The IoT is Here

Natarajan Chandrasekaran, CEO and Managing Director of Tata Consultancy Services (TCS), discusses how businesses can use the Internet of Things to gain immediate feedback on how customers use products and services

What if your company had a vivid picture, in real-time, of how its products and services performed every day? Not at the end of the month or quarter, and not filtered by the interpretations of call centre agents or sales people – just how your customers used your products and services. Live data that provides pure, detailed information that comes directly from the customer.

Welcome to the age of the Internet of Things (IoT). A small but fast-growing number of companies are already streaming live information using digital sensors in products and places they do business.

The age of the IoT is well underway, but the question is whether businesses are ready to cope with the deluge of information it will create.

Does that information scare or comfort? Intimidate or fascinate? Is it just noise, or are more real and actionable insights being revealed? ▸

How a large company's top management team reacts to those questions will separate the winners from the losers. Their answers will reveal how receptive they are to re–imagining the way to do business in a world of 'things'.

In our latest TCS *research*, we studied IoT initiatives at 795 large companies in North America, Europe, Asia-Pacific and Latin America. The findings were revealing – especially what's happening at the 65 companies that had the greatest revenue impact last year from IoT initiatives.

We found that four out of every five large companies are already using IoT technologies to deliver a picture that is richer, on at least one of these four aspects:

- **Supply chains** – the operations in which they produce and distribute offerings
- The **premises** in which they do business with customers
- **Customers** themselves
- The **products and service**s they sell

Companies that have deployed IoT technologies to track all four areas are much better positioned. These companies are profiting handsomely by changing business models, core offerings, business processes, customer segmentation, channels to market and workplaces.

THE INSIGHTS

IoT technologies are giving many companies new and vital insights.

For example, according to our research, about a quarter have embedded digital sensors in products ranging from coffee makers and refrigerators, to aircraft engines and televisions. Product monitoring can reveal whether a piece of construction equipment is running or is incapacitated.
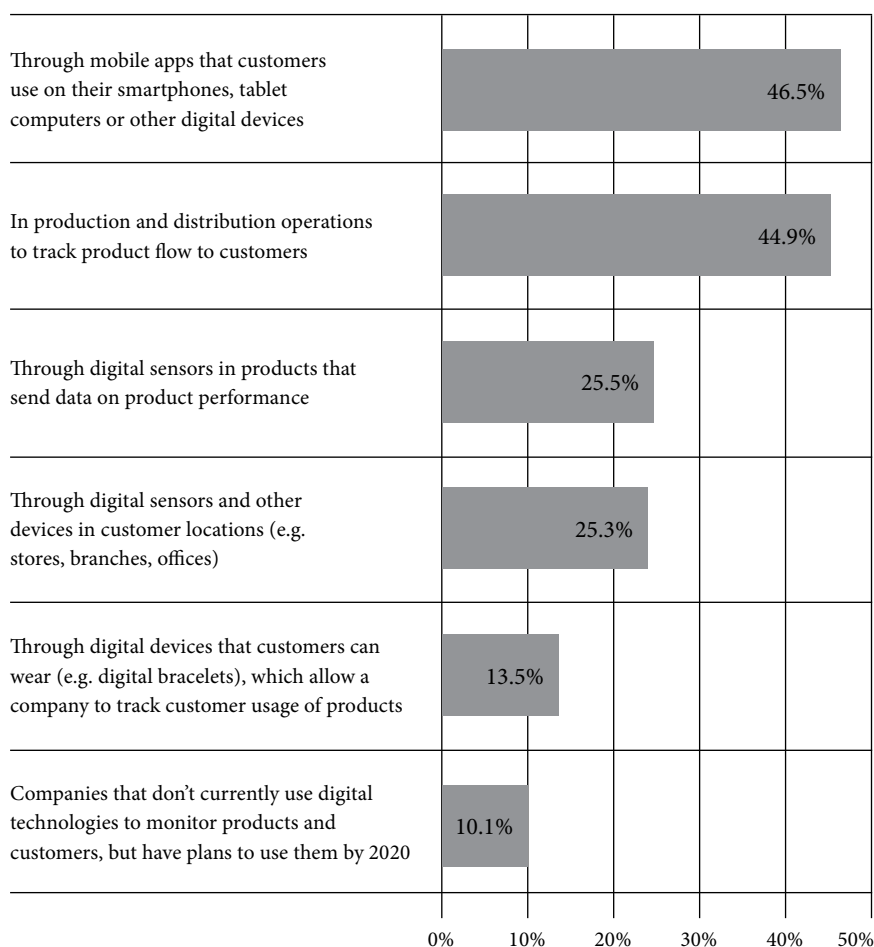
Nearly half of the companies surveyed (45 per cent) are using technologies to monitor supply chains, and 47 per cent track customers themselves via apps.

One in eight has begun tracking customers through wearable devices, such as digital wristbands and watches. And one quarter of companies are using cameras and sensors to track and monitor locations.

The use of IoT technologies is often industry-specific. Consumer-led companies such as retailers, hotel chains and airlines increasingly use premises monitoring – such as, deploying digital cameras, sensors and other technologies to track data in the places they do business with customers. It gives them a detailed view into the environment they've created.

In sectors such as industrial manufacturing, high-tech and life sciences, companies are investing ▸

How Companies Use loT Technologies

Through mobile apps that customers use on their smartphones, tablet computers or other digital devices	46.5%
In production and distribution operations to track product flow to customers	44.9%
Through digital sensors in products that send data on product performance	25.5%
Through digital sensors and other devices in customer locations (e.g. stores, branches, offices)	25.3%
Through digital devices that customers can wear (e.g. digital bracelets), which allow a company to track customer usage of products	13.5%
Companies that don't currently use digital technologies to monitor products and customers, but have plans to use them by 2020	10.1%

Source: TCS

more in IoT technologies for supply chains. They're gaining much deeper insights about the efficiency and effectiveness of these critical operations, from start to finish.

THE EARLY LEADERS

After studying companies with the greatest success in IoT technologies – those with the biggest revenue boost last year from initiatives (which saw an average gain of 64 per cent) – it's clear that the most important part of a company's IoT journey will be working out how to analyse customer experience.

Disney, for example, is getting a much richer picture of families visiting its Orlando, Florida, theme park due to its deployment of wearable bracelets. Disney offers the benefit of cash-free purchases through the use of the wristbands, which illustrates how companies can look to deliver value back to the customer, in return for the data that is being collected.

While most of the companies we studied are committed to investing in IoT initiatives this year – an average of $86 million (£56 million) per company – it isn't the magnitude of that investment that separates IoT leaders from the rest. It's what they are investing in and how they are changing the way they do business to capitalise on the investment.

In other words, early leaders in IoT are investing in initiatives that benefit customers by understanding how products and services perform when they're in customers' hands.

The data that those companies are gathering from tracking products is

> **66** *Part of a company's IoT journey will be working out how to analyse customer experience* **99**

invaluable: the car that needs to be serviced before it stalls, the aircraft engine that requires a tune up, the computer printer that will soon run out of ink, the streamed movie video that's being interrupted by a digital traffic jam to the home, and so on.

What customers really care about is the performance of a product or service, and whether it lives up to what is promised.

Being able to weave together and act on all four sources of data (from the supply chain, premises, products and customers themselves) will be critical to every company.

If you're not using digital technologies to track and adjust your products and services in the years ahead, it's likely you'll fall behind a competitor that does.

Exploiting IoT also has cultural consequences – improper use of the information collected will make many managers and workers nervous. Such data will make a company's performance transparent to customers, all the time.

That's why IoT initiatives not only need air cover at the top of big companies – they will require the passion of CEOs and their management teams to succeed.

Companies in the lead not only compose a data-rich picture but also re-define the business based on it.

Commitment must start at the top of the company, or else the initiatives will quickly lose direction and the ability to deliver big results. ■

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This article was originally published as a 'CEO Point of View' on the TCS website. Find out more here

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