



FROM ESSENTIAL TO EXCEPTIONAL

How to Upgrade Your
Fulfilment Operation
for the E-Comm Era



Executive Summary

- The COVID-19 pandemic has led to a global surge in online shopping, which in turn has increased awareness of packaging waste and its impact on the environment.
- Upgrading and optimising packing processes is the best way to meet the demands of today's e-commerce era.
- Inefficiencies should be identified and corrected to meet the unprecedented order demand.
- This can be achieved by tracking KPIs, such as order processing time, operating costs, order accuracy, damage rate, and customer satisfaction.
- Targeted solutions, such as optimizing the packing floor layout, **investing in automation**, and **integrating systems**, have the power to improve many of these metrics.





The COVID-19 pandemic sparked a seismic shift in consumer behaviour – the world experienced an explosion in online shopping even for basic items many would normally buy in store.

Experts have long predicted that e-commerce will one day surpass brick-and-mortar retail as consumers' primary purchasing method. But now, the pandemic has **accelerated e-commerce's growth by as much as four to six years.**

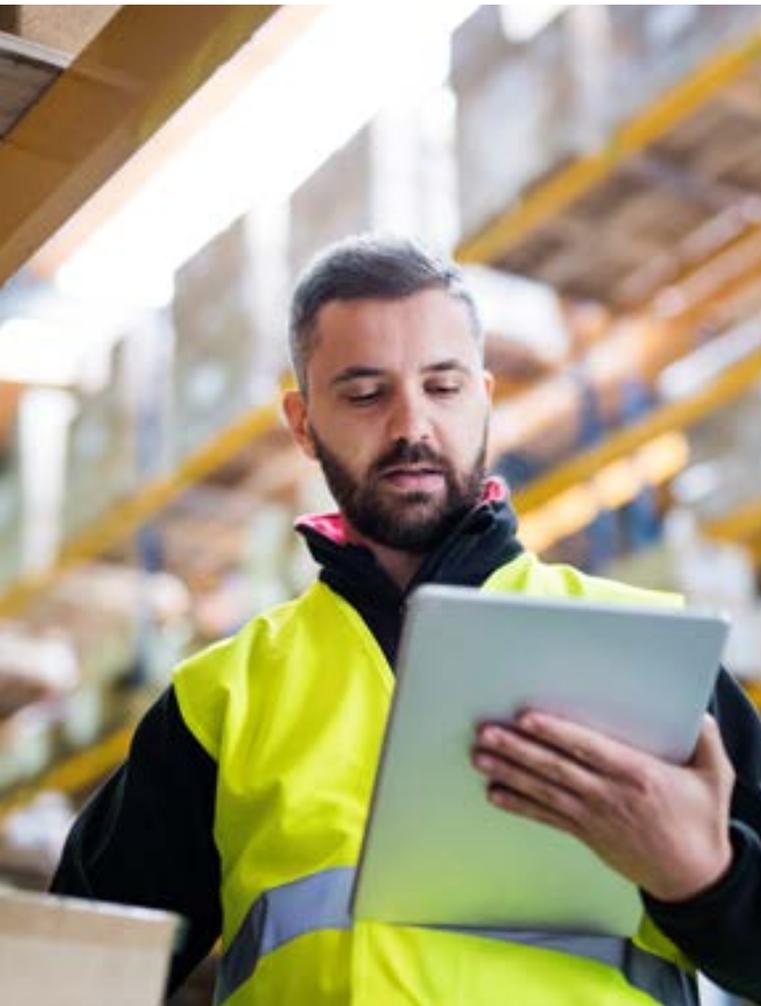
At the same time, consumers are growing more concerned about climate change and their personal environmental impact. As boxes arrive on doorsteps daily, it's impossible to ignore **wasteful and excessive packaging** – affecting shoppers' buying choices across all industries. Ongoing labour shortages and high order volumes are also causing growing concern of delays and delivery failures.

Between COVID-19 purchase surges and environmental awareness, distributors are poised to face numerous challenges:

Managing Increased Order Volume

The pandemic-era appreciation for convenience and speed has stuck around as the top reason consumers shop online, according to research by Pitney Bowes.

Many distribution centres struggled to keep up with the sudden uptick in order volume throughout 2020. The conventional wisdom is that Q1 2022 numbers weren't great for overall retail or e-commerce, and consumer demand for goods softened in response to continued inflation and more interest in services as COVID concerns recede. But demand may dip in the short-term as consumers remain in a strong position. Therefore, the massive operational changes implemented by distributors should now be fine-tuned and incorporated as permanent solutions.



Higher Labour Costs

The U.S. Bureau of Labour Statistics reported that there were **11.4 million job openings in April 2022**. Fulfilment centres face increasing difficulty filling open jobs, even with signing bonuses and other incentives. In an additional report, the Bureau found the separations rate for transportation, warehousing, and utilities had **increased to a staggering 59.5 percent in 2020**, followed by 49% in 2021. Experts estimate that replacing a warehouse worker in the US costs organizations **\$7,000 in lost productivity and training** (based on the \$28,000 average salary). Scaled to the growing size of the industry, labour can incur billions in avoidable costs.

Greater Competition for Customer Loyalty

As more consumers buy products online, there are more options for them to choose from – which means even more competition for companies. Minimising delivery issues is paramount to maintaining the brand loyalty that keeps companies competitive. Approximately 39 percent of online customers will never buy from a vendor again if a delivery arrives damaged or incorrect.

To bolster loyalty, companies also need to match customer expectations on sustainability. A study by BBMG and GlobeScan found that more than **40% of respondents consider themselves to be “aspirational consumers”** who choose to buy from brands that support causes they care about, including sustainability.

Though these challenges signify a revolution in the marketplace, distribution centres can respond in the way they operate.

IMPROVE PACKING PROCESSES TO LEVEL UP FULFILMENT



Precise systems for order picking, packing, and shipping are required to meet the demands of the e-commerce era. If current processes delay order fulfilment time by even just a minute, that inefficiency has the potential to scale to thousands of orders, translating to hundreds or even thousands of euros in additional labour costs. Not to mention, late shipments can create customer dissatisfaction and harm future sales.

Case in point: small inefficiencies can lead to significant – and often avoidable – expenses for companies and distribution centres.



Optimising Fulfilment

With Pregis' guidance, one of Europe's largest and most popular outdoor superstores upgraded their fulfilment centre with a new workstation layout and semi-automated overhead dispensers, reducing packing time and facilitating social distancing.

Prior to engaging Pregis' **integration services**, the packing centre was limited to one inflatable air pillow dispenser located in the middle of the fulfilment floor, which collected individual units in a bin. This forced employees to walk to the bin and back to their individual packing station, restocking their packaging material supply throughout the day – an extremely inefficient and labour-intensive process.

After our customer's packing process upgrade, the U-shaped packing floor was divided into 19 workstations, each accommodating two workers. Every station was equipped with an ergonomic, top fill (overhead) system, which automatically produces and delivers the air pillows where employees need them. This setup also enhanced social distancing and reduces potential COVID-19 spread by keeping employees at their stations.

Read on to find out how these upgrades enhanced their fulfilment centre performance – and how you can improve your operation as well.



BIG CHANGES, BIGGER SUCCESS

Change can be scary, but there is a science to choosing what upgrades to make and determining how well they're performing. Maximising profit potential can be as simple as tracking KPIs for your fulfilment centre and refining processes to polish them. Packing floor layout, workstation setup, machinery, and employee training influence the metrics in critical ways.

Here's how to improve each of these KPIs to unlock the full potential of a fulfilment operation:

Order Processing Time

The time it takes to get a product off the shelf, packed, and out for delivery is one of the most crucial KPIs in e-commerce fulfilment, directly tied to other metrics, including labour costs and customer satisfaction. A Retail TouchPoints survey found that **63 percent of consumers expect to receive a package within three days of placing an order**. If you're looking to improve order processing time, these are three of the best upgrades to implement in your fulfilment centre:

Optimise Packing Floor Layout: Reduce the amount of space between merchandise storage, packing stations, and on-demand paper and air pillow systems, so employees spend less time walking across the fulfilment floor. Place packing stations closest to the types of products they are used with. For example, **Sharp bagging machines** are better suited for durable, lightweight items that don't require product protection.

Take into account fixed architectural features, such as loading bay doors, as designs need to

accommodate them. It may be easier and more cost-effective to move an entire storage system closer to an existing conveyor belt setup than to build a new conveyor system.

Take our outdoor equipment retail customer, where they improved their packing floor and eliminated walking time by equipping each workstation with an overhead inflatable air pillow system.

Invest in Automation: Robotic systems, such as automated storage, retrieval systems, and autonomous vehicles, drastically increase order fulfilment speed.

Fully- and semi-automated packing stations – such as Pregis' **poly bagging, on-demand paper and inflatable air cushioning** – also improve productivity. These solutions can achieve a KPI of 15 to 35 packages per minute, making automation systems a great solution for labour-strapped or high-volume operations on tight shipping deadlines.

Integrate Systems: Internal order processing and fulfilment are often siloed and handled by separate systems, creating lag times between the two departments. As packing operations become tech-driven, new platforms can virtually eliminate internal order processing times and alert packers to fulfil orders within moments after customers check out.

Pregis integrations engineers help companies automate packaging solutions into their operations through several solutions as part of our four-step process.



Operating Costs

Operating cost is a large blanket metric affected by labour utilisation, packing supply use, shipping vendors, and facility costs. Similar to order processing time, centres can lower these costs by optimising the packing floor layout and investing in automation.

With their new workstations, our customer lowered their labour utilisation to significantly reduce operating costs.

An organised packing floor also saves space, making room for more equipment or inventory storage. It can empower a company to consider moving their operation into a smaller, less expensive facility.

Automation can also lower labour costs by reducing the number of employees needed or help existing employees pack a higher volume of packages at a faster rate. What's more, on-demand paper systems can control supply costs by minimising packaging material waste and providing uniform void fill, cushioning, and other protection without human error. Reduced costs for supplies can add up to impressive savings over time.

As the scale of fulfilment operations continue to grow, it's important to control operating costs as much as possible in order to prevent waste from ballooning along with demand. This is how the most successful companies maximise profits in the e-commerce era.

Order Accuracy

The order accuracy KPI measures the total percentage of orders delivered with the correct merchandise. Human error poses the largest threat to this metric. So, the primary way to progress the KPI is to invest in automated systems. Optimising the packing floor layout can also improve merchandise storage labelling, minimising worker confusion.

Pregis provides several **training services** that can help your employees refine their performance as well.

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CASE STUDY: SHARP® MAX-PRO 18 INTEGRATION



Automation technology allows users to track even more granular KPIs for major performance improvement. Recently, Pregis installed a custom, decentralised **Sharp® MAX-PRO 18** system in a customer's fulfilment centre. In addition to improving packing efficiency, the goal was to enable easy scalability (both up and down) based on demand from shipping volume, without drastically affecting costs.

The unique plug and play capabilities of the machines makes it easy to move the machines around the operation where they're most needed. Each machine also features a shipping label printer, so operations can continue in the event that print and apply lines go down.

This has led to some impressive improvements on key KPIs:

Cycle Time: With manual bagging, average packing time was 13.76 seconds per unit. The MAX-PRO 18 system reduced time per unit by 3.6 seconds, down to just 10.09 seconds.

Units Per Hour (UPH): Increased efficiency allowed the fulfilment centre to nearly double their units per

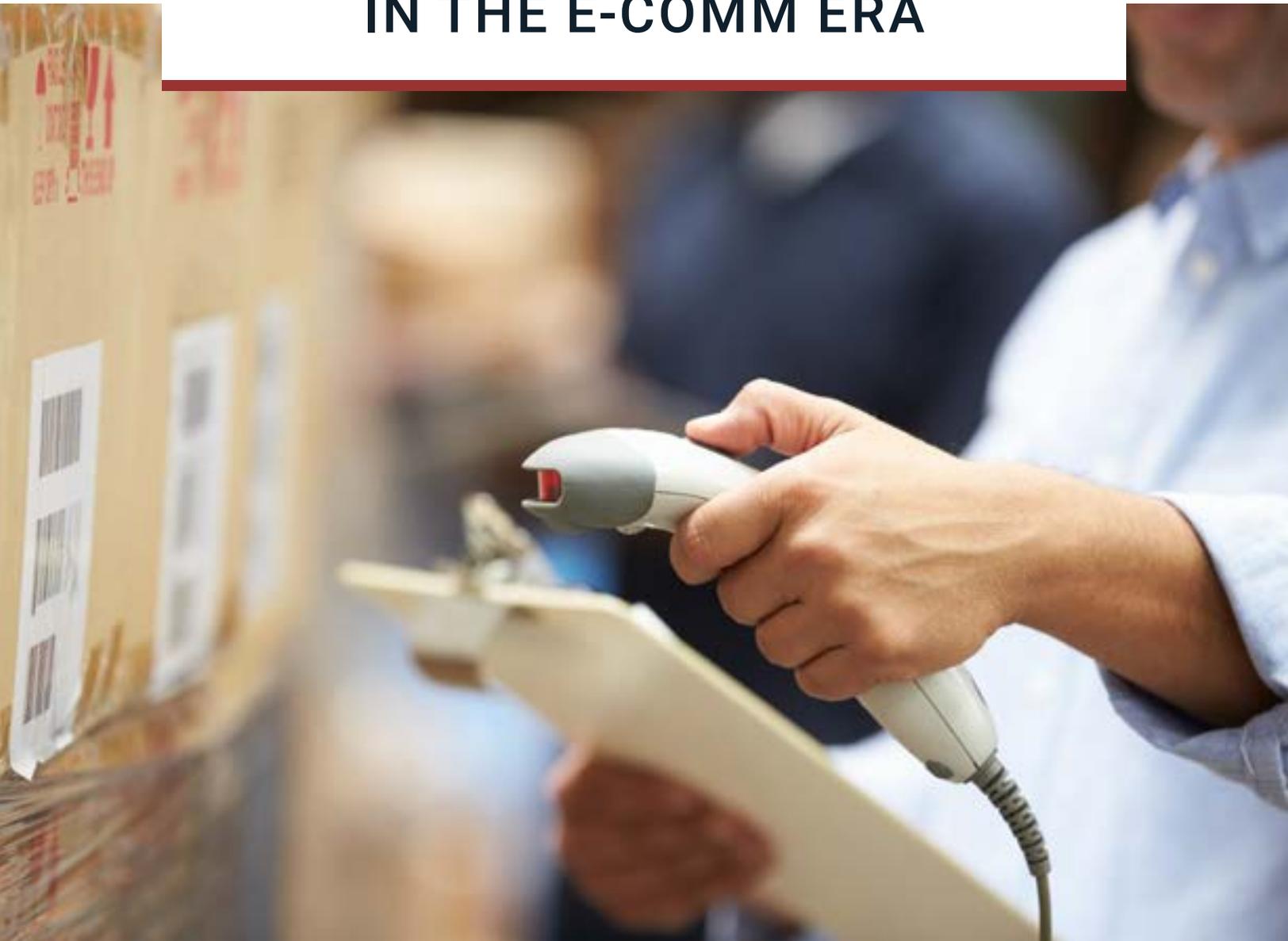
hour, from 170 to over 330. Auto bagging proved more efficient than manual packing by 130 UPH.

Process Steps: Prior to the installation of the auto bagging system, the process took a total of seven steps, all performed by people. The MAX-PRO 18 system reduced this number to four steps, with minimal need for human input, allowing labour to allocate their efforts elsewhere.

Ergonomic Risk: A less common KPI companies measure is the impact of system setups on movement. In comparison to the customer's manual packing operation, the MAX-PRO 18 machine setup reduced integrated shoulder movement by 23.7 percent in females and 39.1 percent in males. The automated workstation completely eliminated low-back efforts for all employees. Automation also decreased workers' fine muscle movements in hands and wrists to place items into bags, rip them from the wickets, tear off foil strips, fold bags, and apply labels.

In addition to improving these KPIs, the increased productivity and decreased labour utilisation translated to a cost savings of € 604,550 after the first year.

EXCELLENCE IS THE NORM IN THE E-COMM ERA



As online orders become part of everyday life for consumers worldwide, the way packages are delivered can be as much of a differentiator as the products themselves.

Mastering the art and science of fulfilment is just the beginning of becoming exceptional. The greatest brands of the next decade will be those that run time- and cost-efficient operations, prevent reshops, and exceed delivery time expectations – freeing up resources to invest in premium packaging that builds real connections with customers.



Bring your fulfilment operation up to speed by **contacting Pregis today.**



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