FUTURE-PROOF YOUR DC WITH VOICE-DIRECTED WORKFLOWS.
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Perpetual, exponential growth in online shopping continues to put immense pressure on distribution centers (DCs) and order fulfillment operations. Maintaining high order accuracy rates is among their biggest challenges. Consumers expect seamless and flawless online shopping experiences. Anything less than perfect — from a poor customer experience to a cumbersome returns process — reflects negatively on the business and can prove costly.
The increase of stock keeping units (SKUs) in warehouse operations has had a significant impact on accuracy rates. As online retailers continue to adjust their product offerings to match consumer demand, their warehouse operations must maintain the flexibility to manage this growth — and accuracy — as they pick, pack, ship and receive.

Typically, businesses home in on a single operational or process challenge, and then invest in a solution that solely resolves that issue. However, to achieve the best results, it’s important to look holistically at the entire operation — including put-away, restocking, replenishment, pick-and-pack, and let-down — and then consider applying scalable and flexible technology solutions in multiple areas.

This white paper explores how selecting adaptable technologies that can grow alongside their e-commerce operations — such as robotics paired with voice technology — contributes to the establishment of best-in-class processes and workflows.
Among the technologies most commonly applied to address accuracy challenges are voice-directed solutions, automation, robotics, radio-frequency (RF) barcode scanning and light-directed picking. While all are far superior to paper-based processes, there’s rarely one right answer when selecting the optimal solution for a given application.

Instead, businesses should look at a technology investment from a best-in-breed/best-in-class perspective. Evaluate technologies based on how they will help a business grow in today’s competitive marketplace. An operation should look at their requirements or the challenge they are trying to solve — such as loss of worker productivity or decreases in picking accuracy — then select the technology that resolves those issues, as well as potentially some others. Rather than applying certain technologies over others because of preference, consider partnering with a trusted vendor who understands your specific business challenges and can offer solutions that help in both the short and long terms.

But bigger questions to ask are: “How is technology applied within the DC?” and “How does the application of technology interact with mobile workers?” Ideally, the application of technology is an opportunity to impact DC operations while simultaneously supporting the day-to-day responsibilities of mobile workers and the tasks that they do best. While there will continue to be a deeper and more seamless integration of technology throughout the DC, the focus should be on applying that technology to complement the mobile workforce; for example, pairing robotics with voice technology to help eliminate travel time for a mobile worker. In this case, the worker remains stationary while the robot is constantly traveling to retrieve items and deliver them to a worker at a central location, making the environment safer and more efficient for both the worker and others in the DC.

Balancing Trade-offs
When selecting the optimal technology solution, there is frequently a trade-off between efficiency and flexibility. Efficiency, for example, could come with a fully automated robotic environment; however, that solution typically does not offer much flexibility. Therefore, when selecting technology that can solve business challenges — including accuracy — it’s important to choose technologies that give workers the best tools for success.

Voice technology provides a simple and straightforward training template to get workers up and running rapidly in the DC, ensuring that they are equipped to succeed from day one. At the same time, a mobile worker utilizing voice technology can continue to interface naturally with collaborative robotics (i.e., cobots or co-robots, which are robots intended to interact with humans in a shared workspace) in ways that other technology solutions simply cannot.

Comparing Return on Investment (ROI)
No business is going to invest in something that does not have a clear return on investment. Some investments in technology have a longer payback, as is the case when fully automating DC operations. Others, such as voice technology, have a shorter payback.

What is more significant for businesses today is the total cost of ownership, or TCO. Businesses should partner with a trusted vendor to help assess technology requirements, as well as fully outline the initial and long-term costs. For example, look beyond the initial investment in automation and consider longer-term maintenance costs. If a bring-your-own-device program is deployed, can associates’ phones withstand a rugged environment? There are significant cost implications when investing in new technology, so selecting the right vendor partnerships will be just as critical as the selection of the technology itself.
If a business can afford to fully automate material handling, then that should be a serious consideration. However, for warehouse environments that have both automation and mobile workers, it is critical to enable them with the tools that help them succeed in terms of productivity, accuracy and efficiency. The optimal tool to achieve these objectives is voice technology.
ADVANTAGES OF VOICE-CONTROLLED WORK

The biggest benefit of voice technology is the ability for mobile workers to have their hands free when picking. Holding a device is cumbersome; voice technology clearly has helped in this area over the years. This advantage can be applied easily to other areas and workflows, including put-away, restocking, replenishment, pick-and-pack, and let-down. Voice technology is all about accuracy, but that accuracy does not have to be limited just to picking items. It also can be applied to inspection and checklist operations as well as applications within retail environments. Then, looking ahead, voice seamlessly integrates with other emerging technology trends like vision picking, augmented reality and robotics. Those latter trends, when tied to the mobile worker via voice, create a true cobotic experience within the DC.

Further, voice workers typically require very little training or onboarding because the system guides them through the process. Voice technology provides a simple and straightforward training template to get workers rapidly up and running in the DC. This ensures that they are equipped to succeed from day one. Not only does this efficiency help mobile workers in any DC environment, but it also helps DC operations managers who are responsible for hiring temporary or seasonal workers.

While voice may be viewed as mature technology used by many companies worldwide, there are continual improvements made in this segment: from investments in technology that leverage deep neural networks (DNN), to hardware that can perform in varying yet extreme environments, and software that is designed to support operations today as well as future growth. Current developments in voice include enhancements to processor speeds, operating systems, pick-up-and-go speech recognition technology, and built-in sensors for more accurate data capture. These features are designed for faster start-up times, more reliable performance and greater accuracy — directly impacting the day-to-day success of the mobile worker.

Voice and SKU Proliferation

As the number of SKUs increases to keep customers happy, so too does the challenge of maintaining (or improving) accuracy among that exponential growth. Increasing inventory of a specific type of product from 10 to 20 SKUs naturally has an impact on warehouse operations. Having a flexible solution — like voice-picking technology — can help to make the transition to larger SKU volume more manageable, while supporting the delivery of a seamless and flawless experience at all points in the value chain.
As businesses continue to adjust their product offerings to match consumer demands, their warehouse operations must maintain the flexibility to manage this growth — and accuracy — as they pick, pack, ship and receive. Voice-directed workflows significantly enhance accuracy while providing associates with the tools that help them succeed in terms of productivity, accuracy and efficiency.
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