



Wearable tech is about to take off

With forecasts of rocketing sales, wearable technology – particularly wristwear – is set to open up exciting prospects for businesses and consumers alike

◆ OVERVIEW

● JAMES DEAN

For the last few weeks, a number of people in Britain have been quietly taking part in one of the largest medical studies ever conducted. If you bumped into one of these people, you wouldn't know they were participating.

They have linked their fitness watches, heart monitors and other wearable health devices to an iPhone app that is sending valuable information to researchers thousands of miles away.

Since the start of August, iPhone owners in Britain have been able to download the MyHeart Counts app. The app uploads their health information to a huge heart disease study being run by cardiologists in California at Stanford University's School of Medicine. More than 41,000 Americans have already agreed to participate in the study, which the researchers want to turn into the largest ever to examine links between physical activity and heart disease.

MyHeart Counts collects health information from wearable devices connected to an iPhone as well as from the iPhone itself. New software designed by Apple to allow large-scale medical studies

then grabs this health data and sends it over the internet to a research database owned by Stanford University.

Michael McConnell, professor of cardiovascular medicine at Stanford University, wants to expand the study to every country in the world to account for geographic and cultural variations in heart health and fitness levels. "Heart disease is a global problem," he notes.

Medical researchers hope large-scale investigations using data collected from millions of wearable devices will provide valuable insights that could help cure or manage major diseases. These studies have been made possible because of the advanced gyroscopes, accelerometers, barometers and other sensors contained in modern wearable devices and smartphones.

MyHeart Counts was one of five medical research apps launched in the United States in March. The other apps involve studies of Parkinson's disease, asthma, diabetes and breast cancer. None of these studies would have been possible a few years ago. However, the increasing popularity of wearable devices, especially smartwatches, has opened up a new front for medical research.



Smart wearables, such as the Apple Watch and Microsoft's HoloLens, are indicative of an upcoming change in computing

The incredible power of big data captured by wearable devices can open new fronts for businesses, too. Companies can take advantage of the vast amounts of information being generated by wearable devices by creating apps or other software to tap the data.

Consumer wearables themselves are also being put to use by companies. For example, Apple Watch, launched in April, is now connected to Apple Pay.

Meanwhile, several companies have equipped their employees with wearable devices to help them work more efficiently and effectively. Tesco was an early adopter, giving armbands to staff at its distribution centre in Ireland. The devices automatically track what they are picking up and dropping off at three-storey shelves, so they don't need to write on a clipboard. The band gives the workers tasks to complete and predicts how long they will take to do them. It also tells them when an order they are packing is short and provides feedback about their performance.

Amazon, the online retail giant, has perhaps the most advanced form of employee "satnav" at work in its vast distribution centres across the UK, which guides workers through the aisles to take the shortest route possible.

Wearables are also at work in the office. Some companies have given staff bracelets that monitor their activity levels, in the hope of reducing sick days. An American company that gave Fitbit devices to its 350 staff saw them collectively lose 285kg in weight over a six-month period because they began walking more.

The International Data Corporation (IDC) predicts 72.1 million wearable devices will be shipped this year, up from 26.4 million in 2014. In 2019, IDC believes shipments will hit 155.7 million.

Shipments in 2019 will be comprised of 66.3 million "basic" wearables, which do not run third-party apps, and 89.4 million "smart" wearables, which do run third-party applications, IDC says. The vast majority of wearable devices in 2019 – more than 120 million – will be wristwear, IDC predicts.

Jitesh Ubrani, senior research analyst at IDC, says that demand for basic wearables was "absolutely astounding" in the first quarter of 2015. Vendors such as Fitbit and Xiaomi have helped propel the market with their sub-\$100 brands, he says, and the momentum is expected to continue for the rest of the year.

Next year, however, Mr Ubrani predicts that smart wearables will take the lead. "Smart wearables, such as the Apple Watch and Microsoft's HoloLens, are indicative of an upcoming change in computing," he says. "The transition from basic to smart wearables opens up a slew of opportunities."

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Credit card companies were quick to link their systems with this new payment platform, which allows an Apple Watch owner to simply swipe their device over a scanner to complete a transaction.

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