



Three emerging trends shaping intralogistics



Introduction

In 2020 and 2021, the world changed its shopping habits, and the immense growth in eCommerce has paved the way for new technology and improved customer journeys.

To stay competitive in this changing market, it is vital to be flexible, scalable, and informed on trends that are shaping the industry. If this fails, it is easy to fall behind and lose customers to competitors.

After 35 years of optimising warehouse performance, we have seen first-hand how new ideas and emerging technology can shape and redirect the industry. One of the most important things we do for our customers is sharing our insights and expertise on which trends shape the future of their industry.

One method we use to gain further insight into what the future holds is collaborating with various universities in the markets we operate. The students and professors provide valuable and inspirational reflections on how they think logistics will develop in the next 10-20 years. These insights, along with our continuous improvement in technology and automated solutions, make us able to predict the most important trends – and help our customers prepare for them.

In this whitepaper, we address three of the most significant trends within intralogistics that are shaping the future right now and will play an essential role in how the industry evolves.



VALUABLE DISCUSSIONS: A workshop with students at the Norwegian University of Science and Technology included valuable discussions on how logistics will develop in the next 20 years.



Trend #1 eGrocery

eGrocery has been an emerging trend for a while, but it was the pandemic that flipped traditional retail upside down in 2020, and the phenomenon really began to accelerate. The challenge ahead for grocers is to build a sustainable infrastructure that aligns with customer demands.

«It is a fascinating time to follow eGrocery. Challengers and new interpretations of the customer journey emerge all the time, and the shift from physical grocery stores to online is happening right now,» Thomas Karlsson, Managing Director in Element Logic Sweden, explains.

As eGrocery gains popularity amongst consumers, so does the need for efficient and user-friendly operations. In other words, an intuitive online platform, excellent quality, competitive pricing, and maybe most importantly – fast and reliable deliveries.

The automated intralogistics solutions to achieve real growth in eGrocery are ready. They provide the required speed and inventory control to win the consumers.

The next step – automation

Just a few years ago, it was hard to imagine that you could order your groceries via an app and have them show up at your doorstep the same day.

The first indications towards the fully online grocery store were in-store picking solutions where employees pick customer orders in the same space as other customers shop. For many, the next step was introducing a «dark store» where companies close their stores for customers entirely and have employees pick orders. The last-mile challenge can either be solved through click and collect or home deliveries.

Today it is common to see a hybrid business model where grocers use click-and-collect and in-store picking in addition to using a dedicated space in the ►

Trend #1 eGrocery

building as a dark store. Others choose only to use dark stores or centralised and/or regional warehouses to be 100 per cent online.

Once companies begin transporting groceries directly to the consumer, the need for a sustainable infrastructure emerges. The infrastructure from order to delivery must be fast and reliable, which, if not done smartly, can be costly and not profitable for the grocer. An analysis from consultancy Brian & Company found that hand-picking online orders from a physical store, delivering them, and charging no customer fees typically has an operating margin of negative 15 per cent.

«Companies can achieve a sustainable and profitable infrastructure by automating the warehouse.»

Thomas Karlsson, Managing Director in Element Logic Sweden



«Companies can achieve a sustainable and profitable infrastructure by automating the warehouse. By not relying on manual labour to pick orders, the grocer eliminates human picking errors while also speeding up the process immensely,» Karlsson explains.

Innovation and temperature control

«At Element Logic, we offer AutoStore solutions that can pick in both room temperature and cooled environments. We are continuously looking for ways to improve the process further to offer automated picking and material flow handling in even more types of environments,» Karlsson says.

In a testing facility, AutoStore is currently experimenting with new ways to use AutoStore solutions in eGrocery. The testing facility can reach temperatures of up to 60 degrees Celsius or minus

40 degrees Celsius. Controlling the temperature is crucial when storing groceries.

Swedish eGrocer invested in AutoStore

There are many examples of pure eGrocers that have experienced tremendous growth lately. One example is the Swedish company MatSMART, which sells groceries that would otherwise be disposed of due to over-production, improper packaging, seasonal trends, or short expiration dates. These goods are sold for a lower price online.

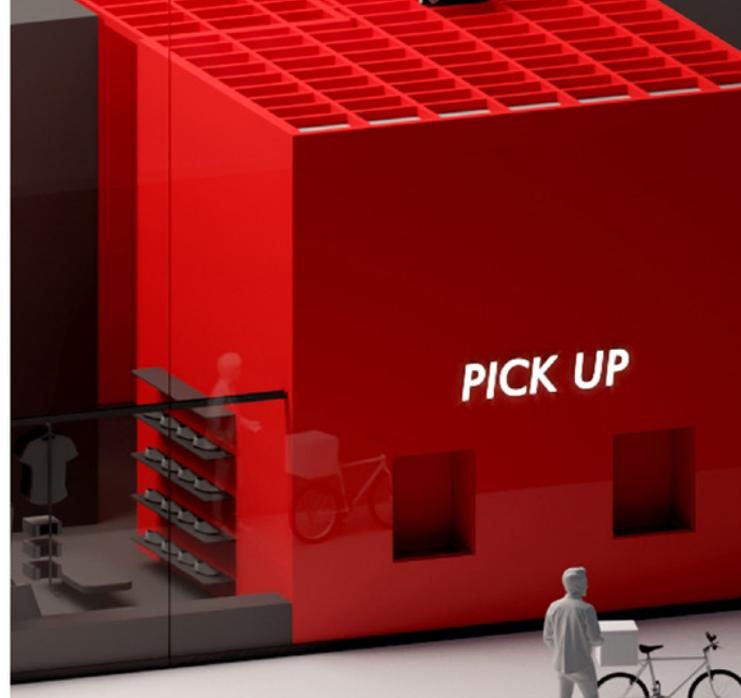
The business model was a success, and by 2021, MatSMART had maxed out its manual labour and space capacity. It was time to take the eGrocery store to the next level. The new automated solution delivered by Element Logic provides MatSMART with three times more capacity while also giving the company even more space to grow. The 149 robots are estimated to pick 6000 items per hour from the 88.000 storage bins.

«Creating durable logistics solutions that are also cost-efficient is the success factor for being profitable and winning eGrocery customers long-term,» Karlsson says.

Many grocers are trying to figure out how to distribute profitably to the smaller cities and rural areas. Today, many grocers only offer home delivery to customers living in the major cities. The answer is most likely micro fulfilment centres combined with more extensive regional warehouses.



SMART INVESTMENT: The Swedish company MatSMART got three times the capacity with their new automated solution.



Trend #2 Micro fulfilment centres

Customers are expecting same-day or next-day delivery as well as click-and-collect options. To shorten the delivery time, companies open smaller warehouses closer to their customers.

«Accurate tracking is becoming more and more important in the customer journey.»

Joachim Kieninger, Director of Business Development in Element Logic Germany



Amazon facilitated the pressure towards faster, local deliveries a few years ago. And now, the industry and market expectations in the U.S. have put pressure on the European market,» Joachim Kieninger, Director of Business Development in Element Logic Germany, explains.

Micro fulfilment centres explained

In theory, a micro fulfilment centre can be placed anywhere. In addition to shorter, local delivery time, it allows for better inventory control, faster and easier returns, and to some extent – lower transportation costs.

«Delivery time is directly related to distance, and by being closer to the customer, you can give them a more accurate estimation of when they can expect their order to arrive. Accurate tracking is becoming more and more important in the customer journey», Kieninger explains. ►

Using smaller warehouses for local order fulfilment has been named micro fulfilment. Micro fulfilment centres first emerged in the United States a couple of years ago. In the last year we have also seen the trend entering the European market.

«A logistics trend of this calibre usually only happens when the industry feels pressured by the end consumers to make the change. In the U.S.,

Trend

#2 Micro fulfilment centres

There are two different types of micro fulfilment centres we believe will shape the future of logistics. One is the dark store, where only employees have access. The other is a regular storefront where a dedicated space in the back is used as a micro fulfilment centre. As the micro fulfilment centre is closer to the customer, companies often let them choose whether to pick up the order or get it delivered.

«One industry that has embraced micro fulfilment centres is the grocery market. Here, the consumers cannot wait for a long delivery time as they are buying essential items with expiration dates. With time I believe more sectors will follow», Gavin Harrison, Sales Manager in Element Logic United Kingdom, says.

Automatic versus manual micro fulfilment centres

«I believe that the manual micro fulfilment centres will be replaced by automated solutions sooner rather than later,» Kieninger predicts.

Even though using micro fulfilment centres is a very forward-minded way to do logistics, many companies using this solution have yet to automate their operations. When relying on manual labour, the company accepts lower productivity. There are only a certain number of products human labour can pick per hour, and there is only a certain amount of shelf space in a warehouse. These numbers are even lower in micro fulfilment centres, and there is even less space.

«In my experience, if twelve or more employees are working at a micro fulfilment centre, you can gain a significant amount of efficiency and reduce operating costs by automating,» Harrison explains.

One company that invested in automation in a local warehouse is the Swiss-based Peterhans. They



FASTER DELIVERY: With AutoStore integrated into the shop customers receive their goods even faster.

use the combination of a regular storefront and an extended warehouse in the back. By automating, Peterhans achieved greater storage capacity, increased warehouse efficiency, and gained a short, unique, and reliable customer journey. In addition to picking online orders, the robots pick orders for customers physically visiting the store.

The storage density is the most significant difference between a manually operated and an automatically operated micro fulfilment centre. It is challenging to store and keep hundreds of products available in a small space. However, if you invest in an automated solution, like AutoStore from Element Logic, the storage capacity increases significantly.

«Smart storage is something an AutoStore system does best. We can fit the modular solution to your ►

Trend

#2 Micro fulfilment centres

existing space and allow you to be more efficient with significantly more stock. This differentiates us from other solutions like shuttles and AMRs», Harrison says.

Is this a trend that will stick?

The rise of eCommerce has decreased brand loyalty as it has become far easier to make price comparisons. A survey done by McKinsey showed that three-quarters of Americans changed their shopping behaviour after the pandemic began. Forty percent of these reported changing brands during this period. This resulted in a doubling of consumer brand switching in 2020 compared to 2019. We believe that providing an excellent customer journey will increasingly be used as a competitive edge to retain customers.

The micro fulfilment centre concept, as a trend, brings customers more value and is shaping

logistics right now. However, whether it will become a standard within operations across several industries will only be revealed with time.

«It is still an additional service that companies can offer to increase customer satisfaction. However, as the demand rises and consumers get used to the comfort of fast deliveries, I believe micro fulfilment centres will become the standard. My guess is that it will happen in the next five to ten years», Kieninger says.

Harrison agrees with Kieninger in his prediction.

«Which retailer a consumer ends up buying from is often decided by tiny margins. By facilitating same-day delivery, companies can gain the necessary competitive edge. The COVID pandemic has only speeded this process up,» Harrison explains.



INCREASED CAPACITY: The storage density is the most significant difference between a manually operated and an automatically operated micro fulfilment centre.



Trend #3 Automation as a Service

Investing in an automated warehouse is worth it for most companies. However, not all companies can afford, or want, to invest before they are sure it is profitable. An emerging trend that accommodates this is automation as a service – AaaS.

«There are several ways to investigate a new business model where we sell our automation concept as a service and not a product. Currently, we are exploring our options and researching what the market needs to automate at an earlier stage», Håvard Hallås, chief commercial officer in Element Logic, explains.

Renting an automated warehouse solution will probably end up more expensive than buying and owning the solution. However, not all companies have the necessary finances to invest in automation, even if their increasing customer demands require them to find new ways of conducting logistics. By subscribing to an automated solution, these companies will free up funds to grow and innovate in other areas.

Automation as a Service will also allow young companies to access automation at a much earlier

«We will make sure the capacity is never too low or too high and be available for support and service whenever it is needed.»

Håvard Hallås, chief commercial officer in Element Logic



stage of their development and facilitate rapid, sustainable growth without cumbersome operations.

«It is a general trend not only in our industry but across all industries, that many prefer a subscription model where the costs are spread evenly throughout the year compared to a large first-time investment. This also eliminates the risks related to owning the solution for the customer», Hallås adds. ►

Trend #3 Automation as a Service

Predictable and all-inclusive warehouse automation

«We will probably automate in five years when we are bigger and have more money.»

This sentence is something we frequently hear, and a reason for why offering automation as a service makes sense. If this trend is realised, the system integrator will own the solution and the equipment, not the customer. Other than the initial investment and the ownership, the customer experience would look very similar. The solution would be built according to the customers' needs and be a more flexible approach to automation with less commitment required from the customer.

«If we offer automation as a service, it will be important to treat those customers in the same way we treat customers who buy the solution. We will make sure the capacity is never too low or too high and be available for support and service whenever it is needed», Hallås says.

An AaaS business model could build on the traditional service subscription models and charge a set price each month. Another option could be to charge a small fee per transaction – or maybe a hybrid of these.

AutoStore – perfect fit for AaaS

No matter which business model is used to offer AaaS, we believe that AutoStore is the best system to adapt to this new way of thinking about warehouse automation.

AutoStore solutions delivered by Element Logic are modular and flexible. This means that it can fit into any space and is easy to scale up or down when necessary. When offering warehouse automation as a service, this will be a great advantage as it

can easily be taken down and rebuilt in another warehouse if a customer decides to end the subscription.

«The fact that it is modular makes an AutoStore solution much more suited for a business model where customers can subscribe to a solution for a limited time», Hallås explains.

Other solutions on the market are often more permanently tailored to their customers and thus not suited for an AaaS-model.

Renting robots during seasonal peaks

A similar concept to AaaS is renting extra robots during seasonal peaks.

Renting robots makes sense when the fluctuation between peak and low season is so significant that ▶



ACCESS TO AUTOMATION: Automation as a Service will allow young companies to access automation at a much earlier stage of their development and facilitate rapid, sustainable growth without unruly operations.

Trend #3 Automation as a Service

it does not make sense to manage the maximum capacity year-round. Examples can be companies specialising in Christmas décor or swimsuits.

«Renting robots allows our customers to increase the picking performance of the solution during peaks – which again leads to more satisfied customers,» Hallås says.

Even though industries experience different peaks, there are some commercial holidays where all industries peak simultaneously, especially during Black Week.

«November, December and January are the months where most customers require additional robots to handle customer orders. Customers who rent

robots during this peak often end up buying the robots as they see the increased efficiency was worth it», Hallås explains.

Will AaaS become a reality?

The intralogistics industry has been doing well the last couple of years, and online sales are reaching new heights almost every day.

«The industry is experiencing tremendous growth, and it is therefore easy to become comfortable and stop innovating towards future customer demands and needs», Hallås says and adds:

«We believe that there is a market for automation as a service, and we look forward to exploring this further. Hopefully, it will become a reality soon.»



Summary

There you have it; these are three trends that are currently shaping the world of logistics.

eGrocery is changing the way we live and shop at an impressive speed. Currently, several established chains and start-ups are fighting for our online orders. The winners will be those who can offer predictable and fast deliveries with competitive pricing.

A micro fulfilment centre is a logistics tool to get closer to the consumers. Companies who set up smaller warehouses for local fulfilment gain several competitive edges – fast delivery, faster returns, and increased stock control. We believe this trend has come to stay.

To provide more companies with the opportunity to automate their warehouses without significant investments, we believe automation as a service will become a trend. AaaS will decrease the risks and make automation more available. We are currently exploring exactly how Element Logic could offer this in the future.

Our customers have experienced massive growth in orders over the last years. And especially during seasonal peaks. We remain flexible to prepare our customers for peak seasons, but new and innovative solutions are needed to handle the pressure as online sales continue to increase.

It is essential to have an efficient and sustainable infrastructure to handle customer demands. Whether that means micro fulfilment centres, preparation for seasonal peaks, increasing capacity, or adopting new technology – you can rely on Element Logic to help you achieve the necessary level of automation to stay competitive.

Our specialists will continue to work on innovative and new solutions to prepare our customers for the next logistics and automation trends.



Do you want to learn more about how we can optimize your warehouse operations? Contact us today!

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