BEREC
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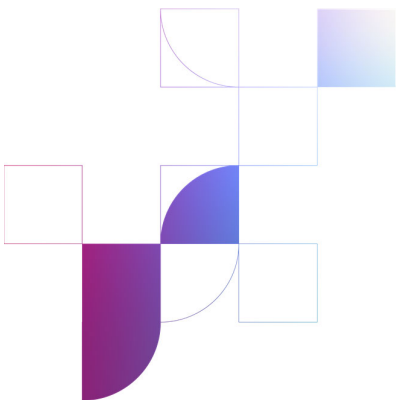
BEREC Report on the implementation of the Open Internet Regulation 2022

This report covers the period from 1 May 2021 to 30 April 2022.



6 October 2022

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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 sixth year of the application of the OIR, covering the period from 1 May 2021 to 30 April 2022. BEREC has gathered information from 28 NRAs via an internal questionnaire. To this information, descriptions of publicly known open internet cases or investigations that arose throughout the 12-month reporting period have been added. However, this report does not in any case 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[4].

The information in this report, firstly, refers to topical issues and, secondly, is organised according to the provisions of the OIR. The report shows that NRAs have actively implemented the OIR. It is evident that during the sixth year of the application of the OIR, the adoption of monitoring methods has increased as compared to the previous years. Moreover, quite a few NRAs have dealt with zero-rating and traffic management cases[5] and a handful of formal decisions were reached.

In particular, the European Court of Justice (ECJ) issued three rulings (C-34/20 – Telekom Deutschland, C-854/19 – Vodafone and C-5/20 – Vodafone) on 2 September 2021 regarding violations of the European Union (EU) OI rules. This report includes a brief reference to these rulings and also outlines the implications of these rulings for Member States and BEREC, as well as some of the NRAs' actions undertaken by 30 April 2022.

Another topic addressed in this report refers to BEREC's actions, with regard to the OIR, to support internet service providers (ISPs) in implementing Regulation (EU) 2022/350. This Regulation prohibits broadcasting or distribution of any content by Russian state media outlets Russia Today (RT) and Sputnik within the EU.

Since its joint statement, on 19 March 2020, with the European Commission on how network operators cope with the increased demand on network capacity, BEREC continued to collect data from NRAs on how the crisis is impacting internet capacity. This collecting exercise ended on 15 November 2021. During the entire reporting period, 33 NRAs shared their data.

[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. See Question 1 below.

[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 and replaced by the 2020 BEREC Guidelines on Open Internet published on 11 June 2020. This report refers to "BEREC Guidelines".

[4] The annual country reports on Open Internet are available via the official EU link: https://digital-strategy.ec.europa.eu/en/library/annual-country-reports-open-internet-national-regulatory-authorities-2022

[5] In cases that internet service providers (ISP) names have already been made public, ISP names are also mentioned in this report. In all other cases, ISP names are not disclosed.

Concerning Article 3 of the OIR regarding end-users' rights to open internet access, information requests to ISPs, the analysis of complaints or end-user reports and market surveys without requesting information from ISPs (e.g., checking ISPs' offers on their web pages) were almost equally used by most NRAs. Moreover, the majority of NRAs indicated that they combined all the above three sources of information to monitor the commercial and technical conditions related to the provision of internet access services (IAS). Zero-rating offers were identified by most of the NRAs (22), with music/video streaming and social networking the most frequently mentioned types of applications being zero-rated. All but one (27) NRAs monitored traffic management practices in one or another way, as more and more NRAs have realised the importance of compliance with the OIR in this area. According to most NRAs, monitoring activities have become an ongoing activity and the interaction with the ISPs evolves year after year.

Concerning Article 4 of the OIR on monitoring ISPs' compliance to transparency and contractual terms, only one NRA stated that they do not monitor these obligations at all, while most (24) NRAs applied multiple methods 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, analysis of end-users' reports and complaints as well as formal and informal requests for information from the ISPs. Reviewing the contracts revealed that ISPs have included the required speed information in their contracts in 19 Member States in case of fixed networks and in 18 Member States in case of mobile networks. A great majority of NRAs (23 out of 28) monitor end-user complaints regarding the performance of the IAS, while two thirds of the NRAs (19 out of 28) offer an IAS quality monitoring mechanism to consumers, 7 of them being qualified as certified monitoring mechanism.

Concerning Article 5 of the OIR on supervision and enforcement, the answers to the questionnaire indicated that most NRAs (25 out of 28) are monitoring the availability of high-speed IAS, with the most popular approaches being either through analysis of complaints and end-user reporting or through information requests from ISPs. Technical network monitoring follows closely 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 based on the NRA responses to questions 10, 14, 15, 19, 22, 25 and 31[6].

[6] This part hosts the actions taken by NRAs, since the entry into force of the Regulation, to the extent that they are relevant to record in the overview provided in this report.

1 Rulings of the European Court of Justice

BEREC took note of the three rulings (C-34/20 – Telekom Deutschland[7], C-854/19 – Vodafone[8] and C-5/20 – Vodafone[9]) on 2 September 2021[10] regarding violations of the European Union (EU) open internet rules, considering also the Telenor ECJ ruling of 15 September 2020 (in the cases C-807/18 and C-39/19)[11]. The ECJ rulings state that the practices by two German providers (Telekom Deutschland and Vodafone) are incompatible with the Open Internet Regulation (OIR)[12].

The three cases referred to in the ECJ rulings consist of IAS' offers including a 'zero tariff' option (commonly also referred to as 'zero-rating' options). Such practices entail that the traffic generated by specific (categories of) applications is not counted towards the data volume of the basic package. The main finding from the reasoning of the rulings is that zero tariff options are incompatible with the equal treatment obligation as set out in Article 3(3) of the OIR since traffic is not treated equally. The ECJ did not assess the individual limitations of use as the "*incompatibility remains, irrespective of the form or nature of the terms of use*"[13].

In light of the ECJ rulings on the OIR and as announced in the BEREC Work Programme 2022[14], BEREC prepared an update to the BEREC Guidelines on the Implementation of the Open Internet Regulation (BEREC Guidelines).

BEREC performed this evaluation based on its experience with the application of the OIR and the BEREC Guidelines. In October 2021, BEREC launched a call[15] for stakeholders' input to offer them the opportunity to share their views on the ECJ rulings on zero-rating with an appropriate justification supporting their understanding. BEREC received substantive responses from 26 stakeholders, 23 of which were published[16].

[7] https://curia.europa.eu/juris/liste.jsf?lgrec=fr&td=%3BALL&language=en&num=C-34/20&jur=C
[8] https://curia.europa.eu/juris/liste.jsf?lgrec=fr&td=%3BALL&language=en&num=C-854/19&jur=C
[9] https://curia.europa.eu/juris/liste.jsf?lgrec=fr&td=%3BALL&language=en&num=C-5/20&jur=C
[10] This report refers as the "ECJ rulings" to the three rulings issued by the European Court of Justice (ECJ) on 2 September 2021.
[11] https://curia.europa.eu/juris/liste.jsf?lgrec=fr&td=%3BALL&language=en&num=C-807/18&jur=C
[12] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2015:310:FULL&from=EN
[13] ECJ, C-854/19 *Vodafone (Roaming)*, paragraph 33; C-5/20 *Vodafone (Tethering)*, paragraph 32; C-34/20 *Telekom Deutschland*, paragraph 35.
[14] BEREC Work Programme 2022, Section 2.4.3. https://berec.europa.eu/eng/document_register/subject_matter/berec/annual_work_programmes/10136-berec-work-programme-2022
[15] https://berec.europa.eu/eng/news_consultations/Closed_Public_Consultations/2021/9008-call-for-stakeholder-input-to-feed-into-the-incorporation-of-the-ecj-judgments-on-the-open-internet-regulation-in-the-berec-guidelines
[16] https://berec.europa.eu/eng/news_and_publications/whats_new/9054-berec-publishes-the-received-stakeholders-input-to-feed-into-the-incorporation-of-the-ecj-judgments-on-the-open-internet-regulation-in-the-berec-guidelines

A draft of the updated Guidelines was issued for public consultation[17] from 15 March to 14 April 2022 (17:00 CET). In total, 22 stakeholders provided responses. The non-confidential responses (from 20 stakeholders) were published[18].

The update to the BEREC Guidelines was released mid-June 2022[19].

Since the publication of the ECJ rulings, NRAs have organised their respective national enforcement and supervision actions. BEREC is also providing a forum for NRAs to share information and to enable the consistent application of the OIR.

For instance, the following actions have been taken by some NRAs by 30 April 2022:

- Internal discussions and planning (10 NRAs);
- Informal and/or formal dialogues with ISPs offering zero-rating products (17 NRAs);
- Monitoring and/or assessing ISP offers as well as supervision of ceasing zero-rating offers (10 NRAs);
- Formal letter sent to concerned ISPs (4 NRAs);
- Data collected from ISPs (9 NRAs).

Some individual NRAs also carried out the following actions:

- Update of the OI section on the NRA website;
- Formal order completed.

Finally, many NRAs have announced to take further actions after the publication of the final updated BEREC Guidelines. The next iteration of this report, to be released in October 2023, will shed further light on the NRA actions undertaken to enforce the OIR and the ECJ rulings accordingly.

[17] https://berec.europa.eu/eng/news_consultations/ongoing_public_consultations/9342-public-consultation-on-draft-berec-guidelines-on-the-implementation-of-the-open-internet-regulation

[18] https://berec.europa.eu/eng/news_and_publications/whats_new/9556-berec-publishes-the-received-stakeholders-input-to-the-public-consultation-on-the-draft-berec-guidelines-on-the-implementation-of-the-open-internet-regulation

[19] BEREC Guidelines on the Implementation of the Open Internet Regulation, BoR (22) 81: https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/10280-berec-guidelines-on-the-implementation-of-the-open-internet-regulation

2 EU sanctions to block RT and Sputnik

The Regulation (EU) 2022/350[20] prohibits broadcasting or distribution of any content by Russian state media outlets Russia Today (RT) and Sputnik within the EU. However, there were some uncertainties on how the Regulation should be applied by the ISPs, which naturally raised some questions on what can be blocked under the exceptions in Article 3(3) of the OIR.

On 4 March 2022[21], BEREC clarified that the OIR allows ISPs to take traffic measures to block specific content, applications, or services in order to comply with Union legislative acts. The Regulation (EU) 2022/350 is a legal Act that falls within the scope of the exceptions in Article 3(3) of the OIR.

BEREC also confirmed that it is committed to providing assistance to NRAs and ISPs on technical issues that may arise. On 11 March 2022[22], BEREC provided further clarity on the implementation of the Regulation (EU) 2022/350. In BEREC's understanding, the obligations to block RT and Sputnik are to be read in a broad manner and that all websites belonging to the entities mentioned in the Annex XV of the Regulation are covered including the provision of access to them by ISPs.

To further help the implementation of the Regulation (EU) 2022/350, BEREC also informed that it considers that all domains including subdomains (such as www.rt.com, francais.rt.com, *.sputniknews.com, sputniknewslv.com, sputniknews.gr, sputniknews.cn etc.) related to the entities mentioned in the Annex XV fall under the scope of the exceptions in Article 3(3) of the OIR. On 23 March 2022[23], the European Commission also published frequently asked questions regarding the restrictions on Russian state-owned media.

Even though no NRA has a specific mandate to enforce the EU sanctions, BEREC NRAs have helped ISPs to comply with the measures. NRAs have monitored the situation contacting the national ISPs and collecting data about the implementation of the Regulation (EU) 2022/350. BEREC has provided a forum for NRAs to share information and to enable the consistent application of the OIR.

According to the information collected by NRAs (status of 30 April 2022), there are 149 different domains and subdomains that are blocked based on the EU sanctions and additional national decisions. The Sanctions are mainly implemented by blocking the certain domain names in DNS, while only a few ISPs have blocked certain IP addresses related to the domain names mentioned above.

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[20] 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, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0350&from=EN

[21] BEREC Open Internet Regulation is not an obstacle in implementing EU sanctions to block RT and Sputnik, https://berec.europa.eu/eng/news_and_publications/whats_new/9321-berec-open-internet-regulation-is-not-an-obstacle-in-implementing-eu-sanctions-to-block-rt-and-sputnik

[22] BEREC supports ISPs in implementing the EU sanctions to block RT and Sputnik, https://berec.europa.eu/eng/news_and_publications/whats_new/9340-berec-supports-isps-in-implementing-the-eu-sanctions-to-block-rt-and-sputnik

[23] Frequently asked questions regarding the restrictions on Russian state-owned media, https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/faqs-sanctions-russia-media_en.pdf

3 Covid-19 crisis

In a joint statement with the European Commission, on 19 March 2020, on how network operators can cope with the increased demand of network capacity, BEREC committed to a special reporting mechanism to ensure regular monitoring of the internet traffic situation in each Member State, in order to be able to respond swiftly to capacity issues.

Between March 2020 and November 2021, BEREC published its summary report on a regular basis. The report provided an update on the information collected by BEREC regarding the status of internet traffic in Member States and on the status of networks based on a 'traffic light' illustration. During the entire reporting period (i.e., since BEREC first published a report on how the Covid-19 crisis impacted on internet capacity etc.), 33[24] national regulatory authorities (NRAs) shared data about the impact of the crisis on electronic communications networks and the actions taken so far in their respective Member States.

In general, three phases in the evolution of internet traffic were observed during the crisis: a sharp increase in its early weeks, a subsequent stabilisation and, through the latter part of 2020 and through 2021, a decrease from the peak (experienced early in the crisis).

Figure 1 below illustrates the results of a data collection exercise regarding the status of networks across Europe as of 15 November 2021. NRAs were asked to provide a response on the overall status of telecommunications networks in their respective countries, based on the following categorisation:

- Green: Networks are working well, Covid-19 is not creating issues for the availability or general quality of internet access services (IAS). No exceptional traffic management measures justified.
- Yellow: Covid-19 is causing limited congestion issues affecting the general quality of IAS (e.g., with 1 or 2 internet service providers or networks). Exceptional traffic management measures might be possible, but would require close scrutiny of the NRA under OIR.
- Red: Severe and/or widely spread network congestion issues due to Covid-19 affecting the general quality of IAS and exceptional traffic management measures are likely justified and/or used.

[24] The following NRAs have contributed so far to the information gathering exercises: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI and SK.

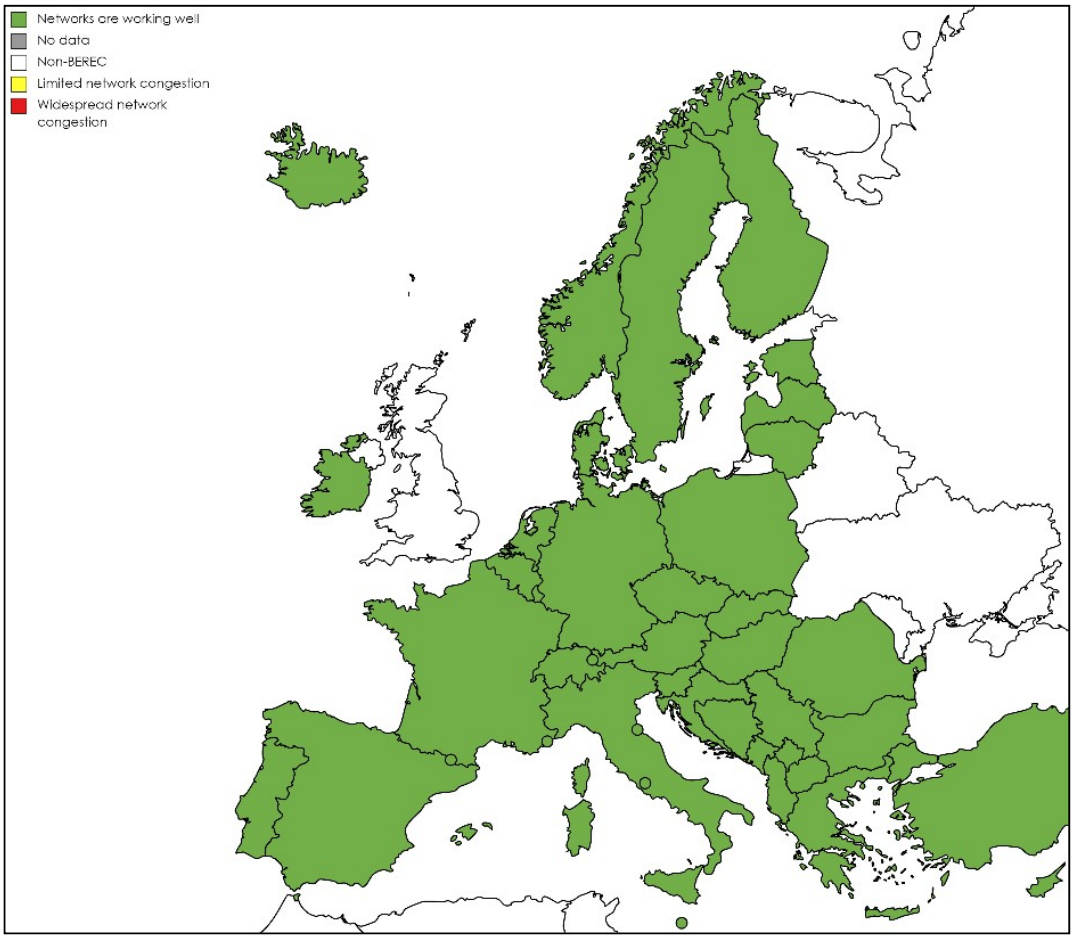


Figure 1. Status of networks (status of 15 November 2021)

All BEREC NRAs have indicated ‘status green’. The overall traffic on fixed and on mobile networks has increased during the COVID-19 crisis, but even in the first weeks of the crisis and Europe-wide lockdowns, no major congestion issues have occurred. According to the information available, network operators have been able to cope well with this additional traffic load.

4 General questions

Question 1. Which types of activities has your NRA engaged in during 2021/22 in order to implement the OIR? Please provide a brief account of:

i. internal activities (e.g., preparing new internal procedures, dedicating teams / FTE, etc.)
ii. external activities (e.g., press-release, meetings with stakeholders or ISPs, drafting national guidelines on enforcement policy, stimulating self-assessment or internal compliance by ISPs, adopting administrative orders/decisions or imposing administrative fines etc.)

Among the internal activities identified by NRAs, in the reporting period, are the following actions:

- setting-up/enlarging (a multidisciplinary/cross-functional) OI team/department or allocating persons from other teams/departments to work on OI (in case there is no dedicated OI team within an NRA); setting-up OI team on ad-hoc basis;
- providing national law/regulations regarding OI/QoS (Cyprus: Decree 72/2017; BIPT Guidelines of 21 February 2022 on “unlimited internet”) and discussing questions on how to implement these specific Guidelines; setting-up/maintaining a special website on OI; knowledge development and policy advice (e.g., on 5G);
- analysing the three ECJ rulings and the OIR and contributing to BEREC's work in this regard (evaluating national zero-rating offers; updating the BEREC Guidelines; drafting the BEREC legal note etc.); assessing zero-rating and similar offers, evaluating its impact for end-users, considering the interpretation given by the ECJ rulings;
- supervision and monitoring activities of compliance with the provisions of the OIR; supervision of compliance with national secondary legislation; investigations on IAS provider compliance related to Article 4 of the OIR; analysis of traffic management and zero-rating practices; information requests from ISPs; checking relevant information on the ISPs’ websites and in contracts; analysis of complaints;
- (preparation of) the procurement documents for the development of a measurement system; setting-up/providing national measurement systems and infrastructure to check and to test measurement and visualise selected qualitative parameters of the IAS (QoS and speed); conduction of legal and technical monitoring of IAS parameters (e.g., port blocking as a measure of traffic management); providing/preparation of national certified measurement tools.

Among the external activities identified by NRAs are the following actions:

- holding (informal, virtual) meetings and workshops with stakeholders and experts (e.g., on issues such as ECJ judgments from September 2021, on the OIR, on unlimited offers; how to cope with the spread of an aggressive smishing scam (involving the "Flubot-virus"); stimulating self-assessment or internal compliance by ISPs; approving of template from industry on how to comply with Article 4 OIR-requirements; public IPv4

address without charge; 5G; port blocking; replacement of GSM-R with commercial mobile networks (regarding railway communications and applications); ensuring the public safety operations over commercial mobile networks (replacement to TETRA); discussions about Wi-Fi and office communications optimisation; virtual talk with experts, in which the topic of OIR was discussed from different perspectives; giving lectures on OIR and zero-rating at university;

- participating in relevant legislative processes; assisting the government in OI-related ECJ cases; giving opinions to the Parliament on the addition of a right to an open and neutral internet access to the Belgian Constitution and on the recognition of internet access as a basic need (containing an idea to introduce a zero-rating of online government sites and online education platforms); drafting national guidelines on enforcement policy;
- monitoring and handling complaints and inquiries from end-users; (formal) information requests and/or questionnaires to ISPs (on issues such as: traffic management; zero-rating; Articles 3 and 4 of the OIR; pricing of IPv4 dynamic public addresses); regular on-site audits at points of sale to check whether the consumers are getting properly informed regarding internet speeds and their rights; market supervision activities; web sites surveys; inspection of ISPs in regards to compliance with the OIR; technical monitoring; performing formal assessments on the technical and commercial conditions regarding the modem and optical network terminal (ONT) devices for fibre to the home (FTTH) offers as well as monitoring on differentiated QoS levels and port blocking measures; assessment of IAS on trains and monitoring of this service; review of terms and conditions (T&Cs) of ISPs;
- providing and updating measurement tools/quality monitoring tools for end-users; offering and updating an online map/measurement results map that reflects the mobile signal coverage for the main technologies and diverse other information; conducting a public consultation on a new methodology for measuring the quality of electronic communications services; conducting measurement campaigns; providing a tool which enables comparison of offers of individual providers of electronic communications services in terms of prices and quality of the services of mobile calls, SMS, data, mobile internet, internet at a fixed location and pay TV;
- issuing administrative decisions; imposing administrative fines due to non-compliance with the OIR; secondary legislation (Greek Open Internet Regulation regarding the estimation and publication of internet speeds in subscriber contracts, and compensations in case of discrepancies; Hungary: revised rules on QoS applicable to all providers of internet access services to the public);
- issuing press releases (e.g., on ECJ judgments from September 2021; annual OI Report; right to public IP address; traffic management measures by providers of IAS under the OIR; national OI events; network slicing and OI); giving interviews; maintaining a website on OI; social media presence (in connection with OI); publications and brochures in connection with OI; participating in university lectures; project with Consumer Ombudsman.

Finally, many NRAs reported about their participation in the BEREC Open Internet Working Group (BEREC OI WG).

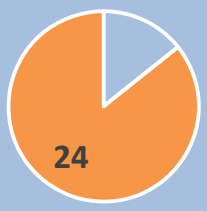
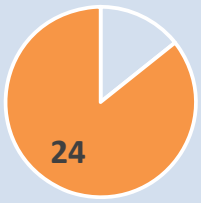
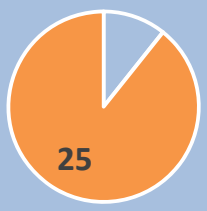
5 Article 3(1) to (3)

Question 2.a. What approach have you taken to monitor the commercial and technical conditions related to the provision of internet access services:

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.

Question 2.b. Is there any change compared to the previous period? If yes, please provide details.

27 NRAs used one or more of the above-mentioned techniques to monitor the commercial and technical conditions related to the provision of IAS in the reporting period, (see Table 1 below). While the majority of NRAs undertook an analysis of complaints and end-user reports (25), a market survey (24), information requests to ISPs (24) or all of the above, a smaller number of NRAs (11) used technical network monitoring tools.

Approach	NRAs	Number of NRAs taking the approach
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)	AT, BE, BG, CY, CZ, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, MT, NL, NO, PT, RO, SI, SK	
Information request from ISPs	AT, BE, BG, CY, CZ, DE, DK, EL, ES, FI, FR, HR, HU, IT, LU, LV, NL, MT, NO, PL, PT, RO, SI, SK	
Analysis of complaints and end-user reporting	AT, BE, BG, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, IE, IT, LT, LU, LV, NL, MT, NO, PL, PT, RO, SI	

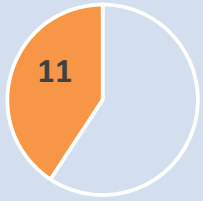
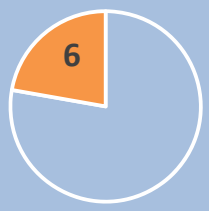
Technical network monitoring	AT, CZ, EE, FR, HR, HU, IE, LT, LU, PT, SI	
Other approaches[25]	AT, DE, EL, FR, HR, IT	

Table 1. Approaches to monitor commercial and technical conditions

Six NRAs (AT, EL, FR, HR, IT) responded that they also applied other approaches. Examples of alternative approaches by NRAs are[26]:

NRA	Other approaches
AT	ISPs are obliged under the new Austrian Telecommunications Act (TKG 2021) 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 ongoing measure. Within this framework also the transparency obligations of the OIR are checked. RTR is entitled to object specific clauses within six weeks if they do not meet particular legal standards. If a violation nevertheless occurs, this can be further tackled via a supervisory procedure and before the conciliation body of RTR.
DE	Reacting to media reports on open internet.
EL	Inspections at points of sale were undertaken.
FR	End-users can report issues on the online alert platform “J'alerte l'Arcep” and they can use the last version of the traffic management application “Wehe” to help them to detect potential traffic differentiations or port blockings implemented by their ISP.
HR	End-user survey and on-site audits at points of sale were undertaken.
IT	Marketing and sales audit were undertaken.

Table 2. Examples of other approaches to monitor commercial and technical conditions

Five NRAs (AT, CZ, EL, HU, SE) responded that there are changes compared to the previous reporting period, as described in Table 3.

[25] Note that these *other approaches* (partly) overlap with the approaches under i. to iv.
[26] Note that these *other approaches* (partly) overlap with the approaches under i. to iv.

NRA	Changes
AT	The new Austrian Telecommunications Act (TKG 2021) is applicable.
CZ	Within the MSEK (Measuring System of Electronic Communication) system, the publicly available CTU-NetTest tool (https://nettest.cz/en/), using the source codes of the RTR-Netztest tool operated by the Austrian regulator RTR was created and launched. The NetTest tool was launched on 17 September 2021 as a certified monitoring mechanism for the quality of IAS. It provides the general public with the opportunity to test the quality of their internet connection once or repeatedly. Additionally, it allows to carry out a certified measurement process in the event that the speed actually achieved in the download or upload direction of the internet connection does not correspond to the contractually specified speeds.
EL	Inspections that were undertaken at points of sale aimed at determining the quality and completeness of information provided to consumers regarding internet speeds.
HU	The new national rules on transparency obligations became mandatory for all IAS providers beginning on 30 June 2021. Therefore, the monitoring was adjusted to take into account the changed rules for QoS parameters.
SE	No survey was conducted during the indicated period.

Table 3. Changes compared to the previous reporting period

Question 3. Pursuant to Article 3(1) have you completed any formal assessment of ISP restrictions on the use of technically compliant terminal equipment?

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

In the reporting period, eight NRAs (BG, CY, CZ, DE, HU, IT, NL, SK) conducted formal assessments of ISP restrictions on the use of technically compliant terminal equipment,, as shown in Table 4 below.

NRA	Assessment
BG	In the annual questionnaire of CRC, there are questions to the ISPs regarding the use / restrictions of the technically compatible terminal equipment. CRC did not identify practices that contradict the provisions of the OIR.
CY	According to the provisions of the OIR (as interpreted in the BEREC Guidelines) and as adopted in national secondary legislation (Decree 72/2017), ISPs are required to report on restrictions on the use of technically compliant terminal equipment. Following collection of ISPs' reports, OCECPR's main findings were that most of the ISPs offer their services accompanied with their own terminal equipment in order to be able to provide support and bundled services (telephony, internet, TV). Based on

	ISPs' explanations, the provision of obligatory equipment by the ISPs is justified and according to the provisions of the OIR and the Decree. It is noted that end-users retain the right granted to them by Law 24(I)/2022 and the OIR to use their own terminal equipment. At the same time, the provision of Article 6(2) of Decree 72/2017 allows the providers through their contracts to provide information to their subscribers regarding the technical parameters (including the terminal equipment used) which may affect the quality of the service provided.
CZ	CTU continued regular monitoring through regular checks of contract terms, targeted requests for information and monitoring the nature of complaints. There were four cases 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 the terminal device of one's choice. The provider, who violated Article 3(1) of the OIR in this manner, was fined in joint administrative proceedings. In another case, the inspection has not yet been completed and in the other cases no breach of the OIR was found.
DE	Regarding prohibiting the use of clauses restricting the use of certain terminal equipment in unlimited mobile data tariffs, four mobile providers received formal orders by BNetzA. The general T&Cs have been amended by now.
HU	NMHH conducted an assessment of the T&Cs of one of the big ISPs. The assessment was prompted by a contradiction between the various terms of the T&Cs: in one location it indicated that the IAS may only be used with the equipment provided by the ISP, while at another location it said that subscribers supply their own terminal equipment. In response to the investigation by the NRA, the ISP modified the T&Cs to make it clear that subscribers may use any compliant terminal equipment. However, the IAS may be only used with the customer premises equipment (CPE) supplied by the ISP. This CPE is part of the ISP's network. Network termination point is the LAN (Ethernet) port of the CPE.
IT	In July 2019, AGCOM concluded different assessments on the free choice of terminal equipment in the case of FTTH and FWA access services. In accordance with the OIR and paragraph 27 of the 2016 BEREC Guidelines, AGCOM considered whether there was an objective technological necessity requiring equipment provided by the ISP. Hence, AGCOM concluded that in said cases – considering the current market and technological scenario – the ISP can provide its own modem in order to supply an IAS based on FTTH and fixed wireless access (FWA) solutions. AGCOM is still monitoring the evolution of the offers in the Italian market. In November 2021, AGCOM conducted a surveillance activity about a restriction imposed by an operator regarding the free choice of modem equipment by users. AGCOM's intervention led to the removal of such restriction. In the period from December 2021 to February 2022, AGCOM conducted an assessment regarding the usage on the networks of two ISPs of the MAP-T and MAP-E protocols and the related compatibility concerns regarding user provided modem equipment. The result of the analysis was that there is enough choice on the

	market of modems supporting these protocols, considering also the fact that the adoption of those protocols will help the transition to IPv6 networks.
NL	In the Netherlands, consumers have full freedom in their choice of terminal equipment. ACM conducted an in-depth investigation into why not all customers of cable operator Ziggo are able to connect their own terminal equipment and assessed whether enforcement of ACM's Policy Rule regarding Enforcement of the Decision on Terminal Equipment is needed. This investigation resulted in ACM imposing an order subject to periodic penalty payments on Ziggo.
SK	All ISPs in the fixed network and some in the mobile network offer their terminal devices for rent or sale, with the possibility of using own terminal equipment of end-users based on ISP recommendations to maintain compatibility with the IAS offered. Set-top boxes for IPTV are usually part of the supplied TV service.

Table 4. Assessments of ISP restrictions on the use of terminal equipment

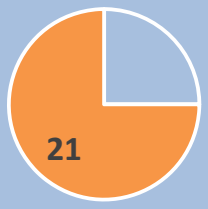
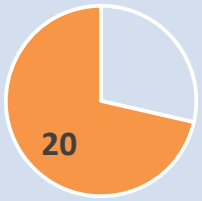
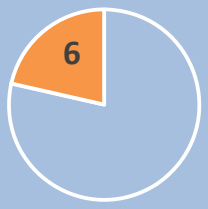
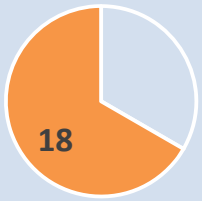
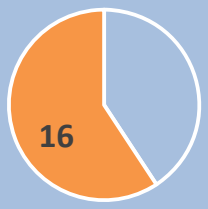
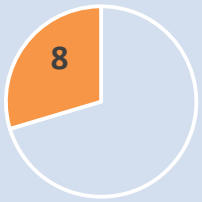
Question 4.a. What types of zero-rating services exist in your country?

i. None
ii. Music streaming services
iii. Video streaming/IPTV services
iv. Gaming
v. Social media services
vi. Voice and short messages
vii. Cloud services
viii. Email services
ix. Other, please specify

Question 4.b. Is there any change compared to the previous period? If yes, please provide details. (e.g., offers voluntarily stopped by ISPs)

Question 4.c. Are any of the above-mentioned examples based on the exemptions from article 3(3)? If yes, please provide details.

There were no zero-rating services identified by six NRAs (BG, CY, EE, FI, IE, LV) in the reporting period, while one or more zero-rating services were reported by all other 22 NRAs (see also Table 5 below). As was the case last year, zero-rating of music streaming services (21), video streaming/IPTV services (20), social media services (18) and voice and short messages (16) were the most often identified examples. Cloud services were zero-rated in eight countries, while email services were zero-rated in five countries.

Type of zero-rating service	NRAs	Number of NRAs reporting
Music streaming services	AT, BE, CZ, DE, DK, EL, ES, HR, HU, IT, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK	
Video streaming / IPTV services	AT, BE, CZ, DE, DK, EL, ES, FR, HR, HU, IT, LT, LU, MT, PL, PT, RO, SE, SI, SK	
Gaming	AT, DE, IT, PL, PT, SK	
Social media services	AT, BE, CZ, DE, DK, EL, ES, HR, HU, IT, LT, LU, PL, PT, RO, SE, SI, SK	
Voice and short messages	AT, BE, CZ, DE, EL, ES, HR, HU, IT, LT, PL, PT, RO, SE, SI, SK	
Cloud services	AT, CZ, EL, IT, PL, PT, RO, SK	

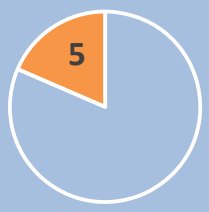
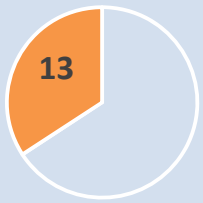
E-mail services	EL, IT, PL, PT, RO	
Other	AT, DK, EL, ES, HR, IT, MT, PL, PT, RO, SE, SI, SK	

Table 5. Type of zero-rating services

13 NRAs responded that there are other types of zero-rating services present in their country (see Table 6 below):

NRA	Other zero-rating services
AT	access to e-paper
DK	access to ISP webpage is zero-rated for customers
EL	tele-education, network control traffic, customer support services, speed measurement tool, payment services, security apps, "services for the general good" (scientific research, panic button, etc.)
ES	maps and navigation
HR	tele-education, speed measurement tool
IT	e-learning, maps
MT	one provider allows its subscribes customer care services after the expiry of download limits
PL	maps and navigation services, self-service websites and applications, banking services
PT	ISPs' own apps and services, usually related to customer care
RO	MyAccount-type of application (i.e. used for cost control, top-up credit/data traffic, add/remove options), antiviruses, parental control (via device), websites for educational purposes, speed measurement tool
SK	navigation, check consumption, control and payment invoices, activate a service package or top up credit
SE	free access to applications related to Microsoft 365

Table 6. Examples of other zero-rating services mentioned

12 NRAs (AT, BG, CZ, DE, DK, EE, EL, ES, HU, LV, SE, SI) responded that there are changes compared to the previous reporting period. Examples include:

NRA	Changes
AT	One additional provider ("educom" - an MVNO) introduced a zero-rating offer. Some of the zero-rating products of the four ISPs with zero-rating products are not offered to (new) customers anymore.
BG	No more zero-rating offers on the market.
DE	During the reporting period, BNetzA ordered Telekom and Vodafone to stop their zero-rating offers with the deadlines 1 July 2022 (active marketing to new customers) and 31 March 2023 (termination of existing contracts).
DK	One ISP still provides zero-rating. Marketing of zero-rating ended by 1 January 2022. From 1 January 2023, none of the existing subscriptions will contain zero-rating.
CZ	As a result of the ECJ's decisions (September 2021), which fundamentally affected the obligation of equal treatment of traffic within the meaning of Article 3(3) of the OIR, discussions with ISPs offering zero-rating practices were taking place.
EE	No more zero-rating offers.
EL	MNOs offered 28 services in total in 2021-2022 with differentiated charging, vs. 22 in 2020-2021. 18 of the 28 services were zero-rated. Zero-rating of educational platforms offered by the Ministry of Education is a zero-rated service, as part of measures to support tele-education in the case of the Covid-19 pandemic. A new category of "services for the general good" was reported (scientific research, panic button, etc.).
ES	Migration to unlimited data rates has decreased significantly the number of users.
HU	Based on the related judgments of the ECJ from September 2021, the NRA has contacted all relevant ISPs asking them about the zero-rating offers they had on the market, their future plans about possible new offers, as well as the planned steps and timetable of phasing out the existing zero-rating offers not in line with the OIR. ISPs indicated that they do not intend to introduce any new zero-rating offers, but the current offers are still available on the market. They also indicated their intended next steps concerning the phase out of the existing offers.
LV	One operator, which previously offered zero-rating applications to its customers, informed that since the beginning of year 2022 it was no longer offering zero-rating.
SE	Supervision will be commenced during the following reporting period.
SI	Offers voluntarily stopped by ISPs (not possible to make a new contract).

Table 7. Changes compared to the previous reporting period

Regarding the question, if any of the above-mentioned examples are based on the exemptions from Article 3(3) of the OIR, two NRAs responded with yes. DK reported that access to the ISP's webpage is zero-rated for customers and that this is considered as an exemption from the principal that all traffic shall be treated equally. RO informed that Netograf, their national speed measurement tool, is zero-rated based on an ANCOM's decision.

Question 5. Pursuant to Article 3(2) have you performed any formal assessments of agreements on commercial and technical conditions as well as commercial practices such as zero-rating or traffic price discrimination practices?

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

Nine NRAs (AT, CY, CZ, DK, HR, IT, LU, MT, NO) said they had undertaken one or more formal assessments of agreements on commercial and technical conditions as well as commercial practices, such as zero-rating or traffic price discrimination practices, in the reporting period.

The following case descriptions (Table 8) serve as examples involving these practices as they were analysed and reported by NRAs.

NRA	Case description
AT	Formal information requests based on Article 5 of the OIR regarding traffic management measures and the equal treatment and non-discrimination of certain content, services or applications (zero-rating/zero tariff options) were sent out in February 2022 to all four ISPs offering zero-rating services/tariffs. They all replied within the given time frame. The information requests cover data on take-up and data volumes of zero-rating offers and information on contacts.
CY	According to the provisions of the OIR (as interpreted in the BEREC Guidelines), ISPs reported to OCECPR on their agreements on commercial and technical conditions and commercial practices. OCECPR concluded that these agreements and commercial practices performed by ISPs do not constitute an infringement of the OIR. No zero-rating services exist in Cyprus. Therefore, no specific assessment regarding zero-rating services was made.
CZ	As in previous years, CTU engaged with selected business practices of ISPs and also focused its attention on zero-rating practices by monitoring the published contract terms of the providers. The tendency for these offers to decline continued as a result of market developments, with tariffs with higher data volume limits or unlimited data volumes being offered on the market.
DK	One ISP still provides zero-rating. Marketing of zero-rating ended by 1 January 2022. From 1 January 2023, none of the existing subscriptions will contain zero-rating.
HR	HAKOM collected and analysed data about the numbers of zero-rating users in Croatia and had informal/formal talks with ISPs.
IT	In March 2022, AGCOM started a formal assessment on zero-rating offers currently available by mobile operators. There are four operators with subscribers with zero-rating offers, three of them still sell them to new subscribers. AGCOM is currently monitoring the transition of subscribers from these offers to offers without a zero-rating component, and the end of sale of currently available zero-rating offers.

	Moreover, AGCOM conducted a specific surveillance activity due to consumer complaints, regarding the unavailability of a public IP address for IAS connections provided by one operator. The operator introduced the possibility of requiring a public IP address after AGCOM's intervention. According to the BEREC Guidelines, AGCOM launched a request for information to mobile and fixed operators in order to verify the case of differentiated QoS level practices as well as to consider whether any commercial practice of ISPs limited the exercise of the rights of end-users laid down in Article 3(1) of the OIR and thus circumvented provisions of the OIR safeguarding open internet access. AGCOM concluded a first round of inquiries and will continue to monitor operators' behaviour in this field.
LU	ILR collected twice a year data of zero-rating offers from one mobile operator since 2018.
MT	In 2018, MCA published its decision where the zero-rated offers by GO plc were analysed in detail. As part of the outcome of that decision, MCA keeps track of a number of key market figures on a quarterly basis and reassesses the offer. The data collected shows that the zero-rated offers present no immediate risk of harm to the subscribers related to the rights of subscribers that the OIR seeks to protect. Within this context and also taking note of BEREC's reading of the OIR following the publication of the ECJ rulings in September 2021, MCA opted to wait for the conclusion of the relevant discussion within BEREC and the publication of the revised BEREC Guidelines before requesting the phase out of all zero-rated offers. In the meantime, MCA collected information necessary in the eventual phase-out. MCA has also requested GO to stop the commercial advertising and sales of new zero-rated elements in the market.
NO	Assessments were made in connection with the work on the annual OI national report, resulting in high-level conclusions and no concrete enforcement actions.

Table 8. Article 3(2) case descriptions

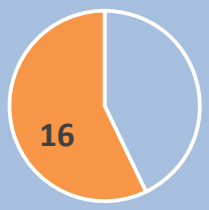
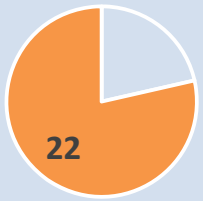
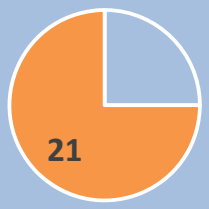
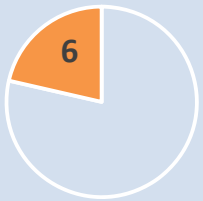
Question 6.a. What approach have you taken to monitor the traffic management practice of ISPs?

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.

Question 6.b. Is there any change compared to the previous period? If yes, please provide details.

27 NRAs (AT, BE, BG, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SI, SK) used one or more of the above-mentioned approaches to monitor traffic management practices in the reporting period. As presented in Table 9 below, NRAs often used more than one of these techniques to monitor traffic management practices. 16 NRAs undertook a market survey without requesting information from ISPs. 22 NRAs reported that they had submitted information requests to ISPs, while 21 NRAs had analysed complaints and end-user reports. Technical monitoring is up and running in six Member States.

Other solutions included initiatives to counter the “Flubot-virus” and to implement (technically) the EU sanctions against the Russian regime (BE). Additionally, end-users can report issues on the online alert platform “J'alerte l'Arcep” and they can use the last version of the traffic management application “Wehe” to help them to detect potential traffic differentiations or port blockings implemented by their ISP (FR).

Approach	NRAs	Number of NRAs taking the approach
Market survey without requesting information from ISPs	AT, BE, CY, CZ, EE, EL, ES, FI, FR, HR, HU, IE, IT, MT, PT, SI	
Information request from ISPs	AT, BG, CY, CZ, DE, DK, EL, ES, FI, FR, HR, IT, LU, LV, MT, NL, NO, PL, PT, RO, SI, SK	
Analysis of complaints and end-user reporting	AT, BG, CY, CZ, DE, DK, ES, FI, FR, HR, HU, IE, IT, LU, LV, MT, NL, PL, RO, SE, SI	
Technical monitoring	AT, CZ, FR, HR, HU, NL	

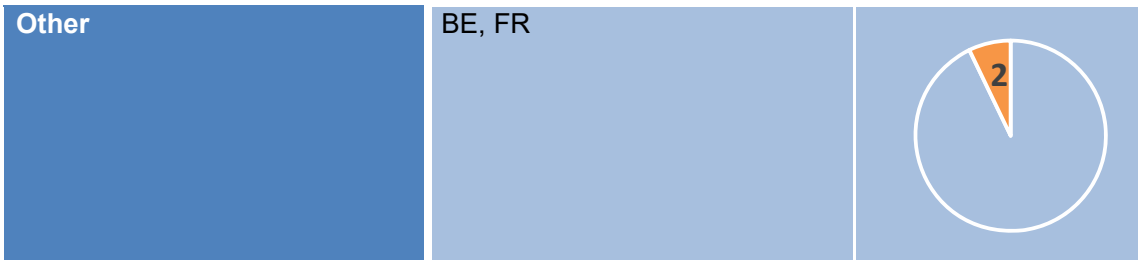


Table 9. Approaches regarding monitoring of traffic management practices

Three NRAs (BE, IE, SE) stated that there has been a change compared to the previous reporting period mainly referring to content blocking and traffic management practices (BE, IE) as well as monitoring of complaints (SE).

Question 7. Pursuant to Article 3(3) subparagraphs 1 to 3, have you completed any formal assessments of an ISP's traffic management practices?

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

11 NRAs (BG, CY, ES, FR, HU, IT, MT, NL, NO, PL, SK) reported that they had completed formal assessments of traffic management practices[27] in the reporting period, as outlined in in Table 10 below.

NRA	Main findings
BG	The assessment of traffic management practices is based on the information provided by ISPs with annual questionnaires. No practices in contradiction to the requirements of the OIR were identified.
CY	According to the provisions of the OIR (as interpreted in BEREC Guidelines), ISPs reported to OCECPR on traffic management practices. OCECPR concluded that any traffic management practices used by ISPs do not constitute an infringement of the OIR.
ES	Router free choice: two operators are under investigation for possible refusal to provide configuration parameters. MultiSIM card restrictions: one operator needs to clarify if its restriction affects offers with limited mobile data.
FR	ARCEP is still assessing possible traffic management practices in internet offers on trains. No conclusion has been reached so far and ARCEP is currently monitoring the case.

[27] This does not prevent NRAs from doing other informal assessments which are not mentioned in this report

HU	NMHH had to assess the blocking of port 445 by one of the fixed ISPs. The ISP argued that the blocking was introduced in order to protect its network and its subscribers from distributed denial-of-service (DDoS) attacks and was based on industry best practices. However, it could not provide a comprehensive risk assessment to support its claims and indicated that the port blocking was introduced for an indefinite time period, pending a change in industry best practices. The NRA established in its decisions that the ISP was engaging in traffic management that went beyond reasonable measures as contained in Article 3(3) subparagraph 2 of the OIR. The ISP failed to justify this practice under any existing exception contained in Article 3(3) subparagraph 3 of the OIR. Therefore, the NRA ordered the ISP to re-evaluate the port blocking and submit a risk assessment report and action plan to the NRA by the deadline specified. The ISP appealed the decision, but the appeal was rejected. Thereafter, the ISP has ceased the port blocking practice.
IT	In March 2022, AGCOM conducted a specific surveillance activity on traffic management practices adopted by a mobile operator due to a complaint. Such practices consisted in prioritising the traffic of the subscribers of certain offers. AGCOM's intervention led to an improvement in transparency towards end-users regarding the adopted practices. After a questionnaire sent to ISPs in February 2021, AGCOM conducted a round of inquiries and will continue to monitor operators' behaviour in this field.
MT	For the past years, MCA was using the TCPI questionnaire to probe on various issues related to OI. The same procedure was applied this year. The main ISPs apply IP blocking intended to stop the unlicensed transmission of copyrighted content prohibiting ISPs in Malta from carrying illegal traffic consisting of the transmission of Spanish football La Liga matches on their electronic platforms. This action is the result of a court decree in favour of "La Liga Nacional e Futbol Profesional" issuing a request for prohibitary injunction against the three main ISPs. The blocking targets a number of IP addresses identified in a study commissioned by PwC and accepted by the court. ISPs also block the DNS resolution of a number of domains related to RT/Russia Today and Sputnik's broadcasting services.
NL	Formal information requests regarding potential traffic management (ICMP, VoWi-Fi) were sent out.
NO	Nkom completed assessments of domain name system (DNS)-based security filters and found the services to be compliant with the OIR. Nkom issued guidance to ISPs on how to ensure end-user transparency.
PL	At the turn of 2021 and 2022, UKE conducted an inspection of one of the largest ISPs in Poland in terms of users regarding compliance with Articles 3(3) and 5(2) of the OIR in the period from 2017 to 2019. The audit revealed that: between 1 January 2017 and 15 May 2019, there was a breach of the terms of the OIR resulting from the practice of prioritising business over retail customer traffic. These practices, during the period of their application, were constant in nature, regardless of the level of traffic on the network. They also applied

	to internet access traffic, which did not have special requirements in terms of delays and fluctuations necessary for the proper operation of the service. Currently, UKE is assessing the collected evidence in order to resolve the administrative proceedings for imposing a fine under Article 209 (1) (25) of the Act of 16 July 2004 – Telecommunications Law.
SK	ISPs use practices imposed by European or national legislation. The provisions of the Act No.171/2005 Coll. on gambling games, the Act No.166/2003 Coll. on the Protection of Privacy against the Unauthorised Use of Technical-Intelligence Measures, child protection platform – for blocking of inappropriate content are complied with in practice. The list of prohibited websites is compiled and published by the Regulatory authority of the gamblings on its website https://www.urhh.sk/web/guest/zoznam-blokovanych-webov.

Table 10. Main findings of traffic management practices

Question 8. Did you conduct any research or survey on port blocking practices by ISPs?

If yes, please briefly describe significant findings.

13 NRAs (AT, BG, EL, ES, HR, IE, IT, LV, MT, NL, PL, SE, SI) surveyed port blocking practices by ISPs in the reporting period. The information provided in Table 11 below summarises the facts provided by the NRAs.

NRA	Main findings
AT	ISPs are obliged under the new 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 contact the NRA and enquire if the blocking of a certain port is in line with the OIR.
BG	CRC continues to assess traffic management practices based on the information provided by ISPs with annual questionnaires. Some access providers block certain ports to maintain the integrity and security of the network, terminal equipment and end users, to protect against DDoS attacks and spam. ISPs apply traffic management practices in accordance with the OIR and the BEREC Guidelines.
EL	Port blocking has been reported in the answers to the annual questionnaire submitted to EETT for a) preventing cyber-attacks, b) preventing spam and phishing messages, c) management of terminal equipment (in ports reserved for such management). It is sometimes used in combination with blocking of specific protocols for network security reasons. It can be a temporary or permanent measure or can be applied automatically. There does not seem to be a set of ports uniformly blocked by all ISPs. No new ports were reported to be blocked in comparison to the previous period.

ES	Most operators block some ports (mainly port 25) to avoid spam and security problems.
HR	HAKOM monitors port-blocking practices of major ISPs. Gathered responses from a survey among ISPs and according to the HAKOMetar Plus measurement results on port blocking practices showed that ISPs do not use permanent port-blocking measures, just temporarily, justifying it with security exceptions (malware, phishing, spoofing, preventing DDoS attacks, etc.). No new ports were reported to be blocked in comparison to previous years.
IE	ComReg undertook an information gathering exercise which contained port blocking. No port blocking going beyond the exceptions listed in Article 3(3) of the OIR was reported.
IT	After sending a questionnaire to ISPs in February 2021, AGCOM conducted a round of inquiries and will continue to monitor operators' behaviour in this field.
LV	Analysing the annual declarations of merchants, SPRK found that some ISPs block certain ports to avoid security threats and malware. Compared to the previous reporting period, the percentage of ISPs that block ports has not changed and is about 14%.
MT	Port blocking is used by ISPs, however, they have all justified such actions due to network security measures.
NL	An information request was sent out due to complaints of port blocking regarding VoWi-Fi, followed by more information requests regarding blocking of IP-addresses.
PL	UKE conducted a survey on the application of the practice to block TCP/UDP ports. Most ISPs do not apply TCP or UDP port blocking practices. ISPs who apply this practice block ports for incoming internet traffic. The following ports are blocked: 135-139, 445 (TCP, UDP). In two isolated cases, ISPs block all ports for incoming internet traffic. 25(TCP) port is blocked for outgoing internet traffic (three cases). These ports are blocked in order to ensure integrity and security of the network and services provided by means of the network and end-users' terminal devices. UKE is still monitoring those cases. There were no subscriber complaints about these practices.
SE	PTS looked into port blocking as a measure of traffic management from both a legal and a technical point of view. No indication of port blocking in conflict with the OIR has been found.
SI	Operators block some ports due to security reasons (preserving the integrity and security of the network and services provided via that network). There are no differences to port blocking practices compared to the previous period.

Table 11. Main findings of port blocking practices

6 Article 3(5)

Question 9.a. What approach have you taken to monitoring services other than internet access services (called specialised services below)?

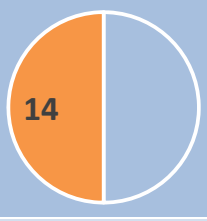
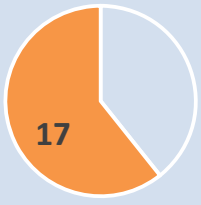
i. market survey without requesting information from ISPs (e.g. checking ISP's offers on their web pages);
ii. information request from ISPs;
iii. analysis of complaints and end-user reporting;
iv. technical network monitoring;
v. other, please specify.

Question 9.b. Is there any change compared to the previous period?

If yes, please provide details.

As shown in Table 12 below, five NRAs (BE, LT, LU, NL, SE) did not monitor specialised services in the reporting period, while most NRAs (23) used one or more of the above-mentioned approaches to monitoring specialised services. More than half of them (17) sent information requests to ISPs and undertook an analysis of complaints and end-users reporting, while about half of them (14) performed a market survey without requesting information from ISPs. One NRA used technical network monitoring.

Furthermore, FR mentioned other approaches, namely that end-users can report issues to the online alert platform "J'alerte l'Arcep" and they can use the traffic management application "Wehe".

Approach	NRAs	Number of NRAs taking the approach
Market survey without requesting information from ISPs (e.g. checking ISP's offers on their web pages)	AT, BG, CY, CZ, EE, EL, ES, FR, HR, HU, IT, MT, PT, SI	
Information request from ISPs	AT, BG, CY, CZ, EL, ES, FI, FR, HR, IT, LV, MT, NO, PL, PT, SI, SK	

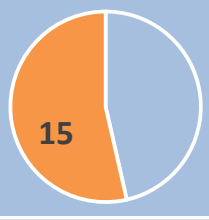
Analysis of complaints and end-user reporting	AT, BG, CY, CZ, DE, ES, FR, HR, IE, IT, LV, MT, PT, RO, SI	
Technical network monitoring	AT	
Other	FR	

Table 12. Approaches regarding monitoring of specialised services

Three NRAs (EL, FI, LV) responded that there are changes compared to the previous reporting period, as outlined in Table 13 below:

NRAs	Changes
EL	EETT reported that IPTV is offered as over-the-top (OTT) in general, but it is still being declared as specialised service from some ISPs for a small subset of subscribers who are still using legacy equipment.
FI	Traficom has held discussions and given guidance related to replacement of GSM-R with commercial mobile networks (regarding railway communications and application(s)) and within this context sent information requests to ISPs.
LV	SPRK informed that one mobile voice service operator has started to offer voice telephony service with the support of VoLTE technology.

Table 13. Changes compared to the previous reporting period regarding monitoring of specialised services

Question 10. Is there an NRA or national interpretation of or guidance on "services other than internet access services", which has not yet been mentioned in the previous BEREC OI Implementation Questionnaires?

If yes, please provide any information and examples other than the ones mentioned in BEREC Guidelines (VoLTE, IPTV).

None of the countries nor NRAs provided new guidance on specialised services in the reporting period. One NRA (AT) stated that the definition in the BEREC Guidelines is adequate, concluding that no further NRA/national interpretation is necessary.

Question 11. Have you completed any formal assessments 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)

Two NRAs (CY, SK) completed a formal assessment of the provision of specialised services in the reporting period. The information provided in Table 14 below summarises the results of the assessments carried out by those NRAs.

NRA	Main findings
CY	According to the provisions of the OIR (as interpreted in the BEREC Guidelines) and as adopted in a national secondary legislation (Decree 72/2017), ISPs reported to the NRA about providing specialised services. OCECPR concluded that the provision of the type of specialised services offered by the ISPs does not constitute an infringement of the OIR.
SK	ISPs in Slovakia offered IPTV, VoD and SVoD services that could meet the criteria for the specialised services. The traffic for these services can be optimised in the network to provide services of the required quality.

Table 14. Main findings of the provision of specialised services

7 Article 4

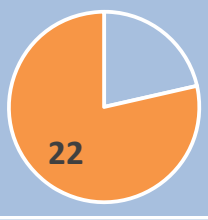
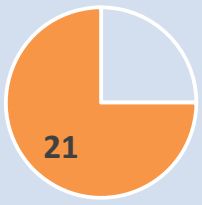
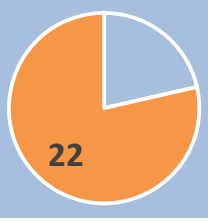
7.1 Article 4(1) – Approach to monitoring and enforcing compliance

Question 12.a. What approach have you taken to monitor and 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:

Question 12.b. Is there any change compared to the previous period? If yes, please provide details.

As shown in Table 15 below, almost all NRAs (27) used at least one approach to monitoring and enforcing ISPs' compliance with their transparency obligations in the reporting period. Most of them (24) have used more than one approach: 22 NRAs undertook a market survey without requesting information from ISPs, 21 submitted information requests to ISPs and 22 analysed complaints and end-users' reports.

Approach	NRAs	Number of NRAs taking the approach
Market survey without requesting information from ISPs (e.g. checking the applicable "terms and conditions")	AT, BE, BG, CY, CZ, DE, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LV, MT, NL, NO, PT, SI	
(Formal or informal) information request from ISPs	AT, BG, CY, CZ, DE, DK, EL, ES, FI, HR, HU, IT, LV, MT, NL, NO, PL, PT, RO, SI, SK	
Analysis of complaints and end-user reporting	AT, BE, BG, CY, CZ, DE, EE, EL, ES, FI, FR, HR, IE, IT, LV, MT, NL, PL, PT, RO, SE, SI	

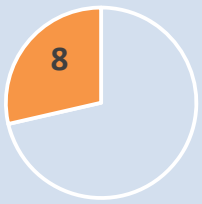
Other	AT, DE, DK, EL, FR, HR, IT, PT	

Table 15. Approaches regarding monitoring and enforcing ISPs' compliance with their transparency obligations set out in Article 4

Furthermore, eight NRAs (AT, DE, DK, EL, FR, HR, IT, PT) mentioned other approaches as outlined in Table 16 below:

NRA	Other approaches
AT	ISPs are obliged under the new Telecommunications Act (TKG 2021) to notify their T&Cs to RTR at the start of a new communication service and when there are changes of the T&Cs. Within this framework, the transparency obligations of the OIR are also checked.
DE	BNetzA mainly applies a complaint-based approach. BNetzA carries out regular spot checks of the respective formulations used by providers in their T&Cs.
DK	Last year, the authority had issued guidance to ISPs regarding Article 4 requirements. The industry made a template on how to comply with those requirements, which the autority has commented and approved.
EL	On-site audits at points of sale were carried out.
FR	Article 45 of the Executive Order n°2021-650, published on 26 May 2021, adds Article L224-27-1 to the French Consumer Code, which mentions that operators must comply with the transparency measures of Article 4(1) of the OIR.
HR	On-site audits at points of sale were carried out.
IT	AGCOM published statistical comparative values of ISPs' QoS results, reached in past periods. In addition, AGCOM started a surveillance activity on service charters and general conditions contents.
PT	In the period concerning the questionnaire, ANACOM analysed the contractual terms used by the main ISPs in their contracts and monitored small ISPs' websites, in regards their compliance with the transparency measures set out in Article 4 of the OIR, in particular information regarding data transmission speed.

Table 16. Examples of other approaches to monitor the ISPs' compliance with the transparency obligations

Six NRAs (AT, BE, CZ, EL, HU, PT) pointed out that there was a change compared to the previous period, as detailed in Table 17.

NRA	Description of the change performed
AT	The new Austrian Telecommunications Act (TKG 2021) is applicable.
BE	BIPT performed an analysis of complaint on the application of a fair use policy (FUP) in relation to offers marketed as “unlimited”.
CZ	The extensive inspection of ISPs has continued. The inspection focused on the compliance with disclosure obligations under Article 4(1)(d) of the OIR, inclusion of information on remedies available pursuant to Article 4(1)(e) of the OIR, and also on compliance with the obligations arising from the General Authorisation VO-S/1/08.2020-9 specifying the method of designating individual speeds and their discrepancies. This inspection activity took place in three phases: i) phase I was focused on educating ISPs and was completed in August 2021, ii) phase II targeted those providers who had not remedied the deficiencies identified in phase I and was completed in December 2021, and iii) the final phase III, currently underway, is scheduled for completion in the second half of 2022.
EL	On-site audits at points of sale were put in place to check whether the consumers are getting properly informed regarding internet speeds and their rights.
HU	The new national legislation concerning QoS and transparency requirements became mandatory for ISPs on 30 June 2021.
PT	ANACOM sent communications, at the end of July 2020, to 15 small ISPs, in which a special warning was issued regarding the obligation to publish on their websites "a clear and comprehensible explanation" of the speeds referred to in Article 4(1)(d) of the OIR, without prejudice to the information in question also having to be specified in the contracts. Several ISPs subsequently adapted their websites. Some ISPs which provide services in different Member States indicated difficulties because they need to harmonise the information disclosed in the different countries and NRAs have different requirements concerning the information to publish in the websites. ANACOM will evaluate the best way to proceed with this monitoring, considering the developments concerning the tool NET.mede and also considering the terms in which this issue is monitored by other NRAs. With regard the analysis of the contractual terms of the most representative ISPs, there is still lack of information regarding the remedies available to the consumers in the event of any continuous or regularly recurring discrepancy between the actual speed performance of the IAS and the performance indicated by the ISPs. Only one ISP introduced an explanation in this regard.

Table 17. Changes compared to previous reporting periods

Question 13. Have you completed any formal assessments 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. [Note: detail of compliance in relation to speeds' information requested below under Q16, 17]

In 14 Member States (AT, CY, CZ, DK, EL, FI, HR, HU, IT, LV, MT, PL, RO, SK), a formal assessment of the ISPs' contract conditions and their compliance with requirements, set out in Article 4(1) subparagraphs 1 a-e, was completed by the NRA in the reporting period. The main findings of those assessments are summarised in Table 18 below.

NRA	Main findings
AT	ISPs are obliged under the new Telecommunications Act (TKG 2021) to notify their terms and conditions to RTR at the start of a new communication service and when there are changes of the terms and conditions. As far as mobile services are concerned the (often significant) deviation between the estimated maximum speed for 3G, 4G and 5G connections set out in their terms and conditions and the realistically achievable speeds in their mobile networks is an ongoing problem.
CY	ISPs 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	Within the inspections carried out, administrative offence proceedings were initiated against those providers who failed to remedy the identified deficiencies in a timely manner. Sanctions in the form of fines were imposed on 312 entities. The inspections carried out in the second phase (until December 2021) were less extensive in nature and targeted 393 providers. At this stage, CTU found that 24% of these providers (mainly the small ones) continued to manifest repeated faults. CTU proceeded to initiate new administrative offence proceedings in these cases and imposed fines on 44 entities. The third and final phase is currently underway (from January 2022) and is scheduled for completion in the second half of this year. At this final phase, CTU is inspecting 95 providers that have not yet complied with all their legal obligations. Following the transposition of the European Electronic Communications Code (EECC) into the Electronic Communications Act, in February 2022, CTU started analysing the contract terms of the selected top 60 providers of electronic communications services, focusing, among other things, on compliance with the obligation to provide a pre-contractual summary of the contract, which includes, pursuant to Article 102(3)(f) of the EECC, the information required under Article 4(1)(d) and (e) of the OIR.
DK	A minority of the ISPs still didn't comply with the requirements in Article 4(1) (a)-(e) of the OIR.
EL	There is monitoring of transparency obligations several times within each reporting period and any shortcomings are addressed. Transparency is generally at a satisfactory level.

FI	Between March and October 2021, Traficom and Finnish Consumer Ombudsman conducted a survey via a questionnaire to Finnish ISPs on how they had taken into account the new contractual and informational obligations set in the EECC in their selling processes. The aim of the questionnaire and following analysis was to determine whether the ISPs implemented the new obligations accordingly to their processes, e.g., whether they provided the required contract summary (Article 102(3) of the EECC), and to give guidance to ISPs where needed. However, no formal decisions were made as part of the project.
HR	Operators in Croatia are obliged under the Croatian Telecommunications Act (ZEK) to notify their T&Cs to HAKOM before they launch a communication service. Thus, HAKOM regularly checks if they meet particular legal standards set out in the ZEK and also the compliance with the OIR. Changes of previously approved T&Cs must be notified as well. The main finding is that transparency is generally at a satisfactory level.
HU	Based on national legislation transposing the EECC, the transparency requirements are part of the information to be provided pursuant to Article 102(1) of the EECC. Compliance with these rules was checked along with the other requirements concerning subscriber contracts. The ISPs did comply with the transparency requirement.
IT	In March 2022, AGCOM conducted a specific surveillance activity about traffic management practices adopted by a mobile operator, starting from a complaint. Such practices consisted in prioritising the traffic of the subscribers of certain offers. AGCOM's intervention led to an improvement in transparency towards end users regarding the adopted practices.
LV	There are no further findings comparing with previous years.
MT	Monitoring of new offers is an ongoing process to ensure that no infringement to the obligations under the OIR are carried out.
PL	UKE audited the manner of presentation of information provided in contractual documents for IAS by 16 local ISPs. Some minor incompatibilities have been found and post inspection recommendations will be issued.
RO	The contracts analysed by ANCOM contained information on the maximum download and upload speed, but less or no information on the minimum and normally available download and upload speeds. The procedure the subscriber must follow in order to measure the speeds and obtain the national remedies available for him/her is also a piece of information that was missing from most of the contracts that were under ANCOM's scrutiny.

SK	According to the outcome of an information request of selected ISPs: • 80% of the ISPs complied with contract conditions set out in Article 4(1)(a) and Article 4(1)(b) of the OIR; • 50% of the ISPs complied with contract conditions set out in article 4(1)(c) of the OIR; • 80-100% of the ISPs complied with contract conditions set out in article 4(1)(d) of the OIR; • 90-100% of the ISPs complied with contract conditions set out in article 4(1)(e) of the OIR.

Table 18. Main findings of assessing the ISPs' contract conditions

Question 14.a. 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? If yes, please provide details. [Note: if the specifications were set before the reporting period, they should be reported in Annex I.]

Question 14.b. Were requirements:

- imposed by NRA or other competent Authority?
- agreed upon by market players?

Question 15. Are these requirements or the NRA's opinion/recommendation legally binding?

New national specifications in relation to the different types of speeds laid out in Article 4(1)(d) have been set in one NRA (LT) in the reporting period. These national specifications were imposed by the NRA.

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

Question 16. To the extent your NRA has reviewed the terms and conditions in ISP contracts, did the ISPs define minimum, maximum, advertised and normally available upload and download speeds of the internet access service in the fixed network? If yes, please briefly explain the main findings.

In 19 Member States (MS) (AT, BE, BG, CY, CZ, DE, EL, FI, HR, IT, LT, LV, MT, NO, PL, PT, RO, SK, SI), ISPs have provided speed definitions in their contracts of the IAS in the fixed network. The main findings of NRAs' assessments, conducted in the reporting period, in regard the terms and conditions in ISP contracts are presented in Table 19.

MS	Main findings
AT	ISPs are obliged under the new Telecommunications Act (TKG 2021) 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. Within this framework also the transparency obligations of the OIR are checked.
BE	The review was prior to the entry into force of the OIR and BIPT has decided not to repeat this review in the reporting period.
BG	In addition to the contract terms, most ISPs provide on their websites detailed information about the speeds and the terms of service.
CY	ISPs defined in their contracts: minimum, maximum and normally available, upload and download speeds of IAS in the fixed network.
CZ	Within the inspections carried out, it was assessed the compliance with Article 4(1)(d) of the OIR and the 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.
DE	ISPs typically mention in their T&Cs concrete figures for the respective speeds or mention a percentage of the maximum speed. The advertised speed typically equals the maximum speed.
EL	Fixed ISPs have incorporated minimum, maximum and normally available speeds in consumer contracts following the entry into force of national provisions on 25 November 2020. Speeds are provided per area and access technology. On-site audits verified conformance of ISPs to the requirements.
FI	All ISPs seem to follow the OIR regarding the speeds of fixed IAS offers.
HR	Based on the conducted review of the T&Cs in ISP contracts, HAKOM concluded that ISPs are in compliance with the OIR.
IT	The ISPs specify in the contracts and the publish on their web sites the minimum speeds of the offers.
LT	This information is provided in standard ISPs' T&Cs. No changes in current reporting period.
LV	As in previous years, SPRK has concluded that the majority of ISPs indicate at least minimum and maximum connection speed values in their contracts.
MT	The ISPs remain compliant to the legal requirements of the OIR including Article 4(1).
NO	ISPs defined the required speed parameters.
PL	Between May and July 2021, UKE audited the manner of presentation of information provided in contractual documents for IAS by 16 local ISPs. Main findings: • In the case of 10 ISPs, it was found that there was a lack of clear and understandable information in contractual documents on fixed-line IAS regarding: i) minimum download and upload speeds; ii) normally available download and upload

	speeds; iii) maximum download and upload speeds; and iv) declared download and upload speeds. • In the case of 6 ISPs, a lack of information was identified in the contractual documents as to what time of day the end-user can expect to reach the maximum speed. • For 6 ISPs, it was found that there was no specification of the time of availability of the normally available speed in the contractual documents. • In the case of 8 ISPs, a lack of clarity and transparency of contracts was found, both in terms of their graphic form (lack of legible font, lack of numerous exceptions and references, the so-called asterisks) and the use in contractual documents of terms incomprehensible to an average consumer (technical and legal terminology). • It was also discovered that there is a lack of specific and unambiguous indication of speed information in the contractual documents - ISPs should provide data transmission speeds: either in the form of unambiguously indicated numerical values expressed in megabits per second (Mbit/s) or gigabits per second (Gbit/s) or by percentage reference to the maximum speed expressed in numerical values in Mbit/s or Gbit/s (7 ISPs).
PT	The main ISPs defined, in their websites and contracts, the different speeds of the IAS in the fixed network.
RO	The contracts analysed by ANCOM contained information on the maximum download and upload speed, but less or no information on the minimum and normally available download and upload speeds. The procedure the subscriber must follow in order to measure the speeds and obtain the national remedies available for him/her is also a piece of information that was missing from most of the contracts that were under ANCOM's scrutiny.
SK	According to the outcome of an information request of selected ISPs, almost all of them defined in their contracts minimum, maximum, advertised and normally available upload and download speeds.
SI	Based on a survey carried out by the NRA, all major and a large majority of small ISPs define in their contracts minimum, maximum, advertised and normally available upload and download speeds of the IAS.

Table 19. Main findings of assessing fixed ISPs' contracts regarding definition of speeds

Question 17. To the extent your NRA has reviewed contracts of mobile ISPs, did they define advertised and estimated maximum upload and download speeds of the IAS in the mobile network?[28]

If yes, 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 (OI guideline 153).

Definitions provided

In 18 Member States (AT, BG, CY, CZ, DE, EE, EL, FI, HR, IT, LT, LV, MT, NO, PL, PT, SI, SK), ISPs contractually defined the speeds of the IAS in the mobile network, as outlined in Table 20 below.

MS	Activities
AT	ISPs are obliged under the Telecommunications Act (TKG 2021) to notify their terms and conditions to RTR at the start of a new communication service. Changes of terms and conditions must be notified as well. Within this framework also the transparency obligations of the OIR are checked. RTR is entitled to object specific clauses within six weeks if they do not meet particular legal standards. This is an ongoing measure.
BG	In their contracts, mobile ISPs declare that the advertised and maximum speeds are equal. The maximum download and upload speeds are defined in the contract for each generation of mobile network (2G, 3G, 4G, 5G).
CY	OCECPR reviewed the contracts of mobile ISPs. The main finding is that ISPs defined where applicable in their contracts the advertised speed, in percentage to the estimated maximum speed.
CZ	Within the inspections carried out, it was assessed the compliance with Article 4(1)(d) of the OIR and the compliance with the obligations arising from the General Authorisation specifying the method of designating individual speeds and their discrepancies of the mobile IAS.
DE	No change compared to the previous reporting period. ISPs typically mention in their T&Cs concrete figures for the respective mobile speeds.
EE	The operator provides the internet at the nominal speed of the package, i.e. at the advertised speed, which is also the maximum speed of the package. The normal speed, which can be used for most of the time in the operator's communication network, is at least 90% of the maximum or advertised speed.

[28] Remarks provided in this section only relate to countries where the NRA has reviewed the terms and conditions in contracts of fixed network ISPs.

	The minimum speed shall be 20-50% of the maximum or advertised speed of the package used, depending on the technology used by the operator to access the internet.
EL	Mobile ISPs provide speed estimates per area and technology following the entry into force of the national provisions on 1 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.
FI	All ISPs seem to follow the guidance and have even set the minimum speed for the mobile IAS offers.
HR	Mobile ISPs are in compliancy with the OIR, as ISPs defined in their contracts advertised and estimated maximum upload and download speeds of the IAS (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).
IT	The ISPs specify in the contracts and they publish on their websites the advertised speeds of the offers.
LT	This information is provided in standard ISPs' terms and conditions. There are no changes in the reporting period.
LV	As in previous years, SPRK has concluded that mobile operators publish on their website information on maximum and average connection speed values that can be achievable with different mobile technologies. As well, mobile ISPs indicate conditions that can influence internet speed.
MT	There are currently two ISPs that offer mobile plans which apply an internet download limit, namely EPIC and Melita. Both ISPs provide an indication of the "realistic usage conditions" that subscribers should expect to experience when subscribed to those plans. This information is not included in the T&Cs, but on the description page of their website where such offers are made available.
NO	ISPs defined the required speed parameters.
PL	In the period from May to July 2021, UKE conducted an audit of the manner of presentation of information provided in contractual documents on IAS by 16 local ISPs. In the case of two that provide both fixed and mobile IAS, it was found that the contractual documents lacked clear and understandable information on: i) estimated maximum download and upload speeds, and ii) the declared download and upload speeds.
PT	The main ISPs defined, in their websites and contracts, the different speeds of the IAS in the mobile network.
SI	All major ISPs defined in their contracts evaluated maximum and advertised upload and download speeds of the IAS. Speed is defined based on contractual package.

SK	According to the outcome of an information request of selected ISPs, all of them defined in their contracts estimated maximum upload and download speeds.

Table 20. Main findings of assessing mobile ISPs' contracts regarding definition of speeds

Realistic usage conditions

From those NRAs who have reviewed contracts of mobile ISPs carried out in the reporting period, some NRAs (AT, BG, FI, MT, PT, SK) provided information regarding contractual conditions, as summarised in Table 21 below.

NRA	Information on contractual conditions
AT	ISPs inform end-users in their T&Cs about the relevant factors influencing their available speed (e.g. network congestion, time of the day, geographical factors etc.). Due to the new Telecommunications Act (TKG 2021), they have been updated. Most ISPs use a non-binding template that RTR has published: https://www.rtr.at/TKP/was_wir_tun/telekommunikation/anbieterservice/allgemeine_geschaeftsbedingungen_und_entgeltbestimmungen/AGB_und_Entgelte.de.html (see under Downloads).
BG	In their contracts, mobile ISPs warn that maximum speeds (downloads and uploads) are not guaranteed. In addition, the contract includes brief information that the reduced speed when reaching the data limit affects the use of the internet (examples are given in frequently asked questions). Some ISPs give information on "realistic terms of use" also in their T&Cs, where they list factors that significantly influence the speed and quality of the IAS (such as the type of technology, the density of the buildings, the location of the end-user, the model of the end equipment, etc.).
FI	Please see Traficom's Opinion on speeds: https://www.traficom.fi/sites/default/files/media/regulation/Verkkoneutraliteettikannanotto-mobiililaajakaistaliittymista_EN.pdf.
MT	Links to mobile providers' websites where realistic usage information with respect to plans which apply a download/upload data speed limit: • EPIC: https://www.epic.com.mt/speedguide/ • Melita: https://www.melita.com/mobile/postpaid-plans/
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 Guidelines.
SK	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 21. Information on contractual conditions

Question 18. Have you completed any formal assessment of the ISPs' obligation to publish, according to Article 4(1), subparagraph 2, the information referred to in Article 4(1), subparagraphs 1 a-e?

If yes, please provide details.

During the reporting period, 11 NRAs (BG, CY, CZ, DK, EE, EL, HR, IT, MT, PL, SK) completed formal assessments of the ISPs' obligations foreseen in Article 4(1), subparagraphs 1 a-e, regarding the publication of information. Some NRAs provided the main findings of those assessments, which are detailed in Table 22 below.

NRA	Main findings
BG	Along with the processing of the information submitted with the annual questionnaires for the activity of the operators, the NRA also reviewed the information published by the operators on their websites in compliance with the OIR. The monitoring shows that the largest ISPs fulfil the obligation to publish the information referred to in Article 4(1), subparagraphs 1 a-e.
CY	According to the provisions of the OIR, as adopted in national secondary legislation (Decree 72/2017), ISPs reported to OCECPR on their obligation to publish the information referred to in Article 4(1), subparagraphs 1 a-e. OCECPR found out that ISPs comply with the relevant legislation.
CZ	Within the inspections carried out, CTU analysed the information stated in published contractual conditions related to the provision of IAS and its compliance especially with the Article 4(1) (d) and (e) of the OIR.
DK	In 2021, 29% of the ISPs did not publish information as referred to in Article 4(1) first subparagraph. However, more ISPs have published this information in comparison to 2020 (where 45% did not).
EL	A regular assessment of the ISPs' websites is performed a few times within each reporting period. Any insufficiencies or discrepancies are pointed out to ISPs and get corrected. A case that was opened in the previous period, regarding an ISP who advertised sync speed guarantees, is now completed.
HR	A regular assessment of the ISPs' websites is performed a few times within each reporting period. Transparency is generally at a satisfactory level.
IT	AGCOM monitors and publishes data on the minimum contractually agreed speed. These values are published on a web page where users can compare the offers (https://www.misurainternet.it/confronto_banda_minima/). Moreover, AGCOM currently verifies contractual conditions and operators' terms of service, publishing them on its website (https://www.agcom.it/carte-dei-servizi).
MT	Regular reviews of the terms and conditions of product offers on the market are carried out. This review also includes checks to ensure the inclusion of information referred to in Article 4(1), subparagraphs 1 a-e.

SK	According to the outcome of the information request of selected ISPs, most ISPs fulfilled the obligation to publish the information referred to in Article 4(1), subparagraphs 1 a-e.

Table 22. Main findings regarding transparency of information

Question 19. Have you imposed additional transparency requirements regarding the publication of information referred to in Article 4(1), subparagraphs 1 a-e?

If yes, please provide details of the requirements.

As presented in Annex I, most transparency requirements regarding the publication of information referred to in Article 4(1), subparagraphs 1 a-e, are still in force in the reporting period. Notwithstanding four NRAs (AT, BE, IT, LT) imposed additional requirements, as outlined in Table 23 below.

NRA	Additional transparency requirements
AT	On an informal level, transparency requirements are regularly discussed with ISPs: • RTR had/has bilateral meetings with ISPs, which also cover issues regarding the OIR and the accompanying BEREC Guidelines. • Also the regular exchange between ISPs and RTR concerning different matters of telecommunications (including OI issues) is ongoing. Within this forum, RTR presents latest developments regarding OI to the ISPs and ISPs are welcome to present their views. • Furthermore there are some non-binding templates/recommendations, which have been updated due to the new Telecommunications Act (TKG 2021) for ISPs, available on RTR's website. (https://www.rtr.at/TKP/was_wir_tun/telekommunikation/anbieterservice/allgemeine_geschaeftsbedingungen_und_entgeltbestimmungen/AGB_und_Entgelte.de.html)
BE	On 23 February 2022, BIPT published guidelines to throw some light on the use of the term "unlimited internet" in commercial communications of ISPs. BIPT acknowledges that a 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. 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 ISPs' 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. Providers have until the end of August 2022 to implement the BIPT Guidelines, so no formal supervision actions have taken place yet. There is also a review clause in the Guidelines, BIPT promised to trigger if it appears the thresholds that were set are no longer high enough (i.e. not high enough anymore so that virtually no one reaches the values of 300 GB and 3 TB respectively).
IT	AGCOM (by virtue of a competence attributed by the Decree Law of 16 October 2017, n. 148 art. 19 quinquiesdecies), adopted a resolution (no. 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. 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, but also latency, jitter and packet loss ratio.

Table 23. Additional transparency requirements

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

Question 20.a. Have ISPs established new or adapted the existing "transparent, simple and efficient procedures to address end-user complaints…" according to article 4(2)?

If yes, please provide details. (e.g., hotlines, complaint templates)?

Question 20.b. Is there an industry wide approach in relation to these procedures?

If yes, was this approach:

i. imposed or facilitated by the NRA,
ii. prescribed by national legislation,
iii. voluntarily agreed upon by the market players,
iv. other, please specify:

In 14 Member States (CY, DK, EE, ES, FR, IT, LU, LT, MT, NL, NO, PL, SE, SK), 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.

In the cases where there is an industry wide approach regarding procedures to address end-user complaints (CY, DE, DK, EL, FR, HR, HU, IT, LV, MT, NO, PL, RO, SI, SK), additional information is summarised in Table 24 below.

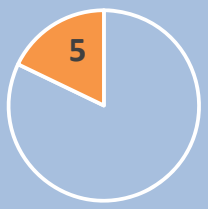
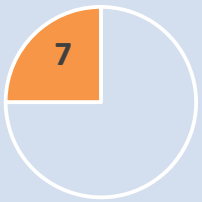
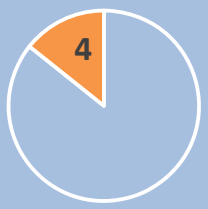
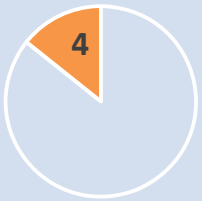
Industry-wide approach	NRAs	Number of NRAs taking the approach
Imposed or facilitated by the NRA	CY, DE, IT, RO, SI	
Prescribed by national legislation	CY, EL, HR, HU, LV, SI, SK	
Voluntarily agreed upon by the market players	FR, MT, PL, SI	
Other	DK, NL, NO, SE	

Table 24. Industry wide approach regarding procedures for end-user complaints

7.3 Article 4(3) – Additional transparency requirements

Question 21. Did you nationally (e.g., NRA, Ministry) provide guidance or impose additional transparency or information requirements on ISPs following the enforcement of the OIR?

If yes, please provide details of the requirements.

Nine Member States (AT, BG, DE, DK, EL, IT, LT, RO, SI) have provided guidance or imposed additional transparency or information requirements on ISPs following the enforcement of the OIR. For most of them (BG, DE, DK, EL, IT, RO, SI), the measures that were taking place in previous years are still in force. Only in two Member States (AT, LT), additional guidance or requirements have been set in the reporting period, as outlined in Table 25 below.

NRA	Measures taken
AT	RTR has regular bilateral meetings with ISPs, which also cover current issues regarding the OIR and the accompanying BEREC Guidelines.
LT	In addition to the requirements set out in Article 4(1) of the OIR, which were introduced in connection with the transposition of the EECC, new requirements were imposed. These requirements are to provide information on: (i) cases where traffic management measures prevent the use of certain services or reduce the speed of data transmission; (ii) the amount of data provided, if the ISP applies restrictions on the amount of data, as well as what measures are applied in case of exceeding this amount; (iii) the minimum and normal data transmission speed in the public mobile communication network.

Table 25. Additional monitoring, information and transparency requirements

7.4 Article 4(4) – Monitoring mechanism

Question 22. Is there an NRA or national interpretation of "significant discrepancy, continuous or regularly recurring"?

If yes, how are these terms interpreted? [Note: if the interpretation was set before the reporting period, it should be reported in Annex I]

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:

As detailed in Annex I, in 12 Member States (BG, CY, CZ, DE, EL, ES, HR, IT, MT, PL, RO, SI), there is a national interpretation of *"significant discrepancy, continuous or regularly recurring"*.

Although adopted in previous years, the interpretations are still valid for all Member States, except one (DE). As there was a new legal basis entitling the consumers to reduce the contractually agreed fee in Germany, some adaptations were made to the previous BNetzA's specifications on the existence of a relevant deviation and its proof.

In 8 out of the 12 Member States (CY, CZ, EL, ES, HR, MT, PL, SI), the definitions were imposed by the NRA.

Question 23. Do you collect or monitor the number of end-user complaints?

If yes, what was the level of end-user complaints about the performance of the internet access service, relative to contracted parameters (speeds or other QoS parameters)?

In 23 Member States (AT, BE, BG, CY, CZ, DE, EL, EE, ES, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI), NRAs have collected and monitored the number of end-user complaints in the reporting period. Additional information on the level of end-user complaints about the performance of the IAS, relative to QoS contracted parameters, are summarised in Table 26 below.

NRA	Information related to net neutrality complaints
AT	The total number of requests submitted for conciliation was 172, of which 118 requests were related to the quality of mobile networks and 54 requests regarded the quality of fixed networks, showing a significant decrease in complaints about the contractually agreed quality of IAS. In addition to conciliation proceedings, there was a large number of general inquiries including OI issues. During the reporting period the following issues were brought up: zero-rating, port blocking, public/private IP addresses, freedom to use the router of choice and minimum content according to Article 4 of the OIR.
BE	Complaints are handled by the Ombudsman for Telecommunications. This year one complaint was submitted to BIPT and there was a request for input on a complaint submitted to the Minister for Telecommunications. In both cases, the complaint revolved around FUP and "unlimited" internet.
BG	CRC received 156 complaints regarding fixed IAS and 53 complaints regarding mobile IAS. Most of the complaints for fixed IAS (85%) are related to the lack of service due to frequent network interruptions (not repaired in time), while the rest of the complaints for fixed IAS are related to speeds (the delivered speed is lower than the advertised and normally available one in the offer). In the case of mobile IAS, most complaints are related to speeds (the delivered speed is lower than the advertised one in the offer) and frequent network interruptions.

CY	Few complaints were received in relation to QoS parameters, mainly concerning fixed broadband connections.
CZ	An increasing number of complaints concerning the fulfilment of the obligations by ISPs was noted, although still only a few dozen. Most of these complaints and enquiries (90%) relate to non-compliance with the agreed quality parameters specified in the contract or the inclusion of quality parameters for the IAS in the contract that are not in accordance with the General Authorisation issued.
DE	BNetzA received around 2 300 complaints and requests per year, revealing an increase compared to the previous year. About 1 050 complaints are sustained end-user complaints (i.e., complaints where no solution can be found between the end-user and the ISP) with the provider. 122 consumers addressed issues in a dispute settlement.
EL	The number of complaints to EETT is very low. However, it should be noted that EETT acts as a second or third level for the resolution of complaints. Complaints are first addressed to the ISPs, and in case of a dispute, they are addressed to dispute resolution bodies (e.g., the Hellenic Consumers' Ombudsman). Only subscribers who are not satisfied with the treatment of their complaint address themselves to EETT.
ES	77 complaints (0.32% of the total amount).
HR	35 complaints regarding internet QoS in fixed networks, 22 complaints regarding internet QoS in mobile networks, 22 complaints (via *HAKOMetar* certified tool) regarding achieving minimum speed.
HU	NMHH only received one report from end-users concerning a fixed operator's violations of the OIR. Based on the report, it can be concluded that it was no systematic problem related to net neutrality and the current regulations can address the problems that arise.
IE	Approximatively 3% of all complaints within the period relate to net neutrality issues.
IT	Complaints mostly related to minimum speed.
LV	18 complaints were received about IAS, of which 8 were related to the quality of IAS. In addition, 24 phone consultations were given regarding quality of IAS.
MT	14 complaints categorised as follows: 5 complaints regarding discrepancies between the contracted speed and the actual speed performance of the service, 1 complaint regarding intermittent internet connection and 8 complaints regarding faults to an internet service.
NL	ACM logged 60 complaints in total of which 43 were about terminal equipment and 11 about internet speeds.
PL	189 complaints regarding performance of the IAS (QoS), including 150 regarding mobile and 39 regarding fixed networks.

PT	630 complaints regarding internet speeds below what is advertised/subscribed, 352 complaints regarding service faults/malfunctioning and 9 complaints regarding FUP and traffic shaping.
RO	3% of the total number of complaints concerning electronic communications services.
SE	37 complaints concerning speeds.
SI	1.5% of all user complaints.

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

Question 24. Have specific additional remedies been introduced for consumer redress in relation to non-conformance of IAS with the contract terms (e.g., legal action before courts and/or NRA, right to early termination, compensation)?

In the reporting period, six NRAs (DE, EL, ES, HR, IT, LV) introduced additional remedies for end-user complaints in case of non-conformance of IAS with the contract terms.

Question 25. Are there any updates regarding your IAS quality monitoring tool for consumers or any respective measurement tool projects? If yes, please provide details. [Note: please check Annex I for existing detailed information regarding monitoring tools.]

15 NRAs (AT, BG, CZ, DE, EL, FI, FR, HR, HU, IT, LV, NL, PT, SK, SI) mentioned updates or plans regarding their IAS quality measurement tool as summarised in Table 27 below.

NRA	Information related to IAS quality monitoring tool
AT	RTR is regularly updating its monitoring tool and its website. This includes regular technical and legal maintenance, such as updates of legal texts due to a new Austrian Telecommunications Act, new servers, cooperating with other NRAs that use the source code of RTR-NetTest.
BG	CRC established a measurement system for monitoring the quality of IAS provided through fixed and mobile networks, in accordance with the OIR, being available for test use since the end of 2021.
CZ	In the period under review, CTU decided to develop and operate its own publicly available measuring tool, CTU-NetTest (https://nettest.cz/en/), for the purposes of technical monitoring of quality, using the source codes of the RTR-Netztest tool operated by the Austrian regulator RTR. To this end, a Memorandum of Cooperation was concluded between CTU and RTR on the sharing of experience in the development and operation of measuring tools focusing on crowdsourcing.

	The NetTest tool was launched on 17 September 2021 as a certified monitoring mechanism for the quality of IAS. It provides the general public with the opportunity not only to test the quality of their internet connection once or repeatedly. Additionally, it allows to carry out a certified measurement process in the event that the speed actually achieved in the download or upload direction of the internet connection does not correspond to the contractually specified speeds.
DE	BNetzA considered its broadband measurement mechanism ("Breitbandmessung") certified according to Article 4(4) of the OIR and in line with paragraph 161 of the BEREC Guidelines.
EL	A new project for the upgrade of the existing QoS measurement platform of EETT – HYPERION – has been kicked off on 1 April 2022.
FI	The estimated launch date of Traficom's monitoring tool "Bittimittari.fi" has been postponed to the end of 2022.
FR	The Application Programming Interface (API) has been developed and is currently deployed gradually by the operators, according to the deployment timeline set up in Arcep's Decision of 2020. In parallel, Arcep and the measurement ecosystem stakeholders updated the Code of conduct for measurement tools. This updated version contains transparency criteria, on which measurement tool companies must commit to communicate. Just like the previous version, it takes into account the elements listed in the BEREC Net Neutrality Regulatory Assessment Methodology and also use additional usage-based criteria, like web page loading time or criteria related to video streaming or characterization of the test servers.
HR	HAKOM updated HAKOMetar Plus, a mobile (crowdsourcing) application for iOS and Android smartphones, which now includes also 5G measurements. HAKOM also started a project for upgrading the existing HAKOMetar measurement tool (fixed network).
HU	The monitoring tool operated by the NRA (https://szelessav.net) has been modified to conduct browser-based measurements over TLS (this is now a more common use case in practice). The tool can now also conduct more correct measurements over high-speed network with big delays (high bandwidth-delay product (BDP)).
IT	Since the beginning of 2022, the development of apps for Android and iOS has been started. Those apps are currently in internal testing and will be released during the course of the year.
LU	ILR endeavours to update Checkmynet.lu on a regular basis in order to take into account technological evolutions. For instance, Checkmynet.lu was updated in May 2021: the tool can now identify internet accesses on 5G networks.
LV	In 2021, SPRK started preparing for the public procurement of new IAS quality measurement tool. In the first quarter of 2022, SPRK launched a new IAS quality measurement tool procurement procedure.
NL	ACM has decided to not develop its own measurement system.
PT	ANACOM introduced some improvements, namely on app NET.mede, including the automatic identification of the type of access (fixed, mobile or non-residential) and of

	the provider, to make it more user-friendly. The iOS and Android versions of the app, now, at the end of each mobile test, indicate the type of mobile network and, the latter, also signal strength. ANACOM has also initiated a collaborative process, involving the most representative ISPs in the market and the public entity whose main mission is to protect the consumers, for the purpose of recognising the validity of the results obtained by users in tests with the NET.mede app.
SK	Technical quality monitoring of IAS is provided by the NRA, independently from ISPs, by Nettest system of the company Specure GmbH, in Slovakia known as MobilTest (www.meracinternetu.sk). The NRA plans to certify this tool as a monitoring mechanism in accordance with Section 122(21) of Act No. 452/2021 Coll. on Electronic Communications, as amended.
SI	The hardware/server infrastructure was upgraded and the measurement network interconnection links were upgraded, so the whole system in now redundant and all components are 100GbE.

Table 27. Updates or plans regarding IAS quality monitoring tool for consumers

For further details regarding NRAs' existing measurement tools, please refer to Annex I of this report.

8 Article 5(1)

Question 26. Did you impose any QoS requirements on any ISP under the OIR (other than definition of contractual speeds)?

If yes, which requirements were imposed?

During the reporting period, LT stated that additional QoS requirements were introduced in connection with the transposition of the EECC. The additional requirements have been established in the Rules for Electronic Communications Services:

- regarding fixed networks:
  - the minimum data speed may not be less than 50% of the maximum data speed;
  - the normally available data speed may not be less than 80% of the maximum data speed;
  - the maximum data speed should be not lower than advertised data speed;
- regarding mobile networks: there should be conditions provided when the minimum as well as the maximum data speed can be achieved.

Question 27.a. What approach have you taken to measure the availability of high-quality internet access services:

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:

Question 27.b. Is there any change compared to the previous period? If yes, please provide details.

In the reporting period, 25 NRAs (AT, BE, BG, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, MT, NL, NO, PL, PT, RO, SI, SK) have monitored the availability of high-speed IAS. The NRA responses suggest that the most popular approaches to measuring the availability of high-quality IAS are through analysis of complaints, through information requests from ISPs and by technical monitoring of networks (see Table 28).

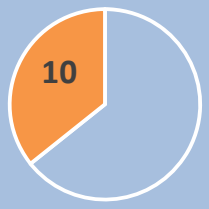
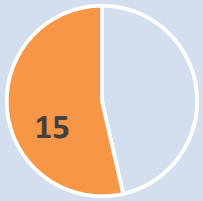
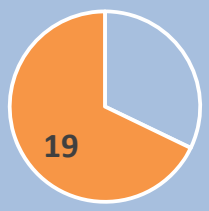
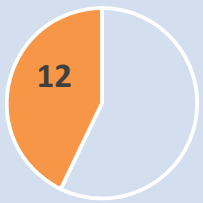
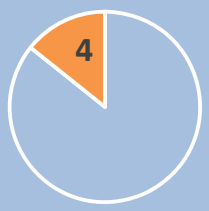
Approach	NRAs	Number of NRAs taking the approach
Market survey without requesting information from ISPs	AT, CY, CZ, EE, HU, IE, IT, LT, MT, PT	
Information request from ISPs	AT, BE, BG, CY, EE, EL, FI, FR, HR, IT, MT, NL, PL, SI, SK	
Analysis of complaints and end-user reporting	AT, BG, CY, CZ, DK, EE, EL, ES, FI, FR, HR, IE, IT, MT, NL, PL, PT, RO, SI	
Technical network monitoring	AT, BE, BG, CZ, EE, HR, HU, IT, LT, MT, NO, PT	
Other	DE, NO, PL, RO	

Table 28. Approaches regarding the availability of high-quality internet access services

Regarding other approaches taken by NRAs, four NRAs indicated the following:

- **DE:** BNetzA used a broadband measurement mechanism;
- **NO:** Nkom has applied BEREC's method for assessment of general quality of IAS in case of 4G networks;
- **PL:** UKE purchased reports from the tests carried out by end-users via the www.speedtest.pl tool;

- **RO**, following monitoring campaigns conducted between 2019 and 2021, developed a map of mobile signal coverage where end-users can follow the evolution of the coverage from one year to another. The map reflects the mobile signal coverage for all technologies available at the time of measurements (2G/3G/4G) for each of the mobile operators active on that market, the level of the aggregate signal throughout the country, the maximum level measured for signals from neighbouring countries.

Only three NRAs (BG, CZ, IT) reported changes in their approaches:

- **BG** made available a measurement tool;
- **CZ**, analysing the results in the monitored period, found changes in the structure of the achieved services performance in download direction as assessed according to speed categories. In the end of 2021, there were significant changes where measurement results in categories 10-30 Mbps and 30-100 Mbps became dominant. This trend of changes can be described as increasing of IAS quality;
- **IT**, in their drive test campaign for mobile IAS quality measurement, AGCOM carried out in 2021, an official measurement campaign for LTE networks and an experimental campaign for 5G networks. The results of the official campaign were published in December 2021, while the results of the 5G campaign will be used for the planning of the 2022 measurement campaign.

Question 28. If you performed measurements of internet access service quality, please report the main findings in relation to the provisions of the OIR.

13 NRAs (AT, BE, CZ, DE, EL, FR, HR, HU, IT, LT, NO, PT, RO) reported that they have performed some form of measurements of IAS quality in the reporting period. These measurements are performed either on the fixed or on the mobile networks, or on both. This includes measurements by NRAs themselves, as well as measurements obtained from crowdsourced measurement applications and tools.

Nine NRAs (DE, EL, FR, HR, HU, LT, NO, PT, RO) indicated that there has been an overall increase in network speeds and capacity or at least that there has been no degradation compared to the previous reporting period. This increase has been generally attributed to the expansion of next generation networks, as well as the broader use of LTE technology (in mobile networks) and the network upgrades that resulted from the Covid-19 crisis, among other reasons.

BG performed some tests, but the results were not sufficient for an analysis as the measurement tool was launched only at the end of 2021.

Question 29. Have you taken any other steps to ensure compliance with **Articles 3 and 4** according to **Article 5(1)** not mentioned elsewhere in this questionnaire? [Note: NRAs' actions regarding ECJ rulings are to be reported separately. Please update the dedicated Excel available on BERECnet].

If yes, please provide details.

In the reporting period, two NRAs (IT, SI) have taken additional steps to ensure compliance with the above Articles:

- **IT** reported that they use a tool that allows users to investigate deviations between minimum QoS contractual parameters with effective measurements and allows them to complain and, if QoS is not met again after 45 days, to break the contract without penalties. Moreover, AGCOM has regional probes (based on the same measurement algorithm) that test the two most popular profiles of operators with more than 500 users in a region and publish these measurements every six months.
- **SI** reported meetings with operators regarding website blocking in relation to the Regulation (EU) 2022/350.

9 Article 6

Question 30. Regarding the rules on penalties to infringements of Articles 3, 4, and 5 pursuing to article 6 of the OIR you apply, is there any change compared to the previous reporting period? If yes, please provide details.

In the previous reporting period, all NRAs reported 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.

During the current reporting period, four NRAs (AT, DE, LU, SK) reported updates:

- **AT:** The new Telecommunications Act (TKG 2021) foresees higher fines in cases of violations of the OIR (from “up to 58 000 EUR” to “up to 100 000 EUR”).
- **DE:** In December 2021, a new Telecom Act entered into force in Germany, transposing the EECC. The Telecom Act contains higher penalties for infringements related to open internet, both higher administrative fines (in case of legal persons with an average turnover exceeding 100 million EUR: up to 1% of the last annual worldwide group turnover) as well as higher periodic penalty payments (up to 10 million EUR).
- **LU:** On 17 December 2021, the new telecom law, transposing the EECC, was adopted. The penalties of Article 33 of this law of can be applied to infringements of the mentioned Articles of the OIR (the amount of the penalty can be up to 1 million EUR).
- **SK:** Pursuant to Article 124 of the Act No. 452/ 2021 Collection of Laws on Electronic Communications, RU applies penalty in the rate from 200 EUR up to 5% of the undertakings’ turnover for the previous accounting period.

Question 31. Have there been any new court proceedings or updates to the cases reported previously related to the OIR? If yes, please provide details.

Five NRAs (AT, DE, IT, NL, RO) reported some progress in OIR-related court proceedings in the past 12 months, as outlined in Table 29.

NRA	Court proceedings
AT	**1)** R 3/16: With the decision of December 18, 2017, the TKK found various violations of Article 3 of the OIR. A1 appealed against this decision to the court (Bundesverwaltungsgericht, BVwG). In December 2021, the Administrative Court (Verwaltungsgerichtshof, VwGH) dismissed the appeal by A1 as unfounded and thus confirmed the findings of the BVwG and the TKK. The decision became legally binding/final in December 2021. (https://www.rtr.at/TKP/aktuelles/entscheidungen/entscheidungen/R3_16_Bescheid_18122017.de.html) **2)** R 5/17: This decision of the TKK prohibited A1 the application of "traffic shaping" in an add-on package to a tariff, where audio and video streaming services are zero-rated. In April 2022, the ISP withdrew its complaint and the court, BVwG, issued a cessation decision. Thus, the decision is now legally binding/final. (https://www.rtr.at/TKP/aktuelles/entscheidungen/entscheidungen/R5_17_Bescheid_18122017.de.html) **3)** R 9/19: In 2021, the decision issued against Lycamobile Austria Limited due to the non-assignment of public IP addresses upon request of its customers became legally binding/final. (https://www.rtr.at/TKP/aktuelles/entscheidungen/entscheidungen/R9_19.de.html)
DE	Proceedings regarding zero-rating offers in order to implement the ECJ rulings. BNetzA ordered Deutsche Telekom and Vodafone to stop their zero-rating offers with the deadlines 1 July 2022 (active marketing to new customers) and 31 March 2023 (termination of existing contracts).
IT	With sentences no. 1200/2020 and no. 1201/2020, the Lazio Regional Administrative Court confirmed the lawfulness of the provision of Article 5, paragraph 1 of resolution no. 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 no. 1200/2020. Decision on sentence no. 1201/2020 is still pending.
NL	Court injunction to block websites involved in copyright infringements (BitTorrent).
RO	The file that has as object the annulment of the Decision of the President of ANCOM 669/08.08.2018 (through which Telekom Mobile Romania was sanctioned for violating the provisions of Article 3(3) indents 1 and 3 of OIR), remained to be tried on the merits at the Bucharest Court of Appeal. After several postponements of pronouncing the sentence, on 26 May 2021, the court decided to annul the above-mentioned decision. ANCOM will appeal against this sentence as soon as it receives the motivation of the decision.

Table 29. Court proceedings on open internet

Annex I: Summary of the 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 questions 10, 14, 15, 19, 22, 25 and 31.

Question 10. Is there an NRA or national interpretation of or guidance on "services other than internet access services", which has not yet been mentioned in the previous BEREC OI Implementation Questionnaires? Y/N

If *yes*, please provide any information and examples other than the ones mentioned in BEREC Guidelines (VoLTE, IPTV).

EL: EETT introduced national measures (EETT Decision 876/7B/17-12-2018) that oblige ISPs to provide contractual information about the quality requirements of the specialised services and the potential impact to the subscriber's IAS. EETT also stipulates that ISPs should ensure the network has sufficient capacity, so that the provision of specialised services to a subscriber does not impair the quality of other subscribers in the network. A quality impairment exists when there is continuous or repeated performance decrease with respect to a previous level of performance, or when it can be proven that this reduction is statistically significant ($\alpha \leq 0.05$).

NL: ACM published an explanatory document on traffic management[29].

Question 14. 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

If *yes*, please provide details.

Were these requirements:

- imposed by NRA or other competent Authority?
- agreed upon by market players?

Question 15. Are these requirements or the NRA's opinion/recommendation legally binding?

[29] The document can be consulted under the following link: https://www.acm.nl/sites/default/files/documents/2020-01/traffic-management-voorlichtend-document.pdf

Specifications set:

National specifications in relation to different types of speeds have been set in 18 Member States (AT, BE, BG, CY, CZ, DK, EL, FI, HR, HU, 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, taking 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 (HU, 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 30.

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 • 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: • as far as fixed networks are concerned, minimum, standard and maximum speed, in percentage of advertised speed; • 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,	Peak hours from 19:00 to 23:00 for residential users, and from 09:00 to 17:00 for non-residential (business) users. ISPs are free to provide different intervals for peak hours, based on the actual usage of their networks.

	maximum and normally available speeds are defined as follows: • Minimum speed 5% of measurements during peak hours • Maximum speed 95% of measurements during non-peak hours • Normally available speed 50% of measurements during peak hours	
FI	Requirements set for subscriptions with the maximum speed ≤ 100 Mbit/s: • Minimum speed must be at least 70% of maximum speed • 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 • Normally available speed: not specified because of the high threshold for minimum speed	
IT	Minimum speed/maximum speed: 95- and 5-quantile (respectively) of the speeds measured in a time interval (6 months for statistical comparative values / 24 hours for single users' lines) Measures are sampled every 15 minutes. Also average and standard deviations are calculated and published.	Maximum speed is defined based on actual measurements, therefore it is achievable.
LT	• Minimum speed is such speed that ensures the provision of IAS; • Normally available speed is calculated as 80th percentile of all speed values measured; • Maximum speed is calculated as 95th percentile of all speed values measured.	
LV	Minimum speed: ≥ 20% of maximum speed	
NL	ISPs are obligated to specify in their contracts internet speeds on fixed networks: • Minimum speed • Normally available speed • 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. • 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. • At least 90% of the maximum speed is reached in one of the ten measurements that an end-user conducts in a single week.
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. • 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 • Maximum speed: achievable at least once per day • 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 • Normally available speed: ≥ 90% of maximum speed • 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 • Maximum speed: at least once between 00:00 and 24:00

Table 30. Specification of speeds by the use of percentages and achievability of speeds

Legally binding or informal:

In 13 of the 17 Member States (BE, CY, CZ, DK, EL, HR, HU, 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.

Question 19. Have you imposed additional transparency requirements regarding the publication of information referred to in article 4(1), subs 1 a-e? Y/N

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

Nine NRAs (AT, BE, BG, DE, EL, IT, LT, NO, 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 31 below.

NRA	Additional transparency requirements
AT	On an informal level, transparency requirements are regularly discussed with ISPs: • RTR had/has bilateral meetings with ISPs, which also cover issues regarding the OIR and the accompanying BEREC Guidelines. • Also the regular exchange between ISPs and RTR concerning different matters of telecommunications (including OI issues) is ongoing. Within this forum, RTR presents latest developments regarding OI to the ISPs and ISPs are welcome to present their views. • Furthermore there are some non-binding templates/recommendations, which have been updated due to the new Telecommunications Act (TKG 2021) 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 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. 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. 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 has entered into force on 1 June 2017. From that date on, the ordinance obliges fixed and mobile ISPs to provide more transparency when offering internet access services.
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 (no. 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. 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.
NO	Monitoring activities indicated that some ISPs needed to improve their speed information regarding fixed IAS. Stakeholder dialogue and subsequent monitoring showed clear improvements. Nkom conducted a dialogue with an ISP regarding the obligation to provide clear and comprehensive explanation of QoS parameters. More specifically, how network congestion may affect performance for end-users with different IAS subscriptions, each with a different level of QoS (cf. paragraph 34b of the BEREC Guidelines)
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 31. Introduction of additional transparency requirements

Question 22. Is there an NRA or national interpretation of "significant discrepancy, continuous or regularly recurring"? Y/N

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_____

12 NRAs (BG, CY, CZ, DE, EL, ES, HR, IT, MT, PL, RO, SI) gave a material interpretation of "*significant discrepancy, continuous or regularly recurring*", as can be seen in Table 32 below.[30]

NRA	Interpretation
BG	• Significant continuous discrepancy – two consecutive weeks in one billing period; • Regularly recurring discrepancy – more than one temporary discrepancy; • 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. • 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 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	• Non-conformity regarding fixed download speeds if one of these cases occurs: • 90% of the contractually agreed maximum speed is not achieved at least once at two out of three measurement days s; • the normally available speed is not achieved in 90% of the measurements; • the speed falls below the contractually agreed minimum speed at least two out of three measurement days.

[30] 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

	• By measuring with the broadband monitoring mechanism, the following requirements need to be considered: • 30 measurements must be performed; • The measurements must be taken on three separate days with at least one day without measurements in between two of those days • The number of measurements is to be spread equally over the three measuring days, so that 10 measurements are taken on a specific day; • 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 • The 30 measurements have to be conducted within 14 days • The measurements must be taken using a LAN connection; • 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 consecutive days.
ES	There has to be a breach of either minimum or normally available speed. It has to be "continuous".
HR	Non-compliance regarding fixed download speed if 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) shows that speeds are below 70% of maximum/advertised speed. Tests are carried out by means of a certified tool for broadband speed tests prepared by the NRA.
IT	A continuous or regularly recurring discrepancy is considered to exist when minimum contractual speed is not met twice in 45 days. In such a case, the current national regulation lets users terminate the contract without additional costs. In order to check minimum speed 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 interval.
MT	• "significant discrepancy": this definition is implicit as any connection performing below the stated ISP's information regarding speed is considered as discrepant; • "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	<u>For the fixed IAS:</u> In the guidelines issued, ANCOM established 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: • the minimum speed is not achieved for at least two measurements; • at least half of the measurements performed by the user do not exceed 50% of the normally available speed indicated in the contract. In order 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: • the minimum speed is not achieved for at least two measurements; • at least half of the measurements do not achieve the normally available speed; • no measurement achieves the maximum speed. <u>For mobile IAS:</u> 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. • 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 32. Interpretation of terms

Question 25. Are there any updates regarding your IAS quality monitoring tool for consumers or any respective measurement tool projects? Y/N

19 NRAs (AT, BE, CY, CZ, DE, DK, EL, HR, HU, IT, LT, LU, NO, PL, PT, RO, SE, SI, SK) provide an IAS quality monitoring tool and in 8 Member States (AT, CY, CZ, DE, 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	https://www.netztest.at	Yes
BE	BIPT Speedtest	http://www.bipt-speedtest.be/#/test/run	No
CY	cyNettest	https://cynettest.ee.cy/ https://ocecpr.ee.cy/el/content/cynettest-systima-ektimisis-poiotitas-eyryzonikon-syndeseon#English_Version	Yes
CZ	NetTest	https://nettest.cz/en/	No
DE	Breitbandmessung	https://breitbandmessung.de	Yes
DK	Tjekditnet (Ookla)	https://tjekditnet.dk/	No
EL	HYPERION	https://hyperiontest.gr	No
HR	HAKOMetar HAKOMetar Plus	https://www.hakom.hr/hr/hakometar/132 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	links to Bredbandskollen	http://www.bredbandskollen.se/	No
SI	AKOSTestNet	https://akostest.net	No
SK	Meracinternetu/ MobilTest	https://www.meracinternetu.sk	No

Table 33. IAS quality measurement tools provided by NRAs

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 (15

out of 19) and packet loss (11 out of 19). With some of these tools (6 out of 19), 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 (15 out of 19) are provided as an Android and iOS app, while some (8 out of 19) 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
CY	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
CZ	Yes	Yes	Yes	No	No	No	Yes	No	No	No
DE	Yes	Yes	Yes	Yes	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
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	No
NO	Yes	Yes	Yes	No	No	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 34. Indicators measured with the tool and supported platforms

Question 31. Have there been any new court proceedings or updates to the cases reported previously related to the OIR?

If *yes*, please provide details

Eight NRAs (AT, BG, DE, HU, IT, NL, RO, SE) reported about national court proceedings related to the OIR. An overview is provided in Table 35 below.

NRA	Court proceedings

AT	• A1 Telekom Austria AG appealed against decision R 3/16 of the regulatory authority:
	  ○ Prohibition of prioritising a VoD service for lack of a specialised service, within three years;
	  ○ Free assignment of public IPv4 at customer demand;
	  ○ Increase in period for disconnecting IP connections from 24 hours to 30 days.
	• A1 Telekom Austria AG appealed against decision R 5/17 of the regulatory authority:
	  ○ Prohibition of applying traffic-shaping to an add-on package with zero-rated audio and video streaming services.
	The decisions of the Austrian NRA are available at: https://www.rtr.at/en/tk/nn_procedures
	Legal action against the decisions of the Telekom-Control-Commission was taken regarding the decisions:
	• R 3/16 (from 18 December 2017): prohibition of prioritising a VoD service due to the lack of a “special service” within 3 years; free allocation of public IPv4 upon customer request; increase period for disconnecting IP connections from 24 hours to 31 days → Decision pending.
	• R 5/17 (from 18 December 2017): prohibition of the use of “traffic shaping” for an additional package in which audio and video streaming services are provided with a zero-rating. → Decision pending
	• S 5/19, S 6/19, S 7/19, S 8/19, S 10/19, S 13/19: an access block to the website is not admissible in the absence of an injunction claim based on copyright and such a block breaches the provisions of the OIR. → The decisions are final.
	For comprehensive information see "RTR Net Neutrality Report 2021" and the net neutrality website on decisions:
	https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/netzneutralitaetsbericht/NNBericht2021.de.html
	https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/netzneutralitaetsbericht/NNBericht2021.en.html

BG	During the reported period, one of the ongoing court proceedings, regarding an appealed penalty notice, issued by the Chairman of the CRC, finished and CRC's penalty notice was confirmed.
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. Deutsche 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 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. 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. Vodafone has withdrawn the appeal at the District Court of Duesseldorf.
HU	In two previous cases (Telenor - My chat and Telenor - My Music), the NRA established that these offers violate Articles 3(2) and 3(3) of the OIR and mandated Telenor Hungary to bring these offers into compliance. Following a preliminary ruling from the ECJ, the national court gave its judgments and dismissed the actions brought by Telenor Hungary against the decisions of the NRA. In practice, the offers were already discontinued by Telenor Hungary.
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.

	With sentences no. 1200/2020 and no. 1201/2020, the Lazio Regional Administrative Court confirmed the lawfulness of the provision of article 5, paragraph 1 of resolution no. 348/18/CONS. The sentences were appealed to the Council of State. On August 2nd, 2021, the Council of State rejected the request to modify the previous decision no. 1200/2020. Decision on sentence no. 1201/2020 is still pending .
NL	T-Mobile introduced a zero-rating offer, which resulted in legal proceedings. The result was that ACM found the offer to be in line with the OIR. An NGO attempted to appeal this decision, but the court decided that ACM was correct in its assessment that the offer was allowed.
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. For the moment, the Courts ruled in favour of the suspension of the decision (the decision is not final and ANCOM has appealed it) until a decision is taken by the Courts on the annulment of ANCOM's decision. On 23 November 2018, the court approved the suspension of the execution of the measures disposed in ANCOM Decision no. 669/2018 (which stated that a certain TM practice constitutes an infringement of Article 3(3) third subparagraph of the OIR) until the final settlement of the action for annulment of the decision. The sentence remained final on 12 December 2019, following the rejection of the appeal filed by ANCOM. Regarding the trial on the merits (the annulment of ANCOM Decision no. 669/2018), it was suspended on 6 May 2020, as a result of the prolongation of the state of emergency regarding Covid-19. The next term is on 1 July 2020. Telekom Romania case: The decision on the suspension became final. Regarding the annulment of the ANCOM Decision (no. 669/2018), at the last appearance in Court, in April 2021, the Court maintained its pronouncement.
SE	The ruling pertains to two mobile offers from Telia on 18 April 2016, "Free surf on social media" (*Sociala*) and "Free surf listening" (*Lyssna*). In summary, PTS found in its supervision that Telia, in connection with the two offers, is applying traffic management measures in violation of Article 3(3) of the OIR. Telia was instructed by PTS to discontinue the traffic management in due course, when the end-user is still able to use the specified services and applications included in each of the offers, whilst other data usage is blocked. The decision of PTS was appealed to the Administrative Court of Stockholm, which on 28 September 2018 rejected the appeal. The ruling has taken legal effect. In light of the court ruling, Telia has adjusted the offer, in making all applications treated equally when the data volume included in the subscription is consumed.

Table 35. 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[31]. The country codes and the respective names of the NRAs are shown in the following table.

Albania	AL	AKEP	Lithuania	LT	RRT
Austria	AT	RTR	Luxembourg	LU	ILR
Belgium	BE	BIPT	Malta	MT	MCA
Bulgaria	BG	CRC	Montenegro	ME	EKIP
Croatia	HR	HAKOM	North Macedonia	MK	AEC
Cyprus	CY	OCECPR	Norway	NO	NKOM
Czech Republic	CZ	CTU	Poland	PL	UKE
Denmark	DK	ADSI	Portugal	PT	ANACOM
Estonia	EE	ECSTRA	Romania	RO	ANCOM
Finland	FI	TRAFICOM	Serbia	RS	RATEL
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	Switzerland	CH	BAKOM
Italy	IT	AGCOM	The Netherlands	NL	ACM
Latvia	LV	SPRK			

Table 36. Country codes

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

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