BEREC
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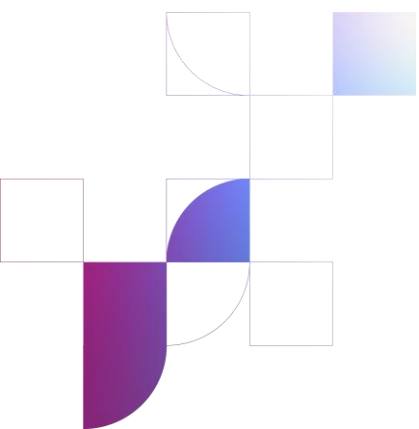
# BEREC Report on the implementation of the Open Internet Regulation



3 October 2024

# Contents

# Executive Summary

This report gives an overview of the activities of the NRAs[1] in the course of implementing the Open Internet Regulation (OIR) (Regulation (EU) 2015/2120)[2] and associated BEREC Open Internet Guidelines[3]. This report reflects the eighth year of the application of the OIR, covering the period from 1 May 2023 to 30 April 2024. BEREC has gathered information from 29 NRAs via an internal questionnaire. Descriptions of publicly known open internet cases or investigations that arose throughout the 12-month reporting period have been added to this information. However, this report does not constitute an exhaustive description of the current actions in the field of open internet, which are described in further details in the NRAs' annual reports on implementing the OIR.

The information in this report is organised according to the provisions of the OIR. For the preparation of this year's iteration, the internal questionnaire was revised with the aim of reducing the number of questions (27 instead of 31) and to further clarify some of the questions. The report has been restructured and adjusted accordingly.

Overall, monitoring and enforcement activities carried out by the NRAs over the last eight years have led to a consistent and harmonised application of the OIR, guaranteeing the freedom to innovate and protecting the end-users' rights.

NRAs take the following recurring actions, concerning **Article 3** of the OIR relating to end-users' rights to open internet access:

- information requests to ISPs,
- the analysis of complaints or end-user reports,
- market surveys which do not involve requesting information from ISPs (e.g., checking ISPs' offers on their web pages).

These three actions continue to be used on an equal basis by most NRAs. Moreover, the majority of NRAs indicated that they combined all three of the above sources of information to monitor the commercial and technical conditions related to the provision of internet access services (IAS).

[1] NRA is used in this report as reference to the National Regulatory Authority in the meaning of Article 5(1) of Regulation (EU) 2015/2120 as they have been designated by the national legislator. These do not fully correspond to the NRAs that are BEREC members and observers.

[2] This report refers as "the OIR" to the open internet rules contained in Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.

[3] The 2016 BEREC Guidelines on Net Neutrality were applicable until 11 June 2020 when they were replaced by the 2020 BEREC Guidelines on Open Internet published on 11 June 2020 which were updated and published on 09 June 2022 (BoR (22) 81). This report refers to "BEREC OI Guidelines".

Regarding traffic management practices, all but two NRAs monitored these practices in one way or another, with information requests from ISPs (22) and analysis of end-user complaints (20) being the most common mentioned. Market surveys without requesting information from ISPs (15) follow in third place.

Concerning **Article 4** of the OIR on monitoring ISPs' compliance with transparency and contractual terms, most NRAs applied multiple approaches and often more than two. The top three activities used by NRAs to assess the ISPs' compliance with Article 4 were market surveys without requesting information from ISPs (22), analysis of end-user reports and complaints (21) and formal and informal requests for information from the ISPs (21). Also in the reporting period, 19 NRAs did a review of contracts and they generally found that ISPs provide a definition of speeds in their contracts. Moreover, four NRAs reported that ISPs offered new contracts for hybrid services[4] in their countries, while there are also situations where no new services can be purchased but still some remaining contracts are on the market. A great majority of NRAs (25 out of 29) monitor end-user complaints regarding the performance of the IAS, while two thirds of the NRAs (20 out of 29) offer an IAS quality monitoring mechanism to consumers.

Concerning **Article 5** of the OIR on supervision and enforcement, the answers to the questionnaire indicated that most NRAs (22 out of 29) are monitoring the availability of high-speed IAS, with the most popular approaches being either through analysis of complaints and end-user reporting (15) or through information requests from ISPs (13). Technical network monitoring (9) follows in third place.

Finally, while the body of the Implementation Report reflects the actions of the last 12 months (thus the most recent reporting period), Annex I describes the relevant national rules, regulations and specifications in force, internet access quality monitoring tools provided and OIR-related court proceedings.

# 1. Article 3(1) to (3) – End-users' rights, agreements, traffic management

**Question 1.a.** Is there any change compared to the previous reporting period regarding to the **approach** you have taken **to monitor the commercial and technical conditions** related to the provision of internet access services (IAS)?

If *yes*, please provide details.

[4] Hybrid internet access services use a combination of technologies.

**Question 1.b.** Please specify what **approach** you have taken **to monitor the commercial and technical conditions** related to the provision of internet access services (IAS), in the reporting period:

i. market survey without requesting information from ISPs (e.g., checking the relevant information on the ISP's web pages, such as the general terms and conditions);
ii. information request from ISPs;
iii. analysis of complaints and end-user reporting;
iv. technical network monitoring;
v. other, please specify.

Regarding the approach taken by NRAs to monitor the commercial and technical conditions of IAS provisions, most of the responding NRAs (26) stated that there is no change compared to the previous reporting period. However, three NRAs reported changes, in particular, the introduction of inspection actions instead of information requests from ISPs (PT), the conclusion of supervision of remaining zero-rating offers (SE) and the collection of data on the transition from IPv4 to IPv6 (LU).

In order to monitor the commercial and technical conditions of IAS provisions, there are three main approaches adopted, from which at least one is applied by all NRAs: market survey without requesting information from ISPs, information request from ISPs and analysis of complaints and end-user reporting. Further details are shown in the figure below.


**Figure 1. Approaches to monitor the commercial and technical conditions**

In addition, six NRAs (AT, DE, EL, FR, HR, PT) also applied other approaches to monitor such commercial and technical conditions, as described in the following table:

| NRA | Other approaches |
|---|---|
| **AT** | ISPs are obliged under the Austrian Telecommunications Act to notify their terms and conditions (T&Cs) to RTR at the start of a new communication service. Changes of T&Cs have to be notified as well. This is an on-going measure. Within this framework, the transparency obligations of the OIR are also checked and this enables RTR to monitor the commercial and technical conditions related to the provision of the IAS as well. |
| **DE** | Reacting to media reports on net neutrality. |
| **EL** | Inspections at points of sale were undertaken. |
| **FR** | End-users can report issues on the online alert platform "J'alerte l'Arcep"[5] and they can use the latest version of the traffic management application "Wehe"[6] to help them detect potential traffic differentiations or port blockings implemented by their ISP. |
| **HR** | An end-user survey and on-site audits at points of sale were undertaken. |
| **PT** | Inspection actions were undertaken. |

**Table 1. Other approaches used to monitor commercial and technical conditions**

**Question 2.** Pursuant to article 3(1), have you completed any **formal assessment** of **ISP restrictions on the use of technically compliant terminal equipment**, in the reporting period?

If *yes*, briefly describe the practice and the conclusions of the assessment (and enforcement action taken where applicable).

In the reporting period, five NRAs (BG, CY, CZ, IT, SK) conducted formal assessments of ISP restrictions on the use of technically compliant terminal equipment, as described in the table below.

| NRA | Formal assessment of ISP restrictions |
|---|---|
| **BG** | CRC collects information on ISP restrictions on the use of technically compliant terminal equipment through an annual questionnaire. The outcome is that no restrictions are applied by ISPs regarding the use of technically compliant terminal equipment. |

[5] Available at https://jalerte.arcep.fr/
[6] Available at https://itunes.apple.com/fr/app/wehe/id1309242023 and https://play.google.com/store/apps/details?id=mobi.meddle.wehe&hl=fr

| | |
|---|---|
| **CY** | According to the provisions of the OIR (as interpreted in the BEREC OI Guidelines) as adopted in national secondary legislation (Decree 72/2017[7]), ISPs are required to report restrictions on the use of technically compliant terminal equipment. Following the collection of ISPs' reports, OCECPR's main findings were that most of ISPs offer their services accompanied with their own terminal equipment to be able to provide support and bundled services (telephony, internet, TV), or to avoid any modification that affects the speed provided.<br>Based on ISPs' explanation, the provision of obligatory equipment by the ISPs is justified and compliant with the provisions of the OIR and the Decree. |
| **CZ** | CTU continued its regular monitoring to ensure that end-users' rights to use terminal equipment of their choice within the meaning of Article 3(1) of the OIR. This was done through regular inspections of contractual T&Cs, targeted requests for information (RFI) and monitoring the nature of complaints. There were two cases recorded of suspected restrictions on the free choice of terminal equipment. In one case, the inspection revealed that there was a restriction on the choice and use of terminal equipment. The ISP was fined accordingly. |
| **IT** | In the reporting period, AGCOM conducted targeted supervisory activities, based on reports received from end-users, about the technical characteristics of the optical network terminal (ONT) devices provided to users of FTTH offers using their own modem. The objective of these activities is to identify the presence of any limitations imposed by these ISPs on the characteristics of internet access. Furthermore, following Decision n. 11/23/CIR, regarding the technical and commercial conditions for the provision of ONT devices for FTTH wholesale services offered by the incumbent TIM, AGCOM has initiated a technical working group with operators in order to update the related processes. |
| **SK** | ISPs offer their terminals for rent or sale, with the possibility of using end-users' own terminals based on ISP recommendations to ensure compatibility with the IAS provided. Set-top boxes for IPTV are usually part of the TV service provided. |

**Table 2. Information on formal assessments of ISP restrictions on the use of technically compliant terminal equipment**

**Question 3.** Has the **location of the Network Termination Point (NTP)** been formally determined in your country or has there been a legislative process to impose the access of free modems?

If *yes*, please provide details (e.g., when has the location of the NTP been determined or the access of free modems been imposed? Were BEREC's NTP Guidelines taken into consideration (both in case of determination of the location of the NTP or legislative

[7] Available at https://ocecpr.ee.cy/sites/default/files/ec_decree_networkneutrality_gr_kdp-72-2017_03-03-2017_ac.pdf

process)? Is it location A, B or C (if necessary, depending on the type of network)? Links to relevant documents).

If *no*, please provide information if there are discussions or plans to specify the location of the NTP in your country and the reasons for this.

In 10 Member States (BE, CY, DE, DK, EL, FI, HR, LI, NL, SI), NRAs conducted formal assessments of the location of the Network Termination Point (NTP), as described in the table below.

| NRA | Formal assessments |
|---|---|
| **BE** | In September 2023, BIPT decided formally that NTPs on copper, coax and fiber networks are located on point A for IAS. As a consequence, from 1 November 2024 on, customers will be able to buy and use their own modem. BIPT's decision[8] is based on the BEREC NTP Guidelines[9]. Television and telephony services were excluded from the decision. |
| **CY** | The NTP has been determined before 1st May 2022. According to Law 24(I)/2022, network termination point means the physical point at which an end-user is provided with access to a public electronic communications network, and which, in the case of networks involving switching or routing, is identified by means of a specific network address, which may be linked to an end-user's number or name. It is located in point A for all technologies. |
| **DE** | The NTP has been determined before 1st May 2022 and can be read in Article 73 Paragraph 1 of the Telecommunication Act[10] (TKG). NTP location is A for fixed line networks. For mobile networks, it is the air interface. These stipulations carry over legal provisions dating from 2016 which in effect already took into account criteria now contained in the BEREC NTP Guidelines. Article 73 Paragraph 2 TKG states that the BNetzA may grant exceptions from these provisions for specific network topologies or technologies, but not individual networks. In this case, the NRA must take account of the BEREC NTP Guidelines. Currently, proceedings are ongoing with regard to the NTP of FTTH GPON networks. |
| **DK** | The NTP was already determined in 2000 at point A for all technologies (Danish Act n. 418 on competition and end-users' rights at the telecom market from 31 May 2000)[11]. |

[8] Available at: https://www.bipt.be/consumers/publication/decision-of-26-september-2023-regarding-the-identification-of-the-network-termination-point-for-broadband-services-and-tv-services

[9] BEREC Guidelines on Common Approaches to the Identification of the Network Termination Point in different Network Topologies (BoR (20) 46) (hereinafter referred to "BEREC NTP Guidelines"):

[10] Available at https://www.gesetze-im-internet.de/tkg_2021/__73.html

[11] See the Danish Act n. 418, section 3, subsection 3: https://www.retsinformation.dk/eli/lta/2000/418

| | |
|---|---|
| | The current legislation, Consolidated Act N. 955 of 17 June 2022 on Electronic Communications Networks and Services[12], also refers to this definition. |
| **EL** | EETT issued a new Regulation[13] for the NTP (published in Gov. Gazzette 7271/B/31-12-2022, entered in force on 1st October 2023) which defines the NTP location for the fixed service at point A according to the BEREC NTP Guidelines with the exception of FTTH networks where the NTP is defined after the ONT. In cases where the ISP provides terminal equipment with built-in ONT, and in order to ensure the end-user's right of free choice of the router, the end-user may request the provision and installation of discrete ONT equipment. |
| **FI** | The NTP was defined in the Regulation 65 A/2014 M, that came into force on 17 December 2014. That Regulation has since been replaced by newer versions and currently the NTP is located at point A for all technologies (as defined in Chapter 2, Section 4 of the Regulation 65 E/2022[14]). |
| **HR** | HAKOM has defined the NTP at point A for all network topologies, excluding FTTH for which it was defined at point B starting from 1st January 2024. The BEREC NTP Guidelines were taken into consideration. (Article 30 of the Ordinance on manner and conditions for the provision of electronic communications networks and services[15]) |
| **LI** | The NTP is located at point A for all technologies (Article 3 paragraph 1 Nr. 21 Law on electronic communication of 17 March 2006[16]). |
| **NL** | The NTP is located at point A for every technology. The BEREC NTP Guidelines have been taking into account. ACM has issued guidelines in 2021[17]. |
| **SI** | The NRA issued a decision[18] on 10 May 2023, specifying that the NTP is located at point B according to the BEREC NTP Guidelines. |

**Table 3. Information on formal assessments of location of the NTP**

Of the remaining NRAs that indicated that they did not take a formal decision, four NRAs (AT, EE, IT, LT) did investigate the possibility to formally specify the location of the NTP but decided not to do so as the current situation seems to satisfy the customers. Further information is provided in the table below.

[12] See the Consolidated Act N. 955 of 17 June 2022 on Electronic Communications Networks and Services, Section 2 (8): https://eng.sdfi.dk/Media/638022868804652495/Act%20on%20Electronic%20Communications%20Networks%20and%20Services_oct2022.pdf
[13] Available at https://www.eett.gr/anakinosis/kanonismos-gia-to-simeioy-termatismoy-diktyoy-statheris-ypiresias/.
[14] Available at https://www.finlex.fi/data/normit/48858/M_65_E2022_M_EN.pdf
[15] Available at https://narodne-novine.nn.hr/clanci/sluzbeni/2023_07_86_1346.html
[16] Available at https://www.gesetze.li/konso/2006091000?search_text=komg
[17] Available at https://www.acm.nl/nl/publicaties/acm-publiceert-de-beleidsregel-handhaving-besluit-eindapparaten
[18] Available at https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2023-01-1696/splosni-akt-o-lokacijah-omreznih-prikljucnih-tock

| NRA | No formal decision taken |
|---|---|
| **AT** | There has been an evaluation regarding the determination of the NTP in 2023. Currently, the NTP is either in the wall of the end-users or the router provided by the ISP. Due to Article 3(1) of the OIR, end-users have the right to use their own router and this is why, they can use the bridge modus of the router provided by the ISP, thereby it only has a modem function. WLAN, Firewall etc. are deactivated and end-users can plug in their own router. During the evaluation, RTR discussed the question of the NTP definition with ISPs and other stakeholders. RTR also analysed national end-user complaints and requests as well as international practice. The ISPs stated that there are only a few people who want to use their own router and there are only a few complaints about this issue. Nevertheless, transparency regarding this issue is key and some ISPs have improved the information on their websites. RTR is monitoring the situation, in case the interest in having a router different from the one that an ISP is offering increases, a re-evaluation can take place. |
| **EE** | There are no discussions or plans to specify the location of the NTP. The end point is specified in the communications services contract. In general, end-users are free to choose modems and routers as long as they are compatible with the ISP's network. |
| **IT** | For fixed networks, AGCOM has not explicitly defined the NTP. However, the decision n. 348/18/CONS is imposing that the end-users have the right to freely choose every equipment used for internet connection that is installed in their premises and that needs electrical power, including the broadband router. This decision prohibits the ISPs to enter into agreements with end-users or to adopt commercial practices that restrict that right. For technical reasons, the ONT/SFP for FTTH and the modem in case of fixed wireless access (FWA) connections are still subject to exemptions and can be provided by the network operators. |
| **LT** | There was no need to formally define the NTP, but generally it is considered at point A according to the BEREC NTP Guidelines. |

**Table 4. Information on NRAs' approaches to define the NTP**

Finally, 13 NRAs (BG, CZ, ES, FR, HU, LU, MT, NO, PL, PT, RO, SE, SK) did not indicate that there are plans to formally determine the location of the NTP.

**Question 4.a.** Are there still any types of **zero-rating services** available in your country on 30.04.2024?

If *yes*, please provide details. (e.g., What types of zero-rating are? Does any ISP still offer to conclude new contracts with zero-rating based on article 3(2)? Are there any plans to stop selling/marketing and/or to terminate existing contracts? If yes, until when?)

**Question 4.b.** Is there any change compared to the previous reporting period?

If *yes*, please provide details. (e.g., offers voluntarily stopped by ISPs or as imposed by the NRA, type of services added to or removed from the offers)

**Question 4.c.** Are any of the before-mentioned zero-rating services based on article 3(2)?

If *yes*, please provide details.

**Question 4.d.** Are any of the before-mentioned zero-rating services based on the exemptions from article 3(3)?

If *yes*, please provide details.

Eight NRAs (BE, EL, FR, HU, IT, PL, PT, RO) reported that at the end of the current reporting period there were still some types of zero-rating services available in the respective national markets (see details in Table 5 below), while some NRAs ordered their ISPs to remove such offers from the national market.

| NRA | Details on zero-rating services |
|---|---|
| **BE** | Emergency communications and public warning systems, volume and/or time consumption monitoring. |
| **EL** | New contracts with zero-rating offers are banned by the NRA according to its new open internet regulation (entry into force on 26 February 2024) after 26 April 2024. As of 30 April 2024, still active zero-rating services include: tele-education sites of the Ministry of Education, account balance information and data renewal pages, speed metering applications, MMS traffic, DNS traffic inside operators' network and one internet application for voluntary contribution of customers' computing resources. |
| **FR** | Discussions are ongoing between Arcep and an ISP concerning the offer of a zero-rated live TV streaming service for mobile. |
| **HU** | The NRA has information that certain ISPs may use preferential treatment regarding the access to online self-service customer service portals and/or specific speed test applications. However, no formal assessment of this has been performed yet. |
| **IT** | No zero-rating offers are present on the market. Some ISPs apply zero-rating on the data traffic of customer care apps. These apps will be subject to the new regulation on customer care services, which had not yet been issued by the end of the reporting period. |
| **PL** | Zero-rating is used for some services i.e. self-services website and applications, banking services. Nevertheless, the President of UKE has taken action to order operators to eliminate zero rating offers from the market. |
| **PT** | ANACOM approved on 1st March 2023 the final decision on zero-rating and similar offers in Portugal[19]. According to this decision: |

[19] Available at https://www.anacom.pt/render.jsp?contentId=1742492

| | |
|---|---|
| | a) ISPs had to cease zero-rating and similar offers not compliant with Article 3(3) of the OIR, for new contracts by 31st March 2023;<br>b) existing contracts with zero-rating offers had to be phased out by 14 July 2023, unless end-users with ongoing loyalty periods chose to maintain their offers until the end of the loyalty period.<br>As the process of migration is ongoing on 30 April 2024, zero-rating and similar offers may still exist for contracts currently in execution but there is no evidence that zero-rating and similar offers are available for new subscriptions. |
| **RO** | There are contracts with commercial zero-rating, commenced in the past and still active, however these offers are no longer advertised, and new contracts cannot be commenced since a considerable amount of time. After a RFI sent by ANCOM, all mobile ISPs with these offers declared that they will stop them by 30 June 2024 and the end-users will be migrated to new/upgraded offers. |

**Table 5. Details on zero-rating services**

Nine NRAs (CZ, EL, IT, MT, NL, PL, PT, RO, SE) responded that there are changes compared to the previous reporting period, as detailed in Table 6 below.

| NRA | Changes compared to the previous reporting period |
|---|---|
| **CZ** | CTU continued to pay its attention to selected business practices of ISPs including zero-rating practices. In this context, CTU initiated a legislative amendment to the Electronic Communications Act on the emergency communications carried through data flow, which constitutes an exemption under Article 3(3) of the OIR. The proposed amendment to the Act is currently in the process of legislative negotiations. |
| **EL** | After 26 June 2024, new contracts including any type of zero-rating offers are strictly banned by the NRA according to its new regulation published on 26 February 2024. |
| **IT** | Zero-rating offers were stopped by ISPs. AGCOM monitored the effective closure of zero-rating offers, the migration of the end-users to new offers and the related conditions. |
| **MT** | One ISP had a technical issue to stop zero-rating on its website while remaining compliant with the Roaming Regulation[20]. The technical issues have been resolved and zero-rating has since been stopped. |
| **NL** | One zero-rating offer was stopped after Q1 2023 following the OI enforcement by ACM. |
| **PL** | The President of UKE issued post-inspection recommendations in which mobile operators were required to cease providing access to selected services and content under the zero-rating model, as it was recognised by the European Court of Justice (ECJ) as discriminatory and contrary to the OIR. |

[20] Regulation (EU) 2022/612 of the European Parliament and of the Council of 6 April 2022 on roaming on public mobile communications networks within the Union (recast):

| | |
|---|---|
| **PT** | ANACOM published on 12 May 2023 a clarification regarding the determination foreseen in the decision related to existing contracts[21]. |
| **RO** | Contracts including commercial zero-rating can no longer be concluded and the number of active contracts with such offers decreased significantly. |
| **SE** | After enforcement, the zero-rating of the following services was stopped:<br>• customer care services (to purchase other services, downloading additional data and the use of ISPs account) by 31 October 2023;<br>• Office 365 applications for business users by 31 October 2023;<br>• video-streaming/IPTV services by 1st July 2023. |

**Table 6. Changes compared to the previous reporting period on zero-rating services**

Three NRAs (FR, PT, RO) reported that at least some of the above-mentioned zero-rating services are based on **Article 3(2)** of the OIR. In FR, there is a zero-rated live TV streaming service for mobile, in PT zero-rating could be present in contracts currently in execution with a loyalty period in progress, and in RO contracts commenced in the past could include zero-rating. Further details are reported in Table 5 above.

Four NRAs (BE, EL, HU, RO) reported that there are zero-rating services based on the exemptions from **Article 3(3)** of the OIR (see Table 7 for more details).

| NRA | Services based on the exemptions from Article 3(3) |
|---|---|
| **BE** | Access is provided to dedicated webpages with information on value added services and emergency services, as foreseen in Articles 13 and 15 of the Roaming Regulation. |
| **EL** | The updated national open internet regulation defines as exceptions that are offered to customers on a free basis, the following service categories (as outlined in Table 6 above). |
| **HU** | It has been argued by some ISPs that access to tools enabling consumers to track their consumption and to customer service must be provided free of charge. However, there is no specific requirement for zero-rating in national law. |
| **RO** | The national QoS measurement tool (Netograf) is zero-rated by means of an ANCOM Decision. |

**Table 7. Details regarding services based on the exemptions from Article 3(3)**

**Question 5.** Pursuant to article 3(2), have you performed any **formal assessment** of **agreements on commercial and technical conditions as well as commercial practices** such as application-agnostic differentiated pricing, in the reporting period?

[21] Available at https://www.anacom.pt/render.jsp?contentId=1745019&languageId=1

If *yes*, please briefly describe the practice and the conclusions of the assessment (and enforcement action taken where applicable).

In the reporting period, seven NRAs (AT, CY, CZ, IT, LI, NL, NO) performed formal assessments of agreements on commercial and technical conditions as well as commercial practices such as application-agnostic differentiated pricing (see Table 8 below).

| NRA | Conclusions of the assessments |
|---|---|
| **AT** | ISPs are obliged under the Austrian Telecommunications Act to notify their terms and conditions (T&Cs) to RTR at the start of a new communication service. Changes of T&Cs also have to be notified. This is an on-going measure. Within this framework, the transparency obligations of the OIR are also checked and this enables RTR to monitor the commercial and technical conditions related to the provision of the IAS as well. |
| **CY** | According to the provisions of the OIR (as interpreted in BEREC OI Guidelines), ISPs reported to OCECPR regarding their agreements on commercial and technical conditions, as well as their commercial practices. Following the assessment of ISPs' reports, OCECPR concluded that the agreements on commercial and technical conditions and on commercial practices performed by ISPs do not constitute an infringement of the OIR. |
| **CZ** | CTU continued to monitor and assess selected business practices of ISPs including zero-rating practices, among others, by monitoring the published contractual ISPs' T&Cs. |
| **IT** | RFIs were sent to the main ISPs regarding agreements on commercial and technical conditions, as well as on commercial practices such as IAS offers with differentiated service quality levels. The RFI related to fixed, FWA and mobile networks. The analysis of the responses did not reveal any issue. |
| **LI** | The agreements have been checked for legal conformity in the past, changes must be reported and are checked by the NRA. |
| **NL** | ACM started an ad hoc investigation of potential commercial blocking/throttling and deep packet inspection. |
| **NO** | Assessments were made in connection with the work on the annual national net neutrality report, resulting in high-level conclusions and no concrete enforcement actions. |

**Table 8. Conclusions of the assessments on commercial practices**

**Question 6.a.** Is there any change compared to the previous reporting period regarding to the **approach** you have taken **to monitor the traffic management practices** of ISPs?

If *yes*, please provide details.

**Question 6.b.** Please specify what **approach** you have taken **to monitor the traffic management practices** of ISPs, in the reporting period:

i. market survey without requesting information from ISPs;
ii. information request from ISPs;
iii. analysis of complaints and end-user reporting;
iv. technical monitoring;
v. other, please specify.

No NRA reported a change in the approach taken to monitor the traffic management practices of ISPs compared to the previous reporting period.

Most NRAs applied at least one of the following approaches (see the figure below): market surveys without requesting information from ISPs (15), information requests from ISPs (22) and analysis of end-user complaints (20). In addition, four NRAs also conducted technical monitoring.


**Figure 2. Approaches to monitor traffic management practices**

Three NRAs (AT, BE, FR) specified which additional measures they have undertaken during the reporting period.

| NRA | Additional measures |
|---|---|
| **AT** | ISPs are obliged under the Austrian Telecommunications Act to notify their T&Cs to RTR at the start of a new communication service. Changes of T&Cs have to be notified as well. This is an on-going measure. Within this framework, the transparency obligation of the OIR are also checked and this enables RTR to monitor the traffic management practices of ISPs as well. |

| | |
|---|---|
| **BE** | BIPT held meetings with ISPs on how to implement (technically) the EU sanctions to ban Russian media outlets, with regard to broadcasting transmissions via websites.<br>Additionally, Belgium has implemented the anti-phishing shield (BAPS) to protect end-users against phishing. This is a system that warns the internet user in the event of browsing on fraudulent or malicious websites. BAPS redirects the internet user to a warning page when browsing these sites. The action is taken at the Belgian DNS level. This is done after a thorough analysis of the site by the Centre for Cybersecurity (CCB). |
| **FR** | End-users can report issues on the online alert platform "J'alerte l'Arcep" and they can use the latest version of the traffic management application Wehe to help them detect potential traffic differentiations or port blockings implemented by their ISP. |

**Table 9. Additional measures used by certain NRAs**

Seven NRAs (BG, CY, DE, FR, IT, MT, SK) provided further details regarding their monitoring practices.

| NRA | Monitoring practice |
|---|---|
| **BG** | CRC collects information by means of a dedicated questionnaire on an annual basis. The conclusion is that the traffic management applied by ISPs is in line with Article 3(3) subs. 1-3 of the OIR. |
| **CY** | According to the provisions of the OIR (as interpreted in the BEREC OI Guidelines), ISPs reported to OCECPR on traffic management practices. Following an assessment of their reports, OCECPR concluded that any traffic management practices used by ISPs do not constitute an infringement of the OIR. |
| **DE** | While there was no formal assessment on traffic management, BNetzA would like to point out that they received eight consumer requests which asked BNetzA to order "network blocking" during the reporting period. The inquiries mainly concerned deletion or blocking of fake shops, internet forums with infringing content, or typosquatting web pages. BNetzA pointed out the lack of jurisdiction for DNS blocking. Furthermore, the consumers were informed about possibilities which could achieve their aims (e.g. notifying the hosting provider and asking for deletion of the website). The procedure varies from case to case. BNetzA also provides general information on its homepage[22].<br>Moreover, BNetzA still assesses recommendations of the "Clearingstelle Urheberrecht im Internet" regarding domains which contain copyright infringing |

[22] Available at https://www.bundesnetzagentur.de/DE/Fachthemen/Digitalisierung/Internet/Netzneutralitaet/DNSsperren/start.html

| | |
|---|---|
| | content (e.g. movies, gaming) and monitors that the blocking of websites due to copyright infringements is in line with the open internet rules. |
| **FR** | Arcep is still assessing possible traffic management practices. No conclusion has been reached so far and Arcep is currently monitoring the situation. |
| **IT** | RFIs were sent to the main ISPs regarding traffic management practices (Article 3(3) subs 2 and 3 of the OIR). The RFIs related to fixed, FWA and mobile networks. After a first analysis of the responses received, an additional RFI was sent to some of the respondents to gather some further information. The assessment of these responses is still ongoing at the end of the reporting period.[23] |
| **MT** | Traffic management practices from all ISPs were reviewed by MCA. No clauses were found to be in breach of the OIR. No further action was necessary. |
| **SK** | ISPs use practices imposed by European or national legislation. In exceptional cases and at the decision of the authority of the authorised by the State, e.g. National security authority Gambling Regulatory Authority and court decisions. |

**Table 10. Main findings of traffic management practices**

**Question 7.** Pursuant to article 3(3) subs. 1 to 3, have you completed any **formal assessment** of an ISP's **traffic management practices**, in the reporting period?

If *yes*, briefly describe the practice and main conclusions of the assessment (and enforcement action taken where applicable).

In the reporting period, in one Member State (AT), the NRA completed formal assessments of ISPs traffic management practices in regard to supervisory procedures relating to website blocking. This blocking was due to the three different reasons: 1) due to copyright issues, 2) due to the EU sanctions to ban Russian media outlets and 3) due to a non-allocation of (at least) dynamic IPv4-adresses. Most of the procedures were dropped as no breach of Article 3 of the OIR was identified. However, some procedures identified a violation of Article 3 of the OIR, since IP-blocking was conducted. Although some of the ISPs ended these measures, others challenged the decision and the parties are awaiting a decision by the Federal Administrative Court.

**Question 8.** In the reporting period, have you conducted any **research or survey** on **port blocking practices** by ISPs?

If *yes*, please briefly describe the main findings.

[23] Since the conclusion of this reporting period, AGCOM has completed the assessment. Therefore, the relevant results will be reflected in the next iteration of this Report.

Seven NRAs (AT, EL, HR, IT, MT, PL, SK) mentioned mainly monitoring activities through annual surveys. Most results indicate that port blocking is only performed for reasons of network security and integrity.

| NRA | Port blocking practices |
|---|---|
| **AT** | ISPs are obliged under the Telecommunications Act to notify their T&Cs to RTR at the start of a new communication service. Changes of T&Cs have to be notified as well. Thus, RTR may come across issues of port blocking when checking the T&Cs. Occasionally, ISPs or end-users contact the NRA and enquire if the blocking of a certain port is in line with the OIR. |
| **EL** | Port blocking (TCP & UDP) has been reported by all ISPs for preventing a) cyber-attacks, b) spam and phishing messages that target private data, c) network overload and loss of service, d) unauthorised access.<br>It is sometimes used in combination with blocking of specific protocols for network security reasons. It can be a temporary or a permanent measure. Usually, it is applied manually. There does not seem to be a set of ports uniformly blocked by all ISPs. |
| **HR** | HAKOM monitors port-blocking practices of major ISPs, by conducting a survey among ISPs and analysing the results of the HAKOMetar Plus measurement tools. The data showed that ISPs do not use permanent port-blocking measures, just temporarily justifying it with the security exception (malware, phishing, spoofing, preventing DDoS attacks, etc.). No new ports were reported to be blocked in comparison to previous years. |
| **IT** | In the RFI regarding traffic management, some ISPs reported also implementing port blocking, both for incoming and outgoing traffic, as a measure to ensure network security and integrity. |
| **MT** | ISPs were asked to declare any active port blocking applied in the network along with the reason for doing so. All active port blocking is justified for network security measures. |
| **PL** | Seven ISPs informed UKE about blocking ports. ISPs who apply this practice block ports for incoming internet traffic. Only 25(TCP) port is blocked for outgoing internet traffic. In general, these ports are blocked to ensure integrity and security of the network and services provided by means of the network and end-users' terminal devices. |
| **SK** | The ISPs perform port blocking of dynamic IP addresses that can be misused to control customer terminal equipment for remote access in a broadband network. |

**Table 11. Port blocking practices**

## 2. Article 3(5) – Specialised services

**Question 9.a.** Is there any change compared to the previous reporting period regarding to the **approach** you have taken **to monitor services other than IAS (called "specialised services"** below)?

If *yes*, please provide details.

**Question 9.b.** Please specify what **approach** you have taken **to monitor the specialised services**:

i. market survey without requesting information from ISPs (e.g. checking ISP's offers on their web pages);
ii. information request from ISPs;
iii. analysis of complaints and end-user reporting;
iv. technical network monitoring;
v. other, please specify.

Three NRAs (BE, LU, PL) reported a change compared to the previous reporting period regarding to the approach to monitor specialised services, as outlined in the table below.

| NRA | Monitoring of specialised services |
|---|---|
| **BE** | BIPT assessed an ISP's proposal for a specialised with dedicated priority. Further information is reported in Q10. |
| **LU** | ILR looked at the conditions of some IPTV offers. |
| **PL** | UKE performed an analysis of complaints. |

**Table 12. Monitoring of specialised services**

Many NRAs applied at least one of the following approaches to monitoring specialised services: market survey without requesting information from ISPs (16), information requests from ISPs (18) and analysis of end-user complaints (17). Additionally, two NRAs did technical network monitoring.


**Figure 3. Approaches to monitor specialised services**

**Question 10.** In the reporting period, have you completed any **formal assessment** of **the provision of specialised services** by ISPs?

If *yes*, briefly describe the practice and the conclusions of the assessment (and enforcement action where applicable).

Five NRAs (BE, CY, DK, IT, SK) have completed a formal assessment of the provision of specialised services by ISPs. However, most of these assessments are framed in the analysis of monitoring reports or surveys.

| NRA | Assessment of specialised services |
|---|---|
| **BE** | Upon an ISP's request, BIPT assessed whether the ISP's proposal for a specialised service with dedicated priority was in line with the OIR and BEREC OI Guidelines. BIPT concluded that it would be in line with the OIR if the ISP and end-user implemented some additional measures such as capacity monitoring. |
| **CY** | Following an assessment of the ISPs' reports, OCECPR concluded that the provision of the type of specialised services offered by ISPs does not constitute an infringement of the OIR. |
| **DK** | In the annual report on the Danish supervision of the OIR, ADSI concluded that there are no issues related to the Danish ISPs' provision of specialised services. |
| **IT** | AGCOM sent a RFI to the main ISPs regarding the specialised services offered and the related optimisation measures, according to Article 3(5) of the OIR. After an initial analysis of the responses received, an additional RFI was sent to a respondent to |

| | |
|---|---|
| | gather some further information. The assessment of this response is still ongoing at the end of the reporting period.[24] |
| **SK** | ISPs offered IPTV, VoD and SVoD services that could meet the criteria to qualify as a specialised service. The traffic for these services can be optimised in the network to provide services of the required quality. Finally, it was decided that these specialised services were compliant with the criteria for specialised services. |

**Table 13. Assessment of specialised services**

# 3. Article 4(1) – Approaches to monitoring and enforcement compliance

**Question 11.a.** Is there any change compared to the previous reporting period regarding to the **approach** you have taken **to monitor and to enforce ISPs' compliance with their transparency** obligations set out in article 4?

If *yes*, please provide details.

**Question 11.b.** Please specify what **approach** you have taken **to monitor and to enforce ISPs' compliance with their transparency** obligations set out in article 4?

i. market survey without requesting information from ISPs (e.g., checking the applicable "terms and conditions");
ii. (formal or informal) information request from ISPs;
iii. analysis of complaints and end-user reporting;
iv. other, please specify.

In the reporting period, all the NRAs monitored and enforced ISPs' compliance with their transparency obligations. As shown in Figure 4 below, most NRAs used at least one approach to do so: 22 NRAs undertook a market survey without requesting information from ISPs, 21 submitted information requests to ISPs and 21 analysed complaints and end-users' reports.

[24] Since the conclusion of this reporting period, AGCOM has completed the assessment. Therefore, the relevant results will be reflected in the next iteration of this Report.

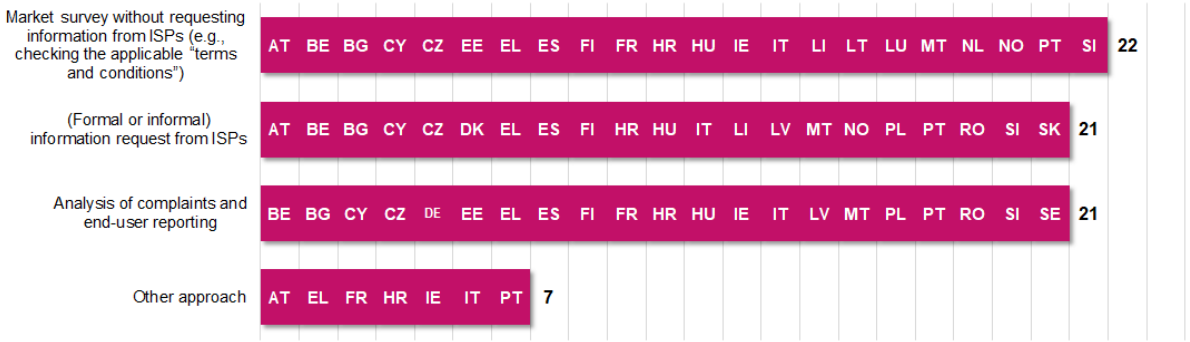



**Figure 4. Approaches regarding monitoring and enforcing ISPs' compliance with their transparency obligations set out in Article 4 of the OIR**

Furthermore, seven NRAs (AT, EL, FR, HR, IE, IT, PT) mentioned other approaches, as detailed in Table 14.

| NRA | Description of other approaches |
|---|---|
| **AT** | ISPs are obliged under the Telecommunications Act to notify their T&Cs to RTR at the start of a new communication service. Changes of T&Cs have to be notified as well. This is an on-going measure. Within this framework, the transparency obligations of the OIR are also checked. RTR is entitled to object to specific clauses within 6 weeks if they do not meet particular legal standards. |
| **EL** | On-site audits of ISPs' commercial offers/products were carried out at points of sale. |
| **FR** | According to Article 45 of the Executive Order n. 2021-650 complementing the French Consumer Code, ISPs must comply with the transparency measures of Article 4(1) of the OIR. |
| **HR** | On-site audits at points of sale were carried out. |
| **IE** | A mystery shopping initiative was conducted to test compliance with transparency obligations. |
| **IT** | AGCOM published statistical comparative values of ISPs' QoS results. Also, AGCOM runs a surveillance activity on service and general conditions contents. |
| **PT** | ANACOM analysed the contractual terms used by the main ISPs in their contracts and monitored the information about speeds published on some ISPs' websites, requesting if needed the amendment of the information published in accordance with the OIR. |

**Table 14. Description of other approaches to monitor ISPs' compliance with the transparency obligations**

Two NRAs (DK, LU) pointed out that there was a change when compared to the previous reporting period. In LU, ILR informally checked the major ISPs' T&Cs published on their websites, while there was a RFI sent to ISPs in DK.

**Question 12.** In the reporting period, have you completed any **formal assessment** of the **ISPs' contract conditions and their compliance** with requirements set out in article 4(1), subs. a-e?

If *yes*, please describe the main findings.

In 11 Member States (AT, BE, BG, CY, CZ, HR, IT, LI, MT, RO, SK), a formal assessment of the ISPs' contract conditions and their compliance with requirements set out in Article 4(1) subs a-e was completed by the respective NRAs in the reporting period (Table 15). No formal assessment was carried out in 18 Member States (DE, DK, EE, EL, ES, FI, FR, HU, IE, LT, LU, LV, NL, NO, PL, PT, SI, SE).

| NRA | ISPs' contract conditions |
|---|---|
| **AT** | See Q11.b. iv). |
| **BE** | BIPT did an in-depth inquiry of the way of one new entrant to the fixed market and its main competitors on the residential market mentioned the speed values on their website and in (pre)contractual documents. This was also done, based on a formal RFI. Another RFI concerned the contractual conditions of unlimited services. Some operators were not sufficiently clear in their wordings. Upon BIPT's request, the wording was clarified. |
| **BG** | CRC collects such information based on an annual questionnaire. ISPs declare that speeds and traffic management rules are described in contracts. Some ISPs declare that information on speeds is also part of contractual summaries. |
| **CY** | ISPs have submitted their contracts to OCECPR, according to the provisions of the OIR and the Decree. Further to OCECPR's assessment of the contracts, ISPs comply with the requirements set out in Article 4(1) of the OIR. |
| **CZ** | The fourth stage of extensive national inspection has been completed. This final stage of the inspection, carried out between August 2023 and November 2023, targeted the remaining ISPs, who had not fulfilled the obligation to provide clear and transparent information including the speeds of the IAS within the pre-contractual summary even after the third stage of this inspection. In total, more than 2000 entities were inspected. As a general result of this inspection, between January 2021 and October 2023, there were 2028 entities inspected, 461 entities fined and 341 entities who notified the provision of IAS at a fixed location terminated the provision of these services. |
| **HR** | Since operators in Croatia are obliged under the Croatian Telecommunications Act (ZEK) to notify their T&Cs to HAKOM before they launch a communication service, HAKOM regularly checks if they meet particular legal standards set out in the ZEK and compliance with the OIR. Changes to previously approved T&Cs must also be notified. Transparency is generally at a satisfactory level. |

| | |
|---|---|
| **IT** | AGCOM currently verifies contractual conditions and operators' terms of service, publishing them on its website[25]. |
| **LI** | ISPs' contractual conditions are in accordance with the legal requirements. |
| **MT** | Contracts of IAS products on the market were rigoursly screened for transparency issues related to the legal obligations including those arising from the OIR. |
| **RO** | ANCOM analysed only those contracts that were subject of end-users' complaints. The NRA received only 2 complaints, which mainly related to the speeds' measurement procedure. As these were only ad-hoc issues that were quickly solved, there was no need to expand the assessment to the contracts on the entire market. |
| **SK** | ISPs' contractual conditions comply with requirements of Article 4 of the OIR. |

**Table 15. Main findings of assessing the ISPs' contract conditions**

**Question 13.a.** In the reporting period, have any new **national specifications** been set or changed in relation to the **different types of speeds** laid out in article 4(1), sub. d.?

If *yes*, please provide details.

**Question 13.b.** Were these requirements:

i. imposed by the NRA or another competent Authority?
ii. agreed upon by market players?
iii. legally binding?

Within the current reporting period, national specifications were set with regard to the different types of speeds by three Member States (CY, EL, IT). Further information is outlined in Table 16 below.

| NRA | National specifications |
|---|---|
| **CY** | According to the provisions of the OIR as adopted in national Decree 72/2017, the speed values to be included in the contract, including information published on the ISPs' website, are defined by the NRA as follows:<br>• as far as fixed network is concerned, minimum, normally available and maximum speed, in percentage of advertised speed.<br>• as far as mobile network is concerned, where applicable, the advertised speed, in percentage to the estimated maximum speed.<br>The imposed requirements are not legally binding.<br>In relation to the provision of fixed IAS, ISPs are required to set the time periods within the day in which maximum speed is achieved, the periods expected to reach |

[25] Available at https://www.agcom.it/carte-dei-servizi

| | |
|---|---|
| | normally available speed, and the periods when speed may be limited to the minimum. |
| **EL** | EETT issued an updated national open internet regulation, which defines that the realistic maximum download/upload (DL/UL) speeds achievable in mobile networks can belong to 7 new speed classes (categories). The new speed classes are:<br>• ≥ 1 Gbit/s<br>• ≥ 300 Mbit/s < 1 Gbps<br>• ≥ 100 Mbit/s < 300 Mbit/s<br>• ≥ 30 Mbit/s < 100 Mbit/s<br>• ≥ 10 Mbit/s < 30 Mbit/s<br>• ≥ 2 Mbit/s < 10 Mbit/s<br>• ≥ 128 kbit/s < 2 Mbit/s<br>The speed classes are common for the DL and UL and will enter into force on 26 February 2025 (the ISPs have to update their online speed maps per area with these new classes). The realistic speeds refer to measurements conducted outdoor by users not moving on a vehicle.<br>The imposed requirements are legally binding. |
| **IT** | AGCOM approved, with resolution n. 156/23/CONS, a consolidated text for the revision and simplification of the quality indicators (key performance indicators) of fixed location services. This resolution establishes, among other things, information on the speed of offers which must be provided both pre-contractually and contractually, and which are legally binding in the event of an end-user complaint. With the new provision, in addition to the minimum speeds already defined in the previous regulation, the definitions of maximum and normally available speeds are established.<br>The measurement methods for those quality indicators are detailed in a guidelines document (resolution n. 11/24/DTC). With reference to speeds, the guidelines establish the following definitions, which are legally binding:<br>• Minimum speeds: “95 quantiles” of DL/UL data transmission speeds measured during the entire observation interval, i.e. the measured values for which 95% of the transfer speeds recorded during the observation period are greater than these values;<br>• Normally available speeds: “75 quantiles” of DL/UL data transmission speeds measured during the entire observation interval, i.e. the measured values for which 75% of the transfer speeds recorded during the observation period are greater than these values;<br>• Maximum speeds: maximum values of DL/UL data transmission speeds measured during the entire observation interval.<br>Resolution n. 156/23/CONS also defines the advertised connection speeds as the speeds, both download and upload, that the operator uses in commercial communications, including advertising and marketing, and defines the information that needs to be published in the technical transparency statements of the offers.<br>Operators and consumer associations participated in this process. |

**Table 16. National specifications of speeds set in the reporting period**

For further details regarding the NRAs' existing national specifications in relation to the different types of speeds, please refer to Annex I of this report.

**Question 14.** In the reporting period, has your NRA **reviewed the terms and conditions** in ISP contracts for IAS in the **fixed networks**? Please also consider hybrid services (see also Q16).

If *yes*¸ did ISPs define minimum, maximum, advertised and normally available upload and download speeds?

Please briefly explain the main findings.

The T&Cs in ISP contracts for **fixed** networks were reviewed in 19 Member States (AT, BE, BG, CY, CZ, DK, EL, FI, HR, IE, IT, LI, LU, MT, NO, PL, PT, SI, SK), while in 10 Member States (DE, EE, ES, FR, HU, LT, LV, NL, RO, SE) NRAs did not carry out such a review.

An overview of the main findings is shown in Table 17 below. In general, the contracts contain information on normally available, minimum, maximum and advertised upload and download speeds. This information is based on either a definition or recommendation of the NRA or on a definition by the ISP itself. In some Member States, the ISPs had to be reminded by the NRA after regular or random sampling to comply with the obligations of the OIR. In one Member State, regulatory changes were introduced regarding contractual protection, transparency and quality of services (QoS).

| NRA | Definition of speeds in fixed contracts |
|---|---|
| **AT** | Within the framework as referred to in Q1, the transparency obligation of the OIR is also checked. ISPs are obliged under the Telecommunications Act to notify their T&Cs to RTR at the start of a new communication service and when there are changes of the T&Cs. In this regard, RTR checks if the providers stick to the terminology as used in the OIR. RTR is entitled to object to specific clauses within 6 weeks if they do not meet particular legal standards. This is an on-going measure. Thus, ultimately all notified T&Cs complied with the law. |
| **BE** | BIPT's review of the ISPs' T&Cs concerned aspects like failure to date the contract summary, failure to mention remedies in case of defective speed of the IAS, referring to the Ombudsman for Telecommunications as a remedy rather than initially to its own customer service, lack of information on features for end-users with a disability. |
| **BG** | Defined speeds are in line with the OIR and CRC's Position (Decision n. 170/18.04.2019). |
| **CY** | ISPs defined the required speed parameters. |

| | |
|---|---|
| **CZ** | Within the above-mentioned inspections (see Q12), compliance with Article 4(1)(d) of the OIR and compliance with the obligations arising from the General Authorisation specifying the method of designating individual speeds and their discrepancies of the IAS at a fixed location were examined. The speeds and discrepancies were found to be compliant with the legislation |
| **DK** | ADSI has asked ISPs if they define minimum and maximum speeds. Findings have not yet been analysed. |
| **EL** | Fixed ISPs incorporate the minimum, maximum and normally available speeds in consumer contracts following the entry into force of national provisions, since 25th November 2020. Speeds are provided per area and access technology. Audits at points of sale verified conformance of ISPs to the requirements. |
| **FI** | Based on informal discussions with an ISP, they changed their FWA speed definitions to be in line with Traficom's guidance. |
| **HR** | Based on the conducted review of the T&Cs in ISPs' contracts, HAKOM conclude that ISPs are in compliance with the regulations. |
| **IE** | ISPs defined the required speed parameters. |
| **IT** | Important regulatory changes were introduced in resolution n. 156/23/CONS, which introduces significant changes regarding contractual protection, transparency and QoS (also see Q13). This new regulation mandates that operators must publish not only minimum speeds but also maximum, normally available and advertised speeds. These requirements must be implemented by the operators in the next reporting period. |
| **LI** | ISPs defined the required speed parameters. |
| **LU** | While ILR did not conduct a systematic review of the T&Cs of all fixed ISPs, ILR noticed that the T&Cs of one ISP have been lacking some information on the speeds. ILR sent a letter to the respective ISP to remedy the situation. The procedure is on-going at the end of the reporting period. |
| **MT** | ISPs defined the required speed parameters. |
| **NO** | ISPs defined the required speed parameters. |
| **PL** | In 2023, four administrative proceedings commenced, in connection with the failure of the inspected ISP to correct the irregularities indicated in the post-inspection recommendations within the prescribed time limit (an audit of follow-up recommendations issued in 2019 was conducted in 2022). As of 30 April 2024, one of these proceedings has ended with the issuance of a decision calling for the elimination of violations, and the others are pending.<br>In 2023, President of UKE carried out an inspection of the implementation of post-inspection recommendations issued to 10 ISPs in 2021.The results of the inspection showed that the ISPs in most cases implemented the post-inspection recommendations. In the case of one ISP, administrative proceedings were initiated. |
| **PT** | In general, ISPs provide information on minimum, normally available, maximum and advertised, DL/UL, speed of the IAS, as well as an explanation for each type of speed. |
| **SI** | Based on AKOS' survey, all major and large majority of small ISPs define in their contracts the required speed parameters. |

| | |
|---|---|
| **SK** | According to the outcome of information requested from selected ISPs, all of them defined in their contracts the required speed parameters. |

**Table 17. Main findings of assessing fixed ISPs' contracts regarding definition of speeds**

**Question 15.** In the reporting period, has your NRA **reviewed the terms and conditions** in ISP contracts for IAS in **the mobile networks**? Please also consider hybrid services (see also Q16).

If *yes*, did they define advertised and estimated maximum upload and download speeds?

Please briefly explain the main findings.

If available, please provide information regarding contractual conditions, such as examples of "realistic usage conditions" under which the estimated maximum speed can be achieved (paragraph 153 of BEREC OI Guidelines).

The T&Cs in ISP contracts for **mobile** networks were reviewed in 15 Member States (AT, BG, CY, CZ, DK, EL, HR, IE, IT, MT, NL, NO, PT, SI, SK), while 14 NRAs (BE, DE, EE, ES, FI, FR, HU, LI, LT, LU, LV, PL, RO, SE) did not review the T&Cs.

An overview of the main findings is shown in Table 18 below. Most contracts contain information on advertised and estimated maximum upload and download speeds. This is often based on definitions by the ISPs, but some NRAs provide definitions or are discussing the definitions with mobile network operators.

| NRA | Definition of speeds in mobile contracts |
|---|---|
| **AT** | Within the framework as referred to in Q1, also the transparency obligation of the OIR is checked. ISPs are obliged under the Telecommunications Act to notify their T&Cs to RTR at the start of a new communication service and when there are changes of the T&Cs. In this regard, RTR checks if the providers adhere to the terminology as used in the OIR. RTR is entitled to object to specific clauses within 6 weeks if they do not meet particular legal standards. This is an on-going measure. Thus, ultimately all notified T&Cs complied with the law. |
| **BG** | Defined speeds are in line with the OIR and CRC's Position (Decision n. 170/18.04.2019). |
| **CY** | OCECPR has reviewed the contracts of mobile ISPs. The main finding is that ISPs defined, where applicable, the advertised speed, in percentage to the estimated maximum speed in their contracts. Furthermore, OCECPR found that an ISP used some practices which may constitute infringement of the provisions of the OIR. OCECPR informed the concerned ISP accordingly and requested further action to ensure compliance with the provisions of the OIR and Decree 72/2017. |

| | |
|---|---|
| **CZ** | Within the above-mentioned inspections (see Q12), compliance with Article 4(1)(d) of the OIR and compliance with the obligations arising from the General Authorisation specifying the method of designating individual speeds and their discrepancies of the mobile IAS were examined. The speeds and discrepancies were found to be compliant with the legislation. |
| **DK** | ADSI has asked ISPs if they define minimum and maximum speeds. Findings have not yet been analysed. |
| **EL** | Mobile ISPs provide maximum speed estimates (downlink and uplink) per area and technology following the entry into force of the national provisions by EETT since 1st March 2021. The speed estimates are given in ranges and are publicly available through interactive maps on the ISPs' websites. There are no advertised speeds in mobile offerings. |
| **HR** | ISPs defined in their contracts the required speed parameters (estimated maximum speeds are made available in a geographical manner providing mobile IAS coverage maps with estimated speed values of network coverage in all locations for different network technologies). |
| **IE** | ISPs defined the required speed parameters. |
| **IT** | With the changes introduced by resolution n. 23/23/CONS, mobile ISPs provide estimated maximum speeds for each network technology, together with coverage maps with a resolution of at least 100 meters. In addition to this, they provide advertised speeds, used in commercial communications including advertising and marketing, defined as the speeds that the operator is realistically able to provide to its users, under conditions of normal use, in the national territory. |
| **MT** | ISPs indicate the maximum DL/UL speeds achievable by their networks as the estimated DL/UL speeds. ISPs also include information about bottlenecks and limitations applicable to reach such speeds. |
| **NL** | ACM conducted ad hoc investigations of speeds in T&Cs for inflight Wi-Fi services. The outcome was that ISPs did not define the respective speeds. |
| **NO** | ISPs defined the required speed parameters. |
| **PT** | In general, ISPs provide information on estimated maximum and advertised, DL/UL, speed of the IAS, as well as an explanation for each type of speed. |
| **SI** | All major ISPs defined in their contracts the required speed parameters. Speed is defined based on contractual package. |
| **SK** | According to outcome of information requested from selected ISPs, all of them defined in their contracts estimated maximum DL/UL speeds. |

**Table 18. Main findings of assessing mobile ISPs' contracts regarding definition of speeds**

Information regarding contractual conditions, such as examples of "realistic usage conditions" under which the estimated maximum speed can be achieved (paragraph 153 of the BEREC OI Guidelines) have been given by nine Member States (BG, DE, FI, FR, IE, MT, PT, RO, SI) as described in Table 19 below.

| NRA | Main findings |
|---|---|
| **BG** | The estimated maximum speed is specified separately for different network technologies with a note that it is achievable in ideal conditions.<br>General T&Cs contain a text like this: "*The speed and quality of IAS depends on the type of technology, the type of device used, the coverage and the network load, the simultaneous use of the service by several devices, architectural and geographical features*." |
| **DE** | While BNetzA did not carry out an overall market monitoring of T&Cs in ISP contracts regarding mobile networks, they have been assessing (and are still assessing) T&Cs of one mobile ISP which contain a so-called "heavy user" clause in a unlimited plan. Users which exceed a certain data threshold are treated differently than other users. BNetzA is currently in exchange with this ISP, and if need be, intends to start corresponding proceedings. |
| **FI** | Traficom issued an Opinion[26] on speeds. |
| **FR** | ISPs only define the theoretical maximum speed for their mobile IAS offers in their mobile contracts, that is the maximal reachable speed for a given access technology (2G, 3G, 4G and 5G). |
| **IE** | As previous year. |
| **MT** | Mobile IAS providers suggest the type of performance of the network when subjected to different activities (e.g. browsing, music or video streaming etc.) Some also suggest the type of mobile package that is better suited for specific activities |
| **PT** | The main ISPs provide the definition of estimated maximum speed and identify the factors that might affect that speed, in accordance with paragraph 153 of the BEREC OI Guidelines. |
| **RO** | ISPs usually include in the contracts information on the factors that influence the achievement of the maximum speeds or the advertised speeds. This could be the case e.g. of factors related to the place at which the measurements are performed (buildings, bridges, tunnels, metal constructions, soil geography etc.), limitations due to the end-user's operating system, signal strength level and signal quality level, the time intervals in which the measurements are made. |
| **SI** | Estimated maximum speed is defined as a speed which is achievable based on contractual package, current radio signal quality, current available resources in the cell, terminal equipment, current used access mobile technology (2G, 3G, 4G, 5G). |

**Table 19. Main findings of assessing mobile ISPs' contracts regarding the definition of speeds**

**Question 16.** In the reporting period, have any ISPs offered **new hybrid services** in your country (as specified in paragraph 141.b. of BEREC OI Guidelines)?

[26] Available at: https://www.traficom.fi/sites/default/files/media/regulation/Verkkoneutraliteettikannanotto-mobiililaajakaistaliittymista_EN.pdf

If *yes*, please provide details.

In four Member States (DK, EL, PT, SI), new hybrid services were offered in the reporting period (see table below), while in 25 Member States, no new hybrid services are available (AT, BE, BG, CY, CZ, DE, EE, ES, FI, FR, HR, HU, IE, IT, LI, LT, LU, LV, MT, NL, NO, PL, RO, SK, SE).

| NRA | Information on new hybrid services |
|---|---|
| **DK** | Fixed Wireless Broadband is used in several rural areas. |
| **EL** | One ISP commercially offers contracts with IAS via 4G FWA, in hybrid access mode. When the DSL access becomes congested, the 4G access is activated, increasing the internet connection speed. End-users are provided with the ISP's hybrid router, as for terminal equipment, with a configured SIM card. The data allowance is 200 GB and there is speed throttling to 15 Mbps when this is consumed. |
| **PT** | The major ISPs in Portugal offer hybrid services namely in areas not covered by VHCN (Fiber or Docsis3.1). These offers include wireless (LTE) technologies for the provision of IAS at a fixed location. |
| **SI** | One ISP still offers new hybrid services and one only offer hybrid services to legacy users. |

**Table 20. Main findings on information on hybrid services**

**Question 17.** In the reporting period, have you completed any **formal assessment** of the **ISPs' obligation to publish**, according to article 4(1), sub. 2, **the information referred to in article 4(1), subs. 1 a-e**?

If *yes*, please provide details.

Formal assessments of the ISPs' obligation to publish information according to Article 4(1) of the OIR were carried out in eight Member States (AT, BG, CY, CZ, IT, LI, MT, SK), while in 21 Member States no formal assessment was completed (BE, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, LT, LU, LV, NL, NO, PL, PT, RO, SE, SI). A detailed overview is shown in Table 21 below.

| NRA | Transparency of information |
|---|---|
| **AT** | See Q15. |
| **BG** | Based on the annual questionnaire, ISPs provide links to their websites where information is published. CRC checks the links for availability of that information and its content. |

| | |
|---|---|
| **CY** | Following an assessment of ISPs reports, OCECPR found out that ISPs comply with the relevant legislation. |
| **CZ** | CTU inspected the information stated in published contractual T&Cs related to the provision of IAS and its compliance especially with the Article 4(1)(d) and (e) of the OIR and with the General Authorisation specifying the method of designating individual speeds and their discrepancies. For the results see Q14 and 15. |
| **IT** | AGCOM monitors and publishes data on the minimum contractually agreed speed for fixed networks. These values are published on a website[27] where users can compare the offers. |
| **LI** | The Contractual conditions of ISPs were screened and are in accordance with the legal requirements. |
| **MT** | All contracts for all fixed and mobile IAS services were screened with regard to the requirements listed under Article 4(1) subs. 1 a-e. All contracts were in order, except for minor issues which were rectified upon discussion with the relevant ISP. |
| **SK** | According to outcome of information requested from selected ISPs:<br>• 88% of ISPs complied with contract conditions set out in article 4(1)a<br>• 100% of ISPs complied with contract conditions set out in article 4(1)b<br>• 63% of ISPs complied with contract conditions set out in article 4(1)c<br>• 100% of ISPs complied with contract conditions set out in article 4(1)d<br>• 100% of ISPs complied with contract conditions set out in article 4(1)e |

**Table 21. Main findings regarding transparency of information**

**Question 18.** In the reporting period, have you imposed any new **additional transparency requirements** or changed the existing ones regarding the publication of information referred to in article 4(1), subs. 1 a-e?

If *yes*, please provide details of the requirements.

In two Member States (EL, IT), additional transparency requirements were imposed, as outlined in Table 22 below:

| NRA | Additional transparency requirements |
|---|---|
| **EL** | The updated national open internet regulation introduced stricter provisions for detailed information to consumers on ISPs' websites regarding OI. Information has to be provided in separate sections for:<br>a) traffic management practices,<br>b) data caps, Fair Usage Policy, speed limits or other parameter constraints,<br>c) constraints on terminal equipment, |

[27] Available at https://www.misurainternet.it/confronto_banda_minima/

| | |
|---|---|
| | d) specialised services,<br>e) information on the actual speeds and other QoS parameters,<br>f) remedies available to customers and procedures for addressing complaints (information was also provided before, but the goal was to make it more homogeneous between ISPs).<br>This regulation also introduced the obligation on ISPs to inform the consumers on the actual speeds for fixed and mobile networks before concluding a contract. This includes all sales channels. In addition, this includes stricter provisions for the ISPs who are obliged to inform the consumers regarding their methodology of verifying the speeds included in the contracts, after a consumer complaint. The above provisions will enter into force on 26 August 2024. |
| **IT** | See Q14 |

**Table 22. Additional transparency requirements imposed in the reporting period**

# 4. Article 4(2) – Procedures for end-user complaints

**Question 19.** In the reporting period, have ISPs established new or adapted the existing "**transparent, simple and efficient procedures to address end-user complaints** of end-users relating to the rights and obligations laid down in Article 3 and paragraph 1" according to article 4(2)?

If *yes*, please provide details (e.g., hotlines, complaint templates, additional channels that can be used to report complaints etc.) specifying if there is an industry-wide approach in relation to these procedures and the basis on which they have been set (e.g., imposed or facilitated by the NRA, prescribed by national legislation etc.)

Three NRAs (DK, PL, SI) reported that ISPs established new, or adapted the existing, "*transparent, simple and efficient procedures to address end-user complaints…*" according to Article 4(2) of the OIR. More details on this aspect are summarised in Table 23 below.

| NRA | Details on the procedures for end-user complaints |
|---|---|
| **DK** | The majority of ISPs are handling consumer complaints about net neutrality in the same way as any other consumer complaints. Some ISPs have established specific processes pertaining to complaints regarding net neutrality. Complaints can be filed by e.g. hotline, contact form or e-mail. Handling of end-user complaints related specifically to net neutrality are not imposed or facilitated by ADSI or prescribed by national legislation.<br>The telecom industry has established an independent private complaints board together with the Danish Consumer Council. The Telecommunications Complaint |

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| | Board is approved by the government to process complaints concerning telecommunication services. |
| **PL** | One of the ISPs indicated that they improved the functioning of the internal application by making changes to the contact form, adding additional diagnostic tools for end-users and expanding the FAQ (frequently asked questions) to include an additional pool of frequently asked questions by end-users. |
| **SI** | The complaint mechanism, as legislated by the EECC, is used. |

**Table 23. Details on the procedures to address end-user complaints according to Article 4(2) of the OIR**

**Question 20.** Do you **collect or monitor end-user complaints about the rights and obligations laid down in Article 3 and article 4(1)**? (Please see Q22 about complaints related to the quality of IAS).

If *yes*, what are the typical issues end-users complain about? (Please state the number or percentage, if available.)

25 responding NRAs (AT, BE, BG, CY, CZ, DE, EE, EL, ES, FR, HR, HU, IE, IT, LI, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI) declared they collect or monitor end-user complaints about the rights and obligations laid down in Article 3 and Article 4(1) of the OIR. The following table reports a detailed description of the typical issues of end-users' complaints, collected by NRAs.

| NRA | Details on the received end-users' complaints |
|---|---|
| **AT** | Please see Q22. |
| **BE** | BIPT is not a body that handles individual complaints. End-user complaints are in principle handled by the Ombudsman for Telecommunications. BIPT does receive reports, as a signal, on the basis of which (among other things) it decides to intervene in order to structurally solve shortcomings on the market with regard to the law and the interests the BIPT must defend. The NRA found no complaints on this matter. |
| **BG** | The total number of complaints is 131 for fixed and mobile IAS. The complaints for fixed IAS are slightly more than that for mobile IAS. Typical issues are speed lower than the contractual one, interruptions, unacceptable quality or missing of the service at all. |
| **CY** | Issues are mainly related to QoS, pricing and technical nature. |
| **CZ** | CTU assessed 42 end-user complaints and enquiries (a decrease of 28% compared to the previous period).<br>Of the total number, 79% of complaints concerned mainly non-compliance with the quality parameters of the IAS agreed in the contract, the malfunction of the IAS due to planned outages. A few enquiries related to the reduced quality of the specialised |

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| | services offered (IPTV), low signal coverage at a specific place or not stating the QoS parameters in the contract. |
| **DE** | End-user complaints received by BNetzA predominantly relate to the speed of IAS (see Q22). |
| **EE** | No complaints of this type received. |
| **EL** | Consumers complain mainly about speeds and poor QoS. Smaller number of complaints is about end-user equipment. |
| **ES** | 79 claims received in Telecomm Users Agency (Ministry of Economy) that are 0.57% of total claims. Speed is the typical issue. |
| **FR** | On "J'alerte l'Arcep", Arcep recorded 149 alerts over the period, relating to the obligations mentioned in Articles 3 and 4 of the OIR. These alerts do not constitute formal complaints, as they are only reports from end-users. |
| **HR** | Issues are related to bill correctness, number portability, fault repair, QoS. |
| **HU** | Such types of complaint are rare in practice. |
| **IE** | The majority of Net Neutrality queries relate to slow IAS speeds. |
| **IT** | The number of such complaints, in relation to other issues, for example billing, is quite low. |
| **LI** | No complaints received. |
| **LT** | Typical issues in end-user complaints are: consequences of contract termination, payments for services, changes to terms of service in contracts. In total, 174 complaints about IAS were received in the reporting period. |
| **LU** | Information on end-user complaints is provided in the annual report on mediation[28]. See Q22 for further details. |
| **LV** | Complaints received in 2023 divided by categories: invoices (34%), service quality (26%), contracts (8%) and other different cases (32%). |
| **MT** | MCA received only one complaint directly concerning OIR issues. |
| **NL** | Common complaints by consumers are: slow internet connections, internet malfunctioning, inadequate compensation by ISP for malfunctioning/slow internet. |
| **PL** | End-user reports regarding the QoS provided in mobile networks accounted for the largest number of reports – this is 50% of the total number of reports and slightly over 26% of reports were related to the QoS in fixed networks. |
| **PT** | In the reporting period, there were 289 complaints directly submitted to ANACOM about IAS (-31.8% compared to the previous reporting period), which represents 14% of the overall complaints regarding electronic communications services. Based only on the complaints descriptions, these complaints focused on:<br>• Service faults/malfunctioning: 64% of IAS complaints;<br>• Internet speeds below what is advertised/subscribed: 36% of IAS complaints.<br>Most of these complaints are about fixed IAS. |
| **RO** | ANCOM received 78 complaints on issues that are related to the provisions of Article 3 and Article 4(1) of the OIR, most of them about the quality of IAS (fixed and mobile). |

[28] Available at https://web.ilr.lu/mediation/FR/Mediation/Informations-utiles/Publications/Pages/default.aspx

| | |
|---|---|
| | Two end-users complained about a “zero-rating” offer of one ISP and one complaint was about possible restrictions imposed on the choice of terminal equipment. |
| **SE** | One recurring type of complaints is related to IAS speeds. |
| **SI** | There are only few complaints regarding the relevant Articles of the OIR. Most of them are about connection not reaching contracted speed. |

**Table 24. Details on the received end-users’ complaints**

# 5. Article 4(4) – Monitoring mechanisms

**Question 21.** In the reporting period, is there any change regarding NRA’s or national interpretation of “**significant discrepancy, continuous or regularly recurring**”?

If *yes*, how are these terms interpreted?

If *yes*, was the definition:

i. imposed by the NRA (e.g. using article 5(1))?
ii. voluntarily agreed upon by the market players?
iii. other, please specify.

In the reporting period, two NRAs (EL, IT) changed the existing or adopted a new interpretation of “*significant discrepancy, continuous or regularly recurring*”, as detailed in Table 25 below.

| NRA | Definition |
|---|---|
| **EL** | According to the updated national open internet regulation, there is a change in the threshold value below which the speed discrepancy is considered to be significant: regarding the FTTH/FTTB technology, significant discrepancy is defined to occur when the realistic minimum subscriber's speed is less than 90% of the minimum contracted speed (DL/UL) instead of less than 80% which was used previously. |
| **IT** | The new regulation for fixed networks (Resolution n. 156/23/CONS) allows end-users to ask for compensation if contractual IAS speeds are not met. To verify speeds, end-users must utilise the certified free measurement software Ne.me.sys. This software tests the line speed every 15 minutes over a 24-hour period. If contractual speeds are not achieved on two separate occasions within 30 days, end-users will have the option to terminate their contract without incurring additional costs.<br>This regulation was developed in consultation with a technical committee comprising operators, consumer associations, and the Ministry, and was subsequently approved by the NRA. |

**Table 25. Interpretation of “significant discrepancy, continuous or regularly recurring”**

**Question 22.** Do you **collect or monitor the number of end-user complaints about the performance of the IAS**, relative to contracted parameters (speeds or other QoS parameters)?

If *yes*, what was the level of end-user complaints received during the reporting period?

25 NRAs (AT, BE, BG, CY, CZ, DE, EE, EL, ES, HR, HU, IE, IT, LI, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK) have collected and monitored the number of end-user complaints related to the performance of the IAS in the reporting period. Additional information on this matter is summarised in Table 26.

| NRA | Information related to end-user complaints about the performance of the IAS |
|---|---|
| **AT** | Only a small number of complaints are related to questions of net neutrality, such as the blocking of certain ports or the usability of certain services, like VoIP. The majority involve instead inadequate service provision (quality issues) by ISPs; there is a decline in these complaints over the last four years, in particular regarding fixed networks, while complaints regarding mobile networks went up slightly during the reporting period. There were 87 complaints regarding mobile networks and 26 complaints regarding fixed networks, usually concerning contractual internet speed/quality issues. |
| **BE** | There was one complaint of a customer about the measured speed being too low compared to the advertised. |
| **BG** | Compared to the previous period there is a trend of an increasing number of complaints for fixed IAS, but it is not a significant increase. |
| **CY** | OCECPR received a few complaints relative to QoS parameters during the reporting period, mainly concerning fixed broadband connections. Consumers couldn't usually receive the advertised speeds of their contracts either because there was a technical limitation from ISPs' side or due to incorrect performance measurements from the consumer side. |
| **CZ** | CTU also dealt with complaints regarding the performance of the IAS, see Q20 for further information. |
| **DE** | BNetzA closely monitors the number of end-user complaints concerning the speed of the IAS, receiving approximately 2,700 complaints and requests per year. It is difficult to assess the complaints statistically since most of the consumers mix problems or report several problems at once (i.e. billing problems/ technical malfunctions/ problems with terminal devices). |
| **EE** | The number of QoS complaints is low, about 10 complaints per year. Most complaints are related to mobile data services, where QoS depends on coverage area and network load. |

| | |
|---|---|
| **EL** | In 2023, the total number of complaints about IAS performance (mainly for speeds) reported by the major ISPs was 330,534 (273,990 for fixed and 56,544 for mobile). |
| **ES** | 79 claims (0.57% of total claims) were received in Telecomm Users Agency (Ministry of Economy). Speed is the typical reported issue. |
| **HR** | HAKOM acts as a 2nd level for the resolution of complaints (complaints are first addressed to the ISPs). In the reporting period, HAKOM received 29 complaints regarding IAS QoS in fixed networks and 22 complaints regarding IAS QoS in mobile networks. In most complaints about mobile IAS which related to service quality, the main reason was poor network coverage. In the reporting period, 5 end-user complaints regarding achieved minimum speed were submitted through HAKOMetar certified tool towards ISPs. |
| **HU** | Such complaints are rare in practice. Most subscribers complain about the failure of the ISP to properly handle the fault reports they have submitted. |
| **IE** | Approx. 5% of all complaints within the period relate to net neutrality issues. |
| **IT** | AGCOM monitors the end-user complaints either sent through the NeMeSys certified measurement tool or sent directly to the NRA. They mostly concern minimum speed. |
| **LI** | No complaints received. |
| **LT** | A total of 174 complaints were received during the reporting period, of which 32 (18%) were related to quality of IAS. |
| **LU** | In the reporting period, ILR received very few (5) complaints related to a discrepancy of the provided speeds. |
| **LV** | 24% of the end-user complaints received were related to net neutrality issues. |
| **MT** | MCA received a total of 5 complaints related to the issues concerning broadband speeds. MCA observes a consistency in the figures when compared to the previous periods. |
| **NL** | ACM received 40 complaints, which were mainly related to internet speed. |
| **PL** | UKE received 256 complaints, which were mainly related to a QoS issue (mobile and fixed networks). |
| **PT** | See Q20. |
| **RO** | ANCOM received 75 complaints about the quality of IAS. |
| **SI** | AKOS received 8 complaints regarding speed (1% of all complaints). No decision was required by AKOS (5 were resolved by mutual agreement and 3 were not fit to be processed). |
| **SK** | During the monitoring period, the Authority received 8 complaints regarding the quality of internet services in relation to outages and internet connection speeds. |
| **SE** | PTS received a handful of complaints/questions. |

**Table 26. Level of end-user complaints about the performance of internet access services**

**Question 23.** In the reporting period, have there been any updates regarding your **IAS quality monitoring tool** for consumers or any respective measurement tool projects?

If *yes*, please provide details.

Six NRAs (AT, CZ, EL, FI, HU, PL) reported updates regarding their IAS quality measurement tool as summarised in Table 27 below. For further details regarding NRAs' existing measurement tools, please refer to Annex I of this report.

| NRA | Information related to IAS quality monitoring tool |
|---|---|
| **AT** | RTR is regularly updating its monitoring tool and related website, as well as collaborating with other NRAs who have similar tools (based on the source code of RTR-NetTest). The newest addition is the Desktop-App[29]. |
| **CZ** | In August 2023, the publicly available measurement tool NetTest was supplemented with an application for iOS mobile devices. Also, in December 2023, a new version of the Visualisation Portal of Telecommunications Services, so-called VPortal, was launched. This new version has been expanded to include the module for "fixed service", which shows available connections allowing provision of the IAS at a fixed location. Besides that, it also shows results of the internet speed measurements done by users via the NetTest tool. |
| **EL** | The upgrade of HYPERION, which is the existing broadband speed measurement platform of EETT, was completed in October 2023. |
| **FI** | In November 2023, Traficom imposed a technical Regulation M58, by which it verified the Bittimittari.fi service's quality measurement as the certified mechanism as set in the Article 4(4) of the OIR for IAS speeds of up to 100/100Mbit/s (download/upload). |
| **HU** | NMHH's broadband speed measurement tool ("SZÉP") can now measure buffer bloat (two-way delay on almost saturated links). |
| **PL** | Technical updates not modifying the functionality of the system - Additional mechanisms for reading the CPU load using the GetSystemTimes function were introduced. |

**Table 27. Information related to IAS quality monitoring tool for consumers**

[29] Available at https://www.rtr.at/TKP/service/rtr-nettest/help/Desktop_App.en.html

# 6. Article 5(1) – Supervision and enforcement

**Question 24.a.** Is there any change compared to the previous reporting period regarding to the **approach** you have taken **to measure the availability of high-quality IAS** (see recital 19 of the OIR)?

If *yes*, please provide details.

**Question 24.b.** Please specify what **approach** you have taken **to measure the availability of high-quality IAS**:

i. market survey without requesting information from ISPs;
ii. information request from ISPs;
iii. analysis of complaints and end-user reporting;
iv. technical network monitoring;
v. other, please specify.

One NRA (IE) reported a change compared to the previous reporting period regarding the approach to measure the availability of high-quality IAS. In particular, ComReg has recently released a public facing tool (ComReg Broadband Checker[30]) which provides a one-stop-shop for information on which ISPs serve a given address, and what speeds are available. Underpinning this is the introduction of a new level of data collection from ISPs.

The NRAs responses suggest that the most popular approaches to monitoring the availability of high-quality IAS are through analysis of end-user complaints (15) and through information requests from ISPs (13). Furthermore, several NRAs also did technical network monitoring (9) as well as conducting a market survey without requesting information from ISPs (7).

Additionally, 13 NRAs (AT, BE, BG, DE, FI, FR, HR, HU, IT, LU, NO, PL, RO) further specified how they measure the availability of high-quality IAS. Most of those NRAs (AT, DE, HR, HU, LU, NO, RO) use a crowdsourced tool (please refer to Question 25 for further details). Others rely on drive tests (BE, BG, IT) or specific measurement methodologies based on end-user complaints (FI). Not all measurement systems measure only upload and/or download speed: some measure the speed in relation to the contractual speed (DE) or the mobile signal coverage and/or other quality of service parameters besides speed (FR, IT, RO).

Furthermore, NRAs of three Member States conducted the following activities:

- **NO:** Nkom has applied BEREC's methodology for assessing the general quality of IAS in case of 4G and 5G networks combined in Norway.

[30] Available at https://www.comreg.ie/broadbandchecker/

- **PL:** As conducted annually, UKE purchased a specific report on the quality of IAS.
- **RO:** ANCOM monitors the availability of high-quality of the IAS by publishing annual reports on the quality of the IAS and, every six months, statistics (on Netograf.ro) on the quality of the fixed and mobile IAS. Also, it publishes a map, which reflects, among other things, the mobile signal coverage for all technologies available (2G/3G/4G) at the time of measurements made by ANCOM. In April 2024, ANCOM started a new monitoring campaign to update the map, check inadvertent roaming and data transfer in some large cities.

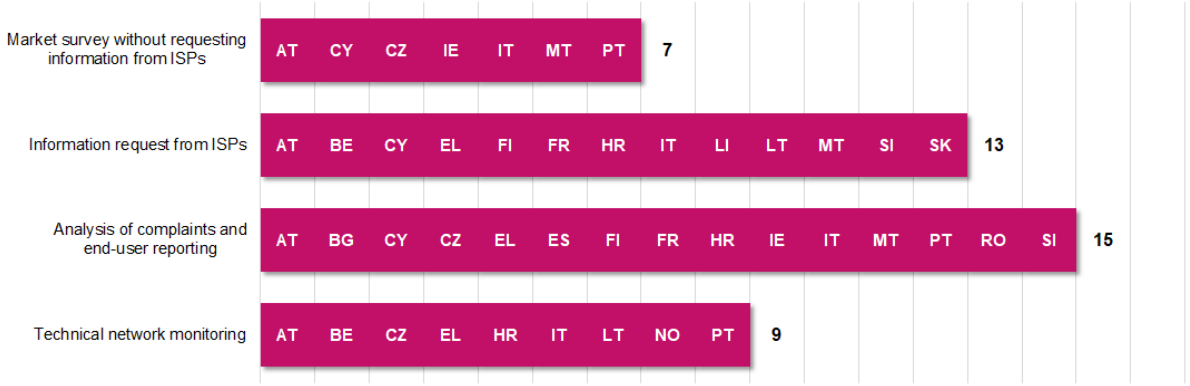


**Figure 5. Approaches to monitor the availability of high-quality IAS**

**Question 25.** If you performed measurements of IAS quality during the reporting period, please report the main findings in relation to the provisions of the OIR.

In the reporting period, 15 NRAs (AT, BE, BG, CZ, DE, EL, HR, HU, IT, LT, LU, NO, PL, PT, RO) were able to present results from these measurements. All but two NRAs (CZ, EL) shared information concerning mobile services. All but three NRAs (BE, BG, LU) showed that the speeds for mobile networks are increasing, often with more than 20% even with a maximum of 48%. However, because this data is most often based on crowdsourced tools, multiple NRAs cautioned not to draw strong conclusions from these measurements as most probably, dissatisfied end-users are mostly prevalent in these measurements.

Where data was available (AT, CZ, DE, EL, HR, HU, LU, NO, PL, PT, RO), similar conclusions were drawn for speed measurements in fixed networks: often increases with more than 10% were observed with a maximum of 28% (HR).

| NRA | Main findings of measurements of IAS quality |
|---|---|
| **AT** | Since 2012, RTR has offered the RTR-NetTest[31], a crowdsourced open data and open source measurement tool which allows measuring different QoS parameters, including blocking of UDP and TCP ports. RTR observed, based on the measurement data[32], a basically positive development in the availability of non-discriminatory IAS during the reporting period. Download and upload speeds have also seen further improvements in the same period. Compared with the first quarters of 2023 and 2024, similar median values were recorded for 3G, 4G and 5G: for 3G, the median download speed in Q1/ 2024 was 8 Mbps, with 50 Mbps for 4G and 188 Mbps for 5G. For (wireless) LAN, median figures rose instead by 25%, from 40 Mbps in Q1/2023 to 51 Mbit/s in Q1/2024. RTR concludes that the availability of non-discriminatory IAS at levels of quality that reflect advances in technology (requirement in Article 5(1) of the OIR) was ensured in Austria over the reporting period. |
| **BE** | BIPT performs some test measurements (QoS-2) on mobile networks, but not in the context of the provisions of the OIR.<br>Results of the drive tests show an average download speed of 107 Mbit/s and upload speed of 27 Mbit/s for services, based on 5G. For services on 4G, the average download speed was 70 Mbit/s and 22 Mbit/s for the upload speed. For 4G services, this is a decrease of 5% compared with 2022, attributed to the increased strain on the network.<br>QoS train tests on the busiest train routes in Belgium were also conducted, resulting in average down- and upload speeds of 69 Mbit/s and 19 Mbit/s respectively. For services relying purely on 4G, these average speeds were 44 Mbit/s and 16 Mbit/s respectively. For upload speed, this is a decrease of 13% compared with 2022, again attributed to the increased strain on the network.<br>BIPT has no information regarding fixed services. |
| **BG** | The results show availability of services with good coverage and quality, however no comparison with 2022 could be made. |
| **CZ** | The main finding for the monitored period is the increase in an average performance of the IAS at a fixed location, where the services' performance reached in download the average value of 90.17 Mbit/s, which is an increase of 18 Mbit/s compared to the previous period and indicates a continuously increasing quality of the IAS at a fixed location. |
| **DE** | End-user measurements are covered in annual reports. A reporting period runs from October in one year to September in the following year.<br>Fixed broadband connections: |

[31] Available at https://www.netztest.at

| | |
|---|---|
| | In the period from October 2022 to September 2023, the proportion of users across all bandwidth categories and ISPs whose fixed broadband connection had a download speed at least half of their contractually agreed maximum speed was 85.5% (2021-2022: 84.4%); the proportion of users whose connection had a speed equivalent to or higher than their contractually agreed maximum speed was 43.5% (2021-2022: 42.3%). The results differ especially with respect to bandwidth categories and ISPs.<br>Based on the speeds measured as a percentage of the contractually agreed speeds, upload performance was on a similar level compared with the download performance. Looking at ISPs' latency times, the best results were achieved especially in higher bandwidth categories. Low latency plays a particularly important part in performance for video calling and online gaming.<br>Mobile broadband connections:<br>Mobile broadband performance was again considerably lower than fixed-line broadband. The proportion of users across all bandwidth categories and ISPs whose connection had a download speed at least half their contractually agreed estimated maximum speed was 25.5% (2021-2022: 23.2%); the proportion of users whose connection had a speed equivalent to or higher than their contractually agreed estimated maximum speed was 4.0% (2021-2022: 3.0%). Again, results differ especially with respect to bandwidth categories and ISPs.<br>Based on the speeds measured as a percentage of the contractually agreed estimated maximum speeds, upload performance was similar to download performance. The latency measured on mobile broadband connections was noticeably higher than on fixed broadband connections. |
| **EL** | Country-level results for fixed broadband speed measurements in 2023 collected from the NRA's online platform HYPERION (increase percentages are with respect to 2022):<br>• Mean: 76.91 Mbit/s download (+60.4%), 12.58 Mbit/s upload (+72.90%)<br>• Median: 58.18 Mbit/s download (+46.1%), 8.5 Mbit/s upload (+35.4%) |
| **HR** | The data gathered from HAKOMetar Plus mobile app (crowdsourced tool for mobile/WLAN networks) and HAKOMetar desktop app (certified tool for fixed networks) showed that the vast majority of the users, who have performed the measurements using HAKOMetar, are achieving at least the minimum speeds defined by the Ordinance. Furthermore, the results indicate that end-users experienced increasing fixed and mobile download speeds, compared to the previous reporting period.<br>Speed for fixed internet (LAN):<br>• average download speed increased from 250 Mbit/s to 319 Mbit/s<br>• average upload speed increased from 141 Mbit/s to 193 Mbit/s<br>Speed for mobile internet (4G & 5G):<br>• average download speed increased from 112 Mbit/s to 118 Mbit/s<br>• average upload speed increased from 20 Mbit/s to 22 Mbit/s |

| | |
|---|---|
| | These results from the HAKOMetar Plus show that the overall quality of IAS in the country is constantly increasing.<br>Also, in 2024, HAKOM performed measurements of mobile IAS QoS by drive-tests. The measurement campaign covered 31 cities and 5,000 kilometers of roads and highways in Croatia, that is, the area where more than 50% of the total population or approximately two million inhabitants live. The measurement showed that the performance of Croatian mobile networks is still very high and that operators continued to invest in development and increased transmission capacities and quality while simultaneously investing in new technologies. The measurement report on the QoS in mobile networks is available on the HAKOM website[33]. |
| **HU** | NMHH observed that download speeds increased in the reporting period compared to the previous one. The average download speed for fixed IAS was 476.5 Mbit/s (increase: 15.4 Mbit/s). For mobile IAS, the average download speed was 28.3 Mbit/s (increase: 5.1 Mbit/s). |
| **IT** | For mobile networks, the measured static urban download average speed is 339 Mbit/s (+26% compared to the previous year) and the measured static dynamic download average speed is 227 Mbit/s (+20% compared to the previous year). Figures for fixed networks are not available. |
| **LT** | The download speeds are increasing, especially in mobile networks with the roll-out of 5G. In 2023, the average download speed in mobile networks was 142 Mbit/s (an increase of 37% from 2022 when it was 104 Mbit/s).<br>As for fixed IAS, the majority (80%) of the end-users are connected via optic fiber. RRT does not measure the average speed for fixed connections for the whole country, as the main determinant for speed is the chosen subscription plan. 70% of all fixed IAS end-users have data speeds in the range of 100 Mbit/s to 1 Gbit/s. The number of fixed IAS subscriptions that are over 100 Mbit/s increases constantly, however only 2.7% of fixed IAS subscriptions are over 1Gbit/s. |
| **LU** | Since 2018, ILR offers a crowdsourced measurement tool[34]. Around 33,000 measurements were performed during the reporting period (corresponding to a reduction of around 30% when compared to the previous reporting period).<br>A continuous increase in download and upload speeds can be observed in fixed networks with an average download speed of 176 Mbit/s (average annual increase of 18%) and an average upload speed of 109 Mbit/s (average annual increase of 27%) over the reporting period.<br>In mobile networks, the values are rather stable with a very slight decrease in both down download and upload speeds. In the given period, the average download speed was 139 Mbit/s (average annual decrease of 1%) and the average upload speed was 28 Mbit/s (average annual decrease of 3%).[35] |

[33] Available at https://www.hakom.hr/UserDocsImages/2024/dokumenti/Kvaliteta%20mre%C5%BEe%202024.pdf?vel=15200746
[34] Available at www.checkmynet.lu
[35] Further information is available at https://assets.ilr.lu/telecom/Documents/ILRLU-1461723625-999.pdf

| | |
|---|---|
| **NO** | • Fixed networks: average speeds (download/upload) as per 2024 are 151/131 Mbit/s. In 2023, corresponding speeds were 141/127 Mbit/s.<br>• Mobile networks (4G/5G): average speeds (download/upload) as per 2024 are 152/25 Mbit/s. In 2023, corresponding speeds were 148/24 Mbit/s. |
| **PL** | As conducted annually, UKE purchased a specific report on the quality of IAS.<br>The average download speed in fixed networks, compared to 2023, increased from 109 Mbit/s to over 130 Mbit/s in 2024, which is an increase of approximately 20%.<br>Also in mobile networks, an increasing trend in average download speeds can be observed among most ISPs. Compared to 2023, the speed increased from 46.1 Mbit/s to 68.8 Mbit/s in 2024, which is an increase of approximately 48%. |
| **PT** | During the period covered by the questionnaire, ANACOM published two quarterly reports of 2023 and the 2023 annual report, based on the main results of the tests ran by NET.mede users. It is worth mentioning in that regard that, in 2023, NET.mede users ran around 663 thousand tests on the speed of IAS (less 79 thousand tests compared to 2022), via web browser or the NET.mede application, 65% and 26% of which were carried out, respectively, on fixed and on mobile accesses, while the remainder came either from accesses identified as non-residential, from foreign operators or undefined.<br>Regarding the tests carried out on NET.mede in 2023, through a web browser or through the application, in half of the tests (median) it was found:<br>• a download speed of 158 Mbps or more, in fixed residential accesses, and of 17 Mbps or more, in mobile accesses;<br>• an upload speed of 94 Mbps or more, in fixed residential accesses, and of 8 Mbps or more, in mobile accesses;<br>• a latency of 13 milliseconds (ms) or less, in fixed residential accesses, and of 36 ms or less, in mobile accesses.<br>Compared to 2022, there is thus an overall improvement, both in fixed and mobile accesses, with increases in download and upload speeds. The exception was the median latency value, which remained the same compared to 2022.<br>ANACOM has also continued its studies to evaluate mobile service performance and coverage of GSM, UMTS and LTE, including IAS, based on drive-tests, carried out by experts from ANACOM. In this regard, ANACOM published, in the period concerning the questionnaire, several studies concerning municipalities (in the mainland and islands). |
| **RO** | The tests performed on Netograf indicate that, in 2023, Romanian end-users experienced increases in fixed and mobile download speeds, compared to 2022. The average download speed for fixed IAS increased from 331 Mbit/s in 2022 to 381 Mbit/s in 2023. The average download speed for mobile IAS slightly increased from 38 Mbit/s in 2022 to 39 Mbit/s in 2023. |

**Table 28. Main findings of measurements of IAS quality**

# 7. Article 6 – Penalties

**Question 26.** In the reporting period, were there any changes in the rules on penalties to infringements of articles 3, 4, and 5 pursuing to article 6 of the OIR you apply?

If *yes*, please provide details.

In the reporting period, no NRA reported any changes in the rules on penalties to infringements of the OIR. Since years ago, all NRAs have the possibility of imposing penalties in cases of infringements of the abovementioned Articles, which is proportionate and may amount to a maximum of 10% of the most recent annual turnover of an undertaking.

# 8. Other relevant information

**Question 27.** Related to the OIR, regarding the reporting period, are there any **other relevant information** (not mentioned before) that you would like to share? Have there been any of the following?

i. new court proceedings;

ii. NRA's regulatory decisions;

iii. updates to cases reported previously;

iv. internal or external implementation actions;

v. guidance (of e.g. NRA, ministry) on additional transparency or information requirements on ISPs;

vi. any additional remedies for consumer redress in relation to non-conformance of IAS with the contract terms;

vii. other, please specify.

*Updates on court proceedings*

Regarding the national cases, two Member States (IT, RO) reported updates as listed below.

| NRA | Updates on court proceedings |
|---|---|
| **IT** | On 2 August 2018, AGCOM published a decision stating that end-users have the right to freely choose their broadband router (AGCOM Resolution no. 348/18/CONS). According to AGCOM, ISPs cannot require end-users to rely |

| | |
|---|---|
| | exclusively on the router supplied by the ISP itself. This decision was appealed and the appeal procedure is pending. With sentences n. 1200/2020 and n. 1201/2020, the Lazio Regional Administrative Court confirmed the lawfulness of the provision of article 5, paragraph 1 of resolution n. 348/18/CONS. The sentences were appealed to the Council of State. On 2 August 2021, the Council of State rejected the request to modify the previous decision n. 1200/2020. On 11 January 2024, the Council of State rejected the request to modify the previous decision n. 1201/2020. |
| **RO** | The Telekom Mobile Romania "Bonus Net Nelimitat" case reached the High Court of Cassation and Justice in Romania (ICCJ), the last level of jurisdiction in this case. As a result of Telekom Mobile's request, the Court considered necessary to address a preliminary question to the ECJ, to clarify the interpretation of the provisions of Article 3 of the OIR. The case was registered under Case C-367/24. More precisely, the ICCJ decided, in April 2024, to ask the ECJ to answer the question whether: "*Article 3 of the [Open Internet Regulation] is to be interpreted as meaning that a tariff option launched by a telecommunications service company that allows end customers who have accessed it to use free of charge all video streaming services, regardless of the content providers from which they originate and regardless of whether or not they have the quality of content partners of the telecommunications service company, without the volume of data consumed through the use of these services being included in the volume of data provided monthly by the mobile phone tariff, but with a bandwidth limitation for this type of content, is compatible with the obligations arising from these provisions?*" The case is ongoing before the ECJ. |

**Table 29. Updates on court proceedings related to open internet**

*New court proceedings*

In the reporting period, only AT reported a *new court proceeding*: While Hutchison Drei Austria GmbH ("Drei") advertised maximum speeds of 10 Mbit/s and 40 Mbit/s for fixed and/or mobile IAS on its website, the actual speed available was only half as fast according to the T&Cs of the contract. The Association for Consumer Information (VKI) therefore filed a lawsuit on behalf of the Ministry of Social Affairs for misleading advertising[36]. The Austrian Supreme Court (Oberster Gerichtshof – OGH) clarified: Even indications that the speeds are maximum values ("up to" information) do not eliminate the misleading effect.

*New regulatory decisions*

In the reporting period, two Member States (EL, PL) reported *new regulatory decisions* as listed below.

[36] https://verbraucherrecht.at/VKI-Erfolg%20gegen%20Hutchison%20Drei

| NRA | New regulatory decision |
|---|---|
| **EL** | EETT issued a new national open internet regulation on 15 January 2024 (EETT Decision 1097/4B/15-1-2024). The new regulation incorporates changes on differentiated pricing, pre-contractual information provided to consumers about the actual speeds, mobile speed classes and speed maps, and management of customer complaints on discrepancies from the speeds announced in the contracts. It included several transition periods (2 months for changes in differentiated pricing, 6 months for precontractual information and 12 months for changes in mobile speed classes and speed maps. |
| **PL** | After inspecting one of the largest ISPs in terms of users for compliance with the provisions of Article 3(3) and Article 5(2) of the OIR in the period from 2017 to 2019, by decision of 3 April 2024, President of UKE waived the penalty and instructed the ISP to act in accordance with the OIR. The President of UKE issued post-inspection recommendations in which mobile ISPs were required to cease providing zero-rating offers, which was recognised by the ECJ as discriminatory and contrary to the idea of an Open Internet. |

**Table 30. New regulatory decisions related to open internet**

*Other actions*

In the reporting period, ILR sent questionnaires to the major ISPs to gather information on the transition from IPv4 to IPv6 in Luxembourg.

In the context of the EU sanctions to ban Russian media outlets, Traficom updated its guidance for ISPs. In October 2023, ILR sent a request to ISPs to gather information related to the blocking of specific websites pursuant to the EU sanction regulations by the ISPs. As divergences in the implementation of these regulations were observed, ILR sent further clarifications to the ISPs to remedy the situation. In general, BEREC and its NRAs continued sharing information between NRAs.

As a reminder, NRAs' first actions related to the EU sanctions to ban Russian media outlets were already taken in 2022. More precisely, in March 2022, the first restrictive measures, aimed at banning specific Russian media outlets, were taken at EU level in light of Russia's actions destabilising the situation in Ukraine. In the 2022 iteration of its Implementation Report, BEREC informed that it had clarified, in March 2022, that the OIR allows ISPs to take traffic measures to block specific content, applications, or services in order to comply with Union legislative acts. BEREC also clarified that the Regulation (EU) 2022/350[37], which prohibits broadcasting or distribution of any content by Russian state media outlets Russia Today (RT)

[37] Council Regulation (EU) 2022/350 of amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine.

and Sputnik within the EU, is a legal Act that falls within the scope of the exceptions in Article 3(3) of the OIR.

In the same report, BEREC indicated that even though no NRA has a specific mandate to enforce the EU sanctions, BEREC NRAs helped ISPs to comply with the measures related to Regulation (EU) 2022/350. BEREC also provided a forum for NRAs to share information and to enable the consistent application of the OIR.

Since then, further sanction regulations were enacted extending the restrictive measures to the following entities:

- Rossiya RTR / RTR Planeta, Rossiya 24 / Russia 24 and TV Centre International, according to Regulation (EU) 2022/879[38];
- NTV/NTV Mir, Rossiya 1, REN TV and Pervyi Kanal, according to Regulation (EU) 2022/2474[39];
- RT Arabic and Sputnik Arabic, according to Regulation (EU) 2023/427[40];
- RT Balkan, Oriental Review, Tsargrad, New Eastern Outlook and Katehon, according to Regulation (EU) 2023/1214[41] adopted in the reporting period from 1 May 2023 to 30 April 2024.

[38] Council Regulation (EU) 2022/879 of 3 June 2022 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine.
[39] Council Regulation (EU) 2022/2474 of 16 December 2022 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine.
[40] Council Regulation (EU) 2023/427 of 25 February 2023 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine.
[41] Council Regulation (EU) 2023/1214 of 23 June 2023 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine

# Annex I: Summary of national rules, guidance, measurement tools and court cases

Annex I describes the relevant national rules, regulations and specifications in force, internet access quality monitoring tools provided and OIR-related court proceedings based on the NRA responses to former questions 14, 15, 19, 22, 25 and 31.

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| **Former Question 14** (now Questions 13.a[42] and 13.b[43])**.** Have any national specifications been set in relation to the different types of speeds laid out in article 4(1), sub d, which have not yet been mentioned in the previous BEREC OI Implementation Questionnaire? Y/N<br>If *yes*, please provide details.<br>Were these requirements:<br>• imposed by NRA or other competent Authority?<br>• agreed upon by market players? |
| **Former Question 15** (now merged with Q.13.b)**.** Are these requirements or the NRA's opinion/recommendation legally binding? |

Specifications set

National specifications in relation to different types of speeds have been set in 17 Member States (AT, BE, BG, CY, CZ, DK, EL, FI, HR, IT, LT, LV, MT, NL, RO, SI, SK). There is a variety of institutional settings on how specifications are set. In 15 cases (AT, BE, BG, CY, CZ, EL, FI, HR, LT, LV, MT, NL, RO, SK, SI), this involved activities by the NRA, which takes the form of recommendations, secondary legislation or decisions. In one case, they were agreed upon by market players (DK), but there are also cases where the agreement by market players comes along with legally binding specifications (IT).

Seven NRAs (BG, CY, FI, HR, LV, SI, SK) used percentage values by defining minimum and normally available speeds as a percentage of the maximum speeds, as presented in Table 31.

[42] **Q.13.a.** In the reporting period, have any new **national specifications** been set or changed in relation to the **different types of speeds** laid out in article 4(1), sub. d.? If *yes*, please provide details.
[43] **Q.13.b.** Were these requirements:
i. imposed by the NRA or another competent Authority?
ii. agreed upon by market players?
iii. legally binding?

| NRA | Specification of speeds by the use of percentages | Achievability of speeds |
|---|---|---|
| **BE** | Normally available upload and download speed: speed the end-user can expect during at least 95% of the time. | • Minimum upload and download speed: speed below which the ISP will never go, except in case of interruption of the connection<br>• Maximum upload and download speed: speed the end-user may expect to receive in principle at least once a day. |
| **BG** | The normally available speeds should be 80% of maximum speed. | Normally available speed should be available 80% of the time over 24 hours. |
| **CY** | ISPs are obligated to specify in their contracts:<br>• as far as fixed networks are concerned, minimum, standard and maximum speed, in percentage of advertised speed;<br>• as far as mobile networks are concerned, where applicable, the advertised speed, in percentage to the estimated maximum speed. | ISPs are required to set the time periods within the day in which maximum speed is achieved, the periods expected to reach normally available speed, and the periods when speed may be limited to the minimum. |
| **EL** | ISPs can perform individual measurements at subscriber connection or aggregate measurements over a geographical area (e.g. municipality, or area defined by local exchange). The measurement sample should not be older than 1 year and estimates should be defined by confidence intervals with confidence level ≥ 95%. Based on the measurement sample, the minimum, maximum and normally available speeds are defined as follows:<br>• Minimum speed 5% of measurements during peak hours<br>• Maximum speed 95% of measurements during non-peak hours<br>• Normally available speed 50% of measurements during peak hours | Peak hours from 19:00 to 23:00 for residential users, and from 09:00 to 17:00 for non-residential (business) users.<br>ISPs are free to provide different intervals for peak hours, based on the actual usage of their networks. |

| | | |
|---|---|---|
| **FI** | Requirements set for subscriptions with the maximum speed ≤ 100 Mbit/s:<br>• Minimum speed must be at least 70% of maximum speed<br>• Normally available must be at least 90% of maximum speed | Normally available speed should be achieved 90% of the time during each four-hour period. |
| **HR** | • Minimum speed ≥ 70% of max. speed<br>• Normally available speed: not specified because of the high threshold for minimum speed | |
| **IT** | For fixed networks:<br>• Minimum speeds: "95 quantiles" of download/upload data transmission speeds measured during the entire observation interval, i.e. the measured values for which 95% of the transfer speeds recorded during the observation period are greater than these values.<br>• Normally available speeds: "75 quantiles" of download/upload data transmission speeds measured during the entire observation interval, i.e. the measured values for which 75% of the transfer speeds recorded during the observation period are greater than these values.<br>• Maximum speeds: maximum values of download/upload data transmission speeds measured during the entire observation interval.<br>Average and standard deviations are also calculated and published. | The measurement time interval is 6 months for statistical comparative values and 24 hours for single users' lines. Measures are sampled every 15 minutes. |
| **LT** | • Minimum speed is such speed that ensures the provision of IAS;<br>• Normally available speed is calculated as 80$^{th}$ percentile of all speed values measured;<br>• Maximum speed is calculated as 95$^{th}$ percentile of all speed values measured. | |
| **LV** | <u>Fixed network:</u><br>• maximum (advertised) speed; | <u>Fixed network:</u> |

| | | |
|---|---|---|
| | • normally available speed must be at least 70% of maximum (advertised) speed and not less than the minimum speed value set by the NRA;<br>• minimum guaranteed speed must be at least 20% of maximum (advertised) speed and not less than the minimum speed value set by the NRA.<br><u>Mobile network:</u><br>• maximum (advertised) speed;<br>• the minimum guaranteed speed must be not less than the minimum broadband internet access service connection speed value set by the NRA, at the fixed-service receiving location within the ISP's designated coverage area in the mobile network, within the end-user's premises or household, if the internet access service is provided using a router-modem. | • Normally available speed must be accessible to the end-user at least 95% of the time within a 24-hour period.<br>• Minimum speed for the fixed network should be at least 6 megabits per second for download speed and at least 2 megabits per second for upload speed.<br><u>Mobile network:</u><br>• Minimum guaranteed speed for both download and upload directions, at the fixed-service receiving location within the ISP's designated coverage area in the mobile network, within the end user's premises or household, using a router-modem, should be at least 2 megabits per second. Minimum guaranteed speed must be accessible to the end-user at least 95% of the time within a 24-hour period.<br>In other cases, ISPs determines the minimum guaranteed speed value. |
| **NL** | ISPs are obligated to specify in their contracts internet speeds on fixed networks:<br>• Minimum speed<br>• Normally available speed<br>• Maximum download speed | • The measured speed can never be below the minimum speed, except if a situation occurs as described in Section 7.1a of the Dutch Telecommunications Act.<br>• The normally available speed must be reached in at least eight out of ten measurements of an internet access service that an end-user conducts in a single week. The measurements should be spread out evenly across at least three days in said week and can be done at any given time during the day, but that no more than one measurement per hour can be counted.<br>• At least 90% of the maximum speed is reached in one of the ten measurements that an end-user conducts in a single week. |

| | | |
|---|---|---|
| **MT** | All fixed broadband ISPs are obliged to include in their contracts a metric termed Typical Speed Range (TSR). | An NRA decision published in 2016 defines the TSR as a metric with which the ISP indicated the expected performance of a fixed broadband connection. The TSR is expressed as a range between two figures - the minimum and maximum speeds. Therefore, a broadband connection is expected to perform within the declared TSR. The Decision also states that in those cases where the headline speed includes a numerical figure to describe speed, the IAS provider is expected to provide a connection which can physically achieve the stated headline speed. The same rules apply to broadband services which are marketed as fixed, even if these are offered through mobile infrastructure. |
| **SI** | • Minimum speed must be at least 50% of the maximum and at least 25% of the maximum inlet and outflow speed using FWA access.<br>• Normally available speed must be at least 80% of the maximum incoming and outgoing connection speed. In the case of FWA access, the normally available speed must be at least 50% of the maximum speed. | • Normally available speed: at least 90% of the time of the day outside peak hours<br>• Maximum speed: achievable at least once per day<br>• Minimum speed: lowest actual data transfer speed from the server or to the server (except for network failures) |
| **SK** | • Minimum speed: ≥ 40% of maximum speed<br>• Normally available speed: ≥ 90% of maximum speed<br>• Advertised speed: recommended to be applied so that it allows to evaluate advertised speed against real performance of internet access service | • Normally available speed: 90% of any continuous 4-hour measurement period<br>• Maximum speed: at least once between 00:00 and 24:00 |

**Table 31. Specification of speeds by the use of percentages and achievability of speeds**

Legally binding or informal

In 12 of the 16 Member States (BE, CY, CZ, DK, EL, HR, IT, LV, MT, NL, RO, SI) that have set national specifications, the requirements or NRAs' opinion/recommendation were legally

binding. In the remaining Member States (AT, BG, FI, SK), the specifications or requirements were not legally binding.

**Former Question 19** (now Question 18[44])**.** Have you imposed additional transparency requirements regarding the publication of information referred to in article 4(1), subs 1 a-e?

If *yes*, please provide details of the requirements.

Eight NRAs (AT, BE, BG, DE, EL, IT, LT, SI) have imposed additional transparency requirements regarding the publication of information referred to in Article 4(1), subparagraphs 1 a-e, as summarised in Table 32 below.

| NRA | Additional transparency requirements |
|---|---|
| **AT** | • On an informal level, transparency requirements are regularly discussed with ISPs.<br>• RTR had/has bilateral meetings with ISPs, which also cover issues regarding the OIR and the accompanying BEREC OI Guidelines.<br>• Also, the regular exchange between ISPs and RTR concerning different matters of telecommunications (including OI issues) is ongoing. Within this forum, RTR presents the latest developments regarding OI to the ISPs, and ISPs are welcome to present their views.<br>• Furthermore, there are some non-binding templates/recommendations for ISPs, available on RTR's website. |
| **BE** | On 23 February 2022, BIPT published guidelines on the use of the term "unlimited internet" in commercial communications of ISPs. BIPT acknowledges that a fair use policy (FUP) can define the limits of the "fair use" to guarantee high-quality internet to all of the network's customers. BIPT, however, finds that ISPs may only use the term "unlimited" for tariff plans where the data volume allows most of the customers to access to the internet without speed restrictions. BIPT thinks that for fixed internet the limit in the FUP should be set at a monthly data volume of at least 3 terabytes, while in the case of mobile internet this is 300 gigabytes.<br>The matter of transparency is also dealt with by the BIPT Guidelines. These Guidelines state that in pre-contractual and contractual documents and on the ISP website clear, easy to understand and to access, precise and up-to-date information needs to be given on the FUP and on what the FUP means in practice. In addition, the Guidelines state that if the FUP is applied, only speed reductions are admissible, not blocking the "unlimited" IAS offer. |

[44] **Q.18.** In the reporting period, have you imposed any new **additional transparency requirements** or changed the existing ones regarding the publication of information referred to in article 4(1), subs. 1 a-e? If *yes*, please provide details of the requirements.

| | |
|---|---|
| | Finally, there is a review clause in the Guidelines to adjust the thresholds where appropriate. |
| **BG** | In its Position, CRC expressed its view about publishing the information referred to in Article 4(1) (b) of the OIR, regarding the consequences of IAS' speed reduction when the data cap is exceeded. The Position of CRC elaborates what this information should include and the way it should be presented in the contracts/ general conditions and on the ISPs' websites. |
| **DE** | The ordinance for framework provisions on the promotion of transparency, publication of information and additional facilities for cost monitoring on the telecommunications market entered into force on 1 June 2017. From that date on, the ordinance obliges fixed and mobile ISPs to provide more transparency when offering IAS. |
| **EL** | The EETT Decision 876/7B/17-12-2018 includes more detailed transparency requirements regarding the publication of information referred to in Article 4(1), subparagraphs 1 a-e of the OIR. Apart from the requirements on contractual speeds, the remaining requirements entered into force on 5 June 2020. The transparency requirements for contractual speeds entered into force on 25 November 2020, for fixed networks, and on 1 March 2021, for mobile networks. |
| **IT** | AGCOM (by virtue of a competence attributed by the Decree Law of 16 October 2017, n. 148 art. 19 quinquiesdecies), adopted a resolution (n. 292/18/CONS) regarding the definition of the technical characteristics and the corresponding names of the various types of physical infrastructure used for the provision of telephone services, television networks and electronic communications.<br>With this provision, AGCOM proposed some transparency measures in the broadband and ultra-broadband retail offers, requiring the operators to make clear the physical architecture through which the respective fixed access services are offered, as well as the quality of service that the user could experience. The definitions and technical characteristics of the access network architectures are introduced at the same time. |
| **LT** | In connection to transposing the EECC into national law, new rules for publication of QoS parameters were approved. For the IAS, operators must publish not only the information about QoS parameters referred to in Article 4(1), subparagraphs 1 a-e of the OIR, but also latency, jitter and packet lost ratio. |
| **SI** | Based on the General Act (legally binding since autumn 2019), AKOS requires ISPs to communicate to end-users the information regarding speeds on monthly bills, user portals or any other adequate transparent way that allows the user to get acquainted with this information at any time and in each billing period. |

**Table 32. Introduction of additional transparency requirements**

**Former Question 22** (now Question 21[45])**.** Is there an NRA or national interpretation of "significant discrepancy, continuous or regularly recurring"?

If *yes*, how are these terms interpreted?

If *yes*, was the definition:

i. imposed by the NRA (e.g., using article 5(1)),
ii. voluntarily agreed upon by the market players
iii. other_____

13 NRAs (BG, CY, CZ, DE, EL, ES, HR, IT, LV, MT, PL, RO, SI) gave a material interpretation of "*significant discrepancy, continuous or regularly recurring*", as can be seen in Table 33 below.[46]

| NRA | Interpretation |
|---|---|
| **BG** | • Significant continuous discrepancy – two consecutive weeks in one billing period;<br>• Regularly recurring discrepancy – more than one temporary discrepancy;<br>• A temporary discrepancy – three consequent days in one billing period. |
| **CY** | Non-compliance if results of measurements over three consecutive days show that the speed received by the end-user is less than or equal to 80% of the minimum or normally available speed specified by the ISP. |
| **CZ** | • For the IAS at a fixed location, significant continuous discrepancy from the normally available speed shall mean a continuous decrease in the actually achieved speed below the defined value of the normally available speed in an interval longer than 70 minutes. Regularly recurring discrepancy from the normally available speed shall mean a discrepancy at which the actually achieved speed decreases at least three times below the defined value of the normally available speed in an interval longer than or equal to 3.5 minutes in a time range of 90 minutes.<br>• For the mobile IAS, significant continuous discrepancy from the advertised speed shall mean a continuous decrease in the actually achieved speed below 25% of the value of the advertised speed in an interval longer than 40 minutes. Regularly recurring discrepancy from the advertised speed shall mean a decrease in the |

[45] **Q.21.** In the reporting period, is there any change regarding NRA's or national interpretation of "**significant discrepancy, continuous or regularly recurring**"? If *yes*, how are these terms interpreted?
If *yes*, was the definition:
i. imposed by the NRA (e.g. using article 5(1))
ii. voluntarily agreed upon by the market players
iii. other, please specify

[46] See the 2020 iteration of this report, which illustrates those cases where there was already such an interpretation, https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8256-report-on-the-implementation-of-regulation-eu-20152120-and-berec-net-neutrality-guidelines

| | |
|---|---|
| | actually achieved speed at least five times below 25% of the value of the advertised speed in an interval longer than or equal to 2 minutes in a time range of 60 minutes. |
| **DE** | Legal basis entitling the consumer to reduce the contractually agreed fee (§57 (4) TKG); interpretation by binding notice by BNetzA (according to §57 (5) TKG). The binding notice specifies the non-conformity regarding fixed down- and upload speeds if one of these cases occurs:<br>• 90% of the contractually agreed maximum speed is not achieved at least once at two out of three measurement days;<br>• the normally available speed is not achieved in 90% of the measurements;<br>• the speed falls below the contractually agreed minimum speed at least two out of three measurement days.<br>• By measuring with the broadband monitoring mechanism, the following requirements need to be considered:<br>• 30 measurements must be performed;<br>• The measurements must be taken on three separate days with at least one day without measurements in between those days<br>• The number of measurements is to be spread equally over the three measuring days, so that 10 measurements are taken on a specific day;<br>• Measurements can be conducted not closer than every five minutes, between the fifth and sixth measurement of a day there has to be a break of at least three hours<br>• The 30 measurements have to be conducted within 14 days<br>• The measurements must be taken using a LAN connection;<br>• The measurements are to be carried out using the installable version of the NRA's broadband monitoring mechanism |
| **EL** | A continuous or regularly recurring discrepancy is considered to exist when it occurs in two out of at least three measurement samples, taken by the ISP in three consecutive days. |
| **ES** | There has to be a breach of either minimum or normally available speed. It has to be "continuous". |
| **HR** | If an end-user complains about broadband speed on a fixed electronic communications network, the end user must submit to the operator the results of at least three tests conducted in a period of five consecutive days (at least one test must be carried out every 24 hours) which shows that speeds is below 70% of maximum/advertised speed. Tests are carried out by means of a certified tool HAKOMetar for broadband speed tests prepared by the Agency. The results of the tests represent adequate proof in the procedure for the resolution of complaints made by end users. |
| **IT** | A continuous or regularly recurring discrepancy is considered to exist when minimum contractual speed is not met twice in 30 days. In such a case, the current national regulation lets users terminate the contract without additional costs. In order to check the speeds reached by a user, the user has to run a free software (Ne.me.sys), certified by ISCOM, for 24 hours. Ne.me.sys samples measurements every 15 minutes. Minimum speed is calculated as the 95-quantile of measurements in the |

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| | interval, normally available speed is calculated as the 75-quantile of measurements in the interval and maximum speed is the maximum value measured during the entire observation interval. |
| **LV** | Fixed networks:<br>• maximum (advertised) speed;<br>• normally available speed, which is available to the end-user no less than 95% of the time per day and whose value is not lower than 70% of the maximum (advertised) connection speed and is not lower than the minimum broadband internet access service determined by the SPRK connection speed value in a fixed electronic communications network;<br>• minimum guaranteed speed, the value of which is at least 20% of the maximum (advertised) connection speed specified in the contract and is not lower than the minimum broadband Internet access service connection speed value determined by the SPRK in a fixed electronic communications network and which describes the lowest speed that can be available to the end user during peak hours.<br><br>Mobile networks:<br>• maximum (advertised) speed, which describes the maximum speed actually available to the end user;<br>• minimum guaranteed speed, the value of which is no less than 95% of the time per day is not lower than the minimum broadband internet access service connection speed value determined by the SPRK in a mobile electronic communications network at the fixed service receiving location in the coverage area specified by the operator in the end-user's premises or household, if the Internet access service is provided through a router-modem.<br>A mobile ISP shall determine the minimum guaranteed speed if he provides the IAS to the end-user in another way.<br>If any of the above-mentioned conditions are not fulfilled during emergency measurements, it is considered that there is a significant discrepancy in the quality of the IAS. |
| **MT** | • “significant discrepancy”: this definition is implicit as any connection performing below the stated ISP’s information regarding speed is considered as discrepant;<br>• “regularly recurring”: no interpretation published. |
| **PL** | As part of a certified mechanism to measure regularly recurring significant discrepancies of service quality, there should be at least six certified measurements carried out at intervals of 30 minutes, in two daily cycles with an interval of less than seven days between them. |
| **RO** | For the fixed IAS:<br>In the guidelines issued, ANCOM recommended the conditions that must be met and the procedures that a user must follow in order to ascertain on one hand the significant discrepancies and on the other hand the continuous or regularly recurring discrepancies. |

| | |
|---|---|
| | In order to ascertain significant discrepancies, the user must perform, under certain conditions, at least six measurements during 24 hours, of which at least one measurement must be performed in the 23:00-07:00 timeframe. Measurements must be carried out at intervals of at least one hour apart. A discrepancy is considered significant, if at least one of the following cases occurs:<br>• the minimum speed is not achieved for at least two measurements;<br>• at least half of the measurements performed by the user do not exceed 50% of the normally available speed indicated in the contract.<br>To ascertain continuous or regularly recurring discrepancies between contractual speeds and the actual performance of the internet access service, the user has to perform measurements, under certain conditions, for at least 5 days (of which at least one weekend day) during a maximum of 30 consecutive days, performing at least 6 measurements per day, of which at least one measurement per day in the 23:00-07:00 timeframe. Measurements must be carried out at intervals of at least one hour apart. A discrepancy is considered continuous or regularly recurring, if at least one of the following cases occurs:<br>• the minimum speed is not achieved for at least two measurements;<br>• at least half of the measurements do not achieve the normally available speed;<br>• no measurement achieves the maximum speed.<br><br><u>For mobile IAS:</u><br>ANCOM established a procedure that a user must follow in order to ascertain significant, continuous or regularly recurring discrepancies between the contractual speeds and the real performance of the internet access service. Thus, the user will have to perform measurements, under certain conditions, for at least five days (of which at least one must be a weekend day) during a maximum of 30 consecutive days, performing at least six measurements per day, of which at least one measurement per day in the 23:00-07:00 timeframe. Measurements must be carried out at intervals of at least one hour apart. A discrepancy is considered significant, continuous or regularly recurring, if at least half of the measurements performed are below certain values, assumed by ISPs in their contracts. These values are calculated according to a series of rules established in the guidelines developed by ANCOM. |
| **SI** | • Minimum speed: at least one of the correctly performed measurements, regardless of the time of the day, falls at the specified minimum speed.<br>• Normally available speed: the average of all correctly performed measurements outside the peak hours is lower than the contractually agreed normally available speed (the measurement with the highest and lowest speed are excluded from the calculation). |

**Table 33. Interpretation of terms**

**Former Question 25** (now Question 23[47])**.** Are there any updates regarding your IAS quality monitoring tool for consumers or any respective measurement tool projects? Y/N

21 NRAs (AT, BE, BG, CY, CZ, DE, DK, EL, FI, HR, HU, IT, LT, LU, NO, PL, PT, RO, SE, SI, SK) provide an IAS quality monitoring tool and in 10 Member States (AT, BG, CY, CZ, DE, FI, HR, IT, PL, RO) it is considered a certified monitoring mechanism according to Article 4(1) (d) of the OIR.

| NRA | Name of tool | URL | Certified |
|---|---|---|---|
| **AT** | RTR-Netztest / RTR-NetTest | https://www.netztest.at<br>https://www.rtr.at/TKP/service/rtr-nettest/help/Desktop_App.en.html | Yes |
| **BE** | BIPT Speedtest | http://www.bipt-speedtest.be/#/test/run | No |
| **BG** | CRC nettest | https://nettest.crc.bg/#/home | Yes |
| **CY** | cyNettest | https://cynettest.ee.cy/<br>https://ocecpr.ee.cy/el/content/cynettest-systima-ektimisis-poiotitas-eyryzonikon-syndeseon#English_Version | Yes |
| **CZ** | NetTest | https://nettest.cz/en/ | Yes |
| **DE** | Breitbandmessung | https://breitbandmessung.de | Yes |
| **DK** | Tjekditnet (Ookla) | https://tjekditnet.dk/ | No |
| **EL** | HYPERION | https://hyperiontest.gr | No |
| **FI** | Bittimittari.fi | www.bittimittari.fi/en | Yes |
| **HR** | HAKOMetar<br>HAKOMetar Plus | https://hakometarplus.hakom.hr/home | Yes |
| **HU** | Szelessav | http://szelessav.net/en/internet_speedtest | No |
| **IT** | Ne.Me.Sys/Misura Internet | https://misurainternet.it | Yes |
| **LT** | matuok.lt (Ookla) | http://matuok.lt | No |
| **LU** | checkmynet.lu | https://checkmynet.lu/ | No |
| **NO** | Nettfart | https://nettfart.no/en/test | No |
| **PL** | PRO Speed Test | https://pro.speedtest.pl/ | Yes |
| **PT** | NET.mede | https://netmede.pt/ | No |
| **RO** | Netograf | https://www.netograf.ro/#/ | Yes |
| **SE** | Bredbandskollen | http://www.bredbandskollen.se/ | No |
| **SI** | AKOSTestNet | https://akostest.net | No |
| **SK** | Meracinternetu/ MobilTest | https://www.meracinternetu.sk | No |

**Table 34. IAS quality measurement tools provided by NRAs**

[47] **Q.23.** In the reporting period, have there been any updates regarding your **IAS quality monitoring tool** for consumers or any respective measurement tool projects? If *yes*, please provide details.

All of the above-mentioned IAS quality monitoring tools can measure download and upload speeds as well as latency. Additionally, many tools allow to perform measurements of jitter (16 out of 21) and packet loss (12 out of 21). With some of these tools (7 out of 21), end-users can also check if any ports are blocked. All but one tools are available as a browser version. The majority of these tools (18 out of 21) are provided as an Android and iOS app, while some (9 out of 21) also consist of installable clients.

| NRA | Download speed | Upload speed | Latency (Ping) | Jitter | Packet loss | TCP/UDP port blocking | Web browser | Android app | iOS app | Installable client |
|---|---|---|---|---|---|---|---|---|---|---|
| **AT** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| **BE** | Yes | Yes | Yes | No | No | No | Yes | Yes | Yes | No |
| **BG** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| **CY** | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes |
| **CZ** | Yes | Yes | Yes | No | No | No | Yes | Yes | No | No |
| **DE** | Yes | Yes | Yes | No | No | No | Yes | Yes | Yes | Yes |
| **DK** | Yes | Yes | Yes | No | No | No | Yes | Yes | Yes | No |
| **EL** | Yes | Yes | Yes | Yes | Yes | No | Yes | No | No | No |
| **FI** | Yes | Yes | Yes | Yes | No | No | Yes | Yes | Yes | No |
| **HR** | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes |
| **HU** | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| **IT** | Yes | Yes | Yes | Yes | Yes | No | Yes | No | No | Yes |
| **LT** | Yes | Yes | Yes | Yes | No | No | Yes | No | No | No |
| **LU** | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes |
| **NO** | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | No |
| **PL** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **PT** | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| **RO** | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| **SE** | Yes | Yes | Yes | No | No | No | Yes | Yes | Yes | No |
| **SI** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| **SK** | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | No |

**Table 35. Indicators measured with the tool and supported platforms**

**Former Question 31** (now Question 27[48])**.** Have there been any new court proceedings or updates to the cases reported previously related to the OIR?

If *yes*, please provide details.

Four NRAs (AT, DE, IT, RO) reported updates to the ongoing national court proceedings related to the OIR. An overview is provided in Table 36 below.

| NRA | Court proceedings |
|---|---|
| **AT** | Please see chapter "Measures in accordance with Article 5(1)" in RTR's Net Neutrality Report 2024 (and also in the past OI reports). The list of all cases and court proceedings (including a brief overview) can be found at: https://www.rtr.at/TKP/was_wir_tun/telekommunikation/weitere-regulierungsthemen/netzneutralitaet/nn_reports.en.html. The links to the individual decisions can be found at: https://www.rtr.at/TKP/was_wir_tun/telekommunikation/weitere-regulierungsthemen/netzneutralitaet/nn_procedures.en.html |
| **DE** | StreamOn: The Administrative Court of Cologne ruled in its interim proceedings (11 November 2018) that BNetzA is not hindered to enforce its decision of 15 December 2017, forbidding the video throttle contained in the zero-rating offer StreamOn. Telekom appealed the interim ruling. The Higher Administrative Court finally confirmed in the interim proceedings (12 July 2019) that BNetzA's decision has to be executed immediately. Telekom deactivated its video throttling on 9 August 2019. The Administrative Court of Cologne suspended the main proceedings and addressed the ECJ (preliminary ruling) for a clarification whether (inter alia) the throttling of video streaming is in line with article 3(3) of the OIR and the principle of equal treatment. The ECJ pronounced its judgment on 2 September 2021, as already outlined in Chapter 1 of this Report. Following this ruling, BNetzA prohibited the marketing of the zero-rating option and terminated the existing customer contracts. Vodafone Pass: There were no court rulings in administrative court proceedings against BNetzA's decisions. However, there was one court ruling in civil proceedings: A consumer association sued Vodafone for various clauses in the T&Cs of Vodafone |

[48] **Q.27.** Related to the OIR, regarding the reporting period, are there any **other relevant information** (not mentioned before) that you would like to share? Have there been any of the following?

i. new court proceedings
ii. NRA's regulatory decisions
iii. updates to cases reported previously
iv. internal or external implementation actions
v. guidance (of e.g. NRA, ministry) on additional transparency or information requirements on ISPs
vi. any additional remedies for consumer redress in relation to non-conformance of IAS with the contract terms
vii. other, please specify.

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| | Pass. On 8 May 2019, the District Court of Duesseldorf ruled inter alia that the clauses used are misleading insofar as it is not obvious for the end-user that (e.g.) voice- or video-telephony is not zero-rated. Regarding tethering, the court argued that counting data consumed by tethering against the data allowance does not constitute a violation of Article 3(1) of the OIR.<br>The District Court of Duesseldorf passed the issue of tethering to the ECJ (preliminary ruling) requesting clarification whether there is a violation of article 3 of the OIR because zero-rating of applications in Vodafone Pass applies only when a mobile device is used. The ECJ pronounced its judgment on 2 September 2021. Following this ruling BNetzA prohibited the marketing of the zero-rating option and terminated the existing customer contracts.<br>Vodafone has withdrawn the appeal at the District Court of Duesseldorf.<br>*Freedom to use terminal equipment:* In May 2023 the German Federal Court of Justice ruled on Art. 3(1) OIR more precisely regarding the right to use terminal equipment of one's choice. The case originated in civil legal proceedings. The German consumer protection association (vzbv) had sued Telefonica Germany GmbH for the use of a clause in its general terms and conditions according to which customers were not allowed to use LTE routers in its unlimited data plans of mobile tariffs. Hence, according to the terms and conditions, SIM cards of these mobile tariffs should not be used as substitute for fixed tariffs at home. In parallel, BNetzA had ordered the ISP (and other ISPs) not to use the said clause. |
| **IT** | On 2 August 2018, AGCOM published a decision stating that end-users have the right to freely choose their broadband router (AGCOM Resolution n. 348/18/CONS). According to AGCOM, ISPs cannot require end-users to rely exclusively on the router supplied by the ISP itself. This decision was appealed and the appeal procedure is pending.<br>With sentences n. 1200/2020 and n. 1201/2020, the Lazio Regional Administrative Court confirmed the lawfulness of the provision of article 5, paragraph 1 of resolution n. 348/18/CONS. The sentences were appealed to the Council of State. On 2 August 2021, the Council of State rejected the request to modify the previous decision n. 1200/2020. Decision on sentence n. 1201/2020 is still pending. |
| **RO** | ANCOM concluded that a certain traffic management practice constitutes an infringement of Article 3(3) third subparagraph of the OIR and ordered that ISP to stop the practice. The ISP challenged ANCOM's decision in front of the Romanian Courts and asked for both the suspension and the annulment of the decision. In the first instance, the Bucharest Court of Appeal decided to suspend the ANCOM decision until the ruling on the substance on its annulment. ANCOM appealed the ruling of the Appeal Court on the decision suspension. However, the appeal was rejected on 12 December 2019 by the decision of the High Court of Cassation and Justice, Administrative and Fiscal Contentious Section, and thus the decision on the suspension has remained definitive. Regarding the cause which concerns the annulment of the ANCOM President's Decision n. 669/08.08.2018, on which the Bucharest Court of Appeal, Administrative and Fiscal Contentious Section VIII, was to issue the ruling on the substance, after several deferrals of the ruling, on |

| | |
|---|---|
| | 26 May 2021, the Court decided to annul the above-mentioned decisions. ANCOM appealed the Court decisions regarding the annulment of the ANCOM President's Decision n. 669/08.08.2018, a first trial term being established for 23 November 2023.<br>Telekom Romania case: ANCOM appealed the Court's decision to annul the ANCOM President's Decision n. 669/08.08.2018. |

**Table 36. Court proceedings related to the OIR**

# Annex II: Abbreviations for countries

Throughout the report, Eurostat country codes are used as abbreviations for the names of the Member States[49]. The country codes and the respective names of the NRAs are shown in the following table.

| | | | | | |
|---|---|---|---|---|---|
| **Austria** | AT | RTR | **Latvia** | LV | SPRK |
| **Belgium** | BE | BIPT | **Liechtenstein** | LI | LLV |
| **Bulgaria** | BG | CRC | **Lithuania** | LT | RRT |
| **Croatia** | HR | HAKOM | **Luxembourg** | LU | ILR |
| **Cyprus** | CY | OCECPR | **Malta** | MT | MCA |
| **Czech Republic** | CZ | CTU | **Norway** | NO | NKOM |
| **Denmark** | DK | ADSI | **Poland** | PL | UKE |
| **Estonia** | EE | ECSTRA | **Portugal** | PT | ANACOM |
| **Finland** | FI | TRAFICOM | **Romania** | RO | ANCOM |
| **France** | FR | ARCEP | **Slovakia** | SK | RU |
| **Germany** | DE | BNETZA | **Slovenia** | SI | AKOS |
| **Greece** | EL | EETT | **Spain** | ES | CNMC |
| **Hungary** | HU | NMHH | **Sweden** | SE | PTS |
| **Ireland** | IE | COMREG | **The Netherlands** | NL | ACM |
| **Italy** | IT | AGCOM | | | |

**Table 37. Country codes and NRAs**

[49] The Eurostat country codes are available via the official link: http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Country_codes

# Annex III: List of figures and tables

## Figures



## Tables