



A fresh take on food distribution

Unlock the secret to seamless warehouse efficiency and see how automation can revolutionize your supply chain, ensuring you stay ahead of rising consumer demands and stringent regulations!

CIMCORP
FUTURE OF AUTOMATION

Manage the entire material flow

from when products enter the warehouse,
through storage and right up to the shipping dock.

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Superior control over operations

Today's food and beverage manufacturers and retailers are facing unprecedented challenges across their supply chains. Pressures range from lowering costs while upholding product quality, to the looming threat of food recalls. Adding to these challenges are the requirements to meet ever-stringent regulations like the Food Safety Modernization Act (FSMA) in the United States and the European Union's EU Food Policy. One of the most critical points in this complex supply chain is the warehouse and distribution center, where the flow of products moving through a facility to be prepared for shipment directly impacts the freshness, quality and safety of goods on store shelves.



Within the warehouse itself, there are often unique challenges related to the efficient and accurate fulfillment of orders, especially in facilities that rely on largely manual processes. Employees have to move up and down long stretches of aisles, pick customer orders, and bend and lift heavy crates or boxes. Order picking becomes a strenuous job, highly dependent on the physical endurance and speed of each individual. In addition to

taking considerable time, such reliance on warehouse staff leaves a lot of room for costly human errors.

Instead, automation presents a fresh take on food distribution. Robotic order fulfillment solutions can manage the entire material flow, from when products enter the warehouse, through storage and right up to the shipping dock.

Automated warehouses thus have superior control over operations, which companies need to overcome the modern challenges of food distribution, including meeting greater consumer demands, keeping up during seasonal spikes in business and maximizing product shelf life.



The modern challenges of food distribution

Greater consumer demands and SKU proliferation

With the rise of e-commerce, consumers now expect to be able to get exactly what they want at the click of a mouse. They have thus become accustomed to being able to choose from a wide range of products. Food and beverage companies have been happy to follow suit, expanding their product

offerings with more options and variations than ever before, including more sizes, flavors and packaging types. Looking to cater to health-conscious consumers, many have also added organic, vegan or gluten-free options. This has led to a proliferation in SKUs, with some facilities increasing from

a hundred to a couple thousand units. Inside manual warehouses built years ago, they have to not only find space to accommodate such a sizable inventory, but also coordinate employees to move orders out the door with the speed and accuracy expected in today's e-commerce age.



Case study

Olvi brewery

Olvi, a 140 year-old traditional brewery in Finland, faced similar struggles with diversification in both packaging and products. Due to market demand, the brewery replaced its refillable glass bottles with recyclable cans and plastic bottles. There was also a large increase in its product range, growing from 200 to 350 SKUs—with continued growth expected. Combined with consumer demand for smaller batches and more frequent orders, these changes put significant pressure on the warehousing and distribution of Olvi's beverages.

But by bringing in an automated order picking system, Olvi was able to optimize its warehouse

capacity and boost its picking efficiency. Using a combination of robotics and warehouse control software, Olvi can control its entire distribution process—including warehousing, material flow and order picking—from the production line to the loading bay. The system rapidly picks products stored in stacked pallets on the warehouse floor. With this space-saving design, Olvi can now store up to 13,800 pallets—double its previously available space—and with room for future growth. Additional updates were made to automate the handling of full trays of Olvi's beverages and to accommodate an increase in annual capacity from 100 million to 178 million liters.

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Olvi's warehouse control system also houses data on all of its products and material flow, providing complete traceability that adheres with food safety requirements. Moreover, it provides the brewer with real-time insight into inventory, including expiration dates, to help mitigate unnecessary production and losses. The data also helps with predicting seasonal peaks in production so Olvi can ensure it has enough workers on staff to keep up during busy times of the year—another key challenge in food distribution today.



Seasonal peaks amid labor shortages

Across all industries, companies are experiencing labor shortages in their distribution centers, as it seems fewer and fewer job seekers view warehousing as a viable career due to concerns around safety. These year-round shortages are felt especially hard during seasonal peaks, when sales spike and orders flood into the warehouse.

In addition to challenges in keeping up with a larger volume of orders, many facilities have to manage more inventory when manufacturers raise output to accommodate heightened demand. Some look to hiring seasonal employees to try to get by, but that creates other challenges in labor costs and providing proper training in a short span of time.



Case study

Martin's Famous Pastry Shoppe, Inc.®

Martin's Famous Pastry Shoppe, Inc.® knew these pains all too well. For the global bread and roll manufacturer, headquartered in Chambersburg, Pennsylvania, summer is one of its best times of the year in terms of sales numbers. But while good for business, the seasonal spike presented major distribution challenges in its completely manual warehouse. Product and load coordinators would have to print orders out on paper, hand pick listed items and move orders across the warehouse for dispatch, which posed inherent safety risks. Since the process took a lot of time, teams had to prepare orders hours in advance of a truck's arrival. The facility also struggled with having sufficient space for an increased volume of goods and added seasonal staff.

To overcome these challenges, Martin's Famous Pastry Shoppe, Inc.® implemented a combination of high-density pallet storage and retrieval along with a robotic material handling system. The combined order picking system has a storage capacity of 19,000 trays and 66 SKUs, from which the bakery can pick 21,000 trays per day. Two robots move inventory, one stack at a time, to storage positions on the warehouse floor, where there are approximately 1,300 stack locations. The trays required for a customer order are picked by the robots, formed into multi-SKU stacks and placed on an outbound conveyor, where they are then transported for palletizing and prepared for loading onto trucks.

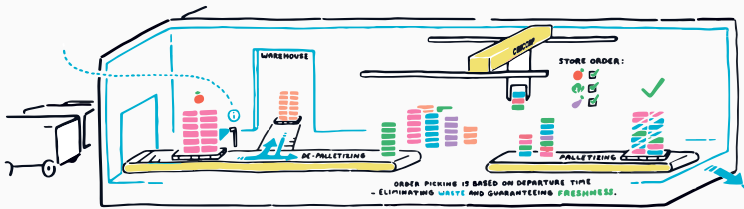
By automating, the bakery has reduced its workforce and man hours by 30 percent, eliminated the inherent safety risks and chances for human error in manual fulfillment.

The system has helped Martin's Famous Pastry Shoppe, Inc.® improve space utilization, requiring only 50 percent of the space previously used by its manual process. By automating, the bakery has been able to reduce its workforce and man hours by 30 percent. In addition, automation has eliminated the inherent safety risks and chances for human error in manual fulfillment. The rapid handling of products enables operators to schedule and prepare orders within an hour of a truck's arrival for more on-time deliveries.

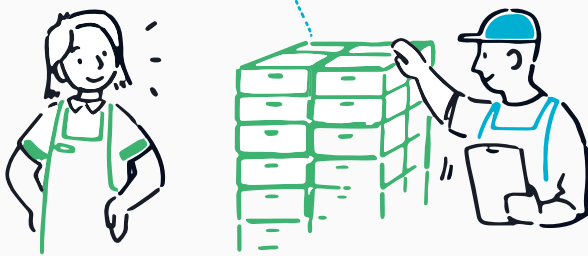
The Quickest Way from Field to Store ...in even less than 24 hours!



distribution center



Error-free delivery



Store-friendly
palletizing

Quality products

I CAN'T BELIEVE
HOW FRESH EVERYTHING
LOOKS!

THIS IS WHY
I LOVE SHOPPING
HERE!



Happy
customer



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Maximizing product freshness and shelf life

When it comes to getting fresh and perishable products—such as fruits and vegetables—to market, time is of the essence. Facilities that handle fresh products have very short lead times. They need to get goods transported from supplier to shelf—going from in-feed, storage, sorting, picking to outbound dispatch—as fast as possible in order to maintain quality and freshness, and minimize food spoilage. Unfortunately, it is often difficult to automate fresh food warehous-

es using conventional automation. This is because most conventional automated systems run storage and order picking as separate functions, which makes fulfillment too slow to keep up with the need for speed in fresh food logistics.

However, there are more innovative solutions available now—ones that integrate product handling and picking into a single system. Ideal for facilities that store products in plastic crates, totes or trays, such a system can handle all

operations in any order simultaneously. Products can come in at any time, and the system will pick the orders in stages. New products can arrive and be picked immediately. This flexibility ensures fast handling and very short lead times. Moreover, this type of solution can integrate seamlessly with existing operations, such as handling products that still require manual picking, so a facility can take care of its entire fresh food inventory.





Case study

Mercadona

Product freshness is a central part of Spanish supermarket giant Mercadona's corporate philosophy, which places heavy emphasis on customer satisfaction. To meet sustained growth, Mercadona needed to add an additional warehouse to its network of distribution centers. For its new facility in Guadix, Granada, Mercadona decided to invest in warehouse automation, with the goal to minimize handling times in order to maximize the freshness and shelf life of its produce.

Mercadona's new distribution center was designed to handle around 6,000 SKUs. The facility features zones dedicated to different product types—one for dry produce, two for refrigerated products, one for frozen

products and a production area for bread. Installed robots provide buffer storage and order picking as one flexible operation. They handle full crates of fresh fruit, vegetables and meat in the refrigerated zones, where there are around 300 different SKUs in some 30,000 crates. A warehouse control system manages all systems and material flow through the facility, and provides full tracking and tracing of products.

Although fully integrated with the surrounding manual operations, the system is effectively an island of automation that prepares orders for Mercadona's over 1,600 supermarket stores, without the need for further processing. With product pallets going in and store pallets coming

A warehouse control system manages all systems and material flow through the facility, and provides full tracking and tracing of products.

out, the island is self-sufficient—taking care of goods reception; put-away; location of stored items; retrieval planning; picking of crates; sorting and assembly of crates into discrete orders; and loading of the orders onto transport units for delivery. The automation allows Mercadona to have all store orders ready for delivery in just six hours. With a high level of flexibility and redundancy, the solution enables Mercadona to adapt its operations to meet daily, weekly, monthly and seasonal fluctuations in business.

// Is it time to automate?

For food and beverage manufacturers and retailers struggling with the complexities of SKU proliferation, seasonal peak demand and efforts to maintain product freshness, it will only become harder—or even impossible—to overcome these challenges without making some changes.

Some organizations may have already reached a tipping point, where storage capacity, labor shortage and inefficiencies are crippling their daily warehouse operations and in turn their businesses.

It is at this point, where many start to seriously look at not only automating, but also building a new facility in hopes that a larger footprint will help improve capacity and efficiency. But automation can also fit into existing operations to help optimize use of a current facility. Companies will need to consider the pros and cons of new construction vs. a retrofit.

New construction

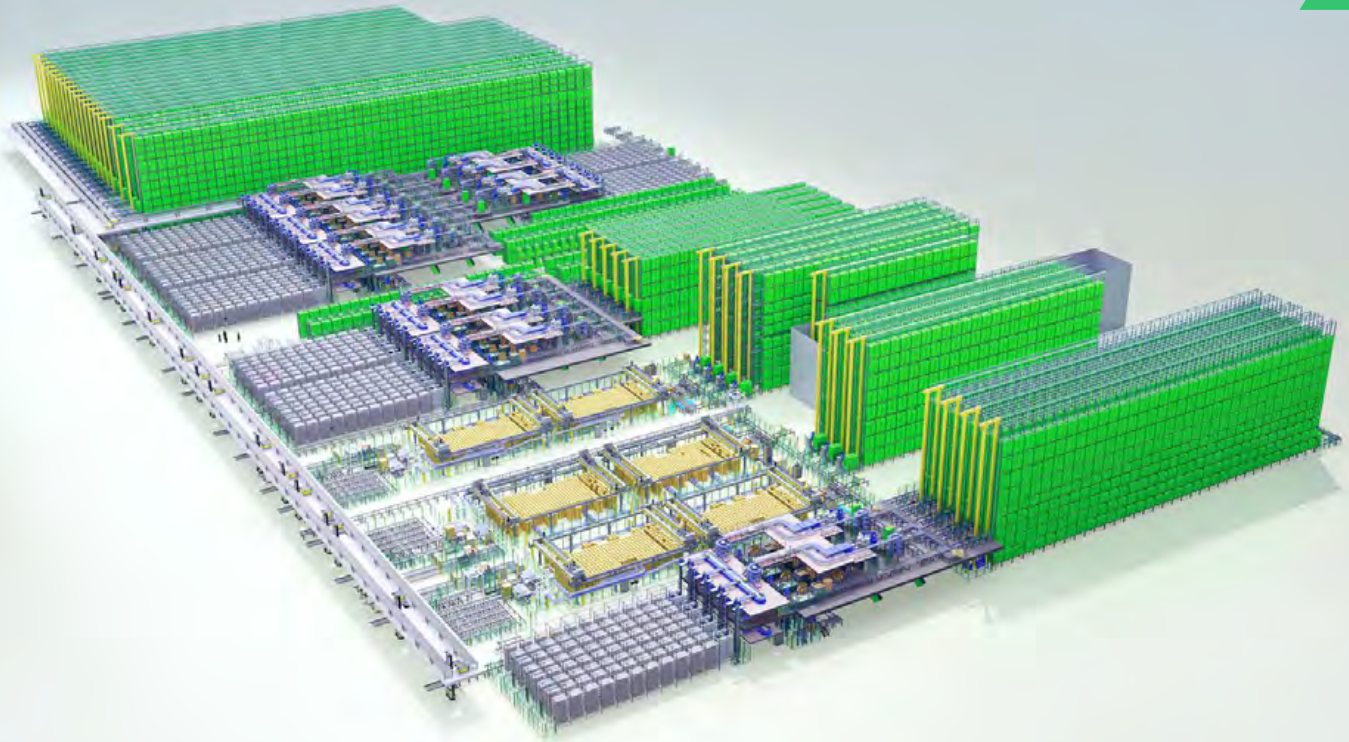
Pros

- ✓ Companies can design a whole new **distribution center**, with the opportunity to add as much floor space as needed now and in the future, based on current growth trajectory.
- ✓ Facilities can install an entire, **end-to-end automated process from square one**, as Kroger did in its award-winning Mountain View dairy, which packs, picks and palletizes crates in cold storage all through automation.

Cons

- ✗ As expected, **new construction is very expensive and time consuming**, requiring significant budget.
- ✗ Unless planned properly, there can be an **interruption in operations** as companies up-root and move from the old facility to the new one.





Retrofit

Pros

✓ Since automated solutions often use high-density storage areas, **retrofitting helps existing warehouses better utilize their current space**—with room for growth—while offsetting the costs of new construction.

✓ **A modular robotic system is easy to install in an existing warehouse without impeding operations.** Modular systems can also be installed through a phased implementation. By gradually expanding automation over time, warehouses can keep costs down for a faster return on investment, and increase the longevity of their investment.

Cons

✗ When installing automation, companies have to think through how the new systems will **integrate into their existing manual operations.**

✗ By staying in the same location, the workforce pool remains the same. In highly competitive areas, it can be a challenge **finding people to fill the warehouse jobs that still require human intervention.**

Through a full-scale retrofit of its existing order picking system, Fazer bakeries in Finland was able raise its productivity by 30 percent and secure a lifetime of up to 20 years of support.

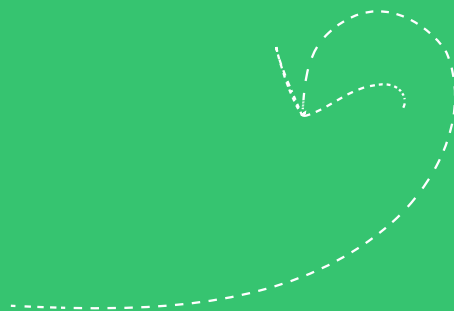
Time to automate is now

The food supply chain is not slowing down. The complexities and demands will only grow with time. Whether opting for new construction or a retrofit, the time to automate is now. And you don't have to go it alone. An experienced automated solutions provider can come in and assess your existing space, discuss your current challenges and determine if new construction or a retrofit is the best solution.

Equipped with the right automation technology, your warehouse will be able to meet consumer demand head on, optimize material flow during the highs and lows of the year and deliver only the freshest products to market—and overcome any other challenges that come along.

Future-proof your supply chain.

Your solution
could be here



Dreamfield

We are crafting a future where logistics excellency is not just a promise but a guarantee. It's not just our solution; it's your logistics strategy in action. Let's fulfill all your fresh food, beverage, bakery, and dairy supply chain needs!

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