



WAREHOUSE NOTEBOOK

Everybody's Talking About Voice Technology

Warehouse operators get the message loud, clear and accurately.

By Pat Russo

No one expects an industry fraught with tight margins and intense competition to spend hard-earned dollars on the latest high-tech fashions.

Only solutions with a proven effect on the bottom line are welcome in this environment.

So when cost-sensitive food and consumer packaged goods companies start implementing voice technology in their warehouses, it's a signal that this solution is regarded as a tool for improving business. These solutions, which replace paper-based pick slips by transmitting spoken instructions to a picker's headset, are generating enthusiasm in addition to results.

Just a few months after Zanios Foods installed the Talkman® solution from Pittsburgh-based provider Vocollect, the foodservice distributor eliminated order checking, boosted accuracy from 99.5 to 99.8 percent and cut new employee training from more than a week to a day or less. And the estimated 11-month payback on the investment did not include the rising productivity the company is

witnessing.

"This voice technology and hardware represent the best distribution-related improvement since radio frequency (RF) forklifts," says John Goneau, president of Zanios Foods, Albuquerque, NM. "I could never get the productivity and accuracy we needed. Having people hands-free and using voice commands solves all those problems. In five years, every major player will be using voice."

The increasing demand for voice solutions has led vendors of leading warehouse management systems (WMS) to provide the interfaces that connect their systems to those of the leading voice-technology providers.

"It's hot, one of the hottest things going right now in warehouse automation," says Todd Michaud, president of Integrated Distribution Solutions (IDS), Omaha, NE. "When we go to conferences or industry trade events and talk about voice technology, everybody gets excited. It's one of the most interesting developments to impact the distribution center in years."

Works In All Environments

Voice-directed picking is proving itself in the sub-zero temperatures of the industry's ice cream and meat freezers, where extreme cold can slow productivity and damage scanning equipment employing liquid-crystal displays.

When Edy's Grand Ice Cream, Oakland, CA, replaced paper pick lists with the Vocollect solution, order pickers no longer lost time struggling to select products and mark lists while wearing thick gloves. The solution not only cut mispicked items by half, it increased productivity 14 percent.

"It's a real advantage to be able to pick faster," says Brad Adams, division logistics manager for Edy's Chicago facility. "We needed to add some type of technology to take us to the next level."

Designed to be resistant to noisy environments, the Vocollect solution is unaffected by loud background noise in a freezer or warehouse. When receiving spoken commands from users during

tasks, the technology is not thrown by regional voice patterns, accents of non-native English speakers and recognizes a variety of languages.

"We created a system that is tailored specifically to an individual," says Tim Eusterman, Vocollect's vice president of marketing and business development. "It's what's called 'speaker dependent.' You record into the system how you say the words and I record how I say the words. We have Spanish-speaking people using Spanish, a combination of Spanish and English, or all English. Our system just doesn't care."

The ability to pick without carrying a list or scanner eases the demands on warehouse personnel, which frees them to be more productive. Having both hands free means they're better equipped to handle heavy items. Vocollect's customers have reported productivity increases between 15 and 50 percent, with employees regularly exceeding labor standards.

"What people are able to do is change the focus of the labor in their warehouse," says Eusterman. "They are significantly more productive. Management can help their workforce do a better job instead of spending time chasing after stuff that's problematic."

Productivity increases are also common in situations requiring the recording of catch weights. At Butler Refrigerated Meats, workers had to constantly stop to log catch weights on about 80 percent of the cases they handled. Once a Vocollect solution was implemented at this Giant Eagle Inc. distribution center, workers could read the weights into a headset without losing momentum. The solution cut total errors by more than 80 percent and reduced mispicks by 88 percent. The impressive results spurred Giant Eagle to bring the solution to other facilities.

Benefits Speak For Themselves

Workers readily accept voice solutions. At Butler, pickers appreciated having both hands free to handle heavy cases. Workers at Mid-Mountain Foods reported an increased sense of ownership, with processes becoming easier both physically and mentally. Edy's order-selection staff quickly adapted to the new system and resisted any notions of returning to the previous process.

The reductions in mispicked orders and increased accuracy have a positive effect on customer service levels. And detailed logs of picking activities can improve communications with customers.

"Our solution provides the ability to know when an item was selected, what was selected before and what was selected after, down to the second," says Eusterman. "You can see how effectively a pallet was built. One customer called a distribution center complaining that a product wasn't on the pallet. Our system showed where that item was picked, which enabled the customer to be told exactly where to find the product on the pallet."

While most industry companies focus on picking applications, voice solutions are not limited to selection tasks. Eusterman reports that companies are using Talkman for put-away, cycle counting, replenishment and crossdocking operations.

Implementing a voice system is not drastically different from implementing other technologies. It requires having sound and efficient warehouse processes in place, as well as clear objectives and expectations. A WMS is needed to provide the data that directs workers, and a wireless infrastructure is required to handle the communications.

The entire implementation process varies with the size of an operation. Eusterman estimates getting 10 users operational in a day or two, while rolling out a system for 200 users at a single site involves a week to 10 days. Having one site operating will speed subsequent implementations.

As competitive pressures increase, voice technology will likely continue to be viewed more as a necessary tool for business improvement and less as a futuristic gadget.

"What we do is reduce the cost of operations by improving accuracy and productivity" says Eusterman. "We provide an opportunity to improve their revenue. When you talk to the guys who have to run the business, voice is much more than a nifty-sounding high-tech toy."

CASE IN POINT: MARKET DAY

No More Headaches

Ironically, it was word-of-mouth that led Market Day to consider voice-selection technology. The Illinois-based food distributor runs a challenging split-case selection process, sending orders used for fundraising to more than 6,000 schools in 16 states. Three distribution centers operate a total of 10 crossdock facilities, with frozen foods accounting for more than 80 percent of inventory, which is estimated at 140 to 170 SKUs.

A casual suggestion from an employee familiar with the Vocollect Talkman® system used at Roundy's prompted a visit to its Milwaukee-based facility. Nearly a year after Market Day adopted the solution, mis-picked items are down 13 percent and productivity is up 20 percent.

The voice technology has streamlined picking. Previously, the two-person process involved pushing a cart through the freezer while reading a pick list. As carts were filled, they were brought to a staging area for accuracy checks before being loaded onto pallets. Completing an order could take between six and seven trips.

Now a single employee directed by voice commands fills an entire order while riding a pallet jack. Efficiencies are gained by building pallets while picking and the warehouses gain the space previously used for staging.

The new process enables Market Day to reward employee productivity. "With the team approach, if you found a mistake on an order there was a lot of finger pointing going on," says Leonard Henderson, Market Day's center manager in Indianapolis. "Now we can reward our most productive guys, the ones giving the best quality. That's worked out really well."

Henderson also reports that the technology has improved employee morale and reduced turnover.

The quality checks built into the Talkman® system make picking nearly foolproof. As employees

arrive at a pick slot, they have to read an associated check digit before they're told the item and quantity. Instead of having to audit all orders, Market Day now selectively audits between 10 to 20 percent.

Although the company operates its own warehouse management software on a Digital Equipment VAX mainframe, creating the interface was not a problem.

"It took programming work from Vocollect and also from our IT guys," says Henderson. "But Vocollect linked up with it fairly easily."

With voice-selection running successfully in the Columbus and Indianapolis facilities, Market Day is planning to put the technology into its largest distribution center in Wooddale, IL.

"Our operations are improved," says Henderson. "Order picking is timely and well organized. And the improvements mean we can deliver better service to our customers. The Vocollect system has worked out well for us." -P.R.

CASE IN POINT: SUPERVALU INC.

Hands-Free In 18 DCs

There were fireworks in Fargo, ND, in July of 2001-and they had nothing to do with Independence Day. That's when a promising new voice technology ushered the future of logistics into Supervalu's distribution center.

"The fundamental process that moves orders between food distributors and retailers hasn't changed over the past 25 years," says Greg Heying, Supervalu's senior vice president of distribution. "What we are seeing is the next revolution in technology."

Despite the audit procedures used to check the work of selectors, producing accurate orders was

a struggle. Voice technology was considered a way to drive improvements.

"The potential for errors in reading from paper pick tickets is significant," says Heying. "It's enough to disrupt the supply chain more than anyone has ever liked."

With Vocollect's voice technology directing selectors in 18 distribution centers, Supervalu's accuracy level improved 60 to 65 percent. And the company's customer service center reports a significant decline in complaints.

The technology also exceeded goals for productivity. Instead of anticipated improvements of 4 to 4.5 percent, productivity rose to the 5.5 to 6 percent range. The increases are attributed to the effect of replacing written instructions with spoken directions and eliminating trips to the order desk.

Information quality on the company's systems also improved dramatically. "We are now in a real-time environment, we are getting instant information updates and we can react on that," says Bob Borlik, senior vice president and chief information officer for Supervalu. "The distribution environment can see and respond to that information much quicker than it could in the past."

Supervalu believes the hands-free selection process is contributing to its improved safety record. "No looking at or fumbling with pick tickets creates a safer work environment," says Heying.

While change can prove difficult for workers, Supervalu reports that employees have embraced the technology. "It's one of the real pluses we have seen," Heying says. "So many people routinely use PCs and the Web, it seemed a natural step for many of the folks that work in our environment. They have adapted very well."

The company expects to exceed its return-on-investment goal, with the system paying for itself in slightly more than a year. Payback comes from improved productivity and accuracy, as well as gains in inventory management and workman's compensation. Eliminating pick tickets has also

resulted in reduced paper and printing costs.

These revolutionary systems need not seem out of reach for smaller business. "The technology is relatively easy to install and it scales well," says Borlik. "Any size wholesaler facing the same issues that we faced could use it." -P.R.

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