prospect

BT's role in the UK's tech sector and digital economy

A Prospect briefing

Contents

1. Why BT matters	3
Digital infrastructure	3
Research and development	4
Jobs, skills and worker voice	7
2. Issues and challenges	9
Financial short-termism	9
Cost-cutting	12
Regulatory uncertainty	13
Fragmentation and duplication	15
Government funding and taxation	17
3. An agenda for the future	19
Endnotes	20

BT's role in the UK's tech sector and digital economy A Prospect briefing

The BT Group is central to the UK's tech sector and digital economy. It is one of the UK's biggest investors in R&D and new technology. The infrastructure and services it provides, along with the connections and innovations they enable, underpin the UK's strengths in digital, creative and high-tech sectors, and the productivity improvements we need to see across the economy. With around 100,000 employees, it is also one of the largest unionised enterprises in the private sector.

A number of challenges and barriers mean we are not making the most of this key national asset – from financial shorttermism to regulatory uncertainty and weaknesses in government policy.

This briefing highlights the vital importance of BT and its workforce to the UK's economic future, and identifies priorities for making the most of that potential.

1. Why BT matters

BT Group plays a central and unique role in the UK's economy and society – one that is becoming even more vital as today's digital and technological revolutions accelerate.

Digital infrastructure

In the twenty-first century, digital connectivity is essential to economic and social infrastructure; its continuous improvement is the fundamental precondition of the improvements in productivity and social inclusion we need to see in the years ahead.

The experience of the Covid pandemic has accentuated its importance as a public service and accelerated its increasing centrality to every aspect of our lives. Anticipated developments in areas like cloud computing, the "Internet of Things", Artificial Intelligence (AI) and quantum technology depend on it.

As well as supporting innovation, inclusion and productivity improvements across the economy, continued advancements in digital connectivity are also critical to a number of other generational challenges, from maintaining our national security to meeting our net zero commitments.

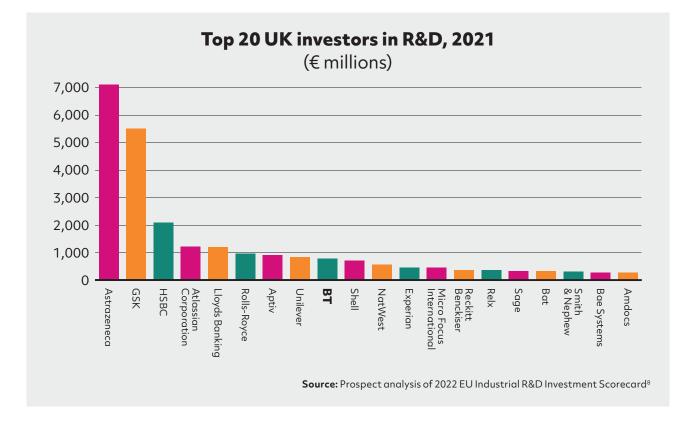
BT is making by far the biggest single contribution to these advances, its investment

dwarfing that of Government or any other private enterprise:

- BT's subsidiary Openreach is spending around £15bn on rolling out full fibre to reach 25 million homes by the end of 2026. This is greater than the total amount Government is spending on new schools and hospitals added together over this same period.
- BT's mobile network EE is currently building the largest 5G network in the UK, already serving over eighty towns and cities. This is part of an estimated £9bn investment programme being delivered by the private sector as a whole.¹

The availability and take-up of faster broadband speeds is expected to add £17bn Gross Value Added (GVA) by 2024, mostly through enhancing the productivity of broadband-using firms.² Recent analysis by the Centre for Economics and Business Research estimates that nationwide rollout of full fibre could deliver a £59bn boost to UK productivity by 2025, and bring 1 million people back into the workforce through remote working.³

It has been estimated that a 5G mobile network could increase annual UK business revenues by up to £15.7bn by 2025.⁴ A report from WPI Economics has forecast that the cumulative gains of UK businesses moving from 4G to 5G could produce an economic



boost of more than £38bn by 2025, plus £120bn between 2025 to 2030.⁵

Research and development

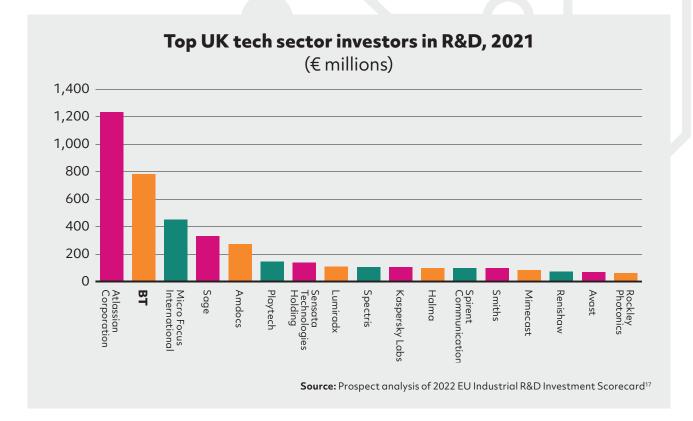
The Government has set a target to raise UK investment in R&D relative to OECD peers, with most observers recognising a particular need to do more to match the world-class excellence of the UK's science base and university sector with more investment in innovation and product development in the private sector.

BT has long served as a major centre for cutting edge corporate research and innovation in the UK economy, comparable to the historic role played by Bell Labs in the US.⁶ It was the original Post Office Research Laboratory that made the breakthroughs in fibre-optic communications that laid the foundations for today's technological revolutions and the UK's leading role in the field.⁷ Its research centre at Adastral Park pioneered critical developments in areas such as voice recognition and videoon-demand, and to date has accumulated over 10,000 patents.

Today BT researchers and technologists drive advances across an extraordinary range of areas:

- working with architects to design a zero-carbon building for testing smart technologies⁹
- using "Internet of Things" to strengthen Environment Agency flood response systems¹⁰
- paving the way for the use of Al in future nuclear waste processing¹¹
- coordinating an initiative to rapidly increase supply of PPE to hospitals during the pandemic¹²
- combining epidemiological modelling with machine learning to better understand and build defences against computer viruses and cyber-attacks¹³

4

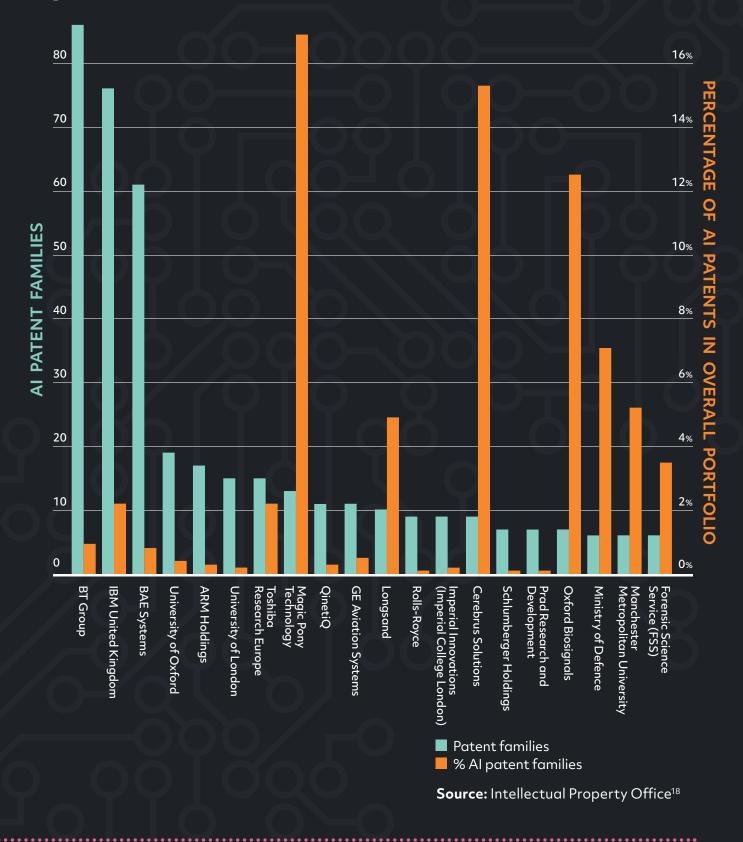


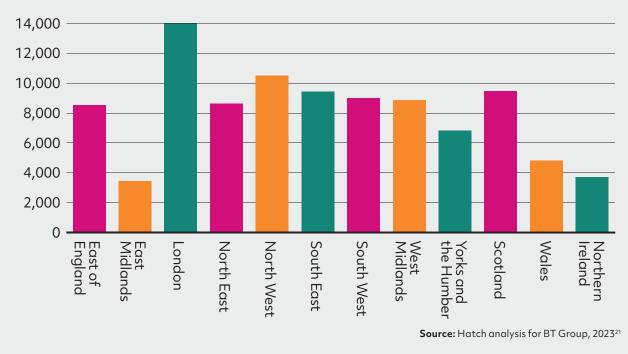
- working with university researchers to develop innovative uses of drones and robots to enable safer and more efficient construction and maintenance of infrastructure¹⁴
- working with Toshiba to use quantum technologies to build ultra-secure communication networks, a key step towards realising the Government's ambition of making the UK the "world's first quantum-ready economy".¹⁵

In financial terms BT Group is one of the UK's top ten private sector investors in R&D, and the second largest R&D spender in the UK's tech sector.

BT Group is also now at the forefront of developments in AI, which the Government sees as a key strategic strength for the UK. To date, BT has filed more AI-based patents than any other UK company, ahead of IBM, BAE Systems, the University of Oxford and ARM Holdings.¹⁶ BT Group is also now at the forefront of developments in Al... To date, BT has filed more AI-based patents than any other UK company

Top UK-based AI patent applicants and proportion of their overall patent portfolio that relates to AI, 1998-2017





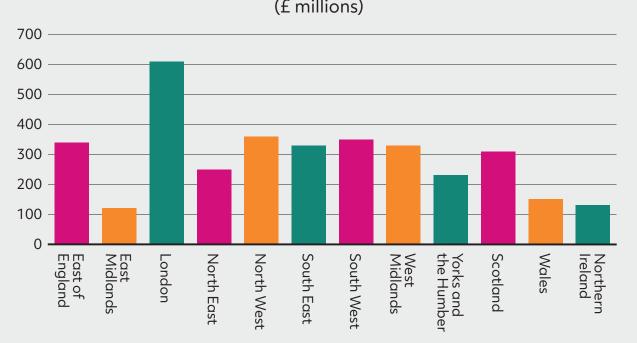
BT Group employees (by place of work)

Jobs, skills and worker voice

With a workforce of over 80,000 in the UK, as well as over 17,000 contractors (FTE), BT is one of the most important employers in the economy. It is also one of the most broadly distributed around the country, providing a significant number of jobs in every nation and region of the UK. On average, each direct or indirect job created by BT contributes around £85,000 in GVA to the economy.¹⁹

BT is also one of the largest unionised employers in the private sector. The company has said it regards trade unions as "vital partners". Prospect is recognised as the collective representative voice of managers and professionals working for the company in the UK.²⁰ Relations are not always easy, but trade unions have played a vital role in developing the company and supporting its workforce. Notable aspects of BT's employment footprint, to which unions have made important contributions, include:

- Through collective negotiation and bargaining, BT's unions work to ensure it remains an important provider of comparatively high value jobs throughout the country, making a critical contribution to local and regional economies. Wages paid to BT employees bring hundreds of millions of pounds a year to each nation and region of the UK (see graph on page 8).
- BT plays an important role in developing the UK's skills base, through apprentice and graduate programmes,²² programmes to modernise employee skills in critical areas like cybersecurity²³ and collaborations with the higher education sector in areas like AI and data science.²⁴ Unions engage closely with the employer to shape training and development opportunities to the benefit of members and the wider economy.



Total wages paid to BT employees by region of residence (£ millions)

 Prospect and other unions are working with BT to deliver its Race Action Plan and ensure that diversity and inclusion is embedded in the company's work and operations.²⁵ BT recognises the role played by unions in championing the concerns and priorities of their members through regular engagement with the D&I Centre of Expertise and Employee Relations team.²⁶

On average, each direct or indirect job created by BT contributes around £85,000 in GVA to the economy

2. Issues and challenges

BT is one of the UK's most valuable centres of innovation and expertise, and provides an invaluable platform for productivity improvements across the economy and the inclusion and participation of every citizen in every community.

But a number of industrial issues and policy failures mean we are failing to make the most of this vital strategic, economic and social asset.

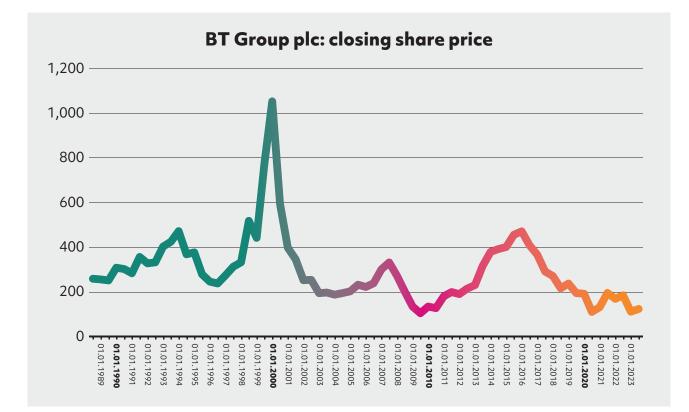
Financial short-termism

Since its floatation in the 1980s, BT has been primarily reliant on private capital markets for equity investment. As the Governmentcommissioned Kay Review recently confirmed, this can expose companies to short-term pressures to maximise shareholder returns that can be in tension with long-term investment in ideas, productive capacity and a committed, skilled workforce.²⁷

This has contributed to some serious instances of underinvestment in essential economic infrastructure in the UK's history, from Railtrack to Thames Water,²⁸ as well as the erosion of its R&D capacities resulting from the loss of corporate research laboratories at firms such as ICI and GEC²⁹ (the two largest industrial companies in the UK in the 1990s). As journalist Will Hutton has also argued,

"The British financial, regulatory and ownership ecosystem is hostile to purposeful companies. The interaction between the way companies are incorporated and the short-term priorities of capital markets, made more acute by Britain's uniquely dispersed and fragmented pattern of share ownership, is particularly biased against the delivery of purpose. Nor are matters helped by an extraordinarily transactional asset management industry, or any of the incentives – including executive pay – throughout the system."³⁰

Comparable issues have been identified in the US, where influential investor Larry Fink warned in 2015 that the "ever-increasing velocity of capital" was contributing to the rise of "acute pressure, growing with every quarter, for companies to meet short-term financial goals at the expense of building long-term value". The result is that "more and more corporate leaders have responded with actions that can deliver immediate returns to shareholders, such as buybacks or dividend increases, while underinvesting in innovation, skilled workforces or essential capital expenditures necessary to sustain long-term growth."³¹



BT Group has been subject to significant share price turbulence in recent decades. The most dramatic episode was the sharp rise and collapse in valuation seen during the telecoms boom and crash of 1998 to 2001. More recently BT's share price grew in the first half of the past decade but has become depressed again since 2016. A contributory factor is likely to be the restrictions on "free cash flow" resulting from the scale of investment being undertaken, which can be a key variable in share-trading algorithms, though as investment advisors stress, "shunning a company for investing in future growth does not make sense if that investment will lead to higher cash flow in future."32

In 2018 it was reported that hedge funds, private equity firms and other activist investors were eyeing the break-up of the company and sell-off of Openreach, prompting the Chief Executive to warn that "a strategy designed to force the share price higher in the short term" would lead to "mistakes".³³ In 2020 BT was forced onto the defensive again by reports that private equity firms were circling for a possible buy-out, following the "failure" of the stock market to understand the scale of investment needed for the future.³⁴

Pressures on the company have become even more acute since 2021 when Patrick Drahi's Altice, a global firm with a reputation for "aggressive cost-cutting", ³⁵ began building its shareholdings to a level that now stands at 24.5%.³⁶ Drahi has made similar moves on other telecom firms, using what the Financial Times has described as "a similar playbook to acquire what he sees as undervalued telecoms assets and then aggressively cuts costs on everything from staff to overheads to repay debt and boost profits". In some cases he has "sold off or spun out infrastructure such as towers or fibre networks to raise funds", which "some analysts criticise ... as asset stripping".³⁷ In France, the Government allowed him to take control of telecoms company SFR in 2014 after promising no job losses for three years, but he proceeded to lay off a third

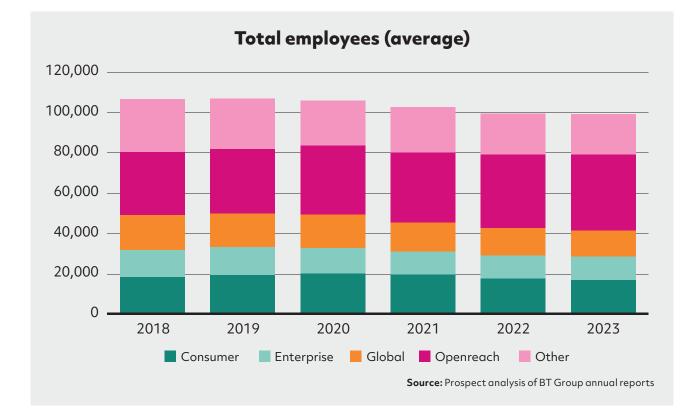
As one industry analyst puts it, the share price has been "languishing" in recent years "largely because the company is investing more [in fibre rollout], and telecoms investors like near-term cashflows"

of the staff in 2017 despite reports of rising customer complaints and failure to meet fibre-installation commitments.³⁸ More recently Altice has faced a corruption probe related to its business in Portugal³⁹ and increasing questions about the rising costs of its \$60bn debt pile,⁴⁰ prompting one financier to comment that "it is just continuously borrowing more money to buy more things".⁴¹ Drahi has responded by promising an asset sell-off across his business empire.⁴²

Prospect called on the Government to review the potential threat to BT's future,⁴³ which the Government did in 2022, though noting that "any future transaction could be subject to a separate assessment".⁴⁴ Any further increase in the Altice stake above the 25% threshold would trigger a further review automatically. One City commentator has warned that "as a genuine strategic national asset, it would be a mistake to let BT fall into the hands of an overseas dealmaker with a fondness for debtfuelled empire-building."45 The Chief Executive of Deutsche Telekom recently commented in February 2023 that "Patrick Drahi is one of the smartest cats... He is sitting in front of the hole waiting for when the mouse is ready, to catch it."46 Another analyst has been quoted as suggesting that if the Government blocked full ownership, "he could take a more activist route by pushing to break the company up and then buying pieces of it".47 Even at 18% there were reports that he "wields even more influence over how the company is run" and is

thought by some to want "cost-cutting to go further".⁴⁸ The increase to 24.5% prompted further concerns about "creeping control".⁴⁹ Summer 2023 saw both new reports that Drahi was preparing to increase his stake to 29.9%,⁵⁰ and suggestions that he might need to sell it,⁵¹ as well as speculation about an alternative takeover plan from Deutsche Telekom.⁵²

A fundamental issue is the lack of "patient capital" needed to support the cost of investment in areas like fibre infrastructure, which will bring benefit over many years to come. As one industry analyst puts it, the share price has been "languishing" in recent years "largely because the company is investing more [in fibre rollout], and telecoms investors like near-term cashflows."53 Prospect has remarked in the past that "It is actually to BT's credit that it has brought its shareholders to the point where they see the case for network investment both in itself and to a level significantly in excess of where a return can be made within a timescale that investors are usually prepared to support". Nevertheless "a set of shareholders that are happy to see capital expenditure held back in the name of increasing their returns causes immense problems to the realisation of what many see as BT's social, or public, obligations."54



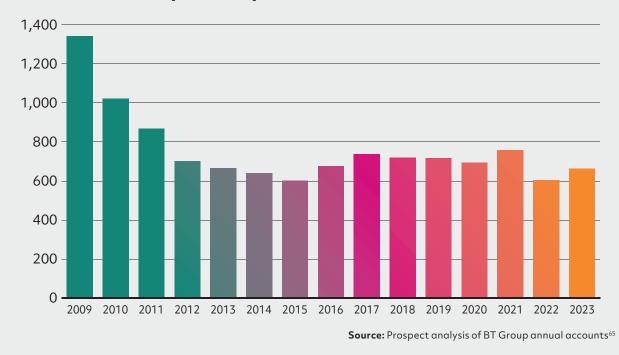
Cost-cutting

Financial and ownership uncertainties have contributed to pressure on BT Group to cut short-term costs, with significant consequences on jobs and pay. In 2018 the firm responded to falls in its share price by promising that 13,000 jobs would be cut at the same time as maintaining its dividend to shareholders.⁵⁵ This resulted in large numbers of redundancies, though the impact on total direct employment was offset by new recruitment in many areas, most notably Openreach. In the five years to 2023 total employment fell 7%; outside Openreach the fall was 19%.

This cost-cutting drive has been accelerating in the face of advances from Altice and pressure from the markets,⁵⁶ with BT announcing a fresh target alongside a reinstatement of the dividend in 2021.⁵⁷ In November 2022 BT announced that it was increasing its cost savings target from £2.5bn to £3bn by April 2025, warning that this could mean additional job cuts.⁵⁸ In May 2023 the Group stated that "total labour resource" (including third party employees) would reduce by 40,000 to 55,000 by 2028-2030.⁵⁹

Prospect has warned that cuts to staffing levels will do significant harm to BT's operations,⁶⁰ and are resulting in the loss of loyal and experienced employees without adequate opportunities for reskilling and redeployment being offered, while additional workloads are heaped on younger workers on lower rates of pay.⁶¹ More recently BT has been experiencing significant recruitment and retention difficulties, with high attrition and turnover rates impacting its ability to maintain and deploy the skilled workforce that it needs.

Further damage has been done to workforce morale and retention through real terms pay cuts. BT Group managers suffered a two year pay-freeze in 2020 and 2021, followed by a below-inflation award of 3-4% in 2022, a year in which the Consumer Price Index



BT Group R&D expenditure (£ millions, real terms)

grew by over 10%.⁶² Attempts to impose below-inflation pay awards across the workforce in 2022 resulted in a damaging pay dispute including the first strikes to take place at the company for thirty years.⁶³

Another worrying trend is the real terms fall in R&D expenditure since the beginning of the last decade, now around 35% below its 2010 level. This has left BT Group spending significantly less on R&D than comparable operators in other advanced economies in recent years.

Given the importance of BT Group in the UK's R&D landscape and its tech sector in particular, this is a real cause for concern.

In July 2023 the Group published outline plans to cut more than one in three jobs at its world-leading research campus at Adastral Park, reducing the workforce at the site from 2,900 to 1,800 over two years. The Group has promised to offer "relocation and redeployment options wherever possible".⁶⁴ However, even where this is possible there is likely to be a negative impact on the firm's contribution to the UK's R&D ambitions – it has long been established that physical proximity is a key factor in research productivity,⁶⁶ which recent research shows has not diminished with the rise of digital connectivity and communication.⁶⁷ Prospect has warned that "fragmenting this centre and losing the environment of collaboration, innovation and creativity it fosters will diminish the business and have a huge personal impact upon the people involved".⁶⁸

Regulatory uncertainty

The BT Group operates in a heavily regulated sector, which can add to pressures to cut short-term costs at the expense of long-term investment.

The chief of Telecom Italia has pointed to regulation as a key constraint on investment in European telecoms.⁶⁹ According to the Financial Times, "Telecoms companies in the

One recent estimate is that the UK is on course for an average of 2.78 fibre connects per home, though this will vary widely between rural and urban areas

US, Japan and China have been subject to less onerous regulation and have much larger customer bases. That means they are more profitable and can justify the huge investment 5G networks require."⁷⁰

For key markets such as LLU (Local Loop Unbundling) and WLR (Wholesale Line Rental) in which BT is seen as a potentially dominant provider to other businesses, Ofcom has relied on "RPI-X" (or "CPI-X") mechanisms of price regulation.⁷¹ These typically enforce continual real terms price reductions by capping the amount a firm can charge for goods or services at a level pegged to inflation with an annual percentage subtraction reflecting expected cost-reductions. Such frameworks were established for privatised utilities in the 1980s and in the words of one expert commentator "turned out to be an excellent regulatory tool for 'sweating the assets' ... it is not a good tool for giving incentives to firms to invest."72

Retail prices to households and individuals are not regulated in the same way but Ofcom enforces rules for how service contracts are structured and presented⁷³ and is currently reviewing the common industry practice of mid-contract inflation-linked price rises.⁷⁴

Prospect has in the past warned that a narrow focus on industry costs and prices has held back investment and service quality.⁷⁵

BT Group has itself warned of "a negative impact on service and innovation in the medium to longer term".⁷⁶ The possibility of such a trade-off between short-term cost cutting and future efficiency and improvement has been dismissed by Ofcom⁷⁷, but it was confirmed by a recent Government review which affirmed that there can be a "tension" between holding down short-term prices and "incentivising investment (with positive consumer benefits in the longerterm)".⁷⁸

This has been illustrated in recent years by the positive impact on investment of Ofcom's Wholesale Fixed Telecoms Market Review, which limited price controls on new fibre-based products and stated that new cost-based price controls were not expected before 2031.⁷⁹ In response, BT was able to significantly raise its full fibre roll-out target. One analyst commented "BT has always maintained that its fibre targets were contingent on the right regulatory conditions that would enable it to make a fair return. It is now living up to its word."⁸⁰

Significant challenges and uncertainties remain, however, on issues such as the indexation of legacy pricing and the lack of certainty around price controls or additional regulations beyond one or two market review periods against a background of actual investment horizons that can exceed fifteen or twenty years.⁸¹ Ofcom reviewed the role of Openreach in 2016. At the time Prospect warned that structural separation would:

- chill investment
- represent a high-risk diversion
- undermine improvements in quality of service
- jeopardise the pan-BT research effort
- raise Openreach's costs (and those of its customers and thus consumers at large)⁸²

In the event Ofcom required that a new armslength relationship be established with BT, warning that "full structural separation remains an option".⁸³ Calls to break up the company remain popular with its competitors⁸⁴ as well as some prominent politicians, including the previous Deputy Prime Minister.⁸⁵

Fragmentation and duplication

Some have argued that the original development of the UK's digital infrastructure was set back several years as a result of Governments' attempts to foster competition in the 1990s, resulting by 2002 in "lots of incomplete, underused, loss-making local networks, no national broadband cable network and an industry on the brink of collective bankruptcy".⁸⁶

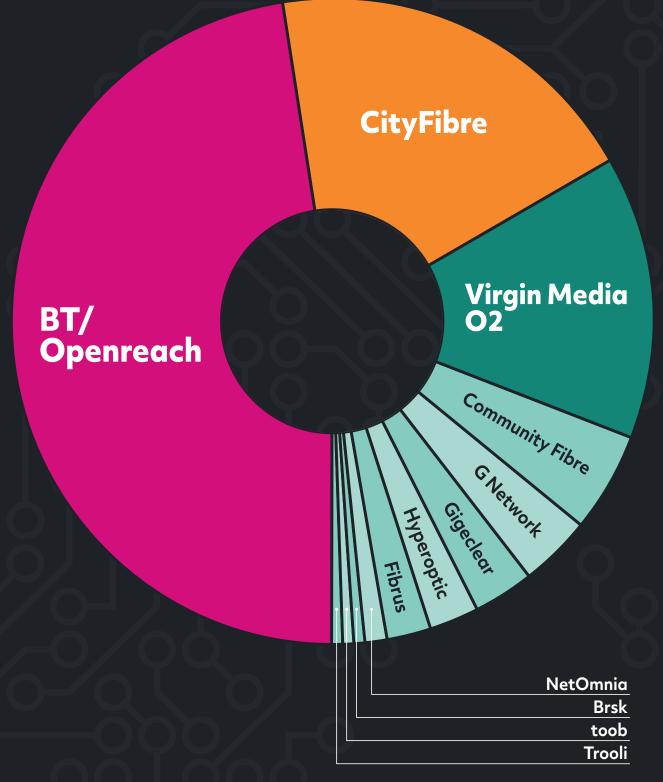
A comparable situation risks developing today as speculators and financial institutions pour money into over a hundred "altnets" now laying broadband fibre cables alongside one another in the most potentially lucrative urban areas.⁸⁷ Around £15bn is reported to have been invested by private investors and banks including KKR, Macquarie, Warburg Pincus and Goldman Sachs. One recent estimate is that the UK is on course for an average of 2.78 fibre connects per home, though this will vary widely between underserved rural areas and urban areas where "overbuild" is highest.⁸⁸

This not only unnecessarily increases the disruption such works create. It also represents, as BT's Chief Executive has warned, "capital wasted on an enormous scale"⁸⁹ in a context where the pool of globally mobile capital available to UK broadband investment is limited.

It is highly unlikely that the market will ever support the simultaneous operation of numerous fibre networks side-by-side with one another. The Financial Times reports expectations "that many of the smaller companies will either go bust or be bought out by competitors, as cable companies were in the 1990s".⁹⁰ The Government is reported to be drawing up contingency plans for bailing out or ensuring continuity of service from smaller providers who fail, as it has been forced to do in the energy supply market.⁹¹

Fibre investment plans

(as of January 2023)



Source: Intelligens Consulting & Various⁹²

The current Government made a manifesto promise "to bring full fibre and gigabit-capable broadband to every home and business across the UK by 2025"

Government funding and taxation

The current Government made a manifesto promise "to bring full fibre and gigabitcapable broadband to every home and business across the UK by 2025".⁹³ As we have seen, by far the largest share of investment in rolling this out is being delivered by BT Group itself – around £15bn over the space of a few years. However, the Government also made a manifesto commitment to provide "£5bn of new public funding to connect premises which are not commercially viable".⁹⁴

Analysis commissioned by BT from Analysys Mason indicated that only around 75% of premises will be commercially viable to serve without public support, requiring funding well beyond the expected scope of the planned £5bn programme. This challenge will be particularly acute in Scotland, Wales and Northern Ireland where less than half of premises are likely to be commercially viable without subsidy.⁹⁵

Following its election, the Government reduced its commitment to ensuring nationwide connection to just 85% by 2025, and 99% by around 2030.⁹⁶ By the end of 2020 less than a quarter of the promised £5bn in support had been committed. By the beginning of 2022 the Government had allocated just £1.2bn to rolling out gigabit by 2025, with a further £3.8bn reserved for future years. Even then a cross-party parliamentary committee reported that "we are still not convinced that the Department will deliver [its revised commitments] on time".⁹⁷

Funding shortfalls have also been identified in the area of 5G rollout if connectivity is to be extended to throughout the UK by 2030. A recent report suggests that, on top of £9bn-worth of investment expected from BT and other private sector providers, an additional £3-5bn would be needed "to meet both expected traffic demand and UK-wide deployment of basic 5G functionalities across the existing mobile network footprint", and even more to bring enhanced 5G quality and coverage to semi-rural locations (beyond the exiting mobile footprint in those areas). Policy interventions that could help fill this gap include:

- direct public funding or provision of low interest loans
- improved regulatory certainty
- certainty around cost of spectrum needed to meet 5G use cases
- changes in industry structure such as consolidation
- reduced rollout barriers
- public procurement of 5G services to reduce revenue uncertainty⁹⁸

Further challenges and uncertainties are presented by the tax regime. It's long been recognised that the UK business tax system favours short-termism and rent-seeking

It's long been recognised that the UK business tax system favours short-termism and rent-seeking over investment, R&D and workforce development

over investment, R&D and workforce development.⁹⁹ The Institute for Public Policy Research has advocated an increase in investment allowances to offset increases in the headline rate of corporation tax "to tilt corporate incentives towards investment rather than dividend payments."¹⁰⁰ The Economy 2030 Inquiry, hosted by the Resolution Foundation, has recently reached similar conclusions, arguing that "with UK investment levels consistently among the lowest in the G7, we should reduce barriers to corporate investment (including by reducing uncertainty)".¹⁰¹

BT Group has recently made its own case for radical reform of investment allowances to offset the impact on investment of rising corporation tax rates.¹⁰² The temporary "super-deduction" policy introduced in 2021 provided valuable support to BT's investment programme in 2021-22 and 2022-3, allowing Openreach "to pursue a bigger, quicker target for broadband investment".¹⁰³ Overall the measure was forecast by the Office for Budget Responsibility (OBR) to raise business investment across the economy by around 10%, or £20bn a year, contributing to a 0.75% boost to GDP.¹⁰⁴

The new "full expensing" policy announced in the 2023 Budget will provide valuable relief for high-investing firms like BT in the shortterm,¹⁰⁵ and is expected by the OBR to raise total business investment by almost 3.5% in 2024 and 2025,¹⁰⁶ but it is due to expire in 2026, with no provision in the Government's current fiscal plans to extend it beyond this date. This cliff-edge will make it particularly hard to plan and finance investment for the medium- and longer term. Prior to the announcement of the extension of investment relief in the 2023 Budget, BT warned that the effect of a "hard stop" would be to

"add to the rising costs which all businesses are currently facing, as well as limiting the scope to make further investments to improve digital connectivity in future. The spillover benefits of fibre investment, such as bringing people back into the workforce and improving productivity and growth, mean this would have knock on impacts for the wider economy".¹⁰⁷

Similar risks to business investment and economic growth are posed by the current prospect of an expiry of the current "full expensing" allowance. For these reasons the Resolution Foundation has argued that a commitment should be made now to make the policy permanent, arguing that "higher investment allowances can be expected to boost investment, GDP and hence other tax revenues. Indeed, in principle, these impacts could be large enough that overall tax revenues are unchanged".¹⁰⁸

3. An agenda for the future

BT Group and its workforce will be pivotal to strengthening and stimulating our economy, and spreading new opportunities throughout our society in the years ahead. But to maximise our potential as a country we need to preserve and develop this crucial national asset.

- There is an immediate challenge for all stakeholders in BT Group to work to repair morale in the organisation in the wake of the industrial dispute of 2022. Staff surveys are confirming warnings made by unions about the damage being done to good will and engagement.
- As in the past, Prospect will work constructively with BT to manage the impact of savings targets on jobs. But in a tight UK labour market, increasing staff turnover at every level – from frontline engineers and customer service to managers and specialists – means that retaining, retraining and reskilling employees for the challenges of the future is becoming even more important. The company has long promised to make this a priority but it is now time for a concrete plan to turn this into reality
- As BT embarks on further reorganising and restructuring, with some of its businesses and divisions given increasing autonomy while others are merged, the social partnership with trade unions successfully developed at Group level needs to be extended and more deeply embedded throughout the company. Informing and involving workers and their union representatives has helped BT through many cycles of workforce change in the past and helped it remain flexible and adaptable in the face of fast-changing technological and economic conditions. In years to come this will be even more critical.
- Government, Ofcom, and BT's investors need to ensure it is in a position to continue investing in the infrastructure, innovation, and workforce skills that will be so critical to the UK's success and prosperity in the years and decades ahead. Public funding and financing in areas from full fibre rollout to high-risk R&D must be sufficient to enable socially beneficial activities that cannot be expected to generate sufficient commercial returns. Pressure from capital markets or the regulator for cost-cutting, or uncertainty about changes in ownership or corporate structure, must not be allowed to prevent the company from taking the long-term view needed for the unique and invaluable role it has to play in the country's future.

Endnotes

- 1 https://www.connectivityuk.org/wp-content/ uploads/2022/09/The-Investment-Gap-to-Full-5G-Rollout.pdf
- 2 <u>https://www.gov.uk/government/uploads/system/</u> uploads/attachment_data/file/257006/UK_Broadband_ Impact_Study_-_Impact_Report_-_Nov_2013_-_Final.pdf
- 3 <u>https://www.openreach.com/content/dam/openreach/openreach-dam-files/new-dam-(not-in-use-yet)/documents/reports/Openreach%20Cebr%20Report%202021%20online.pdf</u>
- 4 <u>https://home.barclays/news/press-releases/2019/04/5g-</u> technology-boost-to-uk-economy/
- 5 <u>https://newscentre.vodafone.co.uk/app/</u> uploads/2020/06/Vodafone-5G-Report-final.pdf
- 6 https://www.itv.com/news/anglia/2015-11-23/40-yearsof-gadgets-and-gizmos-at-adastral-park. On Bell Labs see https://archive.nytimes.com/www.nytimes.com/ imagepages/2012/02/26/sunday-review/26bell-gfx.html; http://jongertner.net/the-idea-factory/
- 7 <u>https://www.theguardian.com/technology/2021/dec/12/</u>john-midwinter-obituary; http://oro.open.ac.uk/40873/
- 8 <u>https://iri.jrc.ec.europa.eu/scoreboard/2022-eu-</u> industrial-rd-investment-scoreboard. "Tech sector" is here taken to comprise software & computer services, fixed line telecommunications, electronic & electrical equipment, and technology hardware and equipment.
- 9 https://www.ipswichstar.co.uk/news/business/ecolab-aspart-of-digicentre-at-adastral-park-submitted-2891306
- 10 <u>https://techmonitor.ai/leadership/digital-</u> transformation/bt-iot-floods
- 11 https://www.theregister.com/2022/08/11/bt_sellafield/?
- 12 <u>https://www.medicalplasticsnews.com/news/</u> manufacturer-vows-to-work-round-the-clock-toprovide-health/#.XrO960VmfMI.twitter; https://www. eadt.co.uk/news/farlingaye-high-ppe-bt-face-masksproject-2677124; https://www.ipswichstar.co.uk/news/ business/bt-s-adastral-park-producing-thousands-ofvisors-to-protect-2880390
- 13 https://www.adsadvance.co.uk/bt-unveils-inflame.html
- 14 <u>https://www.ispreview.co.uk/index.php/2021/11/bt-test-</u> <u>robots-to-help-build-and-fix-uk-fttp-broadband-ducts.</u> <u>html</u>
- 15 https://www.techradar.com/news/bt-and-toshiba-useguantum-cryptography-to-create-unhackable-network
- 16 https://assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment_data/file/817610/

Artificial_Intelligence_-_A_worldwide_overview_of_AI_ patents.pdf

- 17 <u>https://iri.jrc.ec.europa.eu/scoreboard/2022-eu-</u> <u>industrial-rd-investment-scoreboard</u>. "Tech sector" is here taken to comprise software & computer services, fixed line telecommunications, electronic & electrical equipment, and technology hardware and equipment.
- 18 <u>https://assets.publishing.service.gov.uk/government/</u> uploads/system/uploads/attachment_data/file/817610/ Artificial_Intelligence_-_A_worldwide_overview_of_Al_ patents.pdf
- 19 Based on analysis by Hatch for 2020-21 at https://www. bt.com/bt-plc/assets/documents/about-bt/bt-uk-andworldwide/bt-in-the-uk-and-ireland/research-andreports/the-economic-impact-of-bt-group-plc-in-the-uk/ eir-uk-2022.pdf
- 20 <u>https://prospect.org.uk/news/prospect-launches-</u> partnership-agreement-with-bt
- 21 https://www.bt.com/bt-plc/assets/documents/about-bt/ bt-uk-and-worldwide/bt-in-the-uk-and-ireland/researchand-reports/the-economic-impact-of-bt-group-plc-inthe-uk/eir-uk-2022.pdf
- 22 <u>https://prospect.org.uk/news/prospect-hails-new-bt-tech-apprentice-and-graduate-roles</u>
- 23 <u>https://newsroom.bt.com/bt-launches-employee-cyber-</u> security-reskilling-programme-in-partnership-with-<u>capslock/</u>
- 24 <u>https://www.ipswichstar.co.uk/news/artificial-</u> intelligence-course-at-university-of-suffolk-2881844
- 25 <u>https://prospect.org.uk/news/prospect-launches-partnership-agreement-with-bt</u>
- 26 <u>https://www.bt.com/bt-plc/assets/documents/about-bt/</u> our-people/2022-diversity-and-inclusion-report.pdf
- 27 <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/253454/</u> bis-12-917-kay-review-of-equity-markets-final-report. pdf; see also <u>https://www.economist.com/finance-and-</u> economics/2013/10/03/the-profits-prophet.
- 28 <u>https://e-space.mmu.ac.uk/22433/1/2008-01.pdf;</u> <u>https://www.ft.com/content/b2314ae0-9e17-425d-</u> 8e3f-066270388331.
- 29 <u>http://www.softmachines.org/wordpress/wp-content/</u> uploads/2022/11/SPERI-Paper-No.6-The-UKs-Innovation-Deficit-and-How-to-Repair-it-PDF-1131KB. pdf
- 30 <u>https://www.ft.com/content/885ff224-fe60-11e6-96f8-</u> 3700c5664d30

- 31 <u>https://www.businessinsider.com/larry-fink-letter-to-</u> ceos-2015-4?r=US&IR=T
- 32 https://www.investorschronicle.co.uk/2017/03/02/ shares/free-cash-flow-what-it-is-and-how-to-use-it-O3cgi6e2LH6xAygWICDJ1J/article.html
- 33 <u>https://www.ft.com/content/4add3480-a22d-11e8-</u> 85da-eeb7a9ce36e4
- 34 <u>https://news.sky.com/story/bt-group-board-on-alert-</u> for-15bn-takeover-approaches-12054366; https://www. proactiveinvestors.co.uk/companies/news/927382/bt-isin-private-equitys-crosshairs-but-who-else-might-be-inthe-snipers-lens-927382.html
- 35 <u>https://www.ft.com/content/ee3fb8a7-8107-4723-a412-</u> e4198e71b48e
- 36 <u>https://www.telegraph.co.uk/business/2021/06/10/</u> patrick-drahi-cost-cutting-billionaire-has-swooped-bt/; <u>https://www.ft.com/content/c8391f19-cd33-43a5-b68b-</u> <u>3f3987f82cf4</u>
- 37 <u>https://www.ft.com/content/b4aa050e-f85b-4cb9-9434-</u> 2deb280bc6e8
- 38 <u>https://www.connexionfrance.com/article/French-news/</u> Telecoms-giant-SFR-says-it-will-lay-off-3-300-staff-this-<u>summer</u>
- 39 <u>https://www.reuters.com/business/media-telecom/</u> altices-drahi-says-portugal-corruption-probe-is-shocksees-no-impact-operations-2023-08-07/
- 40 <u>https://www.reuters.com/business/media-telecom/</u> <u>breakdown-patrick-drahis-60-billion-debt-</u> altice-2023-08-08/
- 41 <u>https://www.ft.com/content/77aca557-22d9-44a2-9118-</u> b36cc9f09a53
- 42 <u>https://www.reuters.com/business/media-telecom/</u> billionaire-drahi-vows-speedy-asset-sales-cut-debtaltice-2023-08-08/
- 43 <u>https://www.theguardian.com/business/2021/dec/02/</u> <u>bt-union-asks-minister-to-ensure-any-takeover-bid-</u> <u>protects-jobs-national-interest</u>
- 44 <u>https://www.gov.uk/government/news/government-to-</u> take-no-further-action-under-national-security-andinvestment-act-on-bt-share-acquisition
- 45 <u>https://www.telegraph.co.uk/business/2021/12/14/bt-</u> must-saved-creeping-control-french-billionaire/
- 46 <u>https://www.ft.com/content/86acc9f6-0468-4b30-b612-</u> e52964236ac5
- 47 <u>https://www.ft.com/content/b4aa050e-f85b-4cb9-9434-</u> 2deb280bc6e8

- 48 <u>https://www.telegraph.co.uk/business/2021/12/14/bt-</u> must-saved-creeping-control-french-billionaire/
- 49 <u>https://www.telegraph.co.uk/business/2023/05/23/bt-</u> altice-patrick-drahi-stake/
- 50 <u>https://www.thisismoney.co.uk/money/markets/</u> article-12326645/French-billionaire-fancies-biggerstake-rocky-BT.html
- 51 <u>https://www.ft.com/content/353900d3-58c0-483a-</u> be6d-bf226164c5a6
- 52 <u>https://www.telegraph.co.uk/business/2023/07/09/bt-</u> high-alert-german-takeover/
- 53 https://www.theguardian.com/business/2022/jul/29/ strikes-add-to-headaches-for-bt-after-pandemicplaudits
- 54 https://www.ofcom.org.uk/_data/assets/pdf_ file/0031/47857/prospect.pdf
- 55 <u>https://www.proactiveinvestors.co.uk/companies/</u> <u>news/196711/bt-group-shares-drop-as-it-slashes-13000-</u> jobs-and-revenues-fall-but-dividend-maintained-196711. html
- 56 https://www.reuters.com/business/media-telecom/bthits-cost-savings-target-early-drahi-circles-2021-11-01/
- 57 <u>https://www.telegraph.co.uk/business/2021/11/04/</u> <u>french-billionaire-deal-junkie-cannot-allowed-seize-</u> <u>control/</u>
- 58 <u>https://www.theguardian.com/business/2022/nov/03/</u> bt-warns-of-more-job-losses-as-rising-bills-force-biggercost-cutting-drive
- 59 <u>https://newsroom.bt.com/results-for-the-full-year-to-31-</u> march-2023/
- 60 https://members.prospect.org.uk/news/id/2018/01345
- 61 <u>https://www.theguardian.com/business/2019/may/22/</u> bt-accused-by-prospect-union-of-targeting-the-jobs-ofolder-staff
- 62 <u>https://prospect.org.uk/news/prospect-responds-to-bt-pay-award-after-failure-to-reach-agreement</u>
- 63 <u>https://prospect.org.uk/news/prospect-responds-to-bt-pay-award-after-failure-to-reach-agreement</u>
- 64 <u>https://www.telecomtv.com/content/access-evolution/</u> adastral-park-restructuring-is-not-part-of-major-jobcuts-plan-claims-bt-47951/
- 65 Conversion to 2022 prices calculated using Government GDP deflator. Figure for 2009 may not be strictly comparable owing to changes in accounting methods.
- 66 <u>https://som.medium.com/learning-from-bell-labs-</u> <u>b351ea09e74c</u>

- 67 <u>https://news.mit.edu/2017/proximity-boosts-</u> collaboration-mit-campus-0710
- 68 <u>https://www.itv.com/news/anglia/2023-07-06/bt-</u> reveals-plans-to-cut-workforce-by-more-than-a-thirdat-one-of-its-sites
- 69 <u>https://www.ft.com/content/df3ca0d0-d2c9-11e8-a9f2-</u> 7574db66bcd5
- 70 <u>https://www.ft.com/content/28a1f082-3738-11e8-8eee-</u> e06bde01c544
- 71 See for example: <u>https://www.ofcom.org.uk/__data/</u> assets/pdf_file/0024/53808/statementmarch12.pdf
- 72 <u>https://www.ippr.org/files/images/media/files/</u> publication/2011/05/The_Regulatory_State_1276.pdf
- 73 <u>https://www.ofcom.org.uk/news-centre/2022/ofcom-</u> probes-transparency-of-telecoms-price-rises
- 74 <u>https://www.ofcom.org.uk/news-centre/2023/review-of-</u> inflation-linked-telecoms-price-rises
- 75 https://library.prospect.org.uk/download/2015/01716
- 76 <u>http://data.parliament.uk/writtenevidence/</u> <u>committeeevidence.svc/evidencedocument/culture-</u> <u>media-and-sport-committee/impact-of-brexit/</u> written/42300.pdf
- 77 <u>http://data.parliament.uk/writtenevidence/</u> committeeevidence.svc/evidencedocument/eu-internalmarket-subcommittee/eu-telecoms-package/oral/46833. <u>pdf</u>
- 78 <u>https://www.gov.uk/government/publications/future-</u> telecoms-infrastructure-review
- 79 <u>https://www.ofcom.org.uk/__data/assets/pdf_</u> <u>file/0022/216085/wftmr-statement-volume-1-overview.</u> <u>pdf</u>
- 80 <u>https://www.silicon.co.uk/networks/broadband/bt-</u> raises-fttp-target-to-25-million-premises-397515
- 81 <u>https://committees.parliament.uk/</u> writtenevidence/7068/default/
- 82 <u>https://www.ofcom.org.uk/__data/assets/pdf_</u> <u>file/0031/47857/prospect.pdf</u>
- 83 <u>https://www.ofcom.org.uk/__data/assets/pdf_</u> <u>file/0016/50416/dcr-statement.pdf</u>
- 84 See for example https://www.bloomberg.com/news/ articles/2023-03-21/bt-accused-of-stifling-competitionby-broadband-network-rivals?leadSource=uverify%20 wall; https://www.ofcom.org.uk/__data/assets/pdf_ file/0025/216088/wftmr-statement-volume-4-pricingremedies.pdf

- 85 https://www.telegraph.co.uk/politics/2018/06/29/btshould-broken-ownership-broadband-network-harmingconsumers/
- 86 <u>https://www.theguardian.com/politics/2002/feb/03/</u> post.publicservices
- 87 <u>https://www.grantthornton.co.uk/insights/uk-altnets-</u> face-tough-year-in-crowded-broadband-market/
- 88 <u>https://www.ispreview.co.uk/index.php/2023/02/a-quick-look-at-the-changing-growth-of-uk-full-fibre-altnets.</u> html
- 89 <u>https://www.thetimes.co.uk/article/how-taxpayers-</u> <u>could-face-the-bill-if-small-broadband-firms-collapse-</u> <u>t0k2p8vvg</u>
- 90 <u>https://www.ft.com/content/e630a3a1-03ac-4526-83ac-16ff851067cc</u>
- 91 <u>https://www.thetimes.co.uk/article/how-taxpayers-</u> could-face-the-bill-if-small-broadband-firms-collapset0k2p8vvg
- 92 <u>https://www.ispreview.co.uk/index.php/2023/02/a-quick-look-at-the-changing-growth-of-uk-full-fibre-altnets.</u> <u>html</u>. Illustrative purposes only; investment totals may not be exactly comparable
- 93 <u>https://assets-global.website-files.</u> <u>com/5da42e2cae7ebd3f8bde353c/</u> <u>5dda924905da587992a064ba_Conservative%20</u> <u>2019%20Manifesto.pdf</u>
- 94 <u>https://assets-global.website-files.</u> <u>com/5da42e2cae7ebd3f8bde353c/</u> <u>5dda924905da587992a064ba_Conservative%20</u> 2019%20Manifesto.pdf
- 95 <u>https://committees.parliament.uk/</u> writtenevidence/7068/pdf/
- 96 <u>https://researchbriefings.files.parliament.uk/documents/</u> CBP-8392/CBP-8392.pdf
- 97 <u>https://committees.parliament.uk/publications/8513/</u> documents/86177/default/
- 98 <u>https://www.connectivityuk.org/wp-content/uploads/2022/09/The-Investment-Gap-to-Full-5G-Rollout.pdf</u>
- 99 See eg https://www.yourbritain.org.uk/uploads/editor/ files/Overcoming_Short-termism.pdf
- 100 <u>https://www.ippr.org/files/2018-08/1535639099</u> prosperity-and-justice-ippr-2018.pdf
- 101 <u>https://economy2030.resolutionfoundation.org/wp-</u> content/uploads/2023/06/Tax-planning.pdf

- 102 <u>https://www.bt.com/content/dam/bt-plc/assets/</u> documents/about-bt/policy-and-regulation/downloadcentre/2023/investing-in-the-uks-future-the-case-forfundamental-reforms-to-capital-allowances.pdf
- 103 <u>https://www.bt.com/content/dam/bt-plc/assets/</u> documents/about-bt/policy-and-regulation/downloadcentre/2023/investing-in-the-uks-future-the-case-forfundamental-reforms-to-capital-allowances.pdf
- 104 https://obr.uk/docs/CCS207_CCS0221988872-001_CP-387-OBR-EFO-Web-Accessible.pdf
- 105 <u>https://www.bt.com/bt-plc/assets/documents/investors/</u> <u>financial-reporting-and-news/quarterly-results/fy23/q4/</u> <u>q4-fy23-release.pdf</u>
- 106 https://obr.uk/docs/dlm_uploads/OBR-EFO-March-2023_Web_Accessible.pdf
- 107 <u>https://www.bt.com/content/dam/bt-plc/assets/</u> documents/about-bt/policy-and-regulation/downloadcentre/2023/investing-in-the-uks-future-the-case-forfundamental-reforms-to-capital-allowances.pdf
- 108 https://economy2030.resolutionfoundation.org/wpcontent/uploads/2023/06/Tax-planning.pdf





Published by Prospect prospect.org.uk © Prospect, November 2023 23-0068/NOV23/DP-100

prospect

BT's role in the UK's tech sector and digital economy

A Prospect briefing

prospect.org.uk