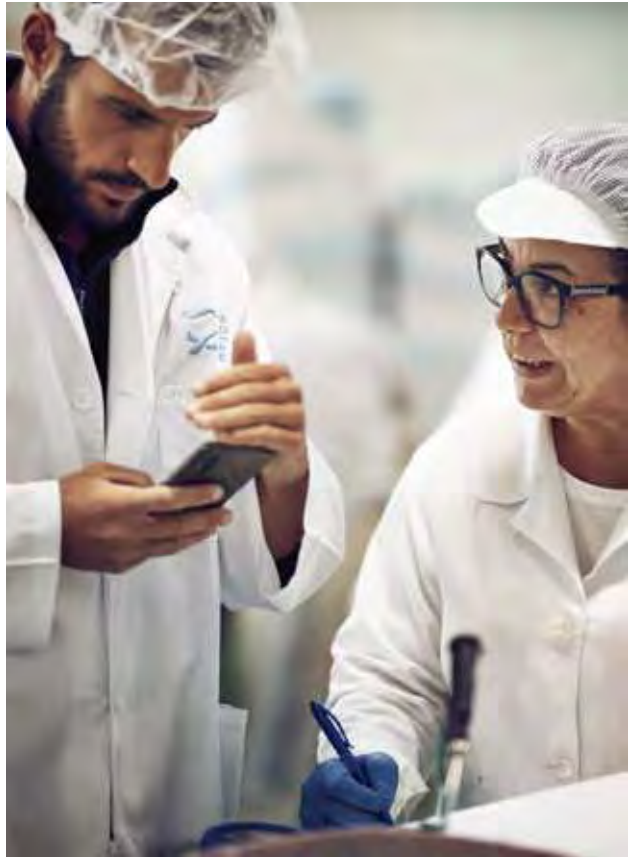
The Changing Shape of E-commerce Logistics

Online retailers pushed to the limit

The huge spike in demand is heaping pressure on distribution facilities, delaying shipments, and stretching supply chains to the point that even e-commerce giants like Amazon are being pushed to the limit.

Online retailer Rakuten saw online orders jump 151% through the week of March 12-15, with buy online/pick-up instore and home delivery services up 210% while grocery app Instacart saw downloads of its app grow by 218% in March alongside a 15% growth in average basket sizes.¹⁶ In March, UK-based food delivery service Ocado saw its website crash for several days as traffic to its website surged.

As a result, many retailers have been forced to suspend services such as same-day and next-day delivery, with a level of delays and wait times normally reserved for the Christmas period.¹⁷



Online retailer Rakuten saw online orders jump 151% while grocery app Instacart saw downloads of its app grow by 218% in March.¹⁶

Acute staff shortages

As if these challenges weren't enough, e-commerce supply chains are also having to contend with acute staff shortages. This is not simply due to the rapid influx of demand outlined above, but also because large numbers of existing staff are taking sick leave after showing symptoms of the virus. Many online retailers have also made the decision to voluntarily place staff on sick leave if they are in a high-risk category, further depleting resources.

As such, businesses are rapidly expanding their workforce to compensate. For example, in March Amazon announced the need to hire some 100,000 additional staff primarily to work in fulfillment centers and transportation operations.¹⁸ Likewise, with some 55,000 employees absent from work, UK supermarket giant Tesco hired 45,000 new staff in just two weeks to cover roles across distribution centres, delivery drivers, and in-store at an estimated additional cost of \$1.1 billion to the company.¹⁹



UK supermarket giant Tesco hired 45,000 new staff in just two weeks to cover roles across distribution centres, delivery drivers, and in-store at an estimated additional cost of \$1.1 billion to the company.¹⁹

According to PWC, this acute shortage of delivery personnel has become a new norm that retailers need to adapt to.²⁰ Even as demand flattens out to normal levels, new waves of the pandemic or any future resurgences are likely to have similar impacts, and businesses need to remain flexible moving forward.

¹⁶ <https://www.statista.com/statistics/1104519/grocery-delivery-app-growth-coronavirus-us/>

¹⁷ <https://www.theguardian.com/business/2020/mar/13/morrisons-speeds-up-payments-to-small-suppliers-because-of-coronavirus>

¹⁸ <https://www.forbes.com/sites/jackkelly/2020/03/17/amazon-is-hiring-100000-workers-will-this-good-news-ultimately-crush-small-businesses/>

¹⁹ <https://www.dailysabah.com/business/economy/tesco-hires-45000-new-staff-amid-covid-19-outbreak-expects-costs-to-surge-by-11-billion>

²⁰ <https://www.pwccn.com/en/retail-and-consumer/publications/impacts-of-coronavirus-turn-into-opportunities.pdf>

Stay Connected

The Changing Shape of E-commerce Logistics

Health and safety measures

At the same time, warehouses and distribution centres have had to adapt to new stringent health and safety measures for workers. This includes not only personal protective equipment (PPE) for staff but also social distancing measures, staggered work hours, and rigorous hygiene regimes, all of which add additional strains and costs on warehouse logistics.



UK clothing outlet Next and department store Fenwicks made a decision to shut down operations temporarily for the safety of their employees.

Some retailers, such as UK clothing outlet Next and department store Fenwicks, even temporarily shut down operations citing the need to keep workers safe with a message on Fenwicks' website stating "we don't have huge warehouses and automated systems, instead a group of dedicated workers handpick the items you purchase from one of our designated stores."^{21,22}

However, this is likely to be the new norm for some time. In China, warehouses and factories are still operating according to strict health and safety measures despite the spread of the virus being largely contained.²³ Businesses in the West can expect the same and retailers need to consider how they can adjust workflows at warehouses and distribution centres to accommodate COVID-19 related health and safety measures in the long-term.



²¹ <https://fashionunited.uk/news/business/the-covid-19-retail-crisis-sees-online-stores-closing-too/2020032648173>

²² <https://www.logisticsmanager.com/next-seeks-sale-and-leaseback-on-warehouses-for-100m-boost/>

²³ <https://www.businessinsider.com/foxconn-iphone-factories-china-reopen-extreme-covid-coronavirus-safety-measures-2020-4?r=US&IR=T>

Stay Connected

The Changing Shape of E-commerce Logistics

E-commerce Logistics



Traditional retail supply chains follow a sequential multi-tier structure: manufacturer, centralised warehouse, regional distribution centres, and a single customer delivery point – the physical stores. As a result, distribution is supply-driven with more inventory distributed across the entire chain, the movement of goods is slow due to relatively stable demand and weekly cycle times, and warehouse configuration changes weekly or monthly.

In comparison to traditional retail, e-commerce is much more complex. Distribution is demand-driven with rapidly fluctuating orders and hourly cycle times and continuously changing warehouse configurations. Unlike a physical store where customers come to you for their purchase, the burden of last-mile delivery is on the retailer and e-commerce customer expectations are high in terms of what they want and the speed in which they want it. Businesses also need to deal with item returns which is much more complex without a physical store. This increases the need for a huge level of digital support and high levels of visibility over the supply chain.

How is COVID-19 impacting e-commerce supply chains?



Consumers

- Huge increase in demand for essential goods overwhelming websites.
- Huge decrease in demand for non-essential goods.



Cross-border deliveries

- Backed up orders due to the impact of COVID-19 in production centres (e.g. China).
- Slow lead times as there is limited airfreight capacity. Businesses need to explore alternative routes to get their goods to market.



Regional warehouses

- Excess inventory for low demand items clogging up warehouses while there are stock shortages for high demand items.



Fulfillment centres

- Stock shortages – High demand means stock supplies are dwindling for some items.
- Staff shortages – With an influx of orders, fulfillment centres are having to rapidly increase their workforce to satisfy demand. This is exacerbated by high numbers of staff on sick leave.
- High demand means delivery slots are backlogged and unavailable.

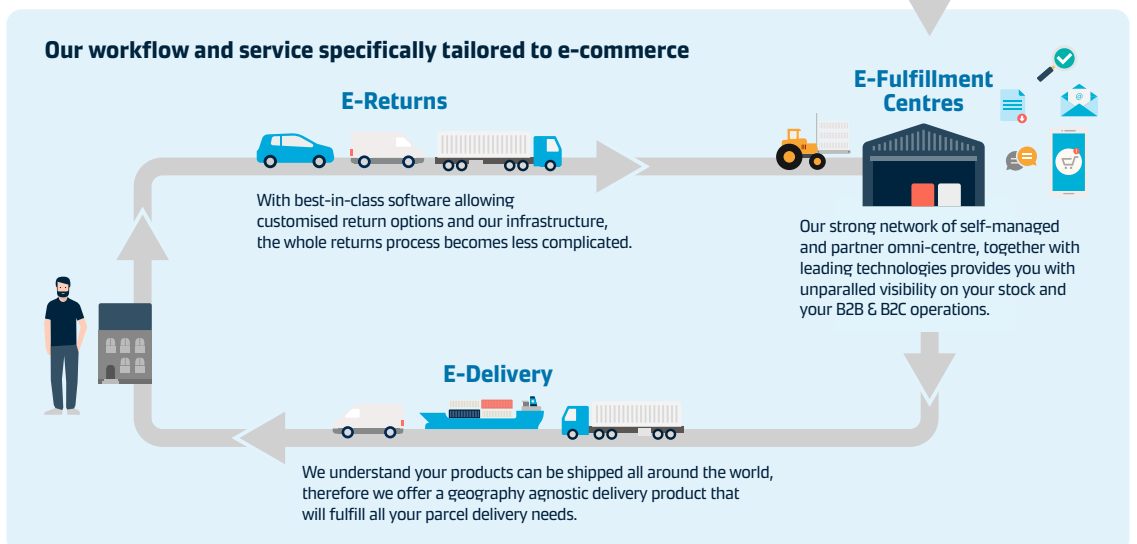
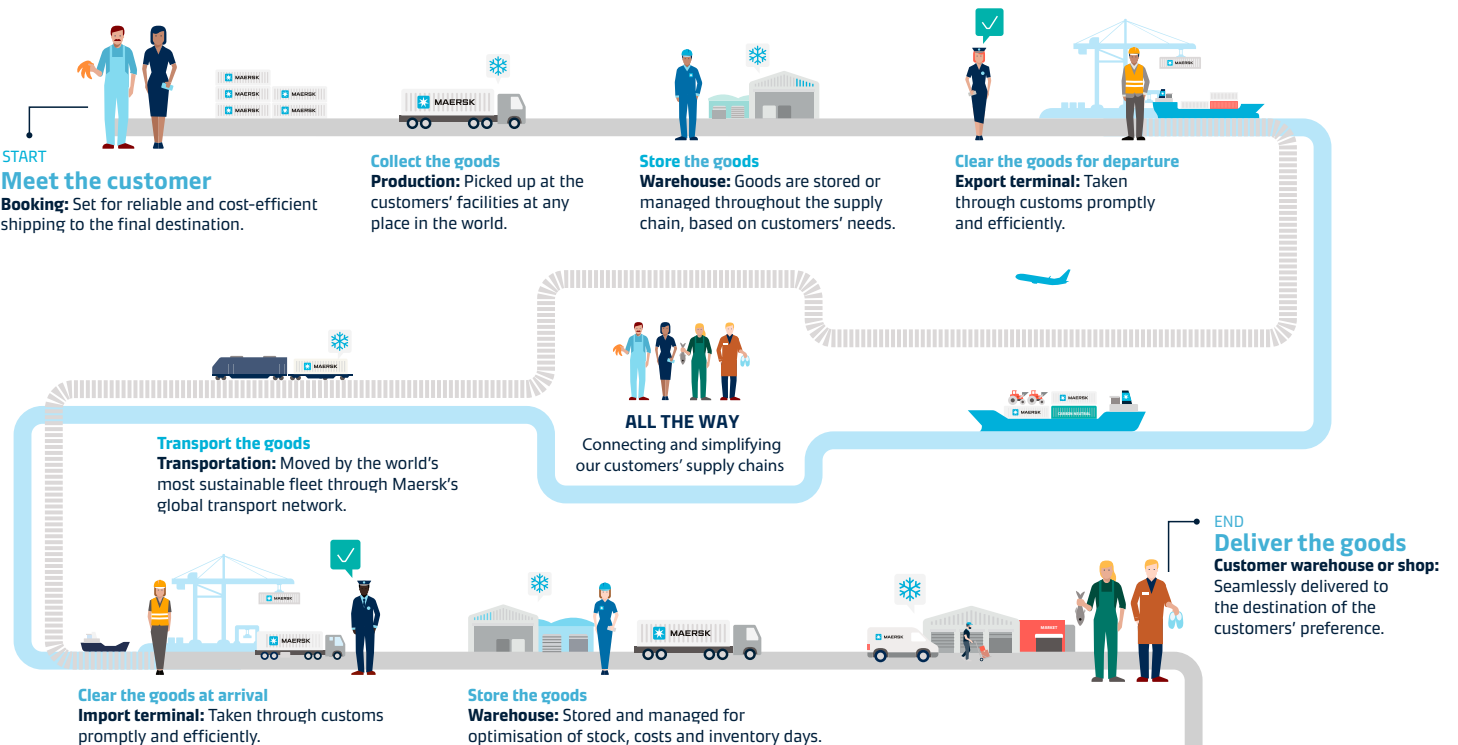
Stay Connected

The Changing Shape of E-commerce Logistics

A Complete E-commerce Logistics Ecosystem

The diagram below explains the Maersk workflow of traditional B2B supply chain. After the goods have reached the customer (your business), we integrate our 3 e-commerce solutions into your supply chain. By leveraging our existing assets and investing in new physical and digital capabilities, we strive to provide the omni-channel solution to enable our customers to fulfill the full potential of the fast-growing e-commerce business.

The below explains the Maersk workflow of traditional B2B supply chain. After the goods are arrived at the customer (your business), we integrate our 3 e-commerce solutions into your supply chain.



Stay Connected

The Changing Shape of E-commerce Logistics

Interview



Martin Holme

Global Head
Supply Chain Management and
E-commerce Logistics



Christoph Stork

Global Managing Director
E-commerce Logistics

What are the biggest changes you have seen in retail supply chains over the past 10 years?

The 2008/09 financial crisis was a key moment for e-commerce and retail in general. Because of the situation, demand became much more volatile and harder to predict and this was a huge challenge. Retailers also began looking to expand overseas and selling through wholesalers, creating new multi-channel supply chains with additional levels of complexity. This, in turn, brought a need for a range of new digital tools and higher levels of granularity and visibility along the supply chain.

As a result, supply chains needed to become significantly stronger and more agile. Businesses started asking whether they could speed up or slow-down the supply chains or how easily they could re-direct supply if they needed to. With COVID-19, these types of questions have taken on a whole new level of importance. Although this is a very difficult time for the industry, the situation would have been a lot more challenging if businesses hadn't already been addressing those questions.

What are the key impacts we are seeing from COVID-19?

The most obvious impact are the new categories of essential vs non-essential stores. While some traditional retailers have been able to continue doing business, the majority have only been able to operate through online channels and have had to ramp up their e-commerce capabilities in a very short space of time.

For essential services and high demand items, retailers have needed to quickly speed-up the supply chain. Prior to COVID-19, when demand was regular and predictable, long lead time routes were effective solutions. However, now retailers have had to pivot towards faster but higher cost solutions in order to meet demand. As an extra complication, the fastest transport option, airfreight, is the one transport that has been hit the hardest by COVID-19. With the majority of commercial flights not operating, there is approximately only 10% of airfreight currently resulting in huge competition for available space.

Conversely, non-essential retailers struggling to sell their products have needed to slow down the supply chain to avoid becoming saturated in stock they cannot sell. Early on in the crisis, there were up to two months of orders in transit with goods that people simply weren't buying. So, retailers and logistics companies had to find ways to slow down the transit by storing goods at various points along the chain.

Which e-commerce supply chain models are the most/least impacted by COVID-19?

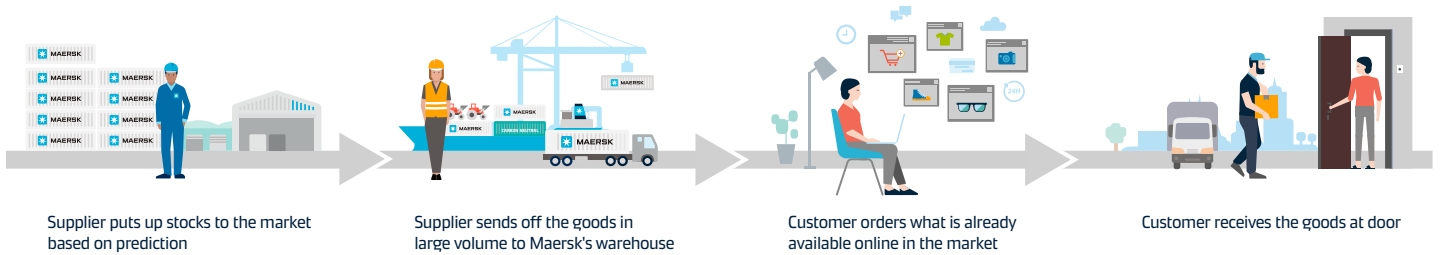
Generally, domestic and localised supply chains have been least impacted. While they have needed to keep up with demand, they are less exposed to the huge complexities of the international supply chain.

For cross-border e-commerce, the situation is more complex and, because this is the fastest-growing form of e-commerce logistics, the impact has been greater.

Stay Connected

The Changing Shape of E-commerce Logistics

Destination Fulfillment



Overall, Destination Fulfillment models, where stock is delivered to markets ahead of time according to forecasts, have worked well for essential items and in-demand goods since products are already in the market, and getting them to the consumer is relatively easy. The main challenge has been for non-essential low-demand goods as suppliers have already committed their stock and have had to cover storage costs until they can sell it or, worst-case scenario, take it back.

Direct Shipping



For Direct Shipping models, where suppliers wait for an order before delivering, the challenges are reversed. For non-essential low-demand goods, although they must contend with lost sales, they haven't committed to delivering a large shipment of stock they cannot sell, and the impact has been less. However, for high-demand essential goods, it has been a huge challenge to satisfy orders quickly enough. Generally, it is Direct Shipping for essential high demand goods that has needed to quickly pivot their supply chains to airfreight solutions and faster lead times and one of Maersk's key roles during the crisis has been to help these customers find alternative routes for their products.

Normally, Direct Shipping tends to suit smaller suppliers however this is something that may change in the future. We support many suppliers who want to shift in this direction by helping them mine their data to make accurate forecasts and develop risk profiles about how much product they want to ship, as well as help with e-fulfillment and e-returns.

Stay Connected

The Changing Shape of E-commerce Logistics

What are the long-term impacts on e-commerce from COVID-19 likely to be?

COVID-19 is a fast-forward for e-commerce logistics similar to how SARS was a massive boom for Chinese e-commerce. The current situation is, however, different and the boom is likely to be much more potent. Firstly, e-commerce today is significantly more advanced than it was in 2002 and secondly, the impact is global whereas SARS was mostly restricted to just China.

So, we are seeing a situation where more people are being exposed to e-commerce for the first time and at a time when, despite all the challenges we are seeing, e-commerce logistics are actually highly advanced and work extremely well. Imagine this crisis without e-commerce and the supply chain that supports it – it would likely be worse for consumers and retailers alike.

How do you see e-commerce supply chains evolving in the future?

The trend toward omnichannel solutions is going to continue. Customer expectations are increasing and, overall, we are getting more demanding as consumers. This is going to drive a need for all B2C retailers to have an omnichannel offering that gives customers as many purchase and delivery point options as possible. This is especially true of returns. Returns are going to become increasingly important and are going to be a crucial factor in which businesses are successful.

In recent years, there has been a shift away from cost and towards resilience, flexibility, diversity, and sustainability as the key driving factors behind how supply chains are structured, and this is a trend we expect to continue to see in the future.

Sustainability especially is a mega-trend we have seen over the past two years that has been really driving decisions. The introduction of electric vehicles for last-mile delivery, eco-friendly packaging, and generally lowering the footprint of each order are going to become increasingly important.

What advice do you have for retailers who are looking to launch a new or expand their existing online e-commerce operations and logistics?

Always start with a business strategy. You need to ask yourself: What sort of supply chain do I need? What sort of speed do I need? What sort of agility will be required? What are my costs going to be? What sort of returns policies do I need? How will my omnichannel structure look? What about sustainability? Ask these questions and try and fit that to your business strategy.

And of course, find a long-term partner who can help you co-design the most suitable supply chain for your needs. But, you need someone who is able to work with you for the long-term. If we can learn anything from COVID-19, it is that supply chains today are very dynamic, and strategies need to be revised with evermore regularity. So, **you need a partner who is equally dynamic and ready to go on that journey with you.**



Stay Connected

The Changing Shape of E-commerce Logistics



Stay Ahead of the Crisis

If you haven't already, we advise that you contact us to understand what potential impacts there are on your e-commerce business, and find out what we tailor-made solutions we offer based on your needs.

1. Reach out to our experts from e-commerce solution product team:
 Amit Sharma (West Central Asia & Africa): amit.sharma@maersk.com
 Fernando Villar (Americas): fernando.villar@maersk.com
 Janny Zheng (Global Queries): janny.zheng@maersk.com
 Kalina Georgieva (Asia Pacific): kalina.georgieva@maersk.com
 Naud Frese (Europe): naud.frese@maersk.com
2. If you have a dedicated account owner or customer service team, please contact them directly.
3. Case Management: login to [Maersk.com](https://www.maersk.com) and raise a case. Our customer service agents will handle your case as quickly as possible.
4. Contact your local office: <https://www.maersk.com/contact>.
5. Chat with us online: <https://www.maersk.com/help/support/#/chat?liveChat=true>.
6. Keep your business moving during the COVID-19 situation: <https://www.maersk.com/stay-ahead>.

ALL THE WAY

