

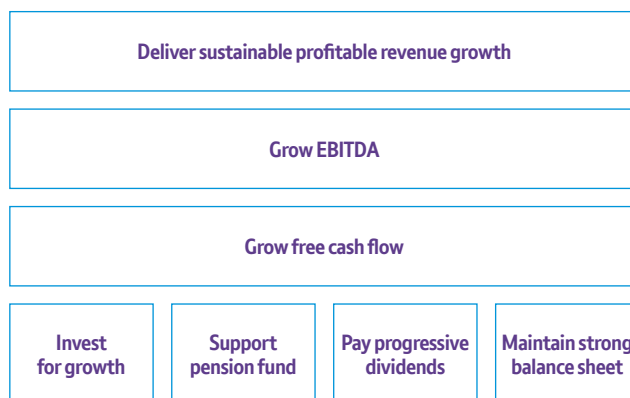
Our resources and culture

In this section we talk about the resources that set us apart and underpin our business model. We also describe our culture and approach, and commitment to respecting human rights.

Financial strength

Our financial strength means we can make long-term investments while supporting other areas of the business.

Our financial strategy has been consistent for a number of years:



We have a prudent financial policy and adhere to a disciplined process for the allocation of capital between four main uses: investment in the business; supporting the pension funds; paying dividends to shareholders; and maintaining a strong balance sheet. We also have strong governance and investment processes/controls. Together, they help us make the right decisions when it comes to planning investments, growing our business, and managing our level of debt and credit metrics.

Healthy finances also mean we can support the business in other ways. For example we continue to invest in R&D to stay at the forefront of a rapidly-changing industry, and in training, developing and supporting our people.

Our networks and physical assets

Our network, service and IT platforms support the products our customers rely on around the world.

Network platforms

Our UK fixed-line network is one of our most valuable assets and our investment in fibre broadband is key to providing services to UK consumers and businesses. Our fibre broadband network now passes more than 27.5m UK premises, and we provide fibre-to-the-premises to more customers than any other UK service provider. To meet the demand from businesses, we're continuing to expand Ethernet availability.

This year we've again had record levels of traffic across our UK network, with a peak demand of 9.75Tbps. The investments we've made in broadband technology mean that more customers get faster speeds and better reliability over our network.

We've also developed new technology that should more than double our previous records for data transmission speeds. Our latest breakthrough should deliver speeds of up to 13Tbps over a single fibre. This more than doubles the world record of 5.6Tbps we set last year.

Our global reach

Our global network is supported by in-country networks and infrastructure. The UK has our widest range of network services, access technologies and coverage. But we also have extensive networks in Brazil, Germany, Italy, the Netherlands, the Republic of Ireland and Spain.

The scale and reach of our global multi-protocol label switching (MPLS) network gives us a competitive advantage. Our virtual private network (VPN) services offer customers the convenience and security of a private network but over the public internet. We use our MPLS network, plus a combination of owned and leased fibre connections, to connect our points of presence (PoPs) around the world. For the final connection into the customers' premises, we either use our own circuits, or lease connections from telecoms operators in that country. If customers need service in very remote places, we make use of our extensive satellite connections.

Security is an important part of our business. The expertise we've gained from protecting our own networks helps us secure our customers' networks. We've seen that hacking tools, phishing scams and disruptive malware are becoming more sophisticated yet more accessible – so we've responded by continuing to develop our cyberdefence capability.

Our resources and culture continued

Mobile network

We are investing in 4G geographic coverage and capability, consolidating the EE network's position as the biggest and fastest in the UK. We aim to expand 4G to reach 95% of the UK's geography by the end of 2020.

Wi-fi

We run one of the world's biggest wi-fi networks, with around 5.9m hotspots.

138
InLinkUK units
installed in London



Progress this year

This year we've:

- achieved 99.999% availability in our core network for broadband customers
- deployed Ethernet and optical nodes into 38 data centres belonging to other companies to help grow business connectivity services.
- upgraded 935 exchanges and migrated more than 309,000 customers to faster broadband services that are cheaper and more energy efficient for us to run
- launched the BT Agile Connect service (see case study)
- reached more than 90% of the UK's geography with our 4G network, giving many rural and remote areas access to 4G
- built 323 new sites on the Emergency Service Network (ESN)
- installed 138 InLinkUK units, providing users with free wi-fi at up to 1Gbps, free UK phone calls, rapid mobile device charging and touchscreen access to local digital services.

Service platforms

We run a number of service platforms that combine our network and IT resources. They underpin many of our products. Our five core service platforms are voice and mobile, broadband and internet access, TV, Ethernet and managed data, and emerging services.

Our TV platform supports a growing number of customers. Our voice and mobile platform supports EE, BT Mobile and Plusnet Mobile; it also underpins the Emergency Services Network (ESN).

Progress this year

This year we've:

- shown the Ashes live from Australia – with enhanced digital experience, so BT Sport customers watching online or via the app can skip straight to key moments
- carried over one billion minutes a month on our BT Conferencing platform.

IT systems platforms

Our IT systems let us manage processes, handle customer information and deliver products and services. They're critical to serving customers and running our business.

We've completed the first phase of our EE integration programme. This involved moving EE people to BT systems so all our people could benefit from a single, consistent set of applications.

Progress this year

We're simplifying the different technologies we use. This year we've:

- brought together BT and EE datacentre and core IT applications management
- deployed robotic process automation, using software robots to carry out automated tasks, including order entry and order management, to cut costs and improve our back-office processes.

BT Agile Connect



BT Agile Connect is our first software-defined wide area network (SD-WAN) for business customers. We're giving them better visibility and control of their networks. It's a faster, simpler and more secure way of setting up new sites

Properties

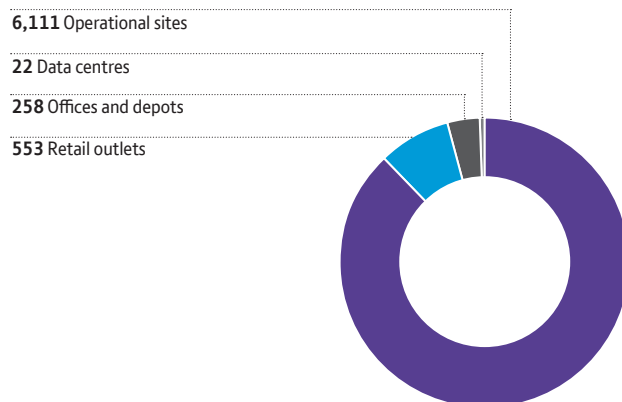
We have around 7,000 properties in the UK and 1,700 across the rest of the world.

We lease most of our UK properties from Telereal Trillium, part of the William Pears group. We signed a sale and leaseback arrangement with them in 2001. The majority (88%) of our UK properties are operational sites housing fixed and mobile telecoms and broadband kit. The rest are retail outlets, offices, contact centres, depots and data centres. We also have the BT Sport TV studios in London.

In the UK, we've rationalised and disposed of office, depot and data centre space in Croydon, Harrogate, Oxford and Wolverhampton.

Outside the UK, we've consolidated key office and operational locations in New York, Cincinnati, São Paulo, Frankfurt and Munich.

BT property portfolio (UK)^a



^a excludes leased cell sites, concessions in other retailers' stores and franchisee-owned leases.

Research and development


Commercial success increasingly depends on innovation – that's why we invest in R&D. The result is an enviable track record of scientific breakthroughs, engineering successes and commercial progress.

A proud history of innovation

In 1837, Sir William Fothergill Cooke and Sir Charles Wheatstone filed a patent for the world's first practical electric telegraph. From this they founded The Electric Telegraph Company. This business eventually grew into BT.

Ingenuity transforms the world

Our innovation has continued to transform communications since Cooke and Wheatstone's electric telegraph. Often that impact has been wider than just communications. Colossus was the world's first electronic programmable computer. It was created by GPO engineer Tommy Flowers in 1943, and heralded the start of the computer age. In 1984, we deployed the world's first commercial 140Mbps single-mode optical fibre link. This technology is now the backbone of communications, carrying huge volumes of internet traffic around the globe. We made the world's first live data call over GPRS (a mobile technology) in 1999. Less than 20 years later, mobile data has transformed the way people live.

 You can read more about our innovation at btplc.com/innovation

We showcased our innovation at two major events this year. Innovation 2017 was held at Adastral Park, our global R&D headquarters in Suffolk, UK. It was attended by 625 customers and influencers, including government, investors, journalists and analysts. New Scientist Live hosted 30,000 visitors over four days. We sponsored its technology zone.

This year we invested around £510m (2016/17: around £520m) in R&D. Over the last decade we've been one of the largest investors in R&D both in the UK, and globally in the telecoms sector.^b

Our research keeps producing new inventions. In 2017/18 we filed patent applications for 97 inventions (2016/17: 102), and as of 31 March 2018 had a worldwide portfolio of more than 5,000 patents and applications.

97

patent applications filed in 2017/18

5,000

patents and applications in our worldwide portfolio

^b Comparison based on total R&D spend 2007/8 to 2016/17. Source: EU Industrial R&D Investment Scoreboard, <http://iri.jrc.ec.europa.eu/scoreboard.html>

Our resources and culture continued

Open innovation

No-one has a monopoly on good ideas. That's why we work with partners, universities and customers from around the world.

There are eight BT global development centres. Our biggest is the innovation campus Adastral Park. Around 3,600 people work there and we share it with more than 90 other high-tech companies.

We have extensive, long-standing, joint-research programmes with Cambridge University (UK), Massachusetts Institute of Technology (USA), Tsinghua University (China), Khalifa University (UAE) and more than 30 other universities globally.

We've used ideas inspired by our collaboration with MIT or Artificial Intelligence (AI) and machine learning to create algorithms that give us a deeper understanding of our access network. This year we launched a five-year research collaboration with Huawei and the University of Cambridge. It will focus on photonics, digital and access network infrastructure and media technologies, alongside work aimed at boosting the impact of communications technologies in society.

We've opened the BT Ireland Innovation Centre with Ulster University in Belfast. It will work alongside the Belfast Global Development Centre and BT Labs at Adastral Park in Suffolk on projects including Internet of Things, artificial intelligence and data analytics for customer experience and cybersecurity.

Repurposed innovation

We like to repurpose innovations from other industries and apply them to our business. This year we flew a drone across a river in a Welsh valley to deliver a fibre. We're looking into new ways to roll out fibre without so much digging. These include new directional drilling techniques and autonomous robots that propel themselves through the ground like worms.

Drone fibre delivery



Our researchers are investigating the application of artificial intelligence and machine learning techniques to the operation of 5G networks.

We're also exploring how we can use a technique from the mobile world – called beamforming – to improve our copper lines' performance. It exploits the interference or 'crosstalk' between copper cable pairs to boost the speed achievable on a line.

Awards for our research and development

We're proud that our R&D is recognised outside BT. Here are some of the awards we've won this year.

- UK IT Awards: Best IoT (Internet of Things) Project
- TM Forum 2017: Excellence Award for Smart City Innovator of the Year
- TM Forum 2017: Outstanding Achievement Award
- The Engineer magazine: Collaborate to Innovate Awards 2017

Here are two examples of BT R&D this year:

Getting interactive with MotoGP



We're researching new forms of TV production that enable content producers to offer better multi-screen interaction. Viewers can control and personalise what they watch across TVs, tablets and smartphones. This could include extra graphics, or split audio and video, depending on the viewer's focus

Mapping underground



Before they dig, our engineers need to understand what's underground. So we're trialling new gravity measurement using quantum sensors, ground penetrating radar and acoustic reflectometry

Brand and reputation

We own three strong retail brands: BT, EE and Plusnet. Between them, they cover UK and global markets for consumers, businesses and the public sector. We've positioned these three brands to maximise their customer reach and minimise overlap. This multi-brand approach makes us more agile in our markets and broadens our overall appeal. We also own the Openreach brand, with which we serve communication providers.

Lots of things affect our brands and reputation. But peoples' direct interactions with us play a big part. That's why we're committed to optimising every aspect of customer experience: from our products to our service experience to our communication. For more on how we're improving customer experience, see page 21 and our customer-facing units from page 72.



The BT brand stretches across consumer, business and public sector markets within the UK and across multinational business markets in 180 countries.

This year, we unveiled Ultrafast Fibre, the first and only fibre broadband with a 100Mbps speed guarantee, and we were host broadcaster of the UEFA Champions League Final in Cardiff.

In the UK business market, we have the highest awareness of any telecoms, networks and IT services brand. Strong business wins included network services for Severn Trent Water and mobility services for FirstGroup Plc.

BT was recognised as a leader for the 14th consecutive time in Gartner's Magic Quadrant for Network Service Providers, Global^a. (See page 95.)

And BT was named a 'Leader' in the IDC MarketScape for Worldwide Managed Security Services 2017 Vendor Assessment^b.



EE is the UK's biggest mobile network operator, positioned at the cutting edge of technology.

With around 600 retail stores across the UK, we are also first for spontaneous brand awareness, despite being the youngest major UK mobile brand by almost a decade.

EE's mobile network has been independently recognised as the best overall network by RootMetrics and in 2017, it was the only network in the UK able to offer mobile connectivity for the new Apple Watch.



Plusnet offers UK customers a great value range of broadband and mobile services.

In 2018, Plusnet's outstanding customer service continued to be acknowledged with industry awards, including uSwitch's Best Customer Service for the fifth consecutive year.

At the same awards, we also won Best Value for Money, Best Home Broadband and – despite only launching mobile in 2016 – Best Value Mobile (SIM-only).

openreach Openreach (page 104) builds and maintains Britain's digital communications network.

More than 25,000 engineers take care of 165 million kilometres of network, working in every community, every day.

This year, Openreach launched a new brand identity, reflecting commitments made as part of the DCR settlement (page 52). The programme to change all assets has already begun, including our buildings, vans and uniforms.

^a Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organisation and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

^b MarketScape for Global Managed Security Services Vendor Assessment 2017, Martha Vazquez, 1 December 2017.

Our resources and culture continued

Our culture

We want our culture to reflect our values of personal, simple and brilliant, for our people and our customers.

Our values

Personal

We come across as human and show our customers that we understand and care.

Simple

We're straightforward, easy to deal with, and make complex things clear.

Brilliant

We lead the way in creating new things, and whatever we do, we do it really well.

We're proudly personal, simple and brilliant in many ways already. That includes our history of pioneering innovation, a strong volunteering ethos, diverse career development for our people, and our ability to disrupt the market and reinvent ourselves when we need to – as through ventures like BT Sport, the 2012 Olympics and the acquisition of EE.

Embedding our values further

There's more to do to be personal, simple and brilliant every day.

So we've launched a multi-year transformation programme to simplify our organisation, improve business performance, and reform our culture and capabilities.

This year we've begun simplifying how we do things – by helping our people take personal ownership to resolve their customers' issues and introducing new ways to make better and faster decisions. That means making sure accountabilities are clear and decisions are made at the right level of the organisation, as close to customers as possible.

We've encouraged more diverse thinking in the business by attracting more diverse talent. This year we doubled our graduate intake and quadrupled our apprentice intake across the group. We're offering more career development opportunities for our people, as well as inspiring fresh perspectives.

More diverse thinking



Openreach is encouraging frontline teams to own the decisions that affect its customers

We're also building new programmes and resources to help our people be brilliant, clarifying the key skills and behaviours they need now and in the future (including Management Essentials, Business Essentials and Connected Leaders (see page 44).

Finally, we've been helping our people do the right thing by:

- regularly reaffirming our expectation that everyone acts with integrity through our ethical code
- creating a safe environment where everyone can speak up about risks and concerns
- equipping our leaders to have more regular open and honest conversations so they make better-informed decisions.

The BT Way

All of this will come together in 'The BT Way' – a three-part guide to reflect how we work together as a company, how we treat each other and how we expect everyone to behave. It will include:

- how we're **organised** and how we deliver for our customers
- what we expect from our people through our updated **ethical code**
- what's important to us and how we do things as expressed through **our values**.

Our efforts are having a positive impact

In January's BT-wide 'Your Say' employee engagement survey, we did better than previous years on all our values scores:

+4%

improvement in our Personal score (75%)

+3%

improvement in our Simple score (62%)

+3%

improvement in our Brilliant score (70%)

Respecting human rights

We're committed to respecting human rights in our own business and through our broader relationships.

We believe that everyone is entitled to basic rights and freedoms, whoever they are and wherever they live. These are established in The International Bill of Human Rights and the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work.

We've been a signatory to the UN Global Compact since it was established in 2000 – this is the world's largest corporate sustainability initiative. We use the UN Guiding Principles on Business and Human Rights (UN Guiding Principles) to guide our approach.

How could we impact human rights?

As a global company we could impact human rights either directly, or indirectly through our business relationships. Our biggest impact could be on customers' rights to privacy and free expression.

We must comply with lawful government requests for information about how people use our services and the content of their communications, but this could impact our customers' rights to privacy.

Free expression includes the right to access information. As a communications company, we need to consider situations where we might need to limit people's access to content. We could also affect our people's rights if our employment standards fall short; workers in our supply chain through our buying practices; and communities where we operate, if we don't stick to environmental standards.

How do we manage human rights in BT?

Our ethical code sets out the standards we expect of our people and those who work on our behalf, including how they respect human rights.

We have a team dedicated to human rights integration and a Human Rights Steering Group chaired by a member of our *Executive Committee*. This year it considered a range of issues, including:

- contracts we're monitoring for human rights issues
- our second Modern Slavery Act statement and programme
- our second privacy and free expression report
- the impact on human rights when broadcasting large sporting events.

What we've been doing this year

We've been pulling together our existing policies on human rights issues into one overarching policy. As part of that we've reviewed our operations in key countries outside the UK with the help of a leading law firm.

Due diligence

In April 2017 we launched our enhanced customer due diligence process. To embed the key principles with our sales teams we held calls and face-to-face training.

In our due diligence checks we look for whether:

- our product/service could be used for defence, military, law enforcement, security or cybersecurity purposes
- the customer or end user is a government, government agency or state-owned company
- the service is being provided in an extreme or high-risk country (based on external measures).

If these criteria are met we look into things in more detail – which might include contractual protections or internal monitoring arrangements.

Modern slavery

In June 2017 we co-sponsored a residential summit of international experts which explored the role of technology in tackling modern slavery. Building on the findings^a we're establishing an industry collaboration to address the challenges and opportunities for technology to help end modern slavery.

We published our second Modern Slavery Act statement^b in August 2017. It explained our progress and the steps we've taken to prevent modern slavery in our business and supply chain. We're also reviewing our policies, processes and procedures with the help of external experts.

We've continued to support the UK Modern Slavery Helpline partnering with anti-slavery charity Unseen – for more details see our Delivering Our Purpose Report.

In October 2017 Gavin Patterson joined the first Business Against Slavery Forum^c hosted by the Home Office. The forum is a way for companies to collaborate and drive change on identifying and tackling modern slavery.

Sport and human rights

Big sporting events have a hugely positive social impact. But they can also carry human rights risks like labour rights violations and community displacement.

Throughout the year we've continued working with the participants in the Mega-Sporting Events Platform for Human Rights. With input from other broadcasters, we've created a tool to help identify human rights risks when broadcasting. We presented it at the second Sporting Chance Forum^d in November 2017. The team at BT Sport are trialling the tool in their compliance processes.

Priorities for the year ahead

We'll launch our overarching human rights policy and embed it in our business having reviewed our existing metrics to support the new policy.

We'll be refreshing our privacy and free expression report with data on information requests in countries outside the UK. We'll also cover what we do on cybersecurity.

^a wiltonpark.org.uk/wp-content/uploads/WP1546-Report.pdf

^b btplc.com/Thegroup/Ourcompany/Ourvalues/ModernSlaveryAct

^c gov.uk/government/news/leading-businesses-unite-to-tackle-slavery

^d ihrb.org/focus-areas/mega-sporting-events/2017-sporting-chance-forum-meeting-report