

THIS TECHNOLOGY COULD RESHAPE THE WORLD OF FOOD DISTRIBUTION

Here's how AI tech is helping some food distributors keep up with demand

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The U.S. food distribution system is in a tight spot. Consider this disparity: Food waste accounts for between 30% and 40% of the nation's food supply even as 10% of the country's 65,000-plus census tracts are considered by the U.S. Department of Agriculture to be food deserts, places where residents lack adequate access to nutritious and affordable food.

To that, add the lingering effects of the COVID-19 pandemic. Demand for food has increased as lockdown measures have waned because consumers feel less pressure to stretch out whatever food they might have in the fridge or pantry. But at the same time, inflation has caused the U.S. food price index to rise more than 14% higher than its average between 2014 and 2016.

That creates a couple of problems. For one, food distributors are

having to stock up on product to meet that heightened demand and ensure they sell as much as they can. But with food prices on the rise, the consequences of overstocking can be just as severe. Essentially, food distributors are chasing perfection, and manual systems just don't cut it anymore.

"Our customers — distributors — are needing to stock more items to meet that customer demand," Pete Zimmerman, North American sales manager for New York-based enterprise resource planning software firm Vormittag Associates Inc. (VAI), explained to Modern Shipper.

"And they're also needing to either stock or reorder special items that customers want. So they may consider an item to be a nonstock item, but as customers want it, they reorder it."

A balancing act

Zimmerman has a front-row seat to the balancing act that is the postpandemic food distribution industry. Some of his clients have struggled to meet the demands of their restaurant and grocery store customers, losing out on potential sales. Others have overordered and been swamped with excess inventory, with some going so far as to store food on the warehouse floor.

"We've seen customers who are actually just storing product in the aisles," Zimmerman recounted. "They physically don't have the space to put product away, so they're having to put it in the aisles."

The shake-up to food demand has also created some secondary issues for distributors, chief among them a lack of human labor. Zimmerman explained that



human resources departments are stretched thin trying to find people to work in their distribution centers, and the added volume has made the job less attractive than it used to be.

“It is hard to find people,” he said. “It’s hard to retain people in this economy and everything that’s going on now. So there’s increased pressure to do more with fewer people.”

In some cases, food distributors have been forced to expand their existing warehouses or add new ones to accommodate the rise in demand. But since capacity and labor are strained to such an extent, they need to get creative to bridge the gap. Zimmerman believes AI-based technology can be that bridge.

Supply chain brain

For years, the conventional wisdom around food distribution has been “get in, get out” — distributors want to store food for as short a time as possible so that they can keep capacity available. But supply chain disruptions have made that strategy borderline impossible for human workers to keep up without a little help.

“Nowadays with the stress in the supply chain and lead

times getting longer, it’s a real challenge,” Zimmerman said.

“Lead times can — I don’t know about daily — but lead times can change certainly on a moment-by-moment basis.”

Zimmerman’s company VAI is the maker of S2K OnCloud, an ERP software purpose-built to be the supply chain brain for food distributors. S2K gives distributors a peek behind the curtain — the automated system collects customer order and sales data that can later be used to forecast supply and demand.

“The first thing you need is a tool that’s going to analyze that historical data — what are the trends? What have customers been buying?” Zimmerman explained.

From there, the software looks for demand trends based on usage, which he defines as the amount of an item’s stock that is being used up. S2K is able to tell whether demand is trending up or down. It even accounts for seasonal demand around holidays and other events.

“If it’s seasonal, the application can then say, ‘Hey, you’ve got to place orders now to have that product in when you need it so you can distribute it out to your

customers,’” Zimmerman said.

All of that information is great, but S2K takes things a step further. Through a mechanism Zimmerman calls “suggested purchasing,” the system tells the distributor exactly how much product it should order, when the order should be placed and where it should be stored. It also takes into account things like safety stock and maximum capacity to prevent overstocking.

S2K can even tell distributors when to order “nonstock” items, products that their vendors don’t keep in inventory but will order as customers request them. These orders are often tailored to specific vendors, which can make them difficult to track manually.

VAI’s software can also help distributors generate demand: “In some cases, our customers are realizing that they have the demand for the items, but the vendors may not be able to fill it,” Zimmerman said. “So our customers can go find secondary vendors or tertiary vendors to fulfill that inventory.

“Or ... they can propose substitutes. So maybe the vendor can’t get Product X, but there’s Product Y that’s a valid substitute. So they can go back to the

customer and instead of losing a sale, they can convert that sale into a different item.”

Using S2K, distributors can navigate between different levels of consumer demand, and VAI has another tool to help distribution center workers stay in the loop. It provides clients with apps that run on smartphones with Android or Apple software, which employees can use to access workflows wherever they are on the floor.

“Unlike the olden days where

there was RF [radio frequency] technology – which was certainly increasing efficiency but often difficult to use – the new apps are really familiar to users,”

Zimmerman said. “They have a familiar user interface. So it makes the onboarding of a new employee pretty easy.”

Zimmerman believes that the same automated systems being adopted by distributors may soon become popular among vendors themselves. As it stands, many of his clients’ restaurant and grocery

store customers still rely on manual methods. But it may not be long before AI makes its way down to the end consumer.

“Whether it’s a retailer or a restaurant, I think they’ll be able to take advantage of artificial intelligence tools that are going to tell them how much to reorder at their store. A lot of our customers’ customers do that manually,” he explained. “But I think there’s going to be tools and capabilities that will be put into the hands of the end user.”

