NIC: The Future of Regulation Study

Call for Evidence – March 2019

About this document

This is BT's response to the National Infrastructure Commission call for evidence for the Future of Regulation study. It reflects the views of BT plc. Openreach, a wholly owned subsidiary of BT, will submit a separate response to this call for evidence.

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Executive Summary

The fixed and mobile communications markets in which BT operates are fiercely competitive, with on-going innovation and high levels of customer satisfaction. We, and others in the industry, are making significant investments to continue to improve connectivity for all consumers and business, benefitting society as a whole. Our objective is to **deliver the best possible digital communications infrastructure across the UK ensuring that all customers have a choice of quality, secure, easy-to-use communications services available wherever they live, work or travel.** To do this, we need a stable and predictable regulatory and policy environment, grounded on evidence and solid principles, whilst remaining flexible for innovation. This is central for long term investor confidence.

The call for evidence to support the National Infrastructure Commission study into the Future of Regulation is broad and very timely. It raises important questions around the principles and practice of economic regulation, and the associated institutional set up, at a time when change is needed in the policy and regulatory model to support large scale infrastructure investment in the communications sector, particularly in fibre and 5G networks. This is taking place in the context of a wider debate around consumer fairness, when trust in the ability of the competitive process to deliver good outcomes for consumers (particularly the most vulnerable) is mixed. We welcome the ambition behind NIC's study, and the emphasis it places on how best to support continued investment and innovation in UK's national infrastructure.

BT wants to be a constructive voice in this on-going debate. Over the last year, we have contributed to several consultations and processes from Government, Ofcom and the CMA, that have touched upon these issues. We have also engaged bilaterally with other regulators such as the FCA and the ICO, as well as the UK Regulators Network and consumer bodies. Our response to this call for evidence builds on those contributions and centres on six main themes that we encourage NIC to focus on as it takes its work on the Future of Regulation forward.

1. **First**, whilst economic regulation has broadly worked to deliver investment in both fixed and mobile networks, we think more could be done to set out a **long-term market vision**, consistent with the strategic goals articulated by Government as part of its strategic policy steer and in a way that recognises and responds to convergence trends. Regulators should also more systematically track how they are addressing the needs of <u>both</u> current <u>and future</u> consumers over time, in line with this vision.

2. **Second**, the scale of investment that is now required in both fixed and mobile networks to provide gigabit speeds across the UK is significant. It will not happen without **bold changes to the current regulatory model** for fixed telecoms. It will also require innovative and joined up solutions to improve mobile coverage, particularly in rural areas.

3. **Third,** some regulated sectors are facing fundamental shifts in technology, which are in turn radically affecting the economics of their respective value chains and the competitive dynamics at different levels. This is certainly true in communications

services, where seamless connectivity for end users across different technologies will soon be the norm and where traditional communications services (such as voice calls or video calls) are provided 'over the top' by software companies. But it is also true in a wider number of sectors, for example with greater disintermediation. It is therefore imperative that regulators (and competition authorities too) take a **genuinely forward-looking approach to regulation**. This may lead them to seek to bring new service providers within the scope regulation (as the government wishes to do with technology companies). Or it may lead them to regulate traditional service providers less, recognising the new constraints they face.

4. **Fourth**, independent regulators will continue to play a critical role in articulating and delivering specific policy outcomes. In doing so, they will need to balance the interests of different customers and align these with those of private providers of services, creating frameworks that inform, enable and encourage the delivery of outcomes that matter to consumers and society. But **there are trade-offs and Government should give regulators clear guidance on those**, particularly when balancing long term investment versus short term consumer prices.

5. **Fifth**, economic regulation principles are well understood and remain fit for purpose, but they are not being applied consistently. **Predictability and accountability** are particularly important as regulators take on a wider and more complex role and the risk of regulatory overlap increases. We also need to maintain **strong checks and balances**, including through effective appeals processes, if regulators are to retain their legitimacy. This is particularly important in a post-Brexit scenario.

6. **Finally,** institutional change may support the UK's ambitions in infrastructure investment. We can see how this could act as a catalyst for change. We see a multi-utility regulator as one of several possible models, but this would be a significant change. We think more work on the costs and benefits, and the merits of this versus other possible models is still needed. In our view, what matters more are the fundamental principles underpinning any approach, and what outcomes are we seeking to achieve given that the competitive dynamics remain sector specific. In any event, we would like to see **better, targeted and more formal cooperation between regulators and consumer bodies on cross-sectoral issues** such as investment incentives, consumer engagement (including disintermediation), and vulnerability. We would also welcome more **structured and timely engagement with industry** within cross-sectoral regulator initiatives.

We look forward to further contributing to the NIC Future of Regulation study, and to its conclusions.

1. **Where has the economic regulation of water, energy or telecoms systematically failed or succeeded to: (a) facilitate future investment needs; (b) promote competition and innovation; and (c) meet the needs of both current and future consumers; and what do you see as the most important improvements that could be made to the UK's system of economic regulation?**

Economic regulation has worked well in fixed telecoms…

Economic regulation in the telecoms sector has worked well to date and delivered significant investment and customer benefits. Traditionally, regulation of fixed telecoms markets has focused on promoting **retail competition** by requiring BT, through Openreach, to provide regulated wholesale products. This, in turn, has facilitated investment and innovation and has created choice and fair pricing for consumers.

As the sector regulator, Ofcom has no direct role in determining (or enabling financing for) new investment. Its focus has been to regulate Openreach's legacy product down to cost, allowing pricing flexibility for new services (should BT decide to invest). BT has invested in new technology (for example the superfast broadband network covering 94% of homes and businesses), where it is more profitable than continuing to provide services over the current technology (i.e. where customers want, and will pay for, new services or where, without the new services from BT, customers would go to Virgin Media). BT fully bears the risk of such investment (e.g. low demand) but Ofcom pledges not to regulate away the upside if the investment turns out better than expected to retain the opportunity of a reward for bearing the risk (the so-called 'fair bet').

The broadband outcomes in the UK – very extensive superfast broadband but less Fibre to the Premise (compared to other countries) reflects this regulatory model. It reflects both:

- the **access model**, which has created fierce retail competition but has lessened the incentives of retailers to build networks themselves or support build by network providers; and
- the **pricing model**, which encourages investment only once demand is sufficient to deliver incremental value over the existing (regulated) products.

… but a change of regulatory model is needed to support infrastructure competition and scale investment

Going forward, both government, Ofcom and the industry recognise that **a change of the regulatory model for fixed telecoms is needed** to:

- better balance the needs of current and future customers; and
- create more **consistent and predictable regulation over a number of years in order** to support at scale, at pace investment in ultrafast broadband which is both long-term and risky.

This new regulatory model, which Ofcom announced in July 2018, seeks to move towards longer review periods (from three to five years); it will drive stronger incentives for access takers to build (or support build); and it will allow BT to drive demand by switching customers promptly to fibre and to create incremental value where new services offer greater reliability and lower faults.

Ofcom is also placing much greater emphasis on **infrastructure competition** (rather than retail competition), again, to drive incentives to invest. We understand this policy objective, and its potential benefits (rapid investment in full fibre). But this should be understood as a policy choice which has both costs and benefits: the obvious cost being the **duplication of assets** (which Frontier Economics estimates – in a report for DCMS – at approximately £12bn, for a national roll out of full fibre). It also creates a situation in which those parts of the market where there is likely to be competition will benefit from quicker roll out than others (because of the opportunity cost of not investing in such areas and effectively ceding those areas to a competitor). It further creates the **possibility of differential geographic prices** as those areas where there is infrastructure competition (likely to be lower cost areas) may benefit from lower prices than those areas less susceptible to infrastructure competition (because they are higher cost to serve).

Ofcom recognises that some parts of the country will not attract competitive investment. In these areas (roughly one third of the country), Ofcom's role may be more like the role of regulators in other infrastructure sectors, with a focus on creating stable and enduring cost recovery mechanisms for investment by BT. Although even in these parts of the market it will be important for Ofcom to recognise the constraints on fibre pricing from other technologies (such as fixed wireless access and mobile). And it must also take into account the social acceptability of any pricing differential between this part of the market and the two thirds of the market it considers potentially competitive.

In mobile, the uncertainty around how to solve rural coverage gaps harms incentives to invest

In mobile, the current regulatory framework whereby mobile operators can acquire national, exclusive spectrum licences, is broadly appropriate for fostering investment including in 5G mobile services.

However, the recurring threat of potential policy intervention to mandate national roaming to address partial not spots – where there is some coverage but not from all four mobile network operators (MNOs) - creates regulatory uncertainty and harms incentives for competitive network investment to extend geographic coverage and capacity. This is because it is harder for the mobile operator with the widest geographic network coverage to market this to customers as a unique selling point.

Ofcom has proposed to auction coverage obligations alongside the 700 MHz and 3.6-3.8 GHz spectrum in the upcoming 5G spectrum auction. We have provided detailed comments to Ofcom's proposals, highlighting our concerns that, as drafted, these obligations discriminate against operators who have the widest coverage.[1] This is because, the more extensive an operator's coverage already is, the costlier it is to deliver coverage to new premises.

[1] See https://www.ofcom.org.uk/__data/assets/pdf_file/0019/143281/bt-ee.pdf.

In parallel, BT is also exploring how Ofcom's approach might be further enhanced with a complementary BT proposal for a new cross-industry **Rural Mobile Coverage Pledge** to improve rural coverage.

The level of mobile coverage in the UK today has been driven almost exclusively by private investment and healthy competition between the four mobile network operators. But we are reaching the edge of commercial coverage, and the reality is that the incentives to going further are hugely outweighed by the challenges. It is becoming more and more difficult to provide coverage to people in the most remote parts of our country.

So a new approach is needed. Our proposed Rural Mobile Coverage Pledge would be a way of delivering new coverage – in a unified way – to those that need it the most.[2] It would give local communities the right to request new coverage, working with mobile operators and local authorities to identify suitable sites and permissions. By being demand-led, it means those that want and need new coverage the most will be first in line. And by being community-driven, it should streamline the planning process and avoid tensions that arise when operators put up masts in areas they are not wanted.

The Pledge will require Government support to unlock funding and streamline the process further, making public buildings available for deployment where possible and easing restrictions on taller mast usage. We are working with Government, Ofcom and other operators to make this a reality.

More could be done to set out a long-term vision, that recognises fixed/mobile convergence

The area where we see scope for most improvement is the development, by economic regulators, of a **long-term market vision** (consistent with any vision or targets articulated by Government as part of its strategic policy steer) and the adoption of a genuinely **forward-looking approach**. In telecoms this is particularly important to ensure that economic regulation reflects (and responds to):

- **Convergence**: viewing connectivity in a converged manner, rather than dealing with fixed and mobile separately, is key to the UK's success. Customers are, in the main, technology agnostic and are principally concerned with having a fast, reliable and affordable connection rather than precisely how the connectivity is delivered. This is crucial when considering the convergence of full fibre and, but must also apply when Ofcom, the Government and the industry consider approaches to ensure universal coverage or delivering against the manifesto commitment to deliver good mobile coverage to 95% of UK geography.
- **Digital disruption**: existing regulation in telecoms markets will also need to adapt to these changes in digital competition. Ofcom continues to impose ex- ante regulation in many of the markets that BT serves, some of which are increasingly being disrupted by technology

[2] Marc Allera, CEO of BT Consumer, set out our proposals in an Article on 1 April 2019. https://www.telegraph.co.uk/business/2019/04/01/back-pledgeto-give-rural-areasmobile-coverage/

developments. We explored these issues further in our response to the government's digital competition review – the 'Furman' review.[3]

2. **The National Infrastructure Assessment outlined a number of changes and challenges in infrastructure to 2050 (e.g. the move to fibre in telecoms, decarbonisation in energy and the need for long term resilience in the water sector). How might the scope, functions or activities of economic regulators need to adapt in light of future challenges?**

As indicated above, the investment required to move to full fibre in telecoms will largely be delivered by commercial entities (with a role for public subsidy in the most remote areas). Regulation is critical to supporting this transition.

The policy of supporting network-based competition in the parts of the country where this is viable will mean that full fibre investment will be market-driven, with less need for regulation to prescribe the terms of access to Openreach's networks. Indeed, regulatory forbearance is essential in order to encourage fibre build rather than relying on access to the Openreach network. Reflecting this, Government expects to see regulation only where, and to the extent necessary to address competition concerns. Ofcom will need to adapt the scope and nature of its economic regulation activities accordingly.

Where regulation does persist, Government places emphasis on the need for stable and long-term regulation. This is important given the long timescales for fibre investment. We think that Ofcom's strategic policy position should signal its regulatory model (if not the detail) over more than one market review period to support long-term business cases. In the case of BT, it is particularly important that Ofcom signals that BT will have the opportunity to make higher returns when a risky investment is successful to compensate it for the chance a risky investment may fail. This need for stable and long-term regulation has to be balanced with the need for regulation to adapt to technological and economic changes. It is possible, for example, that fixed connectivity in respect of the 'final drop' will become increasingly contested by wireless solutions, and that this should in due time lead to deregulation.

MNOs are likely to remain central to meeting the investment challenges of 5G mobile network deployments and the drivers and models for delivering investment (e.g., competition between MNOs, coupled with infrastructure collaboration to reduce costs) will remain important whilst they continue to offer benefits.

However, further measures may be needed from the UK Government to improve the 5G mobile deployment environment (the planning process, for example) to address the specific challenges of coverage in very rural areas (see our response to Question 1); as well as the deployment of small cells for 5G in areas of high footfall (urban areas, railway stations, the main transport corridors, for example).

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[3] BT's response to the Digital Competition Expert Panel is available at pages 51-105. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785549/DCEP_Public_responses_to_call_for_evidence_from_organisations.pdf

3. **How might the increasing availability of data impact regulation in future? Can data increase the pace at which regulation responds to change, enabling innovation?**

Regulatory best practice is grounded on evidence. In telecoms, Ofcom gathers extensive data from market operators, through information requests both as part of specific market reviews or market investigation, as well as on-going research. Ofcom regularly publishes reports on service and availability, that help inform their policy work and improve wider industry understanding.

More and better use of data will help increase consumer engagement and empowerment. Ofcom is considering how to improve insights, and how to strengthen competition through a more effective use by consumers of information on availability, speeds and their own usage of communications services. The Government is also conducting a cross-sectoral review to accelerate the development and use of data-driven technologies and services to improve customer outcomes in regulated markets (Smart Data Review).

BT is very supportive of these efforts. We already help customers to make informed decisions by making data readily available to them and are working on innovative solutions that would allow customers to compare deals based on how they actually use communications services (beyond simple price comparisons). We are discussing with Government and Ofcom ideas for a personalised, portable data profile which could be read on all communications provider (CP) and comparison websites, using common standards. This would help consumers making better informed purchasing decisions.

It's important that data-driven solutions are **tailored to the relevant market**. For example, solutions that may be practical and appropriate in commodity markets (like group switching in energy) could harm consumers if adopted in telecoms. Differentiation has always been very important in telecoms, as there are many parameters that consumers care about beyond price (coverage, speeds, customer service). We elaborate further on this in our response to question 10 below.

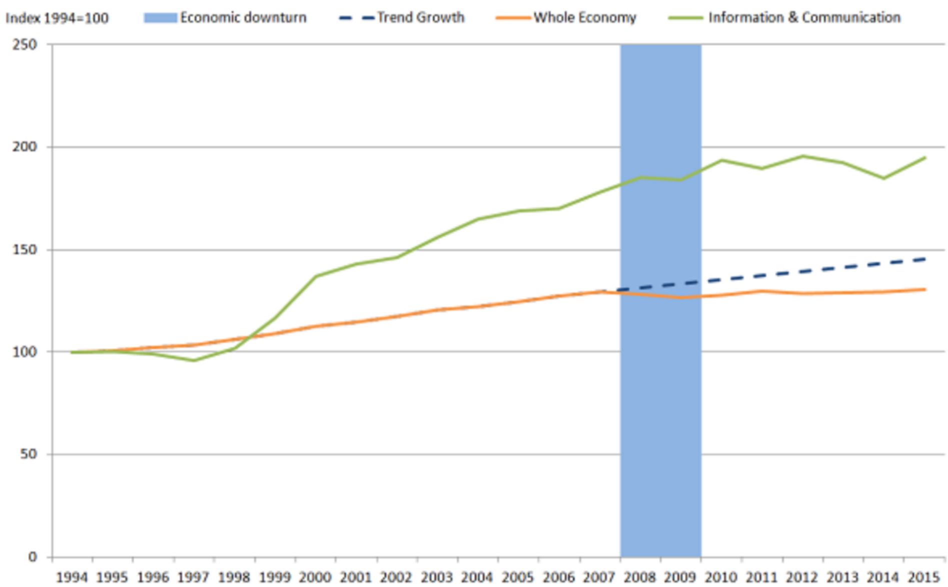
4. **How have the energy, water and telecoms sectors performed with respect to efficiency, since privatisation?**

The telecoms sector is well known for delivering increasing value to customers. For example, in May 2018, Ofcom reported that 'd*ata use over fixed connections increased by 44% in the year to June 2017, and over mobile connections by 46%. But despite the take-up of superfast broadband and 3G and 4G mobile services, average monthly household spending on phone and broadband services has fallen in the last decade*.'[4]

[4] Pricing trends for communications services in the UK, page 2, https://www.ofcom.org.uk/__data/assets/pdf_file/0030/113898/pricing-report-2018.pdf. Ofcom also says at page 9: '*Although there has been a considerable increase in the amount of data consumed by users over residential fixed broadband lines, the average price per GB fell from £0.74 in 2012 to £0.11 in 2017 in real terms, according to data provided by communications providers*.'

The productivity record of the ICT industry more generally shows rapid growth (since 1994) relative to the UK economy as a whole.[5]

Figure 3: Output per hour - UK whole economy and the information and communication industry



Source: Office for National Statistics

As regards BT's regulated activities, prices have broadly fallen over the 30 years that BT has been subject to some form of incentive-based regulation (i.e. RPI-X). To maintain profitability, BT has had to increase efficiency (as intended by this form of regulation). By way of example, in 1989 BT employed approximately 240,000 employees; the figure now stands at approximately 106,000.

In an EY report commissioned by BT in 2016, opex efficiency was estimated at 5% per annum over the previous 10 years. The reports stated: "*The level of efficiency which BT has achieved includes both the efficiency targets set by Ofcom, which BT would have to meet in order to ensure costs are in line with prices, and additional efficiency that BT has realised which has meant it 'outperformed' charge controls. The benefits of these efficiencies affect all of BT's costs. Not just charge control costs due to shared platforms and activities*."[6]

[5] https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/measuringoutputintheinformationcommunicationandtelecommunicationsindustries/2016. ONS undertook a study to better understand the challenges of measuring the output of the information and communications industry.
[6] https://www.ofcom.org.uk/__data/assets/pdf_file/0024/93642/BT-Annex-EY.pdf, para 4.12.

5. How has competition impacted on investment, innovation and outcomes for consumers across energy, water and telecoms since privatisation?

In fixed telecoms, Ofcom has shifted its focus to promote competition between infrastructure networks. For investment to continue, at scale, the regulatory model needs to evolve.

For the ten years following Ofcom's review of the telecoms markets in 2004, the regulator focused on delivering regulated access to BT's copper loops (known as local loop unbundling – LLU). This allowed communication providers to use BT's infrastructure to provide phone and broadband services. But in doing so, they were able to innovate around some elements of the service, including the electronic equipment deployed and the capacity of broadband connections. This proved effective in driving fierce retail competition; BT's share of retail services rapidly decreased. For fixed broadband services it currently stands at approximately 35% (including EE), one of the lowest for an incumbent telecoms operator in Europe.

From around 2009/2010, BT invested in its superfast network, in part driven by the competitive pressure it faced from a large fixed network rival, namely, Virgin Media.[7] From the outset, an access product was made available known as virtual unbundled local access (VULA) which also offered (to access takers) innovation and differentiation benefits (as acknowledged by Ofcom at the time).[8]

Until recently, therefore, Ofcom's approach to regulation was focused on driving retail competition by providing effective, low cost and equal access to Openreach's network rather than encouraging others to build their own networks. Ofcom's approach has now changed and it is focused on supporting competition between networks – both those built from scratch and those built using access to Openreach physical infrastructure (its network of underground ducts and overhead poles).

As indicated above, BT and Openreach understand this objective and are working with Ofcom (and industry) to achieve an effective physical infrastructure access regime which levels the playing field for competitive investment in fibre broadband. But the regulatory model must evolve to reflect the additional competitive pressure that this creates. Ofcom should regulate only, and to the extent necessary to address competition concerns, and not where competitive pressures are shaping investment and pricing. Investment can be brought forward ahead of need only if policy objectives and regulation are aligned and risk sharing is

[7] As part of its Digital Communications Review, Ofcom said: '*In the early 2000s, one of the factors that drove BT to increase the performance of its initial broadband service was the availability of cable broadband. Similarly, BT announced its rollout of superfast broadband shortly after Virgin Media's upgrade to DOCSIS 3.0. BT's recent announcement of G.Fast investment plans was in the context of Virgin Media offering a maximum service speed of 200Mbit/s compared to a maximum of 80Mbit/s available from Openreach for VULA.*' Para 4.11, https://www.ofcom.org.uk/__data/assets/pdf_file/0016/50416/dcr-statement.pdf.

[8] In its 2014 Statement on Fixed Access Market Reviews Ofcom said: '*We set out our view [in 2010] that the most effective way to support the development of downstream competition would be to provide significant scope for alternative providers to innovate and differentiate in how they package and deliver services, and considered that VULA would provide such scope. We considered that the benefits of VULA would be greater if it was provided as a 'raw' product which provided CPs with significant flexibility over their own networks and the services that they could deliver to end-users, as is the case with LLU.*' Para 12.23, https://www.ofcom.org.uk/__data/assets/pdf_file/0032/78863/volume1.pdf.

encouraged. For example, Openreach should have the ability to share risks vertically with CPs, including BT's downstream units on an equal basis with others, through contracts.

Mobile remains a fiercely competitive market, with high levels of investment and innovation, but some challenges remain

Investment in the UK mobile market is underpinned by three main structural factors and competitive demand and supply conditions:

- **Vertical structure**: the four MNOs are vertically integrated allowing all downstream benefits generated by new investment to be captured. Network services are sold (on a commercial wholesale basis) to mobile virtual network operators (MVNOs) who sell on to retail customers. This provides another option for monetising investments should this be attractive (for example, where MVNOs offer an additional channel to market) but there is no regulatory obligation to do so. Both wholesale and retail mobile markets are fiercely competitive.
- **Network sharing and other collaborations**: once initial investments had been made in sites and radio equipment, MNOs entered into network sharing arrangements (Vodafone and O2 in CTIL, and EE and 3 in MBNL) to achieve better coverage while sharing network fixed costs. Other collaborations include a degree of site sharing between all operators, i.e., where CTIL acts as supplier to MBNL and vice versa, and sites operated by Arqiva as well as models created for stadiums, airports and in-building.
- **Infrastructure competition**: notwithstanding network sharing arrangements, the four MNOs can differentiate in terms of, for example, different dimensions of network quality and ultimately downstream retail offers.

This market-driven infrastructure competition has delivered strong outcomes, particularly in combination with collaborative arrangements allowing certain fixed costs to be shared. Ofcom research shows that there has been a downward trend in mobile prices since 2013. Importantly data allowances are becoming larger while the price per gigabyte of mobile data continues to fall giving customers additional value from their subscriptions. Consumer satisfaction with UK mobile services remains high.

There are, however certain challenges facing the mobile sector in the future, where these models work less well, namely: (i) rural geographic coverage; (ii) capacity issues in densely populated urban hot spots and (iii) meeting the differentiated requirements of 5G applications as they emerge.

To meet these challenges, further investments will be required in existing infrastructure: sites, infrastructure (increasingly small cells), radio-access equipment, backhaul and spectrum, primarily by MNOs. The nature and extent of these investments will depend on the existing configuration of assets and spectrum holdings for each MNO and their competitive strategy. We refer back to our response to the Government's Fixed Telecommunications Infrastructure Review (FTIR), where we elaborated on these challenges.[9]

[9] See https://www.btplc.com/Thegroup/Policyandregulation/downloadcentre/2018/DCMS/index.htm.

6. **How has regulation affected the level of innovation in energy, water and telecoms compared to these utilities in other countries and/or comparable industries?**

BT's commercial success critically depends on innovation. To support this, we devote significant resources to our R&D programme and work with partners around the world.[10] Over the last decade, BT has been one of the largest investors in R&D, both in the UK and globally, with £510m spent on R&D in 2017/18, a global portfolio of more than 5,000 patents and applications.[11] We had 106 patent applications for inventions filed in 2018/19.

We see regulation as an important enabler of service innovation in particular, insofar as it creates an environment where competition can thrive, and investment is attractive. The high levels of innovation in both fixed and mobile that characterise the telecoms sector have been the result of strong competition, facilitated by wholesale access regulation in fixed markets and a pro-competition design of spectrum auctions in mobile. In addition, developments in mobile technology (for example future commercial launch of 5G mobile network services by the MNOs and convergence in fixed and mobile services like BT Plus[12]) also drive innovation, contributing further to long-term dynamic efficiency gains and increasing consumer welfare.

Innovation will also be best served where the **wider competitive dynamics of multinational OTT players are recognised** and where there is a regulatory level playing field ensuring traditional telecom providers can compete with OTT providers. The pace of innovation in digital markets has provided valuable new services for consumers, including in online shopping, search tools and social media. These markets have thus far not been subjected to prescriptive regulation, allowing competitive markets to deliver innovation for the prospect of fair returns. Such innovation could also be better realised in telecoms markets if regulation is renewed to take account of competition from new entrants, such as OTT players.

7. **When has regulation been too slow to adapt to changing market circumstances and what have been the consequences for consumers and investors?**

As part of BT's response to the Government's FTIR, we undertook a review of the regulatory and policy models used in countries where faster deployment of full fibre has been seen. Countries like Spain and Portugal embraced de-regulation coupled with infrastructure

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[10] 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. More info can be found at: https://www.btplc.com/Innovation/HowBTinnovates/index.htm

[11] BT Annual Report 2018, p37. https://www.btplc.com/Sharesandperformance/Financialreportingandnews/Annualreportandreview/pdf/2018_BT_Annual_Report.pdf

[12] BT Plus is the UK's first converged fibre and 4G plan that gives customers the fastest speeds available in and out of the home with a unique Keep Connected Promise - all on one simple bill. https://home.bt.com/tech-gadgets/internet/broadband/bt-plus-fibre-broadband-mobile-plans-11364273499178

competition several years ago and have seen rapid deployment of FTTP since (although there are other country-specific factors which explain this outcome for example, network topology, housing density and demand).

Arguably, Ofcom missed an opportunity to move to a new regulatory model for fixed telecoms regulation earlier. But UK consumers did see benefits from the previous model, in particular very rapid deployment of superfast broadband.[13] Superfast broadband coverage now stands at 94% of homes and businesses, up from 91% last year.[14] The European Commission, has consistently scored the UK has having the best level of superfast coverage, ahead of other large EU countries.[15] Ofcom's regulatory policies have also provided the economic conditions in which competitors to Openreach found it attractive to invest, in particular Virgin Media's commitment to extend its footprint by 4 million homes taking its coverage to over 60% (Project Lightning).

Customers also benefitted from fierce retail competition. Retailers such as Sky and TalkTalk were able to launch fibre propositions and compete aggressively with BT. These communication providers have successfully contested market share in competition with BT using Openreach's access products. Virgin Media, through its cable footprint, also provides ultrafast retail services in competition with BT.

Going forward, **the challenge for regulation will be to roll-back promptly as competition shapes market outcomes** – which may include deregulating even slightly ahead of what the regulator might expect to see in terms of a fully competitive market structure, in order to let competition develop and avoid regulating it away. In particular, the prospect of competition can discipline access terms offered by network providers where markets are more contestable (due to physical infrastructure access) and there are strong buyers able to leverage their buyer power. This pressure will be exerted in the commercial negotiation of access terms between network providers and their customers, which Government rightly states may also open up new ways of managing risk. Overall, the competitive environment is also likely to look somewhat different from the past and regulation will need to anticipate and adapt to reflect this, taking more clearly a forward-looking view.

8. Where could regulators work together more consistently to meet future challenges, achieve efficiencies within the regulatory system or to promote better outcomes for consumers, investors or society?

At present, regulators collaborate through a variety of **existing channels**:

- Best practice, tools and expertise shared via bilateral conversations, workshops, conferences, secondment programmes.

[13] Ofcom defines this as the availability of fixed broadband services with a download speed of at least 30 Mbit/s.
[14] See https://www.ofcom.org.uk/__data/assets/pdf_file/0020/130736/Connected-Nations-2018-main-report.pdf.
[15] Digital Economy and Society Index. https://ec.europa.eu/digital-single-market/en/desi

- Memorandums or letters of understanding set out working arrangements when concurrent powers exist. For example, the Memorandum of Understandings (MoU) between the CMA and Ofcom regarding their concurrent competition powers[16] and their concurrent powers under consumer protection legislation,[17] or the Letter of Understanding between Ofcom and the ICO in respect of Ofcom's concurrent enforcement powers primarily around the Privacy and Electronic Communications Regulations (EC Directive) 2003.[18]

There are also **formal joint networks** that have been established in recent years:

- UK Regulators Network (UKRN): established in 2014, it aims at ensuring effective cooperation between sectors. It now has 11 members and in 2017 re-established its objective to facilitate cooperation and communication between its members to promote better outcomes in economic regulation for consumers and the economy.
- The UK Competition Network is an alliance of the Competition and Markets Authority (CMA) and sector regulators that have a specific role to support and enable competition within their sectors.

Our reflection is that generally these methods for collaboration work well, and we welcome UKRN's desire to hold a more strategic role. But there is room for improvement.

First, UKRN members are too different in their powers and purpose (with some important regulators such as the ICO missing from the network), and this may limit the scope for targeted collaboration. There is also a risk that simultaneous changes to regulatory powers could lead to confusion. For example, in his recent letter to BEIS, CMA Chair Lord Tyrie suggested an extension to some of the CMA's powers, particularly around consumer protection. Taken alone, any further reform of the CMA's remit could result in greater overlap with Ofcom and other sector regulators. It is important, therefore, that as changes are taken forward across the regulatory landscape *overall* the remits, roles and responsibilities of the different regulators (and the checks and balances in the system) remain clear.

As a starting point, we believe a **stocktake is needed to establish what formal collaboration currently exists within the regulatory system and how effective it is**. This could then form the basis for the agreement of a common agenda, and which regulators are needed around the table for what purpose, while also recognising the different positions of different sectors and the different remits of different regulators. Regulators could subsequently use this

[16] The 2016 MoU sets out the working arrangements in respect of the competition prohibitions under the Competition Act 1998 and Articles 101 and 102 of the Treaty on the Functioning of the European Union, and in relation to market provisions under the Enterprise Act 2002.
https://www.ofcom.org.uk/__data/assets/pdf_file/0021/83523/cma_and_ofcom_mou_on_use_of_concurrent_consumer_powers_webversion.pdf

[17] The 2015 MoU sets out working arrangements in relation to Ofcom and CMA's concurrent powers to enforce in the communications sector, certain consumer laws under Part 8 of the Enterprise Act, The Unfair Terms in Consumer Contracts Regulations 1999 and Regulation (EC) No 2006/2004 on consumer protection cooperation.
https://www.ofcom.org.uk/__data/assets/pdf_file/0028/83755/cma_and_ofcom_mou_on_use_of_concurrent_consumer_powers_webversion1.pdf

[18] See https://www.ofcom.org.uk/about-ofcom/how-ofcom-is-run/organisations-we-work-with#fn2.

information to identify in their annual plan the projects/programmes of work which overlap with other regulated sectors.

There are some areas like vulnerability, consumer engagement, incentivising network investment and cost of capital that lend themselves to cross-sectoral discussions, whilst others will remain sector specific. For example, in the Consumer Green Paper[19], Government put forward the sensible plan of producing minimum standards for customers with mental health issues. Regulators will now be working together, through the UKRN, to think about how these approaches might work in their sectors, including the ways in which minimum standards might work in the context of principles-based regulation, and the implications for monitoring and enforcement. We're supportive of this level of co-creation, which results in evidence-based best practice for a targeted group of individuals (but who have different needs) that may then be applied more widely. We would encourage initiatives like this to include industry and consumer bodies. We would also encourage greater sharing of trials (both in the design stage as well as results) on issues such as how to enhance consumer engagement. Finally, the UKRN could also be an effective control mechanism to ensure that some regulatory provisions in different places are not in unnecessary conflict.

Second, we think that **industry can play a valuable role in cross-sectoral projects** like the ones described above and can expedite change where it is needed. Yet, industry engagement in cross-sectoral networks at present is channelled through the individual regulator and occurs to varied degrees. It is not always clear for companies whether, how or at which point to engage with cross-sectoral initiatives. For example, following the CMA's response to the loyalty penalty super complaint, the CMA set up a working group to oversee the implementation of recommendations. Its members included the FCA, Ofcom, Ofgem, BEIS, DCMS, HMT and the UKRN. As far as we're aware, industry has not been invited to input into the working group. Similarly, the report 'Helping people get a better deal: Learning lessons about consumer facing remedies' prepared by the FCA and the CMA on behalf of the UKCN did not directly involve industry. We note that the UKRN itself does little industry engagement, which we think is a missed opportunity, given the value that different industry perspectives could bring not only to the collective agenda but also to each individual regulator's work. We would welcome further clarity and ideally a more structured and formal mechanism for industry engagement with these networks (over and above the bilateral engagement with the relevant regulator), so that we can contribute in an effective and timely way that adds value to the debate.

9. What changes to the existing regulatory framework would be necessary to promote greater collaboration and regulatory consistency? Are there functions that might better be provided on a multi-utility basis without the need for wider organisational change?

As set out above, there is room for improvement in the existing mechanisms. Whilst we do not think that a formal statutory duty to cooperate is necessary, we note that this may sometimes act as a barrier to greater cooperation between regulators because of the need for each

[19] Modernising consumer markets: Consumer Green Paper, April 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/699937/modernising-consumer-markets-green-paper.pdf.

regulator to use the resources available to them in pursuit of their formal statutory duties. We address the second part of this question in our response to Question 10 below.

10. What is the case for or against a multi-utility regulator covering energy, digital and water?

Combining water, energy and telecommunications regulators is, for many reasons, attractive, as there are some common themes in all three sectors. For example, both energy and telecoms face high levels of competition across certain sections of the value chain (less so in water), and both are characterised by high levels of technological innovation, with significant investment demands in the face of major technological transitions (to fibre in telecoms, to renewables and distributed generation in energy). Similarly, when we consider issues around vulnerability, it is right to look beyond a specific sector to common solutions that can work across markets and services (people that are vulnerable in their dealings with telecoms providers may be vulnerable when dealing with other providers as well).

We can also see how **reform of the current regulatory institutional set up could act as a catalyst of change to support the broader UK's ambitions in infrastructure investment** across these industries. It could help achieve greater consistency in approaches to network regulation and investment, where market power and therefore some form of regulation is likely to be needed for the foreseeable future. Finally, it could also drive some cost efficiencies in common functions such as HR or Finance and allow for a shared pool of technical resources such as economists or regulatory and competition lawyers. This may have a further benefit in enabling smaller regulators to achieve critical mass in certain key skill sets.

However, we are also **mindful that this would be a significant change** in the current set up, possibly bringing with it disruption for a period of time and risk of distraction from a very important 'day job'. We are also of the view that a multi-utility regulator (which we assume would bring together the competition and consumer functions of the current sectoral regulators) is **one of several possible models**, but there could be others that are worth considering.

Given this, we would encourage NIC to consider further:

(i) **The overlap or commonality between these markets**. For example, the merger that brought together the broadcasting, spectrum and telecoms regulators to create Ofcom in 2003 made sense because of the overlap between these markets, and the anticipated future consumer trends. The same was true with the merger of the Office of Gas Supply and the Office of Electricity Regulation that resulted in Ofgem. But this is not the case more widely. A key aspect of telecommunications market is their dynamic nature. We see high levels of regular engagement with choice of providers and services, complex offers and competition across many parameters including price, speed, quality, customer service, reliability or coverage. This makes switching decisions more complex than in energy or for business customers in water where competition tends to focus on a much more limited set of variables.

Also, the nature and level of innovation and investment is different, with telecommunications providers making investments in technology largely at their own risk (as explained above), and more uncertainty in relation to demand, and future regulated returns. We provided more analysis on the differences between telecoms and other essential services in section 8 of our response to the CMA call for inputs on the Loyalty Penalty super-complaint.[20]

(ii) **The costs and benefits.** For example, while a larger and more diverse talent pool may result in creative thinking and better practices, this can also be achieved through a more regular programme of secondments or rotations. Similarly, the potential for improvements in cost efficiencies largely depends on what model is adopted – and what is the governance for decision making. Finally, how the regulators are integrated would determine the scope and scale of any efficiencies. Experience from other countries such as Spain and the Netherlands, which have gone through similar exercises before, shows that there are trade-offs between simplification and consistency. The agility and timeliness of decision making can be affected in larger organisations. Issues can become too complex for a single body, and this may undermine the responsiveness and ability of a single regulator to react quickly and effectively.

(iii) **Disruption in the interim.** We are also mindful that any changes to the institutional set up could cause significant disruption in the interim. Over the next decade, BT wants to deliver gigabit speeds nationwide, through fibre and 5G, and do so at pace. Similarly, other commercial organisations will be making large and risky investments substantially ahead of demand, and ahead of clarity on potential use cases. Having clarity and certainty over the terms of such investments, and that they will not be compromised under different regulatory models, remains key.

(iv) **The need for consistency and predictability *within* sectors vs *across* sectors.** While there are advantages to consistency of approach across sectors (for example making it easier for new investors in UK infrastructure to understand the regime), it is important that the regulatory approach within sectors – which is a big part of what investors bought into – is consistent over time. This does not mean it cannot change – change is essential if any regime is to stay relevant and be sustainable. But there are risks that in moving to a combined cross-sector regulator, consistency across sectors would be privileged over consistency within sectors, which could damage the confidence of existing investors.

(v) **The long-term vision for the industries being regulated**. An important consideration in telecoms is the dynamic and competitive nature of most of the value chain. For this reason, it is important that the regulator responsible for the regulated parts of the network is also tasked with the promotion of competition in the rest of the market, and that the two are considered in a joined-up way. Else, there is a risk that the overall market dynamics across the value chain are lost, and that regulation persists beyond what is necessary or appropriate – at worst distorting incentives to compete, invest and innovate elsewhere.

[20] See https://www.btplc.com/Thegroup/Policyandregulation/downloadcentre/2018/loyaltypenalty/Loyaltypenaltysuper-complaint-Consumer.pdf.

We remain open to the idea of changes to the current institutional set up if they deliver genuine benefits. Ultimately, what matters to consumers is that our water, energy or telecoms services work, that the companies are easy to deal with and that they have peace of mind that we are getting a good and fair deal. To deliver this, companies like BT need regulatory stability and predictability, and the ability to adapt and respond to market and consumer needs with the confidence that the regulator understands the specificities of the particular market. We believe that, absent any major reform at this point, more consistent (but not the same) outcomes can still be achieved by focusing on **common principles, consistently applied, and through improved cooperation between regulators**.

11. **Is the traditional role of economic regulation, to mimic the outcome of a competitive market, sufficient to ensure future investment and to meet the needs of current and future consumers, and if not, how might this role need to change?**

The role of economic regulators should ideally be to rely on the market wherever possible, intervening where and when necessary to correct market failures, but also doing so with a clear awareness of the risk of regulatory failure. Sometimes the risk of regulatory failure is so great that the right thing to do may be for a market failure to go unaddressed. This is harder to do for a regulator if under pressure "to do something", so it is important for regulators to be explicit about this risk and to refrain from intervention when that is the right course of action.

There is increasingly a view that unfettered markets will not necessarily deliver the political and social outcomes that society demands. The social acceptability of differential prices or access to services between different groups in society or across different geographies, even where these differences are 'economically efficient', are examples of this. For example, Ofcom is concerned that some consumers do not engage with the competitive process, either because they are vulnerable and find it more difficult to do so, or because they do not want to, and are therefore on less good deals than those who are highly engaged.

BT accepts that in some circumstances regulators may need to intervene beyond "mimicking" competitive markets (and indeed that they may be directed by government to do so). But we also note that **risks of regulatory failure, unintended consequences and misallocation of resources** are greater. There is a difference between nudging a market to behave "as it should" and pushing a market off course to achieve a different outcome. In some situations, legitimate social policy goals may need to be pursued not through regulation or Government direction but elsewhere (e.g., through the tax system or targeted regional policy).

12. **What should be the boundary between government setting policy and strategic direction and independent regulation in these sectors? Do the existing duties and functions of regulators need to be adjusted to reflect this?**

It is right for the Government to set the overall strategic policy ambitions and direction in the telecoms sector and to provide guidance on areas such as public spectrum release on the basis that it has a direct role in enabling it to happen. For example, Government has set ambitious targets to have gigabit-capable networks available to 15 million premises by 2025, with nationwide coverage by 2033, and to be a world leader in 5G mobile technology with deployment to the majority of the country by 2027.[21] To meet these targets, Government has set the strategic priority to promote efficient investment and innovation in 5G[22] and said that "the most effective way to deliver nationwide full fibre connectivity at pace is to promote competition and commercial investment where possible, and to intervene where necessary."[23]

Regulators play a critical role articulating and delivering specific policy outcomes. In doing so, they balance the interests of consumers and align these with those of private providers of services, creating frameworks that inform, enable and encourage the delivery of outcomes that matter to consumers and society as a whole.

But there are trade-offs, and Government should give guidance on these, particularly when balancing long term investment versus short term consumer prices. These are trade-offs that have societal implications, and as such require democratic legitimacy and accountability. In its draft Statement of Strategic Priorities, Government set out its view to Ofcom that "promoting investment should be prioritised over interventions to further reduce retail prices in the near term".[24] We support this view, and the appropriateness of Government's stating it clearly and publicly, having followed a proper process of public consultation. To create an environment which supports risky investments by commercial providers, investors must see an opportunity to make a fair return and must have greater clarity on whether, and the extent to which, regulation may affect this opportunity.

But Government should not undermine the day to day independence of regulators by intervening in the specific mechanisms that achieve those strategic goals. So, for example, it should be down to Ofcom as the independent sectoral regulator to establish whether fibre investment is best delivered through competition, and what form this should take, or whether this may require a particular stance on cost recovery in uneconomic or uncompetitive areas. This allows the regulator to balance the social importance of services that are seen by consumers and business as "essential", and the need to create a framework that is predictable and protected against the risk of political considerations that may be short term.

Our view is that Ofcom's current statutory duties in the Communications Act allow for this balance. We see the anticipated requirement to have regard to the Statement of Strategic Priorities as a way to provide a useful steer in how Ofcom exercises its regulatory functions. We would observe, however, that Ofcom retains the discretion to determine whether it should prioritise the desirability of encouraging investment and innovation (as one of 13 other considerations). We would understand how Government might consider it appropriate, in future, to rebalance Ofcom's duties to include this as part of Ofcom's primary duties.

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[21] DCMS, Draft Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services, para 11.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779226/SSP_Consultation_-_Publication_Version__2_.pdf
[22] Future Telecommunications Infrastructure Review, para 186.
https://www.ofcom.org.uk/__data/assets/pdf_file/0032/78863/volume1.pdf. See also the Draft Statement of Strategic Priorities.
[23] Future Telecommunications Infrastructure Review, page 4.
[24] Para 20.

13. **Has there been a lack of clarity over strategic goals? What is the cause of this and what has been the impact on investment?**

It might seem plausible, with hindsight, to argue that there was a lack of strategic vision for the UK telecoms sector and that this is to blame for the currently low penetration of fibre. However, as explained above, the UK has had one of the highest penetration of superfast broadband, and lowest prices, in Europe and this drove high economic performance and overall consumer welfare. So, it would not be right to infer from the desire for more fibre investment that there was somehow a lack of a strategic vision in the past.

In any event, the scale of ambition and investment challenges are of a different nature now. And it could be argued that the regulatory regime was a little slow to pivot towards a new set of strategic goals based around full fibre, and to realise what changes were needed to regulation to bring this about. With hindsight, Ofcom's aggressive reductions in wholesale fibre access charges in 2018 have done little to promote network investment by others.

We have set out our view of what the new challenges are – and what is required from regulators and Government elsewhere in this response. And we are working with Ofcom as it develops a new regulatory regime in line with this. Crucially, we should not be distracted by short term considerations. As noted above, we have welcomed Government's draft SSP that has reaffirmed the importance of the regulator more clearly and explicitly taking a long-term view when exercising judgement.

14. **Are the government's principles for economic regulation* – accountability, focus, predictability, coherence, adaptability and efficiency – fit for purpose; and if not, how should they change?**

The UK has now had widely agreed principles of good regulation for over 20 years.[25] BT's view is that principles themselves remain fit for purpose, but they are not being applied consistently by regulators – nor has Government always adhered to them. We have seen piecemeal and ad hoc changes, as well as political interference in some markets (e.g., the default tariff energy price cap). This, in turn has negative effects on investor confidence. We therefore welcome NIC's consideration of these principles as part of its review.

In BT's view, **predictability and accountability** are particularly important as regulators take on a wider and more complex role and the risk of regulatory overlap increases. Linked to this, we need to maintain the **right checks and balances**, including through effective appeals processes, if regulators are to retain their legitimacy.

Predictability and accountability will also be essential in a post-Brexit scenario, given the regulatory changes that may ensue. With Brexit comes the opportunity to create a new regulatory and policy framework for the UK to promote the right competitive structures and a

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[25] The Better Regulation Task Force devised the principles of good regulation in 1997.

stable environment for investment. In our several submissions to Government and Parliament, BT has emphasised the importance of: (i) retaining the best elements of the current successful framework when defining the new regime in the UK, aligning where possible to tried and tested regulatory principles; and (ii) taking advantage of Brexit in order to evolve regulatory approaches where appropriate to ensure that the UK remains the most digitally advanced economy of the major nations in Europe.[26]

In relation to (i) BT is particularly concerned that the checks and balances on Ofcom's actions may be reduced, and its powers increased. At the moment, the EU Commission carries out a wide variety of important roles in relation to providing regulatory oversight, as well as designing policy and soft law. By potentially removing the roles of the EU Commission and enabling future divergence from EU law, Brexit raises the prospect of reducing existing regulatory checks and balances at the same time as potentially increasing sectoral regulation into new areas, such as retail and oligopoly markets. We understand that there may be other means of achieving the overall objective of ensuring adequate regulatory checks and balances. For example, in the absence of the oversight provided by the EU Commission, it would be prudent to review how Ofcom makes its decisions, especially in circumstances where checks and balances may be reduced and regulatory powers increased. One option would be to divide Ofcom's information gathering and investigation roles on the one hand and its decision-making roles on the other into different groups within Ofcom or externally, while allowing affected parties greater access to the decision makers. This would largely follow recent UK regulatory best practice, similar to the role carried out by the Enforcement Division Panel[27] for Ofgem and the CAA, as well as the process set out recently in relation to the newly established Payment Systems Regulator.[28]

We would invite the NIC to use the opportunity to **reinvigorate the use of existing principles of economic regulation** in individual sectors and ensure that the necessary checks and balances are maintained through effective processes both within regulators, and through independent expert appeal bodies.

15. How can regulators act in the future to support public trust in the regulatory system for water, energy and telecoms?

As argued above, regulators should be clear about what they do and what Government has asked them to do. They should be explicit that their role is to represent and look after consumer interests but that to do that, they need to set the right incentives for companies. This is not always understood by all stakeholders, consumers and investors alike.

[26] See for example BT's submission to the DCMS Committee's Brexit inquiry. http://data.parliament.uk/WrittenEvidence/CommitteeEvidence.svc/EvidenceDocument/Culture,%20Media%20and%20Sport/Impact%20of%20Brexit/written/42300.html

[27] See https://www.ofgem.gov.uk/about-us/how-we-work/our-approach-regulation/enforcement-decision-panel

[28] See https://www.psr.org.uk/how-psr-regulates/decision-making-committees

In their day to day work, regulators should be accessible in their communications, and transparent about their activities. They should celebrate successes and be vocal about the positives of industry, particularly given that we compare well against other countries. But they should do so in a credible way - relying on market evidence and data. Ultimately, **public trust in regulators (and their sponsoring Government departments) will be judged by how well their sector is delivering the outcomes that matter for consumers and society**.

The telecoms sector has high levels of consumer satisfaction. Ofcom research[29] indicates that 87% of end users are either fairly satisfied or very satisfied with their mobile communications services. This figure was 81% percent for overall fixed broadband service in 2017, second only to the US among the comparator countries.[30] There is also high engagement in the market; levels of switching between mobile suppliers compare favourably with some other sectors (including energy) on a 'like for like' basis.[31] And prices are low: the price of mobile services have declined across most usage profiles.[32] Broadband prices have also been falling, while average speeds have been increasing.[33]

Broader questions are being asked about fairness at present and this may be perpetuating a sense that there is a lack of public trust in industry and Ofcom's ability to deliver for *all* consumers.

We recognise that there is more to do, and that there are vulnerable individuals not being well served in the current market. BT is committed to assisting these individuals. We also understand that there are broader questions about fairness, and particularly whether those customers that do not regularly engage are on the deal that is best for them. We deeply care about these issues. Fairness is key for our brand as a differentiator in competitive markets. We also have in place products and services for vulnerable customers, developed through insight and dialogue that represent different groups of customers. However, these issues are complex and interventions must recognise and reflect this to be helpful.

On one side, pricing remedies can be taken to provide equitable outcomes for vulnerable customers; on the other, changes could be made to provide vulnerable consumers an equal opportunity to engage. The first risks unintended outcomes such as disincentivising consumers to engage actively in the market, harming engaged consumers (which includes vulnerable consumers), reducing choice or increasing prices. The latter may not target the right individuals or fall short of achieving equitable outcomes. Given these trade-offs, we believe a quality evidence base is needed before major changes are made.

BT is working closely with Ofcom and with Government to ensure that solutions are appropriate and right for our sector. We believe that we, and others in industry, also have a role to play in improving trust in the regulatory system overall.

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[29] Ofcom International Communications Market Report 2017, 18 December 2017, p.82, figure 45, https://www.ofcom.org.uk/__data/assets/pdf_file/0032/108896/icmr-2017.pdf.
[30] See pages 71-72.
[31] CMA, Final Report on the anticipated acquisition by BT Group plc of EE Limited, para 10.81 https://assets.publishing.service.gov.uk/media/56992242ed915d4747000026/BT_EE_final_report.pdf.
[32] Ofcom, Pricing trends for communications services in the UK, May 2018.
[33] Ofcom Communications Market Report 2018, figure 1.22.