

Consultation response form

Please complete this form in full and return to netneutrality2021@ofcom.org.uk.

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Confidentiality

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Your response

Question	Your response
Question 1: Functioning of the net neutrality framework (a) Which aspects of the current net neutrality framework do you consider work well and should be maintained? Please provide details including any supporting evidence and analysis.	Confidential? – N techUK represents a number of companies on both sides of the value chain with regards to net neutrality, including networks, content providers, and service telecoms providers for enterprise. Therefore, our response reflects the range of views our members hold about the current net neutrality framework.

(b) Which aspects, if any, of the current net neutrality framework do you consider work less well and what impact has this had? What, if any, steps do you think could be taken to address this and what impact could this have? Please provide details including the rule or guidance your response relates to and any supporting evidence or analysis.

techUK is supportive of the principles of net neutrality (a free and open internet for all), and some of our members are signatories of the self-regulatory Open Internet Code of Practice 2016.¹ A fundamental principle of net neutrality rules is that broadband providers must treat all internet traffic on their networks equally, and not favour certain websites or services. The definition of the Open Internet in the UK has been shaped by three principles:

- Users should be able to access all lawful content
- There should be no discrimination against content providers on the basis of commercial rivalry; and
- Traffic management policies should be clear and transparent.

When the Open Internet Code of Practice was reviewed in 2015, WIK found that “UK consumers have the broadest choice of music and video streaming services across OECD countries, and OTT services providing services functionally similar to typical electronic communication products thrive in the UK. OTT services, enabled by an Open Internet, appear in turn to have driven demand for broadband connectivity and upgrades.”²

Given the focus towards greater digital regulation (and the creation of the CMA Digital Market Unit), there is a desire within some of the membership for a joined up and consistent regulation approach to be adopted to ensure inconsistencies do not arise and a level playing field is created.

We also recognise that, since the UK’s net neutrality rules were agreed in 2015, there has been a marked shift in both the range of offering and innovation at service level and

¹ Broadband Stakeholder Group - Open Internet Code of Practice 2016:

<http://www.broadbanduk.org/policies/the-open-internet/open-internet-code-of-practice-2016/>

² WIK – Review of the Open Internet Codes 2015: <http://www.broadbanduk.org/wp-content/uploads/2015/11/WIK-Review-of-the-Open-Internet-Codes-November-15.pdf>

innovation at network level. Current net neutrality guidance is underpinned by an evidence base from the years prior to 2015. We believe Ofcom's guidance on net neutrality needs to evolve in certain areas to reflect current realities and future trends in internet usage and innovation.

On specialised services, these guidelines could also be clarified and improved, to reflect the advances made in the provision of business services purchased by enterprise customers (such as private 5G networks, internet access for businesses, or Internet Protocol Virtual Private Networks (IPVPNs)). Some members feel that the lack of explicit exclusion of these business services risks placing a disproportionate burden on the business communications market and negatively impacting innovation and investment. However, other members feel that further consideration would be needed on how this exemption might work in practice, to ensure the balance in the current framework is maintained, to explore where pragmatic changes are needed to support specialised services whilst guaranteeing service for all types of traffic.

Some members have suggested that, if any new net neutrality guidance is issued, that it be as permissive as possible—while consistent with the preservation of fundamental neutrality principles—and may consider an approach that is more open and accepting of service and technology development but offers the relevant safeguards to prevent discrimination.

As noted above, the wide range of techUK membership includes both sides of the value chain with regards to net neutrality. Many content providers feel that the framework is functioning well and is effective, although some have noted the framework would benefit from some clarification. Some members have highlighted positive collaboration across the value chain, noting the incentives that are

aligned in terms of ensuring the content services flow over the network and reaches users in a way that is usable, functional and makes for a good consumer experience. There is investment on both sides of the value chain that is worth noting: whether in the network, the core, or with content delivery networks (CDNs). Other members have informed us they are more sceptical of this level of coordination, and state that if it does happen, it is happening *in spite of* the framework, rather than *because* of it.

Our key message to Ofcom as it looks to review whether net neutrality is functioning, is to encourage more collaboration across the value chain; whether that is via the framework or other mechanisms.

In the review Ofcom should consider the wider landscape:

- The extent of competition in telecom markets and what it means for net neutrality policy and how competition has evolved in digital markets; as well as the implications of any increased flexibility in net neutrality rules in light of vertical integration and consolidation in the telecom and media markets.
- Data usage on both fixed and mobile networks has rapidly increased. That trend will continue for the next decade but with potential surges as new services come to market and existing platforms for delivering TV services are migrated to IP.
- Despite an increase in data consumption and speed of services, average household spend on telecoms services fell very slightly in 2020. The average UK household spent £79.08 per month on telecoms services in 2020, a decrease of 26 pence since 2019 and equivalent to 3.1% of average monthly

	<p>household spend.³ Some estimates point to a four-year recovery in industry revenues to pre-COVID-19 levels.⁴ Ofcom aims to address this impact on revenue via measures in the Wholesale Fixed Telecoms Market Review, to allow network operators to raise wholesale prices in line with inflation, to help operators pay for new investments (not including mobile industry).</p> <ul style="list-style-type: none"> • The funds available for future network investment are limited. In mobile, the market for unlimited tariffs in mobile has grown in recent years which has raised concerns for some members about its sustainability given a backdrop of ever rising data consumption.⁵ While operators are able to charge for non-tariff data use per megabyte, this is less common as users remain within “bundles”: in 2012, out of bundle data use generated £2.83bn, in 2020 this had decreased to £1.18bn.⁶ <p>The debate around net neutrality rules and guidance was heightened during the COVID pandemic.</p> <ul style="list-style-type: none"> • Overall, the UK’s networks held up well during the pandemic, which saw unprecedented use of networks as mass working from home occurred and there was increased demand for streaming content online and video gaming. Whilst networks withstood this significant pressure and did not fail because of congestion, voluntary across the network eased pressure on
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³ Communications Market Report 2021 – July 2021: https://www.ofcom.org.uk/_data/assets/pdf_file/0011/222401/communications-market-report-2021.pdf

⁴ EY: How do you balance risk with opportunity? Mitigating the top ten risks in telecommunications 2020 - https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/telecommunications/ey-top-10-risks-for-telecom-interactive-pdf.pdf

⁵ Ofcom: Pricing trends for communications services in the UK – July 2021 - https://www.ofcom.org.uk/_data/assets/pdf_file/0013/222331/Pricing-trends-for-communications-services-in-the-UK.pdf

⁶ Ofcom Communications Market Report 2021 – Interactive data: <https://www.ofcom.org.uk/research-and-data/multi-sector-research/cmr/cmr-2021/interactive-data>

networks. Amazon, Netflix, YouTube and Disney agreed to temporarily reduce high-definition video quality to standard definition to reduce the strain on networks. Some members believe this shows industry collaboration is working well, and other members believe it highlights the need for a mechanism in the rules to encourage this type of behaviour – as currently, it is only voluntary. Ofcom sought voluntary commitments from gaming companies to release gaming updates at off peak times to ensure capacity demand did not create congestion.

- The rules provide a number of carve outs which allow operators to manage traffic. ‘Reasonable’ traffic management measures can be taken where certain conditions are met, and even where they are not there are exceptions which include *“traffic management to comply with a legal requirement; to preserve network integrity and security; and/or to prevent impending network congestion and manage exceptional or temporary network congestion”*. This is an issue where techUK would like to see increased collaboration among parties.
- Some members hold the view that these rules are narrow and do not require content providers to take into consideration what their impact is on other network users (both other content and service companies, and consumers). However, this is not to say that content organisations are acting in bad faith with regards to content provision, but that there can be seen to be a lack of visibility on network use; indeed, the majority of content providers are constantly working to improve the end user experience and make services more efficient (see our answer for Question 3).
- Collaboration across the value chain was evident in the exceptional circumstance of zero-rating of (i.e.

	<p>giving free temporary access to) websites such as the NHS COVID hub, BBC Bitesize and Oak Academy during the pandemic. Operators could be seen as in violation of net neutrality rules in this instance, although no ruling was made by Ofcom as a pragmatic response to the pandemic, which is commendable. Our membership hold two views on what this specific example indicates with relation to the net neutrality framework: on the one hand, the lack of enforcement against this particular zero-rating as evidence to not update the framework; on the other hand, it as an example of the rules being inflexible and having to be selectively ignored to fit the circumstances.</p> <p>techUK would support Ofcom clarifying the rules on zero-rating: given the increase in size of data allowances now available to customers, for example, zero-rating access to certain content or applications now may have lower risk of consumer harm. Ofcom no longer has an obligation to follow BEREC guidance, and is not impacted by the latest ECJ judgments on zero-rating. However, they do illustrate the confusion and regulatory uncertainty caused by the current approach. BEREC will not opine on what these judgments mean until March 2022 when it intends to issue a revised version of its guidelines for consultation. Having spent so long devising and reviewing these guidelines, should BEREC decide that the judgments require substantive revision to the guidelines it is hard to see how operators within the EU can take confidence that the regime will remain stable. We must seek to avoid this outcome in the UK and improved guidance is key to achieving this.</p>
<p>Question 2: Use cases, technologies, and other market developments</p> <p>(a) What, if any, specific current or future use cases, technologies or other market developments have raised, or may raise,</p>	<p>(a) Ofcom should update and simplify the guidelines where doing so will to clearly support innovation. For example, while net neutrality rules are appropriately technology-agnostic, Ofcom should ensure that net-neutral 5G and IoT use cases are actively encouraged</p>

particular concerns or issues under the net neutrality framework?

(b) What, if any, steps do you think could be taken to address these concerns or issues and what impact could this have? Please provide details of the use case, technology or market development and the rule or guidance your response relates to, as well as any supporting evidence and analysis.

and confirm the rules are sufficiently flexible to accommodate future trends such as convergence, personalisation.⁷

(b)

The rules should not act to unduly limit the capabilities of mobile services and 5G in particular. There are many use cases for 5G that create the opportunity to provide real innovation, delivering technology benefits to consumers, public services and UK businesses, raising productivity and quality of life in the process. Net neutrality should be sympathetic to the needs of 5G and concepts like network slicing

Adopting a pro-innovation, pro-technology approach is crucial when high reliability, low latency services are needed to be used, either for specific devices, applications or to meet the needs of particular end users. Often in these cases a one size fits all approach isn't likely to work and the specialised service categorisations may not be particularly helpful. Any revised guidance should seek to take this into account in a pragmatic way, while ensuring safeguards against discrimination. A number of techUK members have suggested that Ofcom formalise a net neutrality industry group, that could meet quarterly to review pressures on networks and opportunities to reduce traffic pressures. This group could then be assembled quickly in a crisis situation, to provide a quicker mechanism to agree immediate action. It would be a ready-made 'pressure valve', giving Ofcom and ISPs greater confidence future pressure points could be well managed.

So far, BEREC has given lukewarm support to the innovations outlined above. For example, on 5G innovation they stated "the Regulation and Guidelines are technologically neutral, and therefore do not constitute a ban on the implementation of any 5G technology itself".⁸ This provides little encouragement for investment in 5G.

⁷ GSMA The 5G Guide – April 2019 ([link](#)); GSMA 5G IoT Private & Dedicated Networks for Industry 4.0 - October 2020 ([link](#)); GSMA Network Slicing Use Case Requirements – April 2018 ([link](#))

⁸ BEREC Opinion for the evaluation of the application of Regulation (EU) 2015/2120 and the BEREC Net Neutrality Guidelines (europa.eu)

	<p>While techUK supports the consumer-focus of both the BSG Open Internet Code of Practice and Ofcom's November 2011 Approach to Net Neutrality, some members feel the lack of explicit exclusion of business services purchased by large enterprise customers risks placing a disproportionate burden on the business communications market and negatively impacting innovation and investment.</p> <p>Large businesses not only have bi-laterally negotiated tailor-made contracts that are different from consumer contracts, but they also require and demand different services than those used by consumers. Large businesses in particular require highly tailored services which meet their specific needs for productivity and business critical applications, as opposed to "mass market" style consumer offerings. Regardless of whether increased meaningful transparency or other rules and possible minimum Quality of Service levels are appropriate in the consumer protection context, we believe Ofcom should not automatically apply the same provisions to large business users.</p> <p>In this context, some members feel that the "specialised service" category does not go far enough because it does not explicitly cover a separate category of services which form the basis of large business private networking solutions such as PIP/MPLS, IPVPNs, or Internet Access used by large business as part of an integrated solution. This can be seen as even truer when considering the evolution of the market and the rise of technologies relying on optimisation (e.g. Software Defined Networks (SDN)/Network Functions Virtualisation (NFV), 5G, etc.). We therefore encourage Ofcom to consider the practicality of implementing an explicit exclusion for all business services in any revision to the UK net neutrality framework, while ensuring the overall balance of the current rules.</p>
<p>Question 3: Value chain</p> <p>Are there particular business models or aspects of the internet or other value chains</p>	<p>In the context that capacity is limited, some members feel that there is an increasing onus on operators for investment and innovation to build core networks that meet peak demand,</p>

that you think we should consider as part of our review? Please explain why, providing details including any supporting evidence or analysis.

occurring infrequently. Three viewpoints emerge from techUK on this issue:

- Some members suggest that this onus could be countered by content providers and applications using network capacity more efficiently and to take further steps to mitigate peak traffic growth.
- However, other members point to the current landscape in which content providers are incentivised to distribute their content efficiently by investing in CDNs and other methods of getting data as close to users as possible. These methods prevent content providers becoming significant contributors to unmanageable network congestion, with the intended outcome of positive user experiences for audiences and consumers.
- Some members have also pointed out that the industry is constantly optimizing and innovating to reduce the number of bits it takes to deliver content/ video to customers

Examples of where content providers and access networks already work together and could be further encouraged to optimise delivery include:

- Using caching and peering solutions;
- Gaming releases and updates at off-peak times. When new games are launched, they could be downloaded the night before when the network is only lightly used and then activated on the launch date.
- Whether to use multicast delivery for live TV, especially live sports content.

Other members have pointed to the practice of content providers and access providers already working closely together to deliver content and services demanded by users, such as game updates or live streamed events. techUK supports this innovation and cooperation, which should continue, and content providers should be encouraged, where appropriate, to use the network efficiently and take steps to mitigate peak traffic growth (noting that many, including some techUK members, already do),

	<p>and telecoms operators should likewise be encouraged to cooperate in these endeavours (please see our answer to Question 2 (b)). Furthermore, measures to help cooperation could include increasing the sight of network use with improved communication throughout the value chain, through a net neutrality industry group as we suggest in our answer to Question 2 (b).</p>
<p>Question 4: International cases studies</p> <p>Are there any international case studies or approaches to net neutrality that you think we could usefully consider? Please include details of any analysis or assessments.</p>	<p>While international comparisons can be helpful, the particular circumstances of the UK market should be the key consideration. In the UK, Ofcom has invested considerable time and effort to improving switching for consumers and ensuring the UK has a well-functioning wholesale market in connectivity that has allowed UK consumers to benefit from competition in their choice of communication provider (both fixed and mobile). Ofcom must ensure that all lawful content should be accessible to consumers, and that internet discrimination does not occur within the context of the UK's market circumstances. While it may be helpful for Ofcom, as it reviews the functioning of the UK's net neutrality framework, to analyse recent developments in South Korea and Italy, the approaches adopted remain one of the more contentious issues within the debate.</p> <p>On the specific point about business service exclusion, we note that the United States Federal Communications Commission made clear distinctions between "mass market" and "business" when it explicitly excluded services for large businesses from the scope of its Open Internet Order in 2010⁹ and 2015¹⁰. The term ("mass market") does not include enterprise service offerings which are typically offered to larger organisations through customised or individually negotiated arrangements". We consider this to be best practice in this area.</p>

⁹ Federal Communications Commission, Report and Order on Preserving the Open Internet (December 23, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf. See paragraphs 44 and 45.

¹⁰ Federal Communications Commission, Report and Order on Remand, Declaratory Ruling, and Order on Promoting and Protecting the Open Internet, 30 FCC Rcd 5601 (2015), available at <https://www.fcc.gov/document/fcc-releases-open-internet-order>

Question 5: Guidance and approach to compliance and enforcement

Are there specific challenges with the existing guidance that we should be aware of (e.g. ambiguity, gaps)? Assuming the rules stay broadly the same, which areas could Ofcom usefully provide additional clarity or guidance on? Please provide details.

New guidance could deliver better clarity and be written to better support innovation and service development. Enforcement action should be proportionate and focused on activities where there is a realistic prospect of harm. Clearer guidance on both Ofcom's approach to assess net neutrality and its approach to enforcement would be of considerable benefit to our members.

The industry needs clarity that future services which require special treatment of traffic will be recognised by Ofcom. The current conditions upon which specialised services can be offered are vague and uncertain.

A clear definition of "objectively necessary" is needed so that this doesn't inhibit providers ability to develop these services.

"The network capacity is sufficient to provide these services in addition to internet access service offered and not detrimental to the availability or general quality of internet access service for end users" - We agree that the general internet must remain viable, but capacity is shared and there will always be an impact when providers are offering specialised services. Common sense is needed here, we don't need prescriptive rules but rather a statement of intent that this is understood, and specialised services are encouraged.

For customers to get the full benefits of 5G the industry needs the guidance to set out an unambiguous, pro-innovation approach to future services and technologies.

Question 6: Annual report

Do you find Ofcom's annual monitoring report useful or are there any changes you think we could usefully make either to the content or how we communicate this?

Should Ofcom decide to make changes to its guidance, improving the clarity around its application of the rules as well as its approach to its enforcement priorities, then at this point it may well be sensible to update its annual reporting approach. This may involve streamlining it to focus on how the market is functioning and documenting any areas of concern or ongoing enforcement. techUK members appreciate Ofcom's annual monitoring report and find it useful as it enhances transparency in the market, which is one of the core principles of the net neutrality framework, and helps to drive the certainty

	needed by both edge providers and internet service providers to drive innovation and investment.
Question 7: Other Is there any other evidence or analysis that you are aware of and/or could provide to aid our review?	Nil returned.