INFORMATION FOR ALL

Wearable technology is on track to change the way consumers shop — and retailers operate   by CRAIG GUILLOT

Whether it's a set of glasses with a display, a watch with Internet access or a smart device embedded in clothing, wearables are poised to be the next big thing in tech. The market for wearables is expected to exceed $1.5 billion in 2014, according to a report from Juniper Research, doubling its value from 2013. Companies like Google, Apple and Samsung are jumping in the game, but many experts say the boom will come when these companies can create a "must-have" device that consumers can't resist.

If the adoption of the smartphone is any indicator, things could happen quickly on the consumer end. A recent report by Nielsen Company found that 70 percent of consumers are aware of wearables, and 15 percent currently use wearable tech devices like fitness bands or smart wristwatches in their daily life.

The survey also found that wearable users tended to be relatively young, with 48 percent under the age of 34; three-quarters of wearable users also considered themselves to be "early adopters" of technology. Fitness bands were the most popular wearable device (61 percent), followed by smart wristwatches (45 percent)

and mobile health devices (17 percent). Nearly half of those surveyed said they would likely purchase wearable tech in the near future.

Tech companies are paying attention: Google recently released Android Wear, a version of its Android operating system made just for wearable devices, and is also working with companies like Samsung, LG and Motorola to design smart wristwatches. As was the case with smartphones, wearable devices are likely to go through a series of product failures before the market matures. In the meantime, many companies are building the infrastructure to support such devices.

Sanjay Parthasarathy is a former Microsoft executive and current CEO of Indix, a software development company that is building the world's largest product database to enable every app or device to become product aware. Parthasarathy says while we may not know what form they will take, the use of wearables will require retailers to quickly adapt to new technologies. The database Indix is constructing could someday be used by consumers to access information about any product with any device. Parthasarathy says it's not a matter of if shoppers will use wearables, but when.

"We had single channel, multichannel and omnichannel," he says. "Eventually we'll have 'infinite channel,' and retail will be a world of pervasive computing on wearables and other devices."

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IMPROVING THE CUSTOMER EXPERIENCE

Retailers have been tapping the power of tablets and smartphones for years but have yet to deploy such devices en masse. Chris Todd, CEO and co-founder of technology firm Theatro, says retailers are at a disadvantage because most consumers who walk into a store have more technology and information at their immediate disposal than is available to associates — and that gap is going to grow even wider if retailers don't do anything about it.

"The biggest opportunity to use wearables will be for the [front-line] people who punch a clock," he says.

Todd says many retailers still find the price points for smartphones and tablets to be beyond their reach, still too expensive to allow broad deployment across the entire company. Another problem is that these handheld devices require users to hold the device and focus their eyes and attention upon them, creating periodic disengagement with the customer.

"If you put a handheld device on someone in a retail environment, you might give them more information, but you might also make them more unproductive in the process," says Todd.

Theatro offers a product called the Communicator, which it touts as the first wearable computer with a suite of productivity apps for the retail environment. Voice activation allows users to command the applications through speech, enabling them to be "heads-up and hands-free." Weighing less than two ounces, the compact size makes it easy to clip on to a uniform or shirt. It uses a rechargeable battery and is Wi-Fi enabled, allowing it to leverage existing IT infrastructure.

The Communicator only has a couple of buttons and no screen. "If you put a screen on it, people put it in their hands and look at it," Todd says. "There is nothing to look at. If they're out there engaging with a customer or putting products on a shelf, they don't need to look at anything. They just talk and listen."

After employees "log in" with their wearable devices, they have an instant line of communication to all other workers. They can also receive periodic audio messages during the shift; Wi-Fi triangulation allows the system to know where everyone is in the store. Managers say it has improved training effectiveness and efficiency and has empowered users to better serve customers.

In 2013, The Container Store started a pilot with the Theatro Communicator in a store in Austin, Texas. The retailer was so pleased with the results that it is planning to put it in the hands of employees in all of its stores in the coming years.

Tom Bianculli, senior director of emerging business for Motorola Solutions, believes wearables could be a game-changer for retailers. A simple, easy-to-use, non-intrusive device could bring a truly seamless experience to retailing, bridging the gap between digital and bricks-and-mortar.

Motorola's SB1 Smart Badge can be worn around the neck, arm or on a belt, and enables associates to scan bar codes and answer customers' questions on price or inventory. With task-management applications, associates can also access their own task lists; supervisors can monitor task status in real time. The SB1 features a three-inch display and touch navigation; retailers can customize the device with their own colors and branding. Bianculli says

retailers piloting the SB1 have been attracted to the device's simplicity, functionality and affordability.

"They want to get just enough technology in everyone's hands at the right price point so that everyone can stay connected and informed," he says. "It's a little bit of technology for everyone that allows associates to connect with each other in real time, having scanning ability and the information they need."

MULTIPLE DEVICES, MULTIPLE USES

It may be difficult to pinpoint exactly what wearables will be used in the near future, but many companies are already building the infrastructure to support them. Whether it's via Wi-Fi, Bluetooth or a format yet to be invented, most wearables will connect associates to retailers, the web and other devices around them.

There are endless opportunities for how wearables could be used in a retail environment, says Kurt Bauer, CEO of One Llama Labs, a "machine learning" company that creates acoustic intelligence for wearable devices — especially when associates have the ability to communicate and obtain information by audio. Stock requests, queries and price checks could all be conducted via voice, requiring little more than speaking and listening to obtain information.

"Maybe you don't even have to press anything to talk," Bauer says, "you just say keywords and you're connected with associates or information systems."

Bauer says a system could be expanded with Bluetooth repeater stations to accommodate the size of any business. The possibility of wearable devices embedded in garments means that employee uniforms could be made with built-in microphones, sensors and audio devices. Employees could walk around the store and have access to any information they need without having to hold or touch anything.

Alex Romanov, president and CEO of multiplatform location-based marketing vendor iSign Media, says that while devices may change in the coming years, the platform and delivery is apt to remain relatively constant. Whether it's a smartphone, Google Glass or another wearable device, retailers will likely still use Bluetooth or Wi-Fi to communicate with those devices. What will change is that the information retailers and consumers have

about one another will become more detailed.

Like many others, Romanov believes wearables will complement rather than fully replace smartphones: They can work as satellite devices or peripherals that can send information to or receive it from mobile devices.

While retailers often think about uses in the front of the store, Bianculli says wearables can also offer great benefits in warehousing and logistics. He says Motorola is seeing strong interest from retailers for such devices in facilities where workers are picking, packing and loading trucks.
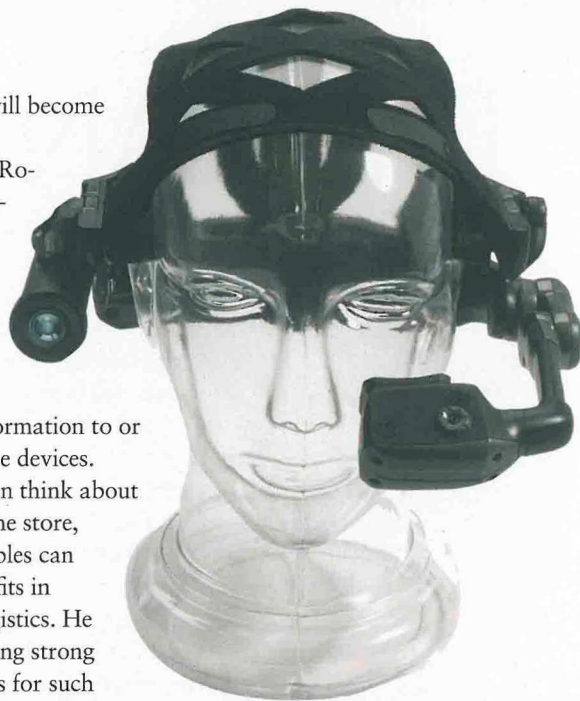
Motorola's HC1 Headset Computer features a camera and micro screen — it looks like something out of a sci-fi movie but offers all the information and computing capabilities of a laptop. The device runs completely on voice, gesture commands and head movements, and allows the user to execute applications and access documents, photos and videos in their line of sight. Bianculli says the HC1 is mainly geared toward repair technicians, telecommunications line workers and field construction managers, but could offer tremendous value for retailers' supply chain operations.

"They may need to be hands-free to operate the equipment, but may also need to look at relatively complicated schematics and drawings where a wearable can make a lot of sense," he says.

Bianculli believes there will be many uses for "eye-level augmented reality" devices like glasses and headsets that can deliver and receive information. Such wearables could be beneficial to new associates and could help supplement training for things like stocking shelves and displaying merchandise. The wearable device could capture images of the shelf, compare it with proper displays and even display recommendations for the associate.
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