

Meet the Digital Transformers

The Futurists and Visionaries thinking beyond Technology



Looking out on London's sprawling urban landscape at 33 floors above ground level on a crisp and clear November afternoon offers perspective. With barely a cloud in sight, I'm at the BT Tower to meet with some of the UK's brightest minds, in a bid to remove another swirling cloud. The one of uncertainty surrounding tomorrow's truly digital world, and it's role in transforming the city spread out below us.

Digital transformation first

The future, as many imagine, will be glistening with intelligent robots, smart machines and data, lots of data.

We will communicate with machines, while they communicate with other machines, generating and collecting data to be analysed by more machines..

There's no set date for this future, it won't happen overnight. Instead, it is already permeating through our lives, simplifying daily tasks and improving overall performance.

Perhaps one of the biggest drivers of this digital transformation is the internet of things (IoT), where machines and objects are given life by becoming connected to the internet. This connection feeds into an ecosystem of devices where their status is monitored to capture valuable data to be used in software applications.

It is IoT that enables you to switch the washing machine on through a smartphone app, and it is also IoT that allows driverless cars to navigate their way through traffic.

The nano-technology that enables this, roughly doubles in power every year and as the cost of silicon chips and sensors drops, more devices will become part of this ecosystem.



(Ben Hammersley: Futurist, Explorer, Pilot, Medic, Scientist and founder of Hammersley Futures)

“That doubling of power gives us unlocked capabilities we didn’t have before,” says Ben Hammersley, Los Angeles based ‘futurist’ and principal at consultancy Hammersley Futures who is in town to speak at BT’s ‘Turning big ideas into business advantage’ IoT event.

What these capabilities are exactly and how they will transpire remain to be seen, but before the full potential of IoT can be realised, we need the right infrastructure in place.

The key to connectivity - Infrastructure

The UK currently lacks the infrastructure required to support and navigate the world of IoT and digital transformation. The £500 million recently allocated from the budget to fund investments in artificial intelligence, 5G networks and driverless cars to name a few, is not enough.

“There are two ways of looking at this: Will the UK be a leader in producing these technologies? The answer is no,” says Ben. “Is there space for the rest of the UK industries to adopt these technologies and make themselves more competitive? The answer is yes.”

The economic and political uncertainty around Brexit, an ageing population and the impact of climate change require a fast solution to maintain global competitiveness.



(Tom Baker, chief intelligence officer (CIO) at BT Major Corporates)

“There is a national debate and narrative that needs to happen,” says Tom Baker, chief intelligence officer (CIO) at BT Major Corporate. “ We need to make some changes if we want quality of life.”

These changes are pretty substantial – strong leadership, overhauling of legacy systems and a cultural shift both among the business community and the wider public.

“There are some countries of similar size that have seized these opportunities, especially in France and South Korea, which gives me the view that the UK can have a real role in IoT,” says Guillaume Sampic, BT director of IoT strategy.

BT is investing in its national network to help fuel this digital transformation.

“With all the investment we’re doing in mobile and fixed network, we will have one of the best 4G networks in the country, which will have a huge impact on IoT use-cases,” says Guillaume.

Investment from all quarters

But a fast-speed network alone is not enough to see the country through the digital transformation. Investment in the power grid will also be required to keep pace with the millions of devices set to come online, regulation and guidance will be needed, so too will the skills.

“There needs to be a point where the government says ‘this is what we’re doing and here is money to do it,’” says Ben who believes that private enterprise as a driver of innovation is a “myth”.

“If you look at the innovations in the early 20th Century, most were subsidised by governments,” he says. “We’re talking about the internet, which was massively subsidised, BT was part of the government and has been subsidised ever since.”

Leaving it entirely up to the private sector will likely result in delayed adoption, incompatible systems and inefficiencies in the long term.

One way to begin, is to adopt a ‘digital first’ strategy for public systems. BT’s experience in Milton Keynes is a case study that can be replicated on a wider scale. Working with Open University and the city council, BT developed an information hub to collect real-time data from different sensors in Milton Keynes, which was relayed to build smart and more innovative transport and energy applications.

“The application of digital capabilities to the physical world gives you a whole new series of super powers with which you can go onto solve business problems in new and exciting and efficient ways,” says Ben.



(Guillaume Sampic, BT director of IoT strategy)

The super power syndrome is in fact driving much of the innovation, “expectations surrounding IoT are racing ahead, says Colm O’Neill, Managing Director of BT Major and Public Sector speaking at the ‘Turning big ideas into business advantage’ IoT event. “People see the power and capability of technology as having an almost magical quality to read our minds and do things that we never thought possible. This is putting the pressure on businesses to make the unimaginable, imaginable.

Data - Getting value from the new currency

From monitoring water leakages in a utility provider’s network to an RFID tag on consumer goods set for export, IoT can better service the business community with valuable data on which decisions can be made. Having better insight can lead to greater profits or expanding to offer new services.

“Not adopting it puts you at a disadvantage over local rivals, and also puts you at a disadvantage over potential international rivals,” says Ben. “If the UK doesn’t implement these technologies for a decade, then everybody else has a ten-year head start in terms of the adaption curve. British companies will look like easy victims.”

According to McKinsey the potential economic impact of the IoT could reach \$11 trillion per year in 2025, equivalent to 11% of the global economy, with up to 50 billion connected devices, driven largely by manufacturing, transportation, logistics and utilities.



(Colm O’Neill, Managing Director of BT Major and Public Sector)

“When you talk to GE, Bosch, their customers are asking for software and data in their machines. That is a trend we have seen in manufacturing, selling products with service apps,” says Guillaume.

Demand from consumers is likely to continue, who stand to become better informed about their daily life and choices through IoT, whether it is tracing the origins of their food, or the air quality of their route to work.



(Interactive panel: 'Are we ready to fully capitalise on the IoT opportunity')

“You will understand more about your health, how much water you’re using at home, how much electricity and gas,” says Tom. “And the reason why is because there will be less of this stuff – less money in the NHS, less air quality. As a citizen, the future is about being more informed. There will be more understanding of your impact on the world and that is a powerful thing.”