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Managing people, materials and costs in the warehouse or DC

From the Golden Zone

Building a business case for voice-enabling your warehouse

by Tom Singer, Tompkins Associates

Voice technology offers great appeal for DC operations. This innovation promises hands-free, eyes-free wireless access to the information workers need to drive key warehouse processes.

Voice also addresses some of the drawbacks of RF terminals and barcode scanning.

For example, these more established technologies require operators to use their hands to scan and key data. They also require operators to read instructions on terminal displays. For many operations, these activities disrupt the normal flow of warehousing and limit the benefits provided by the technology.

Like traditional RF-based barcode scanning terminals, voice solutions center on a small, wireless mobile computing device that warehouse associates typically wear on a belt. The difference is that voice systems deliver instructions verbally through a headset and capture worker responses through a microphone — with no stopping to look at a screen, key in a quantity, or scan a barcode.

Voice is not new. But until recently, it has been more of a niche application than a mainstream solution. This has changed as the technology has matured and evolved and as DC managers have focused more on improving their logistics and fulfillment processes.

While voice is not right for every distribution center or warehouse, the benefits are real.

Voice has moved beyond cutting edge to become an established warehouse technology. Any distribution operation concerned with improving productivity, accuracy, and throughput should give the technology serious consideration.

Building a business case

Building a business case for voice or any other technology in the warehouse requires careful delineation and quantification of benefits and costs. It entails an ability to detail current processes and requirements, map how these processes will change, and plan how requirements will be supported using the new technology.

It also requires recognition that voice is just one of the technology tools to be considered, and that selecting the right tool for the job is ultimately the desired outcome.

Some key factors to keep in mind when evaluating voice for a particular warehouse operations are:

- **Keep your goals in mind.** The objective of any evaluation is not to figure out how to get voice into the warehouse. It is about selecting the best tool for the job.

Use an evaluation approach appropriate to the situation. The details and depth needed for a successful evaluation depend on the current operation and systems.

Voice has a real role to play within the warehouse and rapidly has become a mainstream technology.

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For example, an operation already using a WMS may want to consider using the package's direct voice interface in a particular pick module that is currently supported by RF scanning. Costs, application, and integration components in this situation are much more concise than a paper-based operation without a WMS that is being compelled to significantly expand its capacity. The former may be able to get a relatively high-level review, but the latter needs a comprehensive analysis.

- **Do your homework.** You don't need to become an expert in the technology to consider it. However, anyone evaluating voice needs to know enough to make an informed decision. While voice and WMS vendors can provide guidance and support in developing a business case, any organization contemplating the technology must be prepared to critically challenge its applicability within its distribution center.

- **Put together the right team.** Evaluating, implementing, and using voice are multidisciplinary propositions. The success of any voice evaluation project hinges on putting together a cross-functional team that represents management, operations, IT, and finance. Depending on your internal resources and the complexity of the project, consider hiring a consultant.

- **Be realistic and aboveboard.** The ability to adequately state benefits and costs is the crux to any successful evaluation of a technology or system in the warehouse. However, assumptions and estimates are an inherent component of even the most structured evaluation process. No matter how scrupulous an organization is in its process, there is always the potential of some unknown factor compromising the end results.

Some operations respond to this risk by being conservative on benefits and factoring in a contingency line item on costs. Others bracket minimum, expected, and optimistic savings/gains by benefit.

Defining the business case

The business case provides justification for undertaking a project, in terms of evaluating the benefit, cost and risk of alternative options and the rationale for the preferred solution. Its purpose is to obtain management commitment and approval for investment in the project.

Source: Association for Project Management

Regardless of the approach, occasionally step back and question whether the numbers look realistic.

- **Treat your business case as living document.** Be prepared to live by the business case you develop. Track its performance during implementation and beyond go-live. Measure whether the anticipated ROI was achieved in the projected time frame. Many organizations do not perform post go-live assessments of their systems projects for a variety of reasons. This is a mistake. Even if a project has missed its mark, knowing the root causes for the situation can present an opportunity to change course.

Keep voice on your radar

The expansion of interest in voice is not a fluke or hype. Voice has a real role to play within the warehouse and rapidly has become a mainstream technology. While it may not be viable in the near or even long term for every operation, many others stand to gain from it.

The first step in this process is determining how voice stacks up within the warehouse. Given the evolutionary aspect of voice technology and applications, this is not a static proposition. If the technology is not a good fit today, it may be eminently viable tomorrow.

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