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# Monitoring compliance with the EU Open Internet Regulation

A report to the European Commission and BEREC

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# 1. Introduction

- 1.1 The EU Regulation on open internet access<sup>1</sup> ('the Regulation') imposes a range of obligations on internet service providers (ISPs) regarding their provision of internet access services (IAS). The aim of the Regulation is to "safeguard equal and non-discriminatory treatment of traffic in the provision of internet access services and related end-users' rights" and "guarantee the continued functioning of the internet ecosystem as an engine of innovation"<sup>2</sup>. To secure these goals, the Regulation imposes measures dealing with the way ISPs manage data traffic on their networks. It also places obligations on ISPs about the terms and conditions of, as well as information contained in, customer contracts for the provision of IAS.
- 1.2 The Body of European Regulators for Electronic Communications (BEREC) has published Guidelines on the Implementation by National Regulators of European Net Neutrality Rules.<sup>3</sup> The Guidelines state that the National Regulatory Authorities (NRAs) of the EU Member States "should take utmost account" of the Guidelines, which "should contribute to consistent application of the Regulation, thereby contributing to regulatory certainty to stakeholders."<sup>4</sup>
- 1.3 Ofcom is the designated NRA responsible for enforcing the Regulation in the United Kingdom. National legislation sets out Ofcom's powers in this regard, including powers to impose penalties for breaches of the Regulation.<sup>5</sup>
- 1.4 The Regulation requires NRAs such as Ofcom to monitor and ensure compliance with the Regulation, and to promote the availability of non-discriminatory IAS at levels of quality that reflect advances in technology. The Regulation also requires NRAs to publish an annual report regarding their monitoring and findings and provide those reports to the European Commission and to BEREC. This report fulfills Ofcom's obligations in this regard.

## Overview of report

- 1.5 This is Ofcom's third annual report since the Regulation came into force and covers Ofcom's activities relating to enforcement of net neutrality provisions in the period May 2018 to April 2019. It is divided into sections addressing:
  - monitoring the quality of IAS;
  - safeguarding open internet access and traffic management;
  - transparency measures; and

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<sup>1</sup> Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and retail charges for regulated intra-EU communications and amending Directive 2002/22/EC and Regulation (EU) No 531/2012 - <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02015R2120-20181220>

<sup>2</sup> EU Regulation 2015/2020, Recital (1)

<sup>3</sup> [BEREC Guidelines on the Implementation by National Regulations of European Net Neutrality Rules, 30 August 2019 \('BEREC Guidelines'\)](#)

<sup>4</sup> BEREC Guidelines, Paragraph 1

<sup>5</sup> [The Open Internet Access \(EU Regulation\) Regulations 2016](#)

- complaints and remedies.

1.6 This report shows that;

- The quality of fixed IAS has improved compared with last year;
- Ofcom’s work in this reporting period has secured standards for consumers and ensured ISPs remain compliant with the Open Internet Regulation. The UK’s Codes of Practice relating to transparency of broadband speeds are working well;
- New rules relating to quality of service are working well (although monitoring to ensure continued compliance is necessary).

1.7 We will continue to monitor ISPs practices to ensure compliance with the Regulation; and we will make additional interventions where necessary to achieve that goal. In May 2019, we published a document setting out our approach to assessing compliance with certain aspects of the Open Internet Regulation – in particular, zero-rating offers and traffic management measures – based on our experience to-date. This document is available on our website.<sup>6</sup>

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<sup>6</sup> [Ofcom’s approach to assessing compliance with net neutrality rules: Frameworks for assessing zero rating offers and traffic management measures for compliance with the Open Internet Regulation](#), May 2019

## 2. Monitoring the quality of IAS

### Article 5(1) of the Open Internet Regulation

National regulatory authorities [...] shall promote the continued availability of non-discriminatory internet access services at levels of quality that reflect advances in technology.

- 2.1 Article 5.1 requires Ofcom to promote the availability of non-discriminatory IAS at levels of quality that reflect technological advances.
- 2.2 Our activities to fulfil this obligation have included monitoring consumer complaints, conducting market surveys, and technical network monitoring. We measure various indicators, including broadband speeds and web browsing performance.
- 2.1 Overall, we have found that fixed speeds have improved for consumers of IAS. We expect to publish an updated framework on monitoring mobile QoS before the end of the year.

### Fixed broadband network IAS quality

- 2.2 We measure the availability of high-quality IAS on fixed broadband networks through a programme of regular monitoring and reporting. We use two complementary methods to measure the quality of IAS on fixed networks.
- 2.3 We analyse information provided by ISPs regarding the sync speed of each active line. We collect sync speed data at the address-level from the four largest networks, as well as from smaller network providers. This gives a measure of the maximum possible connection speed achievable between the ISP's access network and the consumer premises. We published the findings of this analysis in our Connected Nations report<sup>7</sup>.
- 2.4 We also analyse data collected by our research partner SamKnows Limited from a panel of volunteers. The panel is selected to be representative in terms of geographic location, broadband connection technology, ISP and broadband package. Volunteers connect a hardware measurement unit to their broadband router. This method measures actual speeds, streaming performance, and average daily disconnections. It also measures other indicators affecting the performance of IAS per ISP package, including web browsing speed, latency, packet loss, Domain Name Server (DNS) resolution, DNS failure, and jitter. The findings of this analysis are published in our Home Broadband Performance report<sup>8</sup>.

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<sup>7</sup> Ofcom [Connected Nations Report](#), December 2018

<sup>8</sup> Ofcom [UK Home Broadband Performance](#), May 2019

## Key findings

- 2.5 The data we gathered from ISPs about sync speeds indicates that the trend of increased average download speeds continued in 2018, up from 44Mbit/s in 2017 and 37Mbit/s in 2016 to just over 49Mbit/s<sup>9</sup>.
- 2.6 The findings in relation to the average actual speeds also demonstrate continued improvement, average download speeds increasing by 18% to 54.2 Mbit/s and average upload speeds by 15% to 7.2 Mbit/s<sup>10</sup>.
- 2.7 Data collected by our research partner indicates continued improvement in ‘peak time’ download speeds compared with the average maximum speed. In 2016 the reported average download speed recorded during peak-time (8pm-10pm) was 33.6Mbit/s, 86% of the average maximum speed<sup>11</sup>. In 2017 that had increased to 44.9Mbit/s, or 92% of the average maximum speed<sup>12</sup>. In 2018, the figure was 53.7Mbit/s, 96% of the average maximum speed. The main driver for both increases was the growing take-up of superfast fibre and cable broadband products, and the proportion of lines receiving an average peak-time speed of 30Mbit/s or more increased from 54% to 58% in the year to November 2018<sup>13</sup>.
- 2.8 In March 2018, the UK Government decided to introduce a broadband Universal Service Order (USO) to ensure people in the UK have the right to request a broadband connection with a download speed of at least 10Mbit/s and an upload speed of at least 1Mbit/s. On 6 June, Ofcom formally notified the European Commission of its decisions in relation to universal service conditions implementing the USO.

## Mobile broadband networks IAS quality

- 2.9 Ofcom monitors mobile coverage in the UK on a monthly basis and we are also part of a UK-wide industry steering group, which is addressing common practices for mobile coverage estimation and information presentation to consumers. This is expected to increase the level of transparency and comparability of mobile services in the UK.
- 2.10 In addition, we are continuing our research on technical metrics, measurement methods and handsets, which are supplemented with field measurements in order to better understand mobile quality of service (QoS) in view of the Regulation and the corresponding BEREC Guidelines. We expect to publish further details on this in October on the Ofcom website.

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<sup>9</sup> Ofcom [Connected Nations Report](#) Scorecard, December 2018

<sup>10</sup> Ofcom [UK Home Broadband Performance](#), May 2019

<sup>11</sup> Ofcom [UK Home Broadband Performance](#), May 2017 (covering period to November 2017)

<sup>12</sup> Ofcom [UK Home Broadband Performance](#), May 2018 (covering period to November 2017)

<sup>13</sup> Ofcom [UK Home Broadband Performance](#), May 2019

- 2.11 We are also participating in the work of BEREC to develop a tool for measuring quality of service in the context of net neutrality. The tool is expected to be delivered by the end of 2019.

## **Consumer satisfaction surveys and complaints**

- 2.12 We monitor consumer complaints to our Consumer Contact Team to evaluate consumer satisfaction. This helps us to identify relevant complaints about the quality of broadband services, including the speeds that customers are getting and the information provided to them.
- 2.13 To facilitate consumer awareness of the Regulation and the rights it guarantees, in 2017 Ofcom created a short video to explain the core principles of net neutrality and posted this on the Ofcom website. We continue to promote this information through social media and other consumer advice bodies<sup>14</sup>.

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<sup>14</sup> See Ofcom website: <https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/advice/net-neutrality>

## 3. Safeguarding open internet access

- 3.1 Article 3 of the Open Internet Regulation sets out the rights of end-users and ISPs' obligations. In order to fulfil our regulatory obligations in this reporting period Ofcom has:
- conducted and concluded an enforcement programme into ISPs' traffic management practices, and taken enforcement action in three instances;<sup>15</sup>
  - conducted initial reviews of zero-rating offers that have been brought to market;
  - engaged with mobile operators about the application of the Open Internet Regulation; and
  - published a [frameworks document](#) which sets out Ofcom's approach to assessing compliance with certain aspects of the Open Internet Regulation, based on our experience to-date. Specifically, the document focusses on zero-rating offers and traffic management practices.
- 3.2 Ofcom's work in this reporting period has secured standards for consumers and ensured ISPs remain compliant with the Open Internet Regulation. A summary of our work is set out below.

### Terminal equipment

#### Article 3(1) of the Regulation

End-users shall have the right to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of the end-user's or provider's location or the location, origin or destination of the information, content, application or service, via their internet access service.

- 3.3 Article 3(1) of the Open Internet Regulation, among other things, grants end-users the right to use terminal equipment of their choice.
- 3.4 As reported last year, an investigation into Three was opened into its compliance with the Open Internet Regulation.<sup>16</sup> One of Ofcom's concerns was regarding Three's practice of restricting tethering, both within the UK and the EU. The investigation was closed on 1 August 2018 after Ofcom received assurances that, among other things, Three agreed to:
- a) withdraw restrictions on the use of handset SIMs in dongles and mifis;
  - b) remove any specific tethering or hotspot allowance for new or upgrading customers, to allow for unrestricted tethering (within the UK or EU);
  - c) remove any requirements for customers to purchase a Data Passport to tether when roaming in the EU;

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<sup>15</sup> See the Three and Vodafone investigations and the O2 assessment later on in this report.

<sup>16</sup> [https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw\\_01218](https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw_01218)

- d) allow customers on all 'Advanced Plans'<sup>17</sup> to tether without restriction; and
- e) allow customers on 'Essential Plans' to tether on their current plan, or to migrate to the nearest equivalent Advanced Plan available at that time.

3.5 The investigation was opened under the Traffic Management Enforcement Programme due to concerns about Three's traffic management practices. More detail on those aspects of the investigation can be found at paragraphs 3.24 -3.26 below.

## Zero-rating offers

### Article 3(2) of the Regulation

Agreements between providers of internet access services and end-users on commercial and technical conditions and the characteristics of internet access services such as price, data volumes or speed, and any commercial practices conducted by providers of internet access services, shall not limit the exercise of the rights of end-users laid down in paragraph.

- 3.6 Article 3(2) of the Regulation allows agreements between ISPs and their end-users on terms such as price, data volumes, and speed, so long as they do not limit end-user rights as set out in Article 3(1).
- 3.7 "Zero-rating" offers are increasingly popular types of agreements between ISPs and end-users that relate to data and price. Under these offers, access to specific services does not count towards any general data cap that may otherwise be an element of a particular tariff. An example is where an ISP applies no charge for consumption of data traffic associated with a specific application or category of applications.
- 3.8 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. In particular, the BEREC Guidelines note that zero-rating can create an economic incentive to use a particular application instead of competing ones, where there is a risk that *"the effects of such a practice applied to a specific application, are more likely to "undermine the essence of the end-users' rights" or lead to circumstances where "end-users' choice is materially reduced in practice" (Recital 7) than when it is applied to an entire category of applications"*.
- 3.9 The BEREC Guidelines further supplement the Open Internet Regulation by suggesting that NRAs should intervene where agreements lead to a situation where customer choice is materially reduced in practice or where they would result in the undermining of the essence of end-user's rights.
- 3.10 The Guidelines provide NRAs with issues to consider when assessing whether zero-rating offers are compliant with the Open Internet Regulation and whether to intervene if end-user

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<sup>17</sup> For information on Three's Advanced and Essential Plans: see <http://www.three.co.uk/store/compare-phone-plans>

rights are undermined. These considerations have been taken into account by Ofcom when creating its framework for reviewing zero-rating offers. The framework can be found, in full, at Annex 1. A summary is provided below.

## Zero-rating framework applied by Ofcom

- 3.11 When conducting an initial review, Ofcom must first establish who is providing the zero-rating offer<sup>18</sup> and what type of offer it is (for example, an open or closed offer and whether the offer is part of an existing tariff or is available as a paid-for add-on). Ofcom will then use the framework below to determine whether there are reasonable grounds to suspect a contravention of the Open Internet Regulation may have occurred.
- 3.12 The framework is a general guideline and, depending on the circumstances of the case, other factors may be relevant. The net neutrality rules are interlinked and as such, in addition to applying the framework set out below, Ofcom will assess whether other aspects of the offer could constitute a breach of the Open Internet Regulation - for example, traffic management measures or restricting consumers' use of terminal equipment.
- 3.13 Ofcom answers the questions in Steps 1-3 sequentially. If the answer to Step 1 is no, we move to Step 2. If the answer to Step 2 is yes, further assessment is carried out under Step 3.

Step 1. Does the offer have the potential to limit and/or exclude end-users' access to certain content/applications?

Step 2. Does the offer appear to have the ability to influence end-users' exercise of rights?

Step 3. Does the offer or commercial practice potentially create a situation where end-users' choice may be materially reduced (or otherwise adversely affected) in practice?

- 3.14 Using the BEREC Guidelines, Ofcom has devised the following list of questions. These will be used to determine the impact of the offer on end-user rights. The questions, and the context provided below, are not exhaustive and Ofcom may consider a wide range of factors when assessing whether end-users' choice may be materially affected. The answers to the questions below will be considered as a whole. If there is evidence that end-users' choice may be materially reduced, Ofcom will give consideration to opening a formal investigation.

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<sup>18</sup> The Open Internet Regulation applies directly to the relationship between the ISP and the end-user concerning the internet access service being offered.

Q1. What are the relative market positions of the ISPs and content application providers involved?

Q2. To what extent may the end-user be incentivised to use specific applications or services?

Q3. What is the potential scale of the practice and presence of alternatives?

Q4. What is the likely effect of the offer on other specific applications or services?

Q5. To what extent does the service seek to circumvent the goals of the Open Internet Regulation in relation to end-user choice?

## Summary of initial reviews in 2018-19

3.15 In this reporting period Ofcom has become aware of four zero-rating offers which are described below.

### EE BT Sport

3.16 EE customers can take up a free three-month subscription to the BT Sport app. During this three-month period both live streaming and catch up of sports content accessed via the app is zero-rated. Ofcom has been considering the potential impact of EE's BT Sport offer and, in particular, whether this is likely to materially reduce end-user choice or circumvent the Open Internet Regulation.

3.17 The BT Sport offer raises some concerns that could *potentially* affect end-user choice and circumvent the provisions safeguarding open internet access under the Open Internet Regulation. For example, as EE is a BT Group brand, it appears that EE has been effectively zero-rating its own content. This could give BT the ability and incentive to distort competition in the content market by discriminating between its own application and those offered by potential competitors. The data used for live streaming sports fixtures, or streaming video on catch up is also relatively 'data heavy' and so the zero-rating of this data could act as an incentive to use the BT Sport App over other sports CAPs. The offer could therefore reinforce EE's and BT Sport's market positions.

3.18 However, with regard to whether these concerns create a situation where end-users' choice may be *materially* reduced (or otherwise adversely affected) in practice, Ofcom notes that there are a number of mitigating factors. Amongst these is the fact that consumers appear to be relying more on Wi-Fi to access the relevant content, rather than on the zero-rated aspect of the offer, suggesting that zero-rating is not a key driver behind customer take-up. In addition, other trial offers<sup>19</sup> and EE's 'Passes' (see below) allow EE customers to zero-rate data used for accessing other sports CAPs.

3.19 On that basis, whilst Ofcom notes that offers such as the EE's BT Sport offer could, *potentially* affect end-user choice, this specific offer does not currently appear to be *materially* affecting

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<sup>19</sup> <https://tvplayer.com/ee3months>

consumer choice. We therefore do not intend to take further action in relation to the zero-rated aspect of the offer at this stage.

### **EE Music and Video Passes**

- 3.20 EE customers can purchase a monthly “Video Pass” add-on for £8.99 per month. During the month data for the following apps are zero-rated: Netflix, Amazon Prime Vide, BT Sport, MTV Play and TV Player. EE also offers a monthly “Music Pass” add-on for £7.99 per month. During the month data for the following apps are zero-rated: Apple Music, Deezer and Tidal.
- 3.21 EE discussed both its Music and Video Passes with Ofcom before launching. EE explained that both Passes are open platforms and they are working on recruiting new content or application providers for these. Ofcom remains in discussion with EE and we are currently in the process of concluding our initial review.

### **Sky Watch**

- 3.22 Sky Mobile customers who have a Sky TV package can watch Sky TV and use Sky apps without this counting toward their general data allowance. Apps that don’t require a subscription, such as Sky News, are zero-rated for all Sky Mobile customers.
- 3.23 Ofcom is currently reviewing the details of Sky’s offer. Similarly, Sky appears to be zero-rating its own content, which has the potential to affect end-user choice. This will be explored in detail as part of Ofcom’s initial review.

## Traffic Management

### Article 3(3) of the Regulation

Providers of internet access services shall treat all traffic equally, when providing internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.

The first subparagraph shall not prevent providers of internet access services from implementing reasonable traffic management measures. In order to be deemed to be reasonable, such measures shall be transparent, non-discriminatory and proportionate, and shall not be based on commercial considerations but on objectively different technical quality of service requirements of specific categories of traffic. Such measures shall not monitor the specific content and shall not be maintained for longer than necessary.

Providers of internet access services shall not engage in traffic management measures going beyond those set out in the second subparagraph, and in particular shall not block, slow down, alter, restrict, interfere with, degrade or discriminate between specific content, applications or services, or specific categories thereof, except as necessary, and only for as long as necessary, in order to:

- a) comply with Union legislative acts, or national legislation that complies with Union law, to which the provider of internet access services is subject, or with measures that comply with Union law giving effect to such Union legislative acts or national legislation, including with orders by courts or public authorities vested with relevant powers;
- b) preserve the integrity and security of the network, of services provided via that network, and of the terminal equipment of end-users;
- c) prevent impending network congestion and mitigate the effects of exceptional or temporary network congestion, provided that equivalent categories of traffic are treated equally.

### Traffic Management Enforcement Programme

3.24 Last year, Ofcom reported that we had opened an enforcement programme into ISPs' traffic management practices and other potential compliance concerns.<sup>20</sup> The aim was to gather information to assess whether any ISP traffic management measures raise specific concerns under the Open Internet Regulation. Ofcom identified concerns with three operators and took enforcement action as necessary.

3.25 In addition to Article 3(3) regarding traffic management, Ofcom was concerned about restrictions on 'tethering', as discussed above under 'Terminal Equipment'. As a result of

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<sup>20</sup> [https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw\\_01210](https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw_01210)

these and other concerns, the enforcement action Ofcom carried out covered elements of the Open Internet Regulation beyond just Article 3(3), as well as areas where the net neutrality rules overlapped with the Roaming Regulation<sup>21</sup> and Consumer Protection Regulations.<sup>22</sup> A summary of the enforcement action is set out below.

### Three Investigation

- 3.26 As a result of information gathered during Ofcom’s enforcement programme and during the initial review of Three’s ‘GoBinge’ offer (covered in last year’s report), Ofcom became aware of a number of traffic management and other practices which had the potential to breach the Open Internet Regulation as well as the Roaming Regulation. These practices included:
- a) Tethering restrictions: Some Three customers were unable to use their handset to connect another device to the internet (also known as using a handset as a ‘hotspot’).
  - b) Device restrictions: Three was imposing restrictions on which devices its SIMs could be used in (e.g. handset SIMs in mi-fi devices).
  - c) Traffic management whilst roaming: Three were ‘throttling’ or slowing down some categories of traffic (such as video traffic, Peer-to-Peer (P2P) and Virtual Private Network (VPN) traffic) when its customers were roaming.
- 3.27 Ofcom opened a formal investigation on 6 March 2018 and engaged with Three to clarify their obligations under the Regulation. On 31 July 2018, Ofcom received signed assurances from Three that it had, or would by December 2018, take the following action:
- a) withdraw restrictions which slowed down speeds of P2P and VPN traffic for customers when roaming within the EU;
  - b) withdraw restrictions on the use of handset SIMs in dongles and mifis;
  - c) cease to restrict video quality to Standard Definition when its customers are roaming in the EU;
  - d) remove any specific tethering or hotspot allowance for new or upgrading customers, to allow for unrestricted tethering (within the UK or EU);
  - e) remove any requirements for customers to purchase a Data Passport to tether when roaming in the EU;
  - f) allow customers on all Advanced Plans to tether without restriction; and
  - g) allow customers on Essential Plans to tether on their current plan, or to migrate to the nearest equivalent Advanced Plan available at that time.

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<sup>21</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012R0531&from=DE>

<sup>22</sup> “Consumer Protection Regulations” refers to the Consumer Contracts Regulations (<http://www.legislation.gov.uk/ukxi/2013/3134/contents/made>) and the Consumer Protection from Unfair Trading Regulations 2008 (<http://www.legislation.gov.uk/ukxi/2008/1277/contents/made>).

3.28 As a result of securing these assurances from Three, Ofcom closed its investigation on 1 August 2018.<sup>23</sup>

### **Vodafone investigation**

3.29 As a result of information gathered during Ofcom's enforcement programme and during the initial review of Vodafone's Passes and VOXI offers (covered in last year's report), Ofcom became aware of traffic management practices which had the potential to breach the Open Internet Regulation as well as transparency concerns related to the Consumer Protection Regulation.

- a) Vodafone was restricting the bandwidth of video traffic to customers using its Video Pass.<sup>24</sup> The restriction to 900kb/s meant customers were only able to watch content in 720p (Standard Definition).
- b) Vodafone Passes provided zero-rated access to certain applications, though some features of those applications would still count toward the customer's general-purpose data allowance. Ofcom was concerned that these exceptions were not transparent.

3.30 Ofcom opened a formal investigation on 6 March 2018 and engaged with Vodafone about their obligations. In order to address the transparency concerns, Vodafone agreed that it would maintain at all times accurate information about the zero-rating exceptions and would send a text message with a link to this information to subscribers when they activated their Pass.

3.31 Ofcom's concerns about Vodafone's traffic management measures were primarily that they did not appear to be based on objectively different quality of service requirements and that they were in place permanently. As per the Traffic Management Flowchart at Annex 2, Ofcom did not consider that the measures could be considered 'reasonable' traffic management measures within the meaning of the Regulation.

3.32 Vodafone subsequently provided Ofcom with written assurances that they had ceased restricting video to Standard Definition for their Passes customers. As a result, Ofcom closed its investigation on 1 August 2018.<sup>25</sup>

### **O2 assessment**

3.33 As a result of information gathered during the enforcement programme, Ofcom began an initial assessment of O2's traffic management practices. In particular we were concerned about:

- a) O2's use of 'rate control' for streamed video content which was compressed to 1 Mbps at all times;

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<sup>23</sup> [https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw\\_01218](https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw_01218)

<sup>24</sup> Customers using a Combo Pass were subject to the same restrictions for video.

<sup>25</sup> [https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw\\_01219](https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw_01219)

- b) O2's use of various compression techniques which were applied at all times to web content and images; and
- c) O2's use of the 'Vasona' platform in the London area to prioritise video and social media traffic over 'background' (or non-time critical) traffic during times of temporary network congestion.

3.34 In relation to these traffic management measures, Ofcom was concerned that O2 had not explained sufficiently how it had satisfied the criteria for 'reasonable' traffic management under Article 3(3), second sub-paragraph. In particular, it was unclear how the measures were justified by reference to objectively different technical quality of service requirements of specific categories of traffic. Ofcom also noted that the first two traffic management practices appeared to be applied constantly. With respect to the use of the Vasona platform in London, it was not clear to Ofcom how frequently that technique was used or, when the system was triggered, the average duration for which it applied in each incidence.

3.35 On 28 January 2019, O2 provided Ofcom with written assurances that it had ceased the use of its Vasona platform in the London area. On 30 April 2019 O2 confirmed that it had ceased the use of 'rate control' and the various compression techniques. Ofcom was therefore satisfied no further action was required.<sup>26</sup>

### **Closure of the programme and publication of the Traffic Management Framework**

3.36 Ofcom decided that it was appropriate to close its formal enforcement programme into the traffic management practices of ISPs, having gained an understanding of traffic management measures applied by ISPs and taken enforcement action where necessary. We will, however, continue to monitor compliance by providers with the Open Internet Regulation and, where necessary, investigate any concerns that arise.

3.37 In the meantime, Ofcom encourages ISPs and CAPs to self-assess proactively their compliance with the net neutrality rules and discuss any queries they may have with Ofcom.

3.38 On 16 May 2019, Ofcom published a [frameworks publication](#) which sets out our approach to assessing compliance with aspects of the Open Internet Regulation, including a Traffic Management Framework, which can be found at Annex 2. We believe that the enforcement action summarised above, along with the Traffic Management Framework, should assist ISPs in self-assessing any current or future traffic management measures that they may be considering.

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<sup>26</sup> Further information in relation to this investigation can be found on our website: [https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw\\_01210](https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw_01210) and [https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw\\_01236](https://www.ofcom.org.uk/about-ofcom/latest/bulletins/competition-bulletins/all-closed-cases/cw_01236).

## Specialised services

### Article 3(5) of the Regulation

Providers of electronic communications to the public, including providers of internet access services, and providers of content, applications and services shall be free to offer services other than internet access services which are optimised for specific content, applications or services, or a combination thereof, where the optimisation is necessary in order to meet requirements of the content, applications or services for a specific level of quality. Providers of electronic communications to the public, including providers of internet access services, may offer or facilitate such services only if the network capacity is sufficient to provide them in addition to any internet access services provided. Such services shall not be usable or offered as a replacement for internet access services, and shall not be to the detriment of the availability or general quality of internet access services for end-users.

- 3.39 In the last year Ofcom has met with a number of mobile operators to discuss practical applications of specialised services and how the Open Internet Regulation may be applied in the future. Of particular interest to Ofcom is how the introduction of 5G and ‘network slicing’ by operators could impact the application of the existing net neutrality rules. It is worth noting that, on the basis of these discussions and our own analysis, we have not been able to identify a case study or a situation where these rules would present a realistic challenge to the introduction of new 5G services. Ofcom will continue to engage with stakeholders about these issues and to contribute to the debate within BEREC in relation to specialised services.

## 4. Transparency measures

### Article 4(1) of the Regulation

Providers of internet access services shall ensure that any contract which includes internet access services specifies at least the following:

- a) information on how traffic management measures applied by that provider could impact on the quality of the internet access services, on the privacy of end-users and on the protection of their personal data;
- b) a clear and comprehensible explanation as to how any volume limitation, speed and other quality of service parameters may in practice have an impact on internet access services, and in particular on the use of content, applications and services;
- c) a clear and comprehensible explanation of how any services referred to in Article 3(5) to which the end-user subscribes might in practice have an impact on the internet access services provided to that end-user;
- d) a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks, or of the estimated maximum and advertised download and upload speed of the internet access services in the case of mobile networks, and how significant deviations from the respective advertised download and upload speeds could impact the exercise of the end-users' rights laid down in Article 3(1);
- e) a clear and comprehensible explanation of the remedies available to the consumer in accordance with national law in the event of any continuous or regularly recurring discrepancy between the actual performance of the internet access service regarding speed or other quality of service parameters and the performance indicated in accordance with points (a) to (d). [...]

- 4.1 Article 4(1) of the Regulation sets out the transparency measures ISPs are required to adhere to in relation to information contained in customer contracts.
- 4.2 For ISPs to be compliant with the Regulation, information contained in customer contracts should be accessible, clear and comprehensible. BEREC guidelines set out the test for assessing whether information meets this standard as follows:
  - it should be easily accessible and identifiable for what it is;
  - it should be accurate and up to date;
  - it should be meaningful to end-users, i.e. relevant, unambiguous and presented in a useful manner;
  - it should not create an incorrect perception of the service provided to the end-user;
  - it should be comparable at least between different offers, but preferably also between different ISPs, so that end-users are able to compare the offers (including the contractual terms used by different ISPs) and ISPs in such a way that the comparison can show differences and similarities.

- 4.3 To fulfil our responsibilities to monitor and ensure compliance in this area in 2018, our primary activities were to review:
- ISP publicly available information from ISP websites, including most especially their contracts and terms and conditions;
  - responses to the information requests we had issued during the 2016/17 reporting period; and
  - consumer complaints.
- 4.4 As noted in last year’s report, during the 2017/18 reporting period, we completed our analysis relating to transparency obligations following information requests sent by us to the eight largest fixed and mobile ISPs. Although we did not open any formal investigations, through our engagement with ISPs we secured key changes to ISP consumer contracts to enhance transparency around traffic management and how ISP practices may impact on privacy and protection of personal data, as well as changes to improve transparency of the remedies available to consumers if they experience performance issues with their IAS. We have not performed any further analysis during 2018/19, although continue with our usual market monitoring.
- 4.5 Ofcom’s revised voluntary ‘Broadband Speed Codes of Practice’ came into force on 1 March 2019.<sup>27</sup> The revised voluntary Codes are consistent with the mandatory requirements set out in the Regulation. They include provisions stating that contracts should include “a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks”. There are two separate revised codes for residential and business customers. The main changes to the Codes were to:
- improve relevancy of speed estimates at point of sale by reflecting peak time speeds;
  - provide a minimum guaranteed download speed at the point of sale;
  - strengthening customers’ right to exit; and
  - ensure customers benefit from the code regardless of their broadband technology.
- 4.7 Under the Regulation, advertised speeds must be included in contracts. In the UK, the Committee of Advertising Practice (CAP) is the body responsible for advertising guidelines for broadband speeds. On 23 May 2018, new CAP guidelines on the advertising of broadband speeds were introduced. These require that any speeds used in broadband advertising should reflect actual package performance and should be based on the download speed available to at least 50% of customers at peak times. Previous guidelines required that the advertised speed should be the maximum speed available to at least 10% of customers on a package, meaning that, potentially, up to 90% of customers might never be able to receive it<sup>28</sup>.

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<sup>27</sup> Ofcom [Voluntary Codes of Practice](#), March 2019

<sup>28</sup> CAP, 2017. Major change to broadband speeds claims in ads <https://www.asa.org.uk/news/major-change-to-broadband-speed-claims-in-ads.html>, accessed May 2019

## 5. Complaints and remedies

- 5.1 In addition to setting out transparency requirements, Article 4 of the Regulation also requires ISPs to have procedures to manage complaints about consumers' core rights under the Regulation, and addresses consumers remedies.
- 5.2 Article 4(2) requires ISPs to have transparent, simple, and effective processes to address customer complaints about their core rights under the Regulation.

### **Article 4(2) of the Regulation**

1. Providers of internet access services shall ensure that any contract which includes internet access services specifies at least the following:

a) information on how traffic management measures applied by that provider could impact on the quality of the internet access services, on the privacy of end-users and on the protection of their personal data;

b) a clear and comprehensible explanation as to how any volume limitation, speed and other quality of service parameters may in practice have an impact on internet access services, and in particular on the use of content, applications and services;

c) a clear and comprehensible explanation of how any services referred to in Article 3(5) to which the end-user subscribes might in practice have an impact on the internet access services provided to that end-user;

d) a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks, or of the estimated maximum and advertised download and upload speed of the internet access services in the case of mobile networks, and how significant deviations from the respective advertised download and upload speeds could impact the exercise of the end-users' rights laid down in Article 3(1);

e) a clear and comprehensible explanation of the remedies available to the consumer in accordance with national law in the event of any continuous or regularly recurring discrepancy between the actual performance of the internet access service regarding speed or other quality of service parameters and the performance indicated in accordance with points (a) to (d). [...]

- 5.3 In our last report, we detailed conclusions from Ofcom's review of its General Conditions of Entitlement ('GCEs'). This included a strengthening of requirements for complaints handling by ISPs. These changes came into effect during on 1 October 2018. ISPs are now required to inform customers how their complaint will be handled, how long it will take, and that they have the right to use ADR if their complaint concludes without a resolution.

## Remedies and Redress

### Article 4(4) of the Regulation

Any significant discrepancy, continuous or regularly recurring, between the actual performance of the internet access service regarding speed or other quality of service parameters and the performance indicated by the provider of internet access services in accordance with points (a) to (d) of paragraph 1 shall, where the relevant facts are established by a monitoring mechanism certified by the national regulatory authority, be deemed to constitute non-conformity of performance for the purposes of triggering the remedies available to the consumer in accordance with national law.

- 5.4 Article 4(4) gives end-users the right to invoke remedies through national law (e.g. consumer or contract law) if there are continuous or regular discrepancies between ISPs' performance relating to speed or other quality of service measures, and a certified monitoring mechanism established by the NRA.
- 5.5 In addition, in the UK consumers have access to additional specific remedies in cases of poor or non-performance by their ISP. Under the revised voluntary Codes of Practice for broadband speeds for fixed services, customers will receive a minimum guaranteed speed at the point of sale. If speeds fall below the minimum guaranteed level for a sustained period of time, the customer has the right to exit the contract without penalty. ISPs are required to make information about the right to exit in after-sale information more prominent and to link it more clearly to the minimum guaranteed speed so that customers understand what triggers this process.
- 5.6 In November 2017 we published a statement on 'Automatic Compensation'<sup>29</sup>, which set out our position on the need for automatic compensation to protect residential landline and/or fixed broadband consumers who are affected by service quality issues. A voluntary industry scheme was launched on 1 April 2019 covering delayed installations, delayed repair following loss or service and missed appointments. We are monitoring the scheme and will carry out a review next year.

### Checker tool

- 5.7 The Regulation refers to the possibility of NRAs certifying speed and quality of service monitoring mechanisms for IAS. We have not yet certified any quality of service monitoring mechanism but are closely supporting development of the tool being developed by BERE.

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<sup>29</sup> Ofcom [Automatic Compensation](#) Scheme

# A1. Zero Rating Framework

## **Step 1: Does the offer have the potential to limit and/or exclude end-users' access to certain content/applications?**

- A1.1 Any limiting by ISPs of their customer's access to applications outside of the zero-rating offer has the potential to constitute a breach of Article 3(1). In addition, the BEREC Guidelines make clear that a zero-rating offer where all applications are blocked (or slowed down) once the data cap is reached except for the zero-rated application(s) would infringe Article 3(3).
- A1.2 If we find that an offer appears to limit or exclude end-user's access to content or applications, Ofcom would consider opening a formal investigation. If no such exclusions appear to be present, we would move to Step 2.

## **Step 2. Does the offer appear to have the ability to influence end-users' exercise of rights?**

- A1.3 Offers which treat applications, or categories of applications, differently can lead to situations where end-users' choice may be materially reduced. This is because zero-rating offers create an economic incentive to use one application or categories of applications.
- A1.4 Zero-rating offers which are not class-based (i.e. only one or two applications from a particular category are included) are more likely to "undermine the essence of the end-users' rights" or lead to circumstances where "end-users' choice is materially reduced in practice" than when the offer is applied to an entire category of applications.<sup>30</sup> Closed offers have the potential to increase this effect further.
- A1.5 If we find that an offer has the potential to limit end-user choice and therefore the potential to contravene the Open Internet Regulation, further assessment is carried out under Step 3.

## **Step 3. Does the offer or commercial practice potentially create a situation where end-users' choice may be materially reduced (or otherwise adversely affected) in practice?**

- A1.6 Using the BEREC Guidelines, Ofcom has devised the following list of questions. These will be used to determine the impact of the offer on end-user rights. The questions, and the context provided below, are not exhaustive and Ofcom may consider a wide range of factors when assessing whether end-users' choice may be materially affected. The answers to the questions below will be considered as a whole. If there is evidence that end-users' choice may be materially reduced, Ofcom will consider opening a formal investigation.

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<sup>30</sup> BEREC Guidelines, paragraph 42.

## **Q1. What are the relative market positions of the ISPs and content application providers involved?**

A1.7 Understanding the market position of the ISP is important to determine how many potential customers could be impacted by any reduction of end-user choice. The Open Internet Regulation includes CAPs as end-users and so it is important to consider how content providers whose content is not zero-rated as part of the offer may be adversely affected. For example, competition concerns may arise if only dominant providers of content or applications are included in zero-rated offers at the expense of new entrants to the market.

## **Q2. To what extent may the end-user be incentivised to use specific applications or services?**

A1.8 One area Ofcom may review under this question is the general-purpose data allowance of the tariffs on which the zero-rating offer is available. If the zero-rating offer includes applications which are considered 'data-heavy' (such as video streaming) then a lower general-purpose data allowance means the offer has a greater potential for influencing the end-users' choice of which application to use.

A1.9 Ofcom may also review the length of the offer; on how many tariffs the offer is provided; whether there is a price difference between tariffs with and without zero-rating; and whether there are other factors such as free subscriptions to premium services being offered alongside the zero-rating. If such information is available, Ofcom may consider the volume of zero-rated data traffic compared to the data traffic generated within the data cap.

## **Q3. What is the potential scale of the practice and presence of alternatives?**

A1.10 The potential scale of the practice is assessed by looking at the number of customers the offer is available to, as well as reviewing the popularity and usage of the applications included in the offer. Ofcom may request information from the ISP regarding the number of subscribers to the offer and, if available, any usage statistics. This is to help gauge the materiality of any potential impact on end-user choice.

A1.11 Ofcom will review the alternative zero-rating offers available at the time. We will investigate whether the content or applications zero-rated in the offer are zero-rated elsewhere. Where the content is not available to customers of other ISPs, or is available on significantly worse terms, concerns about exploiting the control of content to distort competition between ISPs may arise.<sup>31</sup>

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<sup>31</sup> <http://ec.europa.eu/competition/publications/reports/kd0217687enn.pdf> page 130

#### **Q4. What is the likely effect of the offer on other specific applications or services?**

- A1.12 Ofcom considers the effect of the offer on the market for that particular service, including whether competitors to the CAPs included in the offer (particularly smaller providers and start-ups) may be discouraged from entering the market as a result. This will include an assessment of the conditions for entry into the market and the barriers involved in joining the offer.
- A1.13 Under this question, exclusive offers may come under more detailed examination as Ofcom assesses potential adverse effects on competition. This is particularly the case if an offer involves content owned or controlled by the ISP. Vertical integration combined with zero-rating of an integrated ISP/CAP's own content might lead to the potential for greater concerns. The stronger the market position of the vertically integrated ISP and the more attractive the product or content (as determined by question 2 above), the greater the likelihood of concerns arising.

#### **Q5. To what extent does the service seek to circumvent the goals of the Open Internet Regulation in relation to end-user choice?**

- A1.14 This question considers whether, in the round, the offer undermines the goals of the Regulation to *"safeguard equal and non-discriminatory treatment of traffic"* (Article 1) and to *"guarantee the continued functioning of the internet ecosystem as an engine of innovation"* (Recital 1). Ofcom also considers Recital 7, which directs intervention against agreements or commercial practices which, *"by reason of their scale, lead to situations where end-users' choice is materially reduced in practice", or which would result in "the undermining of the essence of the end-users' rights"*.

## A2. Traffic Management Framework

A2.1 Before Ofcom opens an investigation, it assesses the relevant facts to determine whether there are reasonable grounds to suspect that a contravention of the Open Internet Regulation may have occurred. We do this by reference to the framework set out in Diagram 1 below.

Diagram 1 – Traffic Management Flowchart

