

Why internet connectivity is the lifeblood of the UK's economy

The digital landscape is dictating the pace of evolution of our nation's businesses. That is why it is vital to invest in infrastructure, writes **Rory Ross**

When it comes to internet connectivity, the UK is one of the world leaders. We are a nation of digital dependants who work, play, shop and socialise using small screens.

Britain's connectivity – that network of cables, wires, cabinets and holes in the road attended to by men in white vans – is the nation's nerve centre. It is what enables us to lead the world in online shopping; it is what allows 24 per cent of households to subscribe to Netflix, Amazon Video or Now TV; and it is what permits more than four million Britons to work at home. It's also what lets the digital economy create new jobs 2.8 times faster than the non-digital economy, making the UK the largest digital economy in the G20 in terms of share of GDP.

In short, Britain's connectivity is transforming our economy and defining who we are. And BT is at the centre of that revolution.

Since BT was privatised in 1984, it has invested tens of billions into upgrading what was the national telephone network and transforming

6 We continue to lead major European nations on almost all measures of speed and connectivity

Business on the go The UK's digital reach puts the power of the internet in your hands

it into one of the fastest and most powerful networks in the world. The company launched its first mass-market internet service in March 1996, which offered electronic mail and file transfer and access to the world wide web, and since then it has replaced millions of kilometres of copper wire with optical fibre. Where a small percentage of copper wire remains, BT has developed and pioneered new ways of sending more data down it, and at faster speeds, using advanced techniques.

Data traffic overtook voice traffic on BT's Openreach network several years ago. Now the Openreach network delivers services with speeds of up to 80mbps, that allow 90 per cent of the UK simultaneously to run text, images, audio, video, video conferencing and multiple bandwidth-hungry applications such as 4K and HD films. In 2013, BT launched three live televised sports channels on air 24/7.

Now more than 26 million homes and businesses can access fibre broadband over the Openreach network. Openreach continues to build superfast broadband capability

in full support of the government's objective of taking coverage to 95 per cent.

As BT strategy director Sean Williams says: "We continue to lead other major European nations on almost all measures of speed and connectivity. Our network supports a wide range of over-the-top applications and services, which require increasing bandwidths. For example, Netflix traffic has grown from nothing to 20 per cent of the data we carry. And broadband traffic has grown at about 40 per cent a year."

This huge infrastructure investment has helped the UK government realise its stated aspiration to see the UK become the best major European country for broadband.

As Williams says: "Our network in the UK is a critical national asset, and we take our guardianship of it very seriously. We aim to be the best network provider in the UK by investing in it and by providing the best services over it. As a digital nation, the UK will only keep up with the pace of the world economy via this long-term investment in fast, first-class connections."

BROADBAND FACTS YOU NEED TO KNOW



The UK is the country with the most online shoppers – 77 per cent of users aged 16-64 bought something online in the past month (GlobalWebIndex, Q4 2015)

75pc

of digital tech businesses are outside London, proof the UK's digital economy is not just about the capital

(Tech City UK: Tech Nation 2016 report)



Our digital economy looks set to provide 800,000 additional jobs over the next two years (Virgin Digital Opportunity report)



Time spent online has more than doubled in a decade

Internet users aged 16 and above claimed to spend nearly 10 hours online a week in 2005. By 2015, nine in 10 went online every day, clocking up an average of 25 hours a week (Ofcom Communications Market Report 2016)



We don't have enough eyeballs On an average UK superfast line you could watch 22 simultaneous HD iPlayer streams – if you have enough TVs (and eyeballs)

Social media helps friendship 79 per cent admit they have friends they would not stay in contact with at all if it weren't for social media; 72 per cent believe social media has strengthened their friendships

Where would we be without social media?

Each year, each person in the UK sends on average:

6,935 WhatsApp messages

11,315 texts

1,092 picture messages



GETTY/ALAMY

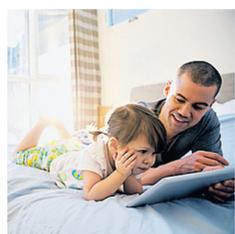
BUSTING MYTHS ABOUT BROADBAND

1 Fibre-optic broadband is not widely available in the UK

Six years ago this would have been true but thanks to a multi-billion pound investment programme, with the UK rollout of fibre connections coming to nine out of 10 homes, the "haves" now greatly outnumber the "have nots". Thousands more homes are gaining access to fibre every week – if you are unsure you can get it, visit Openreach's Fibre Checker site at www.openreach.co.uk/fibrechecker

2 My line is incapable of providing the speed that my provider said it could

There are two main ways of



getting fixed broadband at home: Virgin Media with cable or via the hundreds of other service providers that have access to Openreach, BT's local network business.

Openreach allows companies such as Plusnet, Sky and TalkTalk to use its lines and maintenance teams – benefiting from more than £10bn on the network over the past 10 years. These outside companies put their own service on to the Openreach lines for broadband but the speed is generally the same.

The actual broadband speeds you experience can depend on a range of factors, including your home wiring, the thickness of your walls or even the vicinity of home appliances such as microwaves.

You can maximise broadband speeds by changing your router positioning and by keeping the router in the main socket. If there are problems in your home wiring or Wi-Fi, the speed slows to keep the signal stable, so check your connections first and see



if you can improve the router position.

3 I shouldn't bother switching providers – they all provide the same service

Unless you're taking cable from Virgin Media, chances are your service will be delivered down a line on the Openreach network, but that doesn't mean you'll get the same service from each provider.

There are hundreds of providers competing on the Openreach network, with each offering a different mix of products and services. With so many companies offering different flavours, speeds and service packages, it's worth shopping around.

4 Copper can't deliver the speed I need – I must have fibre

The Openreach network is already predominantly fibre rather than copper.

A national study by Ofcom found that the average download speeds are now 28.9mbps, while average download speeds on a superfast connection



are 63mbps. These speeds are much greater than what it takes, for example, to watch a BBC HD iPlayer stream, which runs at 2.8mbps.

Meanwhile, Openreach continues to invest in network upgrades, from superfast to ultrafast speeds of 100mbps and higher via a mix of technologies including more fibre-optic and enhancements to the existing network with G.fast, a new technology which boosts speeds over the final length of copper.

Copper has been proven to carry very high speeds of 5,000mbps over short distances – whereas most current service uses only 80mbps of this potential.

5 The Government should not invest any money in broadband because it is the job of private companies

Whether it's tackling recession, the impact of an ageing population or planning for a sustainable future, broadband helps solve these problems because it increases productivity and opens up a world of possibilities in telecare, the cloud, banking and more.

A 2011 study found that a doubling in broadband speeds produces a 0.3 per cent increase in GDP, chiefly in the country's information and communication technology sector. Broadband also creates jobs during construction: In the UK, an investment of £15bn in ICT would create or retain 700,000 jobs.

A high-bandwidth connection is necessary for medical services. It eases transport systems and the environmental cost of commuting, and enables virtual classrooms in remote communities.

For more information, visit tgr.ph/bt

