

# INVESTOR'S BUSINESS DAILY

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## INTERNET & TECHNOLOGY

### Staples Looks To Robots To Be Warehouse Staple

#### System First Of A Kind

Retail chain will use the machines to speed up its supply chain operations

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In a bid to deliver orders faster to business clients, Staples is tapping a different type of worker: robots.

It's not quite "Star Wars," but a system consisting of orange robots and blue shelves from Kiva Systems may help Staples<sup>SPLS</sup> speed up its supply chain operations, says Don Ralph, senior vice president of logistics at the retail chain.

"This is a new technology," he said. "The goods flow to the individual (warehouse worker), rather than the individual to the goods."

These robots are more like R2-D2 than C-3PO, says Mick Mountz, chief executive and founder of privately held Kiva Systems of Woburn, Mass.

The robots don't talk or look human. They're one-foot-tall square dollies that are programmed to roll around a warehouse.

"The orders go directly to robots that drive across the factory floor," Mountz explained. "This changes the game in order fulfillment."

A software system manages the robots over a wire-

less network. The robots use cameras to navigate.

Rather than picking up individual items, which can still be a tricky endeavor for a robot, the little machines lift whole racks of inventory.

The robot delivers a rack to a warehouse worker, who pulls the needed items and packs them up.

Then the robot returns the rack and awaits its next pickup. The system is dynamic. That is, it continually rearranges the racks, giving priority locations to racks of the most popular items, which speeds up the process even more.

Staples is Kiva's first customer. A warehouse might use hundreds of the robots and racks. A complete system can cost from \$1 million to \$20 million. Most will cost around \$2 million, says Mountz.

Despite the price tag for the robotic system, this approach can slash labor costs. Based on two pilot programs last year, Kiva users can double or even triple their productivity in filling orders, says Mountz.

He says the system creates new opportunities. "We're the first of our kind to allow any product to go to any operator in the warehouse at any time," Mountz said.

Mountz came up with the idea in the wake of his former role as a head of lo-



Kiva Systems' warehouse robots are more R2-D2 than C-3PO.

gistics at Webvan, the online grocery delivery service that became one of the biggest casualties of the dot-com era.

One problem for Webvan, he says, was huge labor costs for workers who mostly walked around a warehouse pulling items for shipment. Kiva's notion is that inventory should be brought to the worker, not the other way around.

"The problem that Kiva can solve is how to pick, pack and ship items," Mountz said. "We combine the picking and packing into one operation."

Staples has 30 order ful-

fillment centers in North America. It's installing its first Kiva robot system at a 500,000-square-foot center in Chambersburg, Pa. It should be running by April. Staples hasn't committed to buy more Kiva systems.

Ralph wouldn't say how much money Staples expects to save with the system. But he said a pilot program in Dallas last year showed the benefits to be "meaningful."

"This is a productivity enhancement, but it also provides us with much greater flexibility," Ralph said.

Staples reported sales rose 11% for its fiscal year ended Jan. 28.