

## Ofcom Net Neutrality Review – Call for Evidence

### Non-confidential

#### 1. Introduction

- 1.1 KCOM Group Limited ('KCOM') welcomes Ofcom's Net Neutrality Review and the opportunity to respond to the Call for Evidence.
- 1.2 The internet has proven to be an open and inclusive platform which has had immeasurable impacts on society, enabling innovation and inclusion. KCOM supports the concept of an open internet and the principle that users should have the right to access lawful content, applications and services via their internet service. We comply with existing regulation and to demonstrate our commitment KCOM is a signatory to the Broadband Stakeholder Group's Open Internet Code of Practice ("BSG Code").<sup>1</sup>
- 1.3 There has been significant growth in the market for internet access services, innovation in the networks delivering these services and the applications and services which depend on internet access services for their delivery. Customers expect to be able to access a growing amount and range of services and are using the internet in different ways. These changes have resulted in increasing demand on networks which has been accelerated by the impact of the COVID-19 pandemic. We expect that some of these impacts will be enduring.
- 1.4 It is right that Ofcom should now consider how the current net neutrality framework is functioning and whether changes are needed to ensure that it best meets the needs of consumers and internet access providers.
- 1.5 We appreciate that the scope of this review is limited in that it is intended to inform Ofcom's work in monitoring and ensuring compliance with the net neutrality rules and the operation of current guidance on complying with the existing rules. KCOM would however stress that market developments and the impact for ISPs<sup>2</sup> means that a wider review would be beneficial. We would expect that Ofcom is engaged with Government as part of this review to inform and move the wider policy debate forward.

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<sup>1</sup> <http://www.broadbanduk.org/wp-content/uploads/2016/06/BSG-Open-Internet-Code-2016.pdf>

<sup>2</sup> The term "ISP" is used throughout this response to refer to both internet service providers who have a relationship with end customers and network access providers who may or may not have a relationship with end customers.

## 2. 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.

(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.

- 2.1 While the current framework benefits from simplicity, it is a very blunt instrument which offers little flexibility for commercial innovation nor does it enable ISPs to adapt to the evolving needs of their customers.
- 2.2 In considering how the current net neutrality framework is functioning, KCOM believes it is helpful to think in terms of some key themes. In our view, the right approach to meeting the needs of consumers, ISPs and the other internet stakeholders is to strike the right balance between sometimes conflicting needs. As demand has changed and grown it is not always the case that that current framework supports that balance.
- 2.3 **Transparency** – Customers should be given meaningful information on their usage and on the network management techniques that are deployed, including an indication of the minimum and general level of experience they can expect – subject to their available access speed and the applications simultaneously using their connection.
- 2.4 There are several ways in which customers are currently provided with information about their services. This includes broadband speed information and information which is provided by a number of internet access providers, including KCOM, under the BSG Code which requires the publication of Key Facts Indicators in a specified format.
- 2.5 Our primary concern is that there is currently a lack of consistency in terms of the information customers can expect to be given. Not all providers are signatories to the BSG Code and it is not clear that all customers currently receive relevant information.
- 2.6 KCOM agrees with Ofcom that this should be addressed through changes to the General Conditions arising from implementation of the European Electronic Communications Code, specifically the requirement in GC C1 to provide contract information before a customer is bound by a contract.<sup>3</sup>

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<sup>3</sup> Para 3.12, [https://www.ofcom.org.uk/data/assets/pdf\\_file/0015/224142/call-for-evidence-net-neutrality-review.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0015/224142/call-for-evidence-net-neutrality-review.pdf)

- 2.7 **Open access** –customers should be able to use their internet connection to access and run the content and applications of their choice (provided they are legal). An individual user’s experience will depend on the access level/technology purchased and any relevant contractual conditions.
- 2.8 As it currently stands, when it comes to meeting customer needs, choice is limited to a “one size fits all” option which may no longer meet the needs of all. Some customers may be willing to pay more for higher quality of service/enhanced capabilities in relation to particular categories of application/content (e.g., gaming) but the net neutrality framework effectively prohibits the development of these options.
- 2.9 **Fair competition** – A competitive market is the best way to protect everyone’s interests rather than regulation. Customers should have a wide choice of ISPs and should be able to switch between providers without penalty subject to their contracts.
- 2.10 The UK market offers a wide range of ISPs and customers have the ability to move between providers with relative ease. Clarity and consistency in the interpretation and application of the net neutrality rules helps to create a level playing field.
- 2.11 **Reasonable network management** – ISPs should be free to deploy techniques to manage congestion and optimise the performance of the various applications using their networks.
- 2.12 It is the case that some degree of traffic management will always be necessary. While some traffic peaks can be anticipated, it is simply not possible for ISPs to efficiently and economically size their networks to deal with all possible events.
- 2.13 Within the current net neutrality framework ISPs can undertake “reasonable” traffic management in certain circumstances so long as it is transparent, non-discriminatory and proportionate, and not based on commercial considerations, but on objectively different technical quality of service requirements of specific categories of traffic. Traffic management should not be maintained for longer than necessary.
- 2.14 In effect, networks are dimensioned beyond the requirements of some customers to meet the needs of a small number of users, yet that cost must be spread across all customers. The current framework means that ISPs are effectively limited in their ability to adapt their networks to take account of customer preferences and the type of content that is being consumed and develop commercial models which might allow costs to be more equitably distributed.
- 2.15 **Commercial activity with no undue constraints to innovation** – the market should be free to develop new services and new business models which may differ from the current business models.

- 2.16 The current net neutrality framework acts as a constraint on the development of innovative commercial models, in particular those that involve customers or content/application providers (“CAPs”) paying for enhanced capability, such as prioritised delivery.
- 2.17 The current interpretation of the non-discrimination requirement effectively precludes ISPs from offering an enhanced service at a different price point to those customers who might wish to pay to gain a better overall experience. We would argue that this would not be in and of itself a form of discrimination, so long as all customers are guaranteed a reasonable standard of service.
- 2.18 The current net neutrality framework also has the effect of deterring innovation at network level to support different applications. KCOM appreciates that this is a complex area and that there are potential dangers associated with the development of partnerships between ISPs and CAPs, but there may be substantial benefits from enabling this type of arrangement (with appropriate controls).
- 2.19 The rollout of full fibre connectivity offers the potential for considerable service innovation. It has also fundamentally changed the commercial realities for ISPs. It is therefore appropriate that different commercial models are considered as part of any review of the net neutrality framework.

### **3. Use cases, technologies, and other market developments**

(a) What, if any, specific current or future use cases, technologies or other market developments have raised, or may raise, 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.

- 3.1 There have been significant changes in the range of services available (both network and content and applications) and the way in which customers are using those services since the net neutrality framework was first introduced.
- 3.2 IP was initially used for relatively simple, low volume, non-time sensitive applications such as file transfer (FTP), and a “best efforts” approach to connectivity. Over time, an ever-increasing number of new or enhanced protocols have been developed, with the subsequent launch of new applications and services based on them.

- 3.3 These changes have become more pronounced in more recent times and this has resulted in a situation where not all of these new protocols are based on the traditional IP approach of “best efforts” and an even-handed use of resources such as bandwidth. Some applications are specifically designed to use these new protocol capabilities to optimise performance.
- 3.4 The issue is whether the net neutrality framework is flexible enough to accommodate these changes and evolving customer expectations, particularly in relation to specific services. While there is the ability for internet service providers to offer “managed services” or “alternative services” which might, for example, offer optimisation necessary to meet the requirements of the content application or service for a specific level of quality, the term “internet access” cannot be used to describe or market such services. Yet for customers that is exactly what they are.
- 3.5 It is no longer the case that demand for these services is the preserve of business customers. Increasingly consumers are placing higher value on the reliability of some services over others and might wish to have an assured level of service in relation to those services. The current net neutrality framework effectively precludes the development of these services for the mass market. At the very least, Ofcom should provide further guidance as to what constitutes a “specialised service” and what may be permissible within the current framework.
- 3.6 Consumers are using their internet access services to access an increasing number of services for increased amounts of time. Ofcom’s Online National 2021 Report<sup>4</sup> found that with the UK in some form of lockdown for most of 2020, we were more dependent than ever on online services a wide range of services and we spent more time online: an average of 3 hours 37 minutes a day on smartphones, tablets and computers as well as an average of 1 hour 21 minutes a day watching online services such as Netflix and BBC iPlayer on television. More people have taken part in online gaming, video-calling and online health services during the COVID-19 pandemic.
- 3.7 While the COVID-19 pandemic could be categorised as an exceptional event giving rise to a change in habits for a specific period of time, this remains to be seen. KCOM believes we will see sustained changes in customer behaviour as a result of the way in which they have used internet access services over the past 18 months.

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<sup>4</sup> [https://www.ofcom.org.uk/data/assets/pdf\\_file/0013/220414/online-nation-2021-report.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0013/220414/online-nation-2021-report.pdf)

## 4. Value Chain

Are there particular business models or aspects of the internet or other value chains that you think we should consider as part of our review? Please explain why, providing details including any supporting evidence or analysis.

- 4.1 ISPs are only one part of a complex chain involved in the delivery of internet access services. Advances in end user equipment and material changes to service offered by CAPs (e.g., the increase in definition HD to 4k) have significantly increased traffic on networks and required ISPs to make additional investment in their networks.
- 4.2 Yet, it remains the case that regulation of an open internet focusses solely on ISPs who have limited commercial options to manage demand on their networks, in effect being limited to recovering costs through retail charges.
- 4.3 We believe that this focus is too narrow and there is a need to consider the incentives on all players in the value chain who have the potential to have an impact on the end user experience. As it stands, the net neutrality framework places no obligations on others to manage the distribution of content and provides no incentives to encourage efficient use of bandwidth. The benefit of the current framework is heavily weighted towards CAPs which increasingly acts to the detriment of ISPs.
- 4.4 Ultimately IPS can only deliver services which meet the needs of both customers and CAPs if there are sufficient revenues, and all those involved in the distribution of content play their part in mitigating the potential adverse effects of peaks in demand.
- 4.5 The capacity available to an ISP is constrained by the systems and architecture adopted, which have finite capacity and need to grow to meet increased capacity demands from consumers.
- 4.6 For most mass market ISPs in competitive markets, “connectivity” to the wider internet is generally provided via transit providers which charge according to traffic volumes at peak times. Therefore, providing more capacity per user at peak times requires a greater outlay.
- 4.7 ISPs have made decisions about their network and transit arrangements, based on assumptions about users’ service consumption habits and underlying needs, which are aimed at providing acceptable levels of service at a commercially attractive price. Generally, a fixed price unlimited approach has been adopted – this is well suited to services with a well-established pattern of use and a relatively narrow distribution of user behaviour.

- 4.8 KCOM, and other ISPs, have seen material growth and face increasing costs. That growth and the distribution of volume consumption is increasingly skewed to a small proportion of users making use of specific applications who dominate actual bandwidth consumption.
- 4.9 Previously “caps”, “download limits” and policing of fair usage policies were all aspects of one approach to “flattening the peak” of user bandwidth demand and, hence, to limit costs and upward pressure on user pricing. However, these approaches are no longer compatible with user expectations.
- 4.10 As an example of the challenges being faced by ISPs, the following graphs show demand generated by specific services on 26 December 2019. They illustrate the impact which specific events can have on network demand, requiring ISPs to take action to manage competing traffic streams.
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- 4.11 ✂
- 4.12 This is not an isolated incident and requires constant monitoring and adjustment by networks to manage and meet demand and is not without cost.
- 4.13 Solutions have been developed which enable ISPs to manage traffic more effectively. Network caching is one solution which allows ISPs to more effectively manage content across their networks by storing it locally, removing the need for traffic to traverse the wider internet and be subject to the issues this may cause.
- 4.14 While there are a variety of technical and commercial models used to cache content, caches have increasingly been deployed by ISPs within their networks and at their own cost to manage increased demand at peak times. Like other ISPs, KCOM has installed caches to enable us to manage content on our network more effectively.
- 4.15 As part of its review, it would be beneficial for Ofcom to consider the actions taken by, and incentives on, different players in the value chain to manage content. The current approach of placing the burden of traffic management on ISPs may no longer be the most efficient or equitable approach.

## 5. International cases studies

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.

- 5.1 While internet access services are provided on a national basis, the market for internet services is very much a global one.
- 5.2 It is right that Ofcom should consider international approaches to net neutrality as part of its review. We are aware of divergent models emerging which recognise the complex internet ecosystem and recognise the challenges faced by ISPs.
- 5.3 For example, we understand that in the US and France, Netflix pays a fee to ISPs, although this has not been classified as a network usage fee. More recently there has been legal action in South Korea which confirmed an obligation on Netflix to pay network usage fees to mobile carriers.
- 5.4 We appreciate that consideration of this type of fundamental change to the net neutrality framework is outside of the scope of Ofcom's review. However, these alternative approaches can inform the debate and warrant consideration.

## 6. 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.

- 6.1 Ofcom's approach to compliance and enforcement of the current framework has been pragmatic, engaging with ISPs where there have been perceived issues. KCOM supports this approach recognising the complexities associated with interpretation and application of the current rules to day-day management of networks.
- 6.2 Subject to our comments above regarding the need for wider review, assuming the rules stay broadly the same, there are some areas where KCOM believes further clarification within Ofcom's guidance would be helpful.
- 6.3 The COVID-19 pandemic has thrown into sharp relief the importance of some services. There is a question whether particular services should be allowed to be prioritised in periods of network congestion for wider public / societal benefit. It is far from clear that the current guidance would allow this however not doing so has the potential to have significant harmful effects.



- 6.4 Linked to this is the issue of zero-rating of traffic. As Ofcom’s guidance notes “The Open Internet Regulation neither prohibits nor allows all zero-rating offers, but the BEREC Guidelines indicate that such offers should be assessed by National Regulatory Authorities (‘NRAs’) carefully, on a case-by-case basis, to ensure they do not undermine the goals of the Regulation.”<sup>5</sup>
- 6.5 During the COVID-19 pandemic, zero rating of traffic to some services has been offered by ISPs to the benefit of many customers, for example those accessing health and education resources. We believe that there is a case for considering the options for more commercial flexibility to offer packages, aimed at particular market segments, that are currently in danger of being deemed to be a breach of the current net neutrality rules.
- 6.6 Finally, we believe that there is a need for further clarification regarding “specialised services”. As full fibre networks are increasingly deployed, we can see that there is the potential for innovation in services which require a specific quality of service. It would be timely for Ofcom to consider these developments in this review.

## 7. 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?

- 7.1 The scope of Ofcom’s Annual Monitoring Report is currently very limited, considering broadband quality of service, traffic management, transparency and complaints. We appreciate that the scope has previously been largely determined by the reporting requirements of the EU Regulation on open internet access.<sup>6</sup> As such, the report has limited use in exploring the practical impacts of the net neutrality framework.
- 7.2 KCOM believes that there is the potential for Ofcom to provide more insight into the wider market and provide a more holistic view of the factors which have an impact on customer’s experience of internet access services. In particular, the behaviour of CAPs and the impact they have on networks and how end users are using their services would be informative.

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<sup>5</sup> Para 3.4, [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0014/148100/ofcom-approach-net-neutrality.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0014/148100/ofcom-approach-net-neutrality.pdf)

<sup>6</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02015R2120-20181220>

## 8. Other

Is there any other evidence or analysis that you are aware of and/or could provide to aid our review?

- 8.1 KCOM is aware of alternative models used in other regulated network industries. For example, in the gas sectors heavy suppliers of molecules onto the network must pay an additional “system charge” as part compensation for the upgrade to pipes and pumps necessary to carry the molecules. Additionally, the capex/opex involved in these connections is added to the RAB so that the recovery costs are both socialised over all end-users and tilted so that the supplier pays a larger share.
- 8.2 It would be beneficial for Ofcom to consider the approaches taken in other regulated network industries.