



Interview: How Distribution & Fulfillment Centers Overcome Challenges with Voice Solutions

Voice Applications in Supply Chain

This interview was originally published by Emily McIntosh, VDC Research, on April 28, 2023, and can be found at vdcresearch.com.

Between supply chain instability and a tight labor market, the distribution centers of today are faced with many obstacles. Luckily, the picking and sorting process can be streamlined through advanced voice solutions - wearable devices that talk employees through workflows. Time spent interacting with a screen or paper adds up and opens the door to error, but with hands available and eyes free from distraction, employees can accomplish more for their efforts. While employers favor voice systems for productivity, workers love them for ease of use.

Voice system process logic simplifies picking by breaking down tasks into short steps and always waiting for verbal confirmation from the worker before proceeding. This protocol increases precision and shortens training time. These simple 'conversations' not only ensure high accuracy, they diminish interruptions and barriers to productivity as workers are also talked through unexpected exceptions, like shorts. Beyond the benefits of efficiency and accuracy, voice systems help attract and retain productive personnel.

Today, voice systems are better equipped than ever to adapt to the modern, diverse labor pool. While speaker-dependent systems require users to devote some time to training their individual voice templates, they accommodate an infinite number of spoken languages, accents, and dialects. Meanwhile, speaker-independent systems are beginning to offer a variety of languages, including some commonly spoken at distribution centers.

To glean more insight on the applications and future of voice solutions, VDC recently spoke to Gary Glessner, Senior Voice Advisor at Mountain Leverage. For nearly 30 years, the "Hands-Free, Eyes-Free" company has provided customer-centric voice solutions for distribution and fulfillment workflows.



Emily McIntosh: What are your thoughts about the ROI of process optimization, especially in light of a constrained labor pool and economic recession?

Gary Glessner: A voice system is a **classic process optimization** investment, increasing picking accuracy up to 99.9%. Its ROI only increases considering today's constrained labor pool because it helps **attract and retain workers** while dramatically **reducing training times** when turnover does occur.

Voice systems are also flexible in that they are purchased/licensed (and can even be rented) on a **per worker** basis. Consequently, their **ROI is higher than hard automation** systems in times of economic change.

EM: What settings and workflows does voice work best in?

GG: While voice solutions can be tailored to optimize accuracy and productivity of any distribution center workflow, they are not inexpensive. As a result, they are best implemented for workflows for which they generate significant operational cost savings and deliver an acceptable **ROI**. They are most often implemented in picking flows where the **number of workers and transactions are large**.

Voice has long been very popular in **freezer and refrigerated** environments because of the increased value of a "hands-free, eyes-free" solution for workers wearing gloves.

It should also be noted that voice has long been integrated with finger and back of hand scanners so that if bar coded data needs to be captured during the pick process, it can be done so **ergonomically** by voice-directed workers. It is a long-standing misconception that if bar code data needs to be captured when picking, then handheld or mobile computer/scanner devices should always be deployed to direct workers doing such picking.

EM: Are there industries/applications where voice could grow?

GG: While voice has already shown itself valuable in a variety of distribution center workflows beyond picking, the application in which voice is likely to grow the most in the coming years is **Maintenance and Inspection (M&I)**, across many industries. Today, voice is often used in the maintenance and inspection processes of aircraft components and truck fleets. These workflows are diverse and lend themselves to all the advantages and benefits of being executed via a “hands-free, eyes-free” methodology. Given that these workers typically need to be mobile to execute their tasks, voice allows them to **work much faster without having to stop to document** using a mobile computer, tablet, or paper. Voice also guides them through the maintenance or inspection process, so **nothing is missed** or overlooked. These systems are also capable of storing audio files of free speech descriptions of exception conditions, so they are **flexible** to accommodate many M&I applications.

EM: What does the interplay look like between voice solutions and automation?

GG: Voice solutions are destined to **operate in conjunction with flexible automation systems** that incorporate robots to move pallets and/or bins within distribution centers. Voice systems by themselves can group and batch orders to generate picking assignments that **minimize the travel time of the picker**, but robots can help further reduce or eliminate travel time. One can envision, for example, a distribution center where voice-directed workers pick with **optimal accuracy and productivity** in zones within a picking area and place the picked products on pallets or in bins that are moved by robots, so there is no need for the pickers to travel from the picking area to the shipping area at the end of a picking assignment.

For more on voice:



Blog: [Mountain Leverage Voice Vs. Personal Voice Assistants: What Makes Our Technology Better?](#)

Blog: [How Much Do You Know About ROI?](#)

Video: [First Person Voice Picking in Action](#)

Follow: [Mountain Leverage on LinkedIn](#)

This interview was originally published by Emily McIntosh, VDC Research, on April 28, 2023, and can be found at vdcresearch.com.

Final Takeaways

Because the ROI of voice solutions increases as picking volume increases, companies in industries such as eCommerce or Grocery/Beverage are particularly primed to take advantage of the benefits voice solutions offer. Organizations can also benefit from flexible acquisition models, a key consideration for all of those looking to streamline workflows during times of economic uncertainty.

The future of voice solutions will likely parallel that of mobile wearables as the two complement each other. Use cases are trending for both products in Maintenance & Repair. The accuracy that “hands-free, eyes-free” voice solutions provides is invaluable during inspections, where missed details are consequential. Meanwhile, head-worn displays and smart glasses use AR for remote assistance during complex inspection and repair procedures. In Warehousing and Manufacturing environments, hand-oriented scanners and wrist-mounted mobile computers are commonly used in congruence with voice solutions to further liberate motion. In these industries we expect to see voice systems used by workers for accuracy in detail-oriented tasks (such as picking or sorting), while flexible automation systems and robotics will take on more straight-forward, labor-intensive tasks (such as moving pallets from picking to shipping). We also see ergonomics influencing design innovation across enterprise mobile solutions as worker comfort and productivity is increasingly valued.

