The Economist Intelligence Unit

An article from the Economist Intelligence Unit

Transformation in store

More than any other industry, the retail and consumer goods sector sees the IoT as being central to its digital transformation strategies





Today's demanding consumers expect more from their shopping experiences than ever before. More specifically, they expect competitive pricing, a wealth of product information and extensive choice across every channel, be it a physical bricks-and-mortar store, an e-commerce site or a mobile app.

In response, consumer goods and retail companies seeking to win customers over—and ensure their repeat business—are on a mission to revolutionise the shopping experience for them. For many, Internet of Things (IoT) technologies hold the key to success.

In the IoT Business Index 2017, compiled by The Economist Intelligence Unit and sponsored by ARM and IBM, respondents from the consumer goods and retail industry are the most likely to agree that the IoT is one of the most important parts of their organisation's digital transformation strategy. Fifty-six percent of respondents from this sector say this is a case, putting them ahead of those in IT and technology (54%), infrastructure (53%) and financial services (52%).

And when asked about the impact that the IoT has had so far on business in general, 64% of respondents say that it has had a major impact or is expected to do so in the future.

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At the same time, many in the industry acknowledge that IoT adoption has not kept pace with earlier expectations: nearly two-thirds (65%) agree "strongly" or "somewhat" that progress has not happened as fast as expected.

The pace of progress is faster when it comes to customer-facing implementation: according to the index, the external IoT score for the consumer goods and retail industry has grown from 3.68 in 2013 to 5.02 in 2016. This means that the average retailer has moved confidently from "research" to "planning" with respect to external IoT. This score is bettered by only two other sectors in the study: IT and technology (6.04) and financial services (5.44).

The internal IoT index, which tracks progress in the use of the IoT in internal operations, has grown by a smaller margin, from 4.21 in 2013 to 4.48 in 2016, suggesting that the average retailer is still researching their internal use of the IoT.

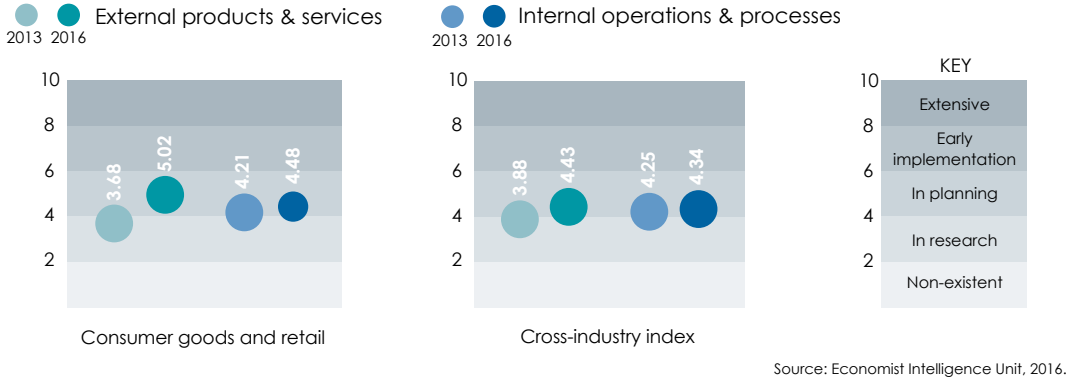
In the retail sector, however, the line between internal and external use of the IoT is less distinct than in other industries. The merging of the physical and digital worlds, being driven by the convergence of online and offline retail channels, affects internal operations and the customer experience equally.

For example, many retailers have instituted "click and collect" services, whereby customers visit a physical store to pick up an order they have placed online. This is made a lot easier by IoT technologies, such as smart scanning and labelling, which enable retailers to locate a product in storerooms or on shop-floor shelves and track its relocation to an in-store collection point, ready for pick-up.

It might be argued that the retail sector has been adopting elements of the IoT for some time: radio frequency data identification (RFDI) tags, for example, have long been used to track batches of inventory as they make their way from the manufacturing plant to the store.

But the confluence of recent technological advances—cheaper and smaller sensors, abundant wireless connectivity, increased computing power and more sophisticated analytics—mean that there are almost limitless ways for this sector to gauge more accurately consumer demand and match it with a guaranteed supply of goods. Or, to put it another way, the number of "things" ready to join the retail IoT is now almost limitless.

The IoT business index for the consumer goods and retail industries



Source: Economist Intelligence Unit, 2016.

It is now physically and financially viable, for example, to attach RFDI sensors to individual items, not just batches of products. US retailer Target, for example, has been rolling out "smart labels" on price tags on women's, children's and baby apparel, along with home decor and other key merchandise categories, throughout much of 2016. This helps it to keep costs down by reducing the need for shelf-stacking and allows customers to find out whether items are in stock before they visit a store.

"This is making a big, big difference for guests [customers] and for our team members who work in-store," says Target CIO Mike McNamara. "For guests, it means they can quickly find out whether we've got an item at their local Target store or another store nearby. For team members, it massively reduces the workload on shelf-filling. For us as a company, it means better overall inventory accuracy. It means we can keep stores stocked with the goods that customers want to buy."

After all, few things frustrate a customer ready to spend money more than an out-of-stock product. Yet that's the situation they face around 8% of the time, reckons John White, co-CEO of Powershelf, a Panasonic company that has installed around 500,000 "smart shelves" in US retail stores on behalf of the retailers themselves or the consumer goods companies that manufacture the products.

These smart shelves, Mr White explains, send out alerts requesting restocks to retailers when they run low, but they can also communicate with shoppers' smartphones using Bluetooth to send them coupons, recipes, ingredients lists and so on. In freezer and refrigerated areas they can alert the retailer if a freezer door is left open or the temperature dips below a certain point, helping to avoid spoilage and safety risks.

"We're expecting 2017 to be the breakout year for smart retail, because there are just too many benefits both for shoppers and for the companies that make and sell consumer goods," Mr White says. In the next two years, he predicts that Powershelf's installed units will rise from 500,000 to over 2m.

By giving retailers a much more granular view of stock in store and the supply chain, the IoT can help retailers address immediate issues, such as empty shelves or damaged goods. When combined with predictive analytics and external data sources, it can also help them anticipate buying trends as they happen. This practice has been pioneered by online retailers such as Missguided, which analyses buying patterns in real time and refreshes its stock on a daily basis in response to up-to-the-minute trends. This means customers are more likely to find what they want, and the company is less likely to buy unwanted goods.

The IoT promises to bring these and many other benefits of e-commerce into physical stores. Retailers' desire to meet their customers' ever-higher expectations suggests that the pace of the industry's IoT progress will continue unabated. ■

About this article

This article accompanies The Internet of Things Business Index 2017: Transformation in motion, an investigation of business adoption of the Internet of Things (IoT), conducted by The Economist Intelligence Unit and sponsored by ARM and IBM. It draws on a global survey of 825 executives from a range of industries, including 75 from the retail and consumer goods sector. Responses to a subset of survey questions were used to calculate two index scores: one for the external use of IoT (i.e. with respect to products and services), and the other for the internal use (i.e. with respect to internal operations and process). The index score for each industry represents the average stage of progress for companies in that industry. For more details on the survey and index methodology, read the full The Internet of Things Business Index 2017: Transformation in motion report.

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