



Picking Up Steam

Newegg increases distribution center efficiency with voice-directed system

by LEN LEWIS

Ask a bricks-and-mortar retailer what the most important aspect of business is these days and the answer is likely to be “the in-store experience.” The response may be a bit different for online retailers, but there is one common denominator: warehouse efficiency and productivity and the ability to get the right products to customers in the shortest amount of time.

For Newegg.com, the 13-year-old online consumer electronics retailer whose annual sales have skyrocketed to nearly \$3 billion, the solution has been to streamline distribution center operations with a voice-to-pick system from Vocollect.

Voice-directed warehousing systems — where users wear headsets that give them simple voice prompts on what items to pick from the shelves — have become increasingly popular: They are in use at thousands of manufacturing centers and distribution facilities by

a wide variety of industries who have found that the wireless, wearable, easy-to-use computers can improve productivity by upwards of 40 percent and help companies reach nearly 100 percent order accuracy.

“It’s a bit early in the process to pinpoint total operational savings from the system, but right now we’re seeing a 25 to 30 percent time savings alone,” says Kunal Thakkar, Newegg senior vice president of operations, intimating that it is likely to yield even

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bigger dividends as the company continues adding new product categories. “The more efficient we are, the more categories we can get into.”

The company has focused primarily on consumer electronics, especially computer equipment, which Thakkar says accounts for 70-80 percent of sales. Newegg has expanded into such categories as toys, jewelry, home appliances, sporting goods, pet supplies and indoor and outdoor furniture.

The issue of warehouse efficiency became even more urgent in August when Newegg launched same-day delivery service for customers that live within 50 miles of the company’s two distribution centers in City of Industry, Calif. The “local express” option carries an additional \$20 charge for delivery before 6 p.m. and will be piloted through Christmas. If successful, the service may be expanded to its Indianapolis, Edison, N.J., and Memphis, Tenn., distribution centers.

“We have a big marketplace,” Thakkar says, noting that one of the company’s City of Industry DCs handles small items that can be placed on a conveyor belt while the other stocks larger items

like printers and televisions. There are two DCs in Memphis, one each in Edison, Toronto and Indianapolis, and the company is looking at the possibility of opening a warehouse in Vancouver, B.C. As part of its international operations, DCs are also operated in China and Taiwan.

“Our volume is equally distributed between all warehouses, so we pretty much mirror 80 to 90 percent of our inventory,” he says. “With this balance, we can ship to consumers from the facility nearest to them.”

HIGH ACCURACY

Newegg is no stranger to warehouse technology solutions. Prior to using Vocollect, the company had several in place that continue to work fairly well. “We do [radio frequency] scanning and recently invested in a perfect pick or goods-to-man system in Indianapolis, which is considered a state-of-the-art warehouse,” Thakkar says.

The company has also used pick-to-light systems which increase efficiency by using a system of flashing lights on shelves to direct pickers to specific locations. Voice-to-pick is the most recent investment.

The decision to begin with the Memphis DCs was largely based on volume. The two warehouses account for about 30 percent of the company’s total shipments of 20-25 million packages a year.

“When we started looking at ways to streamline our supply chain, we saw that voice-to-pick technology offered multiple benefits over RF scanning,” he says. “It was what we needed in order to make the operation more effective in terms of productivity, accuracy, safety and to reduce the lengthy training time for employees.”

Clearly, the biggest issue was productivity. “With RF scanning, one of the worker’s hands is always reserved. Productivity is relatively



low when an employee has to look at a screen and use only one hand to pick,” says Thakkar.

Accuracy with RF “was decent, but not as high as what we’re now achieving with voice-to-pick. This will be particularly valuable during the holiday season when accuracy — specifically mispicks and overpicks — are a problem with seasonal employees.

Newegg began bringing seasonal employees in at the end of last month to begin training. “By November, about 30 percent of our staff is seasonal,” Thakkar says. “With scanners, training takes about a week and it’s often two weeks before people feel comfortable using it. But with voice-to-pick, training is pretty much reduced to one day and peak efficiency is reached within two or three days.”

Newegg began working with Vocollect at the beginning of 2013. “It was after our peak season and we saw that Memphis was having some challenges in bringing accuracy and productivity to the level we needed because of the heavy use of temporary employees,” Thakkar says. “That’s when we decided we needed a technology that was reliable and scalable — something that could be expanded to multiple locations and to various functions like receiving, replenishment and shipping within the warehouse,” he says.

“It’s also been a great tool for inventory management because if there is a missing item or an extra item in a location, you’re able to communicate

with the system and make changes in real time.”

INCREASED EFFICIENCY

Right now, however, it’s all about picking. When an order is dropped in the warehouse, pickers log onto the computer sets they wear and follow instructions to bring product in a certain quantity to a particular location. Then they confirm the move with the system and

go on to the next item. Because their eyes are on the products and they are using both hands, efficiency and accuracy are increased by as much as 25 percent.

The next facility to get voice-to-pick will probably be Indianapolis, which went live last August. “We already have a good combination of technologies there, but we feel there are certain areas that would be complemented by voice-to-pick. That will happen early next year,” says Thakkar. “Meanwhile, we are focusing on testing additional functions in Memphis.”

Asked about rolling out the system internationally, he says, “Overseas facilities use more manual processes because labor is cheaper. We’re not planning anything until we finish implementing the system in North America.”

Thakkar says the average implementation time is about six to eight weeks, during which time IT teams from Vocollect and Newegg work closely together to work out any bugs that might crop up. “We have our own warehouse management systems so it’s easier for us to integrate it with Vocollect,” he says. “Everything’s been pretty straightforward and only minor changes needed to be made. Both IT teams are communicating constantly with each other, so the whole process has been very seamless.” **STORES**

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