



CIMCORP

Resilience for tomorrow

How to future-proof your
warehouse operations

The uncertainties of business

Warehouses and distribution centers are no stranger to fluctuations in business and consumer demand. For instance, there are seasonal spikes that companies and their facilities can typically anticipate and prepare for. Consumer brands can often expect heightened demand around the holiday season and will thereby scale up their workforce accordingly to ensure product flow doesn't suffer during such a critical time of the year. At the same time, temporary staffing also presents challenges in vetting and training warehouse employees from already limited labor pools.

What 2020 and recent events have reminded many organizations of, however, is the unpredictability of the future and the volatility of demand. A multitude of factors—including the likes of a global pandemic—can seemingly appear out of nowhere and cause order volumes to skyrocket (as well as drop). When such sudden shifts happen, facilities need to be able to adapt their operations to meet demand and maintain optimal efficiency and service quality to the end customer.

Such adaptability and flexibility are key to building resilience and creating a future-proof warehouse that's ready for anything that may lie ahead. It's difficult to achieve in the traditional warehouse where operations are highly dependent on manual order picking by employees, but it is possible through more innovative strategies and technologies.



Challenges of keeping up

Today, there are robotic order picking systems that can perform the majority of product handling operations. These automated systems can receive, store and retrieve products for order fulfillment far faster than humanly possible, which can result in facilities that are six times more efficient than their manual counterparts.

The speed of these automated systems can be especially beneficial to companies distributing goods like fresh produce or bakery products, where the ability to meet very short lead times and thereby maintain product freshness are essential to customer satisfaction.

But to future-proof a warehouse you need to look beyond peaks and valleys and consider all the unpredictable scenarios that might affect your business. A good idea is to look for systems that are flexible and modular in design, allowing you to increase the levels of automation as necessary based on current or projected demand.

When designed for future-proofing, a robotic solution will give you the ability to handle both predictable peak periods as well as the unpredictable ones. This means you can eliminate the need to look for seasonal staffing and alleviate existing employees from bearing the physical burden of keeping up with increased order volumes. Moreover, such systems can run 24/7 with minimal human intervention, keeping orders moving out the door even during the most trying times.

Ultimately, a well-planned automated system provides a form of surge protection, ensuring your facility can run at its best, at all times, no matter how much your business may grow or demand may fluctuate today, tomorrow, and long into the future.



BACK TO THE FUTURE

For companies who are new to automation but want to move quickly to implement a solution, you don't need a DeLorean to fast track your way to the future. Here are helpful tips to shorten the implementation process and accelerate adoption:

HONE IN AND FOCUS

The quickest way to streamline implementation is to focus on automating the processes that meet your immediate businesses needs and present the highest potential of success and impact. Focusing on these processes eases leadership buy-in, as they're the ones that would provide the biggest and quickest return on your investment. Your solutions provider can review your operational data and current processes to help you identify these opportunities.

DESIGN FOR NOW WITH FLEXIBILITY FOR THE FUTURE

Trying to build a solution that fits your long-term goals can slow down the design and implementation process. If time is of the essence, you want scalable automation that can solve your current challenges with the flexibility to be easily modified in the future. This allows you to focus on current data parameters, minimize the need for far-out projections and analysis, and shorten the lead time for development.

KEEP EVERYONE UP TO SPEED

If you need to move quickly on an automation project, then it's important to keep everyone, including decision-makers and local users, in the loop and share key details along the way. Regularly review timelines and deadlines so everyone has realistic expectations, and all parties can work together to implement automation quickly and successfully.

FIND COMFORT IN STANDARDIZATION

When looking to fast-track implementation, you should consider what standardized solutions are available that can fit into your existing facility. Standardized equipment, such as that of a modular solution, allows you to utilize a pre-engineered cell of automation that reduces lead times and can easily be repeatable to grow as your business grows.



Micro-fulfillment for efficiency and resiliency

An important aspect of resilience, particularly in distribution, is the ability to not only adapt and scale operations to meet demand, but also do so quickly. One of the latest ways organizations are scaling with speed is through micro-fulfillment centers.

Instead of solely relying on large-scale distribution centers, these companies are opening multiple regional “pop-up warehouses” that are a fraction of a typical facility’s size and can be set up—with automation—in a matter of weeks, rather than months.

Last-mile delivery

Micro-fulfillment centers are compact enough to squeeze into tight urban industrial buildings or even fit in the back of brick and mortar stores. For those in the grocery industry, this could mean placing automated pop-up warehouses in the back or side of local grocery stores, or sometimes even placing them within the store itself.

Other facilities can be strategically located in major metropolitan areas and designed to build orders of less perishable goods. These orders can then be sent to local grocery stores where perishable goods are added for delivery or curbside pick-up. This can be particularly beneficial to fulfilling online orders, which have grown significantly in volume as a result of e-commerce becoming a safer primary sales channel for many companies, including those in the grocery business.

Fast to set up with low investment required, these agile pop-up warehouses allow you to respond quickly to the growing needs and demands of consumers.

It’s micro-level investment for macro-level resilience!



ON THE MONEY

In addition to time savings during set up, micro-fulfillment centers can help organizations realize new cost savings in a number of areas:



REAL-ESTATE FOOTPRINT

Building a traditional distribution center requires a sizable real-estate footprint, and with it major construction costs. By building smaller facilities or leveraging existing stores, you minimize the amount of investment you need to make in real estate to meet your current business needs.



AUTOMATION COSTS

Given their smaller size, micro-fulfillment centers are far less expensive to automate—only a fraction of the costs to automate a large distribution center.



SHIPPING COSTS

Since these facilities are located closer to consumers, you can reduce the costs of last-mile delivery.

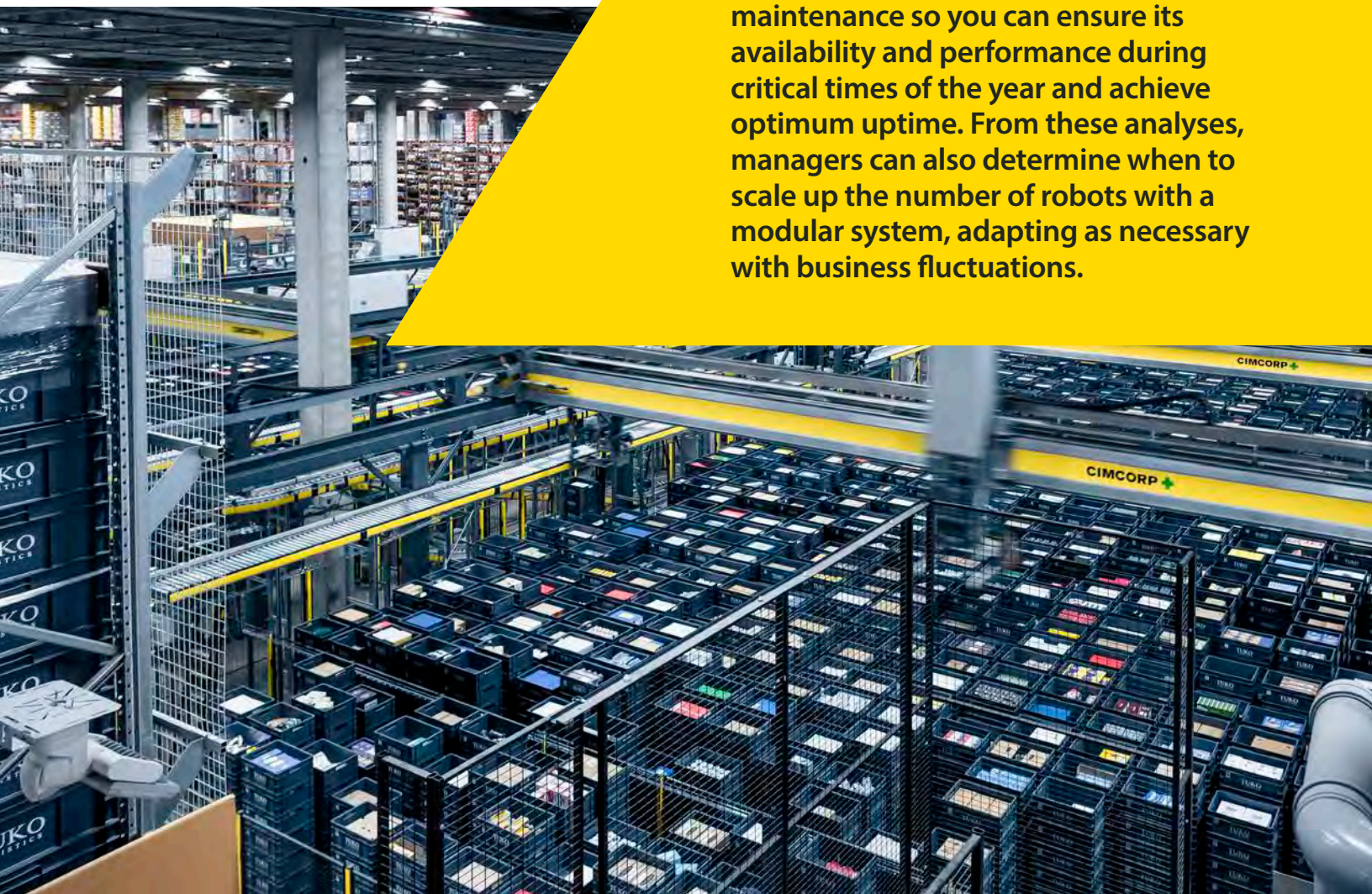


Smart warehouse. Smart choice.

To act with agility and intelligently adjust warehouse operations during market changes or disruptions, you need ready access to data and robust control over end-to-end processes, including your automated material handling systems. That's what a Warehouse Control System (WCS) provides. With a WCS, you can assess information on inventory, order lines, priorities and deadlines to optimally manage everything from individual robot movements to the entire material flow of the warehouse, even with surges and extremely tight lead times.

A WCS bridges the digital and physical world, creating flexible, cyberphysical environments. This is the smart warehouse of the future, informed by real-time data and executed through rapid, accurate and reliable automation. With historical data stored in the WCS, warehouse managers can also run analyses to find opportunities for future improvement. For instance, they can eliminate process inefficiencies according to evaluated facility performance.

It's also possible to preemptively determine if a system is in need of maintenance so you can ensure its availability and performance during critical times of the year and achieve optimum uptime. From these analyses, managers can also determine when to scale up the number of robots with a modular system, adapting as necessary with business fluctuations.



Surge-proofing during COVID-19

Founded in 1965, Kwik Trip is a family-owned and operated chain of convenient stores with over 700 locations throughout the Midwest of the United States. Kwik Trip is a vertically integrated company with its own bakery business that produces and delivers 25-30 different types of fresh baked goods to its stores each day.

To continue meeting growing demand for its bakery products, Kwik Trip opened a brand-new, 200,000-square-foot dedicated baking facility in La Crosse, Wisconsin in the fall of 2018. The state-of-the-art facility leverages automated systems to handle the majority of end-to-end operations in a well-orchestrated, integrated fashion. When looking for a solution to manage order fulfillment on its warehousing side, Kwik Trip turned to Cimcorp, having heard of its experience and expertise in automating order fulfillment in the bakery industry.

Within the 87,000-square-foot warehouse space, Cimcorp designed a space-saving, high-density layout and custom automated solution centered around its MultiPick robotic order picking system. The solution is able to rapidly manage 80,000 trays of fast-moving bakery products and process orders for 53,000 outbound trays to Kwik Trip stores within 20 hours each day.

Notably, when orders come in, that data is transferred to Cimcorp's WCS, which then controls and directs the MultiPick to pick the orders based on store and route. This computer control ensures that the orders are picked with 100-percent accuracy and that Kwik Trip follows a first-in-first-out (FIFO) inventory management model for optimal product freshness.

The modular design of the MultiPick proved invaluable at the beginning of the COVID-19 pandemic, as Kwik Trip saw consumer demand and output nearly triple in a single week. While Kwik Trip would have struggled to handle the surge with its previous manual setup, the MultiPick enabled the La Crosse facility to maintain the same level of product flow and order accuracy as its normal production levels.

Learn more about Kwik Trip's recipe for resilience here:

[Download Now](#)





Preparing for the future

While the future is uncertain, companies can future-proof their warehouses and order fulfillment processes through these new proactive and innovative means. From automated order picking systems and micro-fulfillment centers, to the cyberphysical control possible with a WCS, these solutions available today can help you mitigate the risks of the unknown and ensure your products continue to flow efficiently and effectively no matter what tomorrow may hold.

There's no time like the present. Speak with one of our experts to determine the best strategy for you to future-proof your distribution operations:

[Contact Us](#)