2025 Annual Report

BEREC

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EUconnectivity

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2025 Annual Report

BEREC

Body of European Regulators
for Electronic Communications

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Foreword by the BEREC Chair 2025

Robert Mourik

BEREC Chair 2025

In 2025, the Body of European Regulators of Electronic Communications (BEREC) pursued an ambitious work programme. Alongside its ongoing monitoring and reporting duties under the European Electronic Communications Code (EECC) and the BEREC Regulation, BEREC advanced a number of key projects and participated in workshops aimed at shaping a future proof regulatory environment for electronic communications in Europe.

This demanding agenda unfolded against the backdrop of the European Commission's review of the regulatory framework and its drafting of the Digital Networks Act (DNA), to which BEREC contributed actively. In parallel, we supported the implementation of the Digital Markets Act (DMA) and issued an updated Opinion on Meta's Reference Offers for Messenger and WhatsApp interoperability. We also published two sets of guidelines under the Gigabit Infrastructure Act (GIA), collaborated closely with the Commission on its methodology for mapping broadband service quality of service (QoS) coverage and reported on the progress to manage copper network switch-off.

Our work in 2025 continued to reflect the increasingly complex challenges facing the sector, particularly in relation to criminal and fraudulent activities affecting end users. BEREC strengthened its efforts on cybersecurity and consumer protection, and we will continue deepening our cooperation with other EU agencies and European bodies to share knowledge and ensure effective safeguards for consumers. These initiatives will continue into 2026, demonstrating BEREC's agility and the dedication of our working groups, expert members, and the BEREC Office.

This period of significant change — where the boundaries between policy areas, technologies, and market dynamics grow ever more fluid — reinforced the value of BEREC's collegiate and collective approach to leadership. It is thanks to this shared commitment that my year as Chair was able to build on the efforts and output of my predecessors.

Chairing BEREC has been both challenging and deeply rewarding. I am sincerely grateful for the support of my team, the BEREC Office, the working group co chairs, drafters, and all colleagues in the Board of Regulators and the Management Board. I extend particular thanks to the 2025 BEREC Mini Board for their steadfast support.

As we look to 2026, I wish my colleague Marko Mismas of AKOS every success in his chairmanship. I am confident that under his leadership, BEREC will continue to serve the European Union and its citizens effectively and with purpose.

Executive Summary

BEREC Annual Report 2025 provides, in Part A, an overview of the key developments and market trends in the electronic communications sector in Europe for 2025. The report discusses market dynamics and development of European Union (EU) public policies and regulatory practices, and gives BEREC's perspectives on these matters, based on the collective expertise and knowledge of the member states national regulatory authorities (NRAs). BEREC's contribution to the electronic communications sector in Europe has also been outlined. The analysis in this report includes qualitative reasoning based on information from BEREC Working Groups (WGs) and quantitative data from periodic BEREC data collection and other public documents.

In 2025, BEREC continued its work by approving and publishing a considerable number of regulatory best practice-related documents and implementation reports, with the aim of ensuring transparent, standardised and effective regulatory provisions, as well as the consistent and predictable application of rules across the European digital single market, in line with the provisions of the European electronic communications regulatory framework.

This report highlights how this programme has been successfully implemented under the Chairmanship of Mr. Robert Mourik (ComReg, Ireland), focusing on BEREC's three strategic objectives: promoting full connectivity, supporting sustainable and open digital markets and empowering end users. Part A presents the high-level aspects of BEREC's work in 2025, while Part B provides an overview of the deliverables under the 2025 Work Programme.

These deliverables underscore BEREC's commitment to independent, consistent and high-quality regulation of digital markets for the benefit of Europe and its citizens. They also demonstrate BEREC's continuous engagement and cooperation with stakeholders and international organisations, as well as its underlying analytical and monitoring work, which supports its ability to respond effectively and provide well-informed input and opinions based on comprehensive data collection.

Part A.

ANNUAL REPORT ON MARKET DEVELOPMENTS IN THE ELECTRONIC COMMUNICATIONS SECTOR IN 2025

Part A of this report includes BEREC's "Annual Report on market developments in the electronic communications sector in 2025". Part A is in accordance with Article 4(1)(j)(v) of Regulation (EU) No 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office).

1. Introduction

Part A of the Annual Report highlights BEREC's views on market trends and developments in the European electronic communications sector in 2025, focusing on market dynamics and developing European Union public policies and regulatory practices under Article 4(1)(j)(v) of the BEREC Regulation.

The following high-level assessment integrates insights gained from the expertise and knowledge of the member NRAs through BEREC's WGs. This analysis has been informed by quantitative and qualitative information from BEREC's WGs.

2. Market trends

2.1. Broadband and Very High Capacity Networks

Article 3(2)(a) of the EECC[1] stipulates that the national regulatory and other competent authorities as well as BEREC, the Commission and the Member States shall, inter alia, pursue the general objective of promoting connectivity and access to, and take-up of, very high capacity networks, including fixed, mobile and wireless networks, by all citizens and businesses of the EU. This objective is also at the core of the EU's ambition towards a Gigabit Society[2] and, therefore, the concept of a very high capacity network is also used in other initiatives taken up by the EU institutions e.g. the Gigabit Infrastructure Act.

Connectivity and the use of electronic communications are an integral element of European society and welfare. Very high capacity networks support innovation in content-rich internet services, strengthen the international competitiveness of the EU and have enormous potential to deliver benefits to consumers and businesses across the EU.

EECC Article 2(2) defines the term 'very high capacity network' and Article 82 provides that BEREC shall issue guidelines on the criteria that a network has to fulfil in order to be considered a very high capacity network, in particular in terms of down- and uplink bandwidth, resilience, error-related parameters, latency and its variation. In 2025, BEREC reviewed these Guidelines, initially published in October 2020, with respect to performance requirements for fixed networks.[3] These Guidelines determine, in accordance with the EECC, that any network that fulfils one (or both) of the two criteria below is a fixed very high capacity network[4].

[1] European Electronic Communications Code.

[2] Support for digital connectivity, see: https://digital-strategy.ec.europa.eu/en/policies/digital-connectivity-support

[3] BoR (25) 182, BEREC Guidelines on Very High Capacity Networks, 04.12.2025, see: https://www.berec.europa.eu/en/all-documents/berec/regulatory-best-practices/guidelines/berec-guidelines-on-very-high-capacity-networks

[4] In addition, these BEREC guidelines also determined the criteria a network has to fulfil in order to qualify as a wireless very high capacity network.

(i) Any network providing a fixed-line connection with a fibre roll-out at least up to the multi-dwelling building (i.e. FTTB or FTTH).

(ii) Any network providing, irrespective of the underlying technology, a fixed-line connection that is capable[5] of delivering, under usual peak-time conditions, services to the end-users with the following quality of service:

Quality of Service Parameter	Threshold
Downlink data rate	≥ 1000 Mbps
Uplink data rate	≥ 200 Mbps
IP packet error ratio	≤ 0.05%
IP packet loss ratio	≤ 0.0025%
Round-trip IP packet delay	≤ 10 ms
IP packet delay variation	≤ 2 ms
IP service availability	≥ 99.9% per year

According to the most recent study 'Broadband Coverage in Europe 2024'[6] commissioned by the European Commission (EC), VHCN coverage in the EU-27 increased significantly over the past few years.[7] At the end of June 2024, 82.5% of EU households were passed by at least one FTTP or Data Over Cable Service Interface Specification (DOCSIS) 3.1 network, with coverage growing by 3.9 percentage points on the EU27 level compared to the previous year.[8] In particular, FTTP coverage increased significantly by 5.4 percentage points between mid-2023 and mid-2024 and, according to the study, was on course to overtake the Digital Subscriber Line (DSL) in 2025.

In June 2024, FTTP coverage, and therefore also fixed very high capacity network coverage, was already higher than 90% in six countries (Romania, Iceland, Spain, Portugal, Norway and Bulgaria), while no country recorded FTTP coverage below 30% and only two countries, Belgium and Germany, recorded FTTP coverage below 40%.[9]

[5] It is sufficient that the network is capable of delivering the quality of service, irrespective of the question, if a service of such quality is actually offered to customers.

[6] Digital Decade 2025: Broadband Coverage in Europe 2024, see: https://digital-strategy.ec.europa.eu/en/library/digital-decade-2025-broadband-coverage-europe-2024

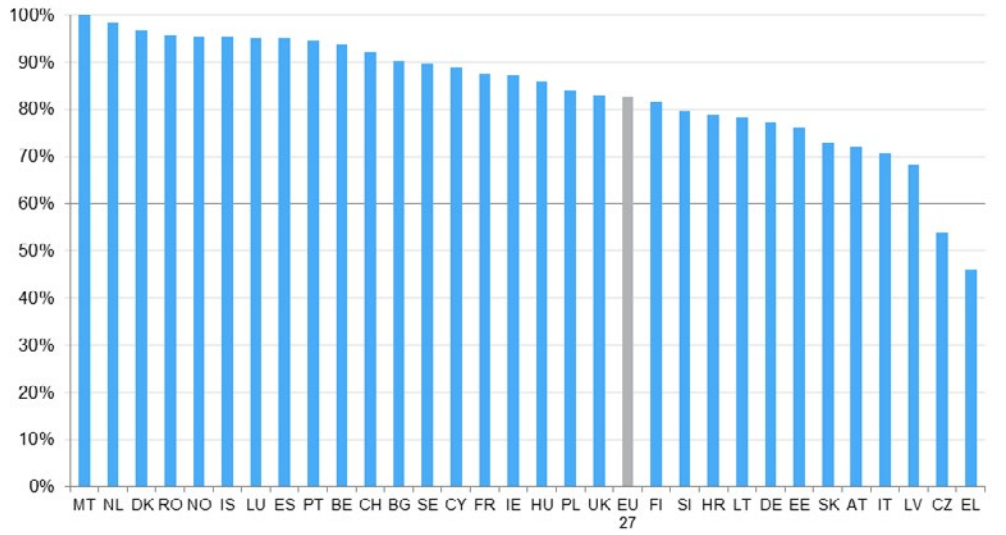
[7] In the context of the Digital Decade Policy Program, a simplified VHCN definition as compared to the definition in the BEREC Guidelines is used to facilitate accurate reporting. According to the Commission implementing decision of 30.6.2023 setting out KPIs to measure the progress towards the digital targets, the technologies considered to qualify as VHCN are FTTH, FTTB and Cable DOCSIS 3.1 for 2019 onwards.

[8] Broadband coverage in Europe 2024, page 41.

[9] However, overall VHCN Coverage in Belgium and Germany is >90% and >75% respectively due to significant cable coverage.

FIGURE 1: Overall fixed VHCN coverage by country in 2024

Source: Broadband coverage in Europe 2024



By mid-2024, the availability of Next Generation Access (NGA) services (VDSL, VDSL2 Vectoring, DOCSIS 3.0, DOCSIS 3.1 and FTTP) in the EU reached 94.1% of households. This equates to a 1.2 percentage point increase compared to the previous year.[10]

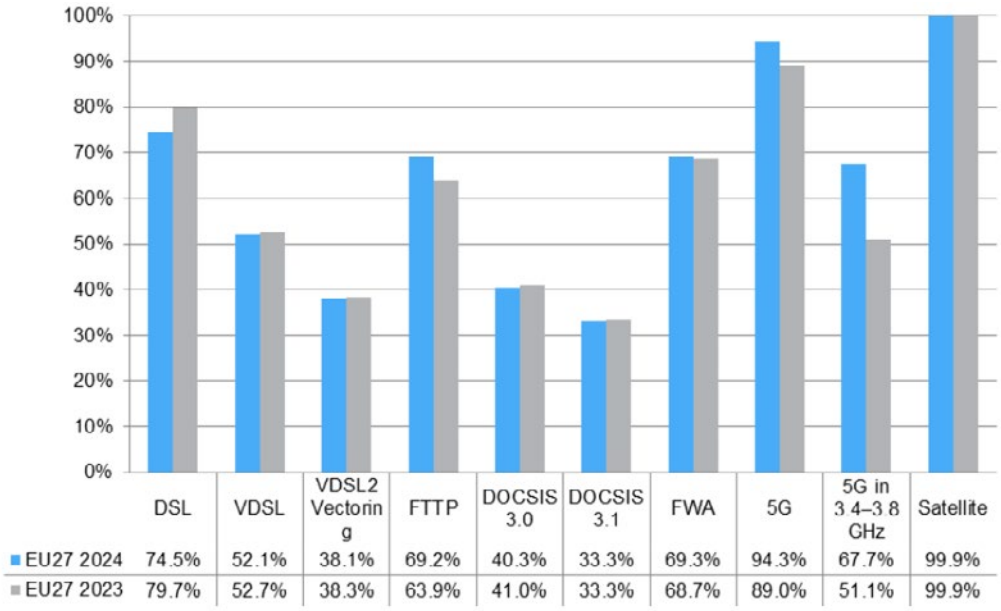
The coverage of different types of broadband networks deployed in the EU[11] between mid-2023 (data from the last report) and mid-2024 is shown in figure 2.

[10] Broadband coverage in Europe 2023, page 37.

[11] See: https://digital-decade-desi.digital-strategy.ec.europa.eu/datasets/desi/charts/desi-indicators?period=desi_2025&indicator=desi_5gcov&breakdown=total_poph-h&unit=pc_hh&country=AT,BE,BG,HR,CY,CZ,DK,EE,EU,FI,FR,DE,EL,HU,IE,IT,LV,LT,LU,MT,NL,PL,PT,RO,SK,SI,ES,SE

FIGURE 2: Broadband coverage in Europe by technology in 2023 and 2024

Source: Broadband coverage in Europe 2024



	DSL	VDSL	VDSL2 Vectoring	FTTP	DOCSIS 3.0	DOCSIS 3.1	FWA	5G	5G in 3.4–3.8 GHz	Satellite
EU27 2024	74.5%	52.1%	38.1%	69.2%	40.3%	33.3%	69.3%	94.3%	67.7%	99.9%
EU27 2023	79.7%	52.7%	38.3%	63.9%	41.0%	33.3%	68.7%	89.0%	51.1%	99.9%

For the first time, the coverage of DSL across technologies declined. Having been one of the main drivers of NGA coverage growth since 2013, the coverage growth of VDSL began to stagnate in 2021. As in previous years, the coverage of cable DOCSIS 3.0 and 3.1 remained relatively stable. FTTP was responsible for the largest increase in coverage of fixed technologies in the EU, gaining > 5% points and reaching approximately 70% of EU households.

Looking at mobile networks, the 5G coverage continued to increase significantly compared to the previous year, reaching a coverage > 94% in 2024 in the EU.

2.2. Mobile broadband and 5G

According to DESI 2025, 5G coverage[12] reached 94.35% of the households in the EU, increasing from 89.05% in 2024. 5G coverage in 19 Member States (Cyprus, Denmark, Malta, Netherlands, Greece, Lithuania, Luxemburg, Austria, Italy, Finland, Czechia, Germany, Portugal, Sweden, Belgium, Slovenia, Spain, France and Croatia) exceeds 94% of households. Six EU countries (Estonia, Ireland, Poland, Slovakia, Hungary, and Bulgaria) have 5G coverage between 80% and 94% of households. Two countries have 5G coverage lower than 80% of households (Latvia and Romania).

5G coverage in the 3.4-3.8 GHz band reached 67.72% of the households in the EU compared to 51.06% in 2024. In seven countries (Netherlands, Italy, Slovenia, Finland, Denmark, Austria and Bulgaria) 5G coverage in the 3.4-3.8 GHz band is over 80% of households. 10 EU countries (Lithuania, Spain, Sweden, France, Greece, Portugal, Luxemburg, Slovakia, Estonia and Poland) have 5G coverage in the 3.4-3.8 GHz band between 60% and 80% of households. 10 countries (Ireland, Hungary, Latvia, Germany, Belgium, Croatia, Czechia, Malta, Cyprus and

[12] See: https://digital-decade-desi.digital-strategy.ec.europa.eu/datasets/desi/charts/desi-indicators?period=desi_2025&indicator=desi_5gcov&breakdown=total_pophh&unit=pc_hh&country=AT,BE,BG,HR,CY,CZ,DK,EE,EU,FI,FR,DE,EL,HU,IE,IT,LV,LT,LU,MT,NL,PL,PT,RO,SK,SI,ES,SE

Romania) have 5G coverage in the 3.4-3.8 GHz band of less than 60% of households. 74.63% of the 5G spectrum in 5G pioneer bands[13] was assigned and ready for 5G use at the EU level. 5G mobile subscriptions, defined as SIM cards that generated any internet traffic on a domestic 5G network in the last 90 days, accounted for 35.56% of the total population in the EU, compared to 21.7% in 2024. The total number of deployed edge nodes in the EU providing latencies below 20 milliseconds was 1,185.

2.3. Regulatory accounting

The actual trend in the regulatory practice does not follow a straight line. From one side there is a reduction of ex ante regulation over time by some NRAs. However, it can happen that the need for ex ante regulation can arise in previously deregulated markets due to a detriment of competitive constraint at retail level, specifically in cases when a 'lighter' regulatory approach is no longer sufficient to spur investment in VHCN or provide fair access to networks necessary to promote competition. Considering that the base of ex ante regulation follows the three criteria test, it can happen that also in a fully or partially deregulated market, competitive conditions can worsen in such a way that ex post intervention is not enough to address the corresponding competitive problems. It is in this light that some new recent proposals can be seen, still under consultation, from RO and BG, that propose again to consider the possibility of applying an ex-ante (SMP) framework after years of fully deregulated access markets, at least in some geographical areas where VHCN has been available for several years.

Regarding the general regulatory trend, some NRAs are proposing to fully deregulate all markets due to the fact that commercial agreements are the main instrument used by operators to access to SMP products (PL[14]) or to fully deregulate the wholesale local access markets leaving access to civil infrastructure remedies regulated in a specific standalone Physical Infrastructure Access Market still to be defined (ES[15]). Some NRAs are applying symmetric regulation together with SMP remedies. Mostly, the regulatory obligations on copper and VHCN products are still widely imposed on the legal basis of the SMP framework. For the first time more VHCN than copper access products are regulated in market 1/2020.

The detailed product by product analysis on the wholesale access level has shown that ex ante regulation is applied by NRAs in a more targeted way using the flexibility of the EECC provisions to tailor the regulatory obligations to the specific competition and infrastructure situation identified in the market analysis (also from a geographical point of view).

Concerning VHCN products a reduction trend is not evident and it seems that regulatory obligations are adjusted in light of different investment dynamics and needs. The SMP regulatory remedies have been applied by NRAs generally to-

[13] These bands are 700 MHz (703-733 MHz and 758-788 MHz), 3.6 GHz (3400-3800 MHz) and 26 GHz (1000 MHz within 24250-27500 MHz). All three spectrum bands have an equal weight.

[14] In PL a proposal for full deregulation of WLA and WCA is ongoing.

[15] In July, the CNMC deregulated markets 1/2020 and 3b/2014. Previously, regulation in these markets applied to only around 30% of the population due to geographical segmentation. The CNMC is currently working on a standalone PIA market to ensure the continuation of civil infrastructure remedies, and Telefónica has submitted a set of commitments in this market that is currently under assessment. On the other hand, Wholesale Dedicated Capacity (market 2) remains regulated in Spain due to Telefónica's high market share in the corporate segment.

wards a single national SMP operator. In some cases, the SMP regulation has been applied to more than one SMP operator.

The number of NRAs facing different competitive conditions across their national territory has increased compared to last year for most markets/products thus justifying a geographically differentiated approach (in terms of market definition or remedies application).

Most NRAs apply the whole set of remedies when SMP regulation is imposed on a specific product/market, where the most frequently applied remedies are access obligation in combination with non-discrimination. As a stable result during previous years, cost orientation remains the most-commonly used price control method and is applied mainly for legacy products, while retail minus is mainly used for VULA and market 3b/2014 products.

Regarding the WACC, the in-depth survey and the update provided in the Regulatory Accounting in Practice (RA) report (chapter 5) highlights that all NRAs use the Capital-Asset-Pricing-Model (CAPM)[16] and hence similar parameters for determining the WACC. However, the value of these parameters naturally differs reflecting different national financial market conditions. The statistical analysis (regression) of the data shows – in line with the previous exercises – that the differences of the final WACC values over time are mainly explained by parameters in the WACC calculation that are more "country-related" such as the RFR, and Tax rate, with a less-relevant role for "sector-specific" parameters such as beta, gearing and debt premium. This is consistent with survey results on "used methodologies" that confirm that beta, gearing and debt premium are estimated mainly on a "notional" basis by NRAs for a long time prior to the WACC Notice.

By taking into account only the most recent estimation over time (last three most recent values for each NRA) in the pooled regression analysis, RFR and Tax are seen as the most relevant country-specific parameters in explaining differences. Notional parameters such as Beta, gearing, ERP and debt premium, provide a less important contribution to explaining differences in final WACC values - in the proposed order of relevance. This outcome shows that the application of the WACC Notice starts to have a visible effect in converging notional values, and also provides limited flexibility for NRAs to choose the peer group for the beta and gearing estimation to better reflect national circumstances. Among notional parameters, Beta is becoming more relevant for explaining the differences between EU NRAs and this can be related to different aspects: the estimation of this parameter may address the country situation, as allowed by the Notice and it has been less stable in recent years than in the past due to a change in the risk profile of telecom operators. This can be indirectly seen in the different frequencies of WACC updates.

Overall, the 2025 data confirms a consistent approach to regulatory accounting. This indicates that NRAs are providing predictable regulatory environments in their countries. The convergence of regulatory accounting approaches for wholesale access markets needs to bear in mind that wholesale access markets are reflecting different national market situations and structural factors that influence regulatory strategies.

[16] Cf. BoR (13) 110.

2.4. Forward looking trends in the telecommunication sector

Connectivity networks and services are undergoing a pivotal evolutionary phase, mostly driven by disruptive technological paradigms and shifts such as 5G, edge-cloud, artificial intelligence, and, as next game changer, agentic AI. The provision of connectivity co-evolves with distributed compute and data centres capabilities, with data seen as a strategic asset and control point.

At the infrastructure layer, the connectivity provided by legacy terrestrial networks (fixed and mobile) is increasingly sided and complemented by connectivity provided by non-terrestrial and submarine cables.

Networks are being re-architected, evolving virtualised, programmable, adaptive, and highly distributed. Hence, very high-capacity networks (VHCN) set the baseline and technology-neutral performance threshold for top-tier connectivity.

Such an evolution is not cosmetic; it underwrites the performance and trust requirements of both, next-generation services and emerging applications (such as cooperative and autonomous mobility, virtual worlds, AI gigafactories, industrial automation and massive IoT ecosystems) which demand ultra-low latency, high reliability, scalability, and seamless service continuity.

Finally, in this transition, factors such as security, cybersecurity, preparedness, resiliency, cross-border operativity, scale and relationships with hyperscalers and content and access providers, play a pivotal role and carry deep impact.

Against this backdrop, BEREC's 2026-2030 Strategy (see Part B par. 2.5) frames connectivity as an evolving ecosystem and highlights the evolution of underlying connectivity networks as a major competitive driver of the Single market and European industrial relevance. The Strategy also factored in all major market developments which are reshaping the connectivity ecosystem as part of the broader digital sector.

2.5. Evolution in digital markets

Digital markets have undergone significant evolution in recent decades, driven by technological advances, such as virtualisation, cloudification, internet-based platforms and services, and AI, as well as by changing consumer behaviour and emerging trends. Moreover, key European legislation, including the Digital Markets Act (DMA), the Digital Services Act (DSA), the Data Act and the Artificial Intelligence Act (AIA) has entered into force. In this context, BEREC has carried out several analyses to better assess these developments and to contribute to the implementation of these regulatory frameworks.

Under Article 7 of the DMA, the designated gatekeeper Meta was required to ensure interoperability of its number-independent interpersonal communication services (NI-ICS), specifically its core platform services WhatsApp and Messenger. BEREC is continuing to engage with and assist the EC in this evaluation and in the implementation of the DMA, both in application of Article 7 and by contributing to the DMA High-Level Group and its subgroups.

Beyond the DMA, BEREC is also contributing to the implementation of other digital regulations. Several BEREC members have been designated as the Digital

Services Coordinators (DSCs) under the DSA and/or as the national competent authority responsible for the application and enforcement of certain chapters under the Data Act, with more members to be designated in the future. In 2025, BEREC ran several workshops, knowledge-building and experience-sharing activities to ensure effective cooperation among its members.

BEREC also continued its participation in the EC DMA High-Level Group, advising the EC on DMA implementation, enforcement and revision, and contributed to its subgroups on data obligations, interoperability, and AI by providing specific inputs highlighting some potential issues in the digital ecosystem.

Moreover, some market and technological developments, such as the rapid emergence of generative AI, have significantly changed the dynamics in the internet ecosystem and introduced several challenges. In 2025, BEREC had meetings with telecom associations to assess how AI is used by European telecom operators and regulators, and organised an internal workshop on the use of AI solutions to support regulatory tasks.

3. Regulatory framework

The European Electronic Communications Code (EECC)[17] remains the core EU legal framework for electronic communications (market definitions, ex-ante regulation, access, consumer protections, spectrum coordination powers of Member States). As required, the Commission is undertaking the review of the EECC in 2025. However, in January 2026[18], the EC published a proposal for a new legal framework, the Digital Networks Act (DNA) which was accompanied by the outcome of the review of the EECC and BEREC evaluation. The aim of the DNA is to simplify and further harmonise the legal framework, with a view to reinforcing competitiveness and to fostering a more integrated single market.

4. Developments related to the Openness of the Internet

In October 2025, BEREC published its annual report on the implementation of the Open Internet Regulation (OIR), covering the period from 1 May 2024 to 30 April 2025. The report provided a comprehensive overview of the activities undertaken by NRAs in enforcing the OIR and adhering to the associated BEREC Open Internet Guidelines.

An internal workshop with invited external presentations was held in May 2025 to consider the implications of 5G differentiated services and network slicing on the open internet, with a focus on regulatory issues related to ‘specialised services’, API openness, and network slicing. The workshop addressed questions raised by market players, including operators, service providers, and equipment manufacturers, in the context of the rollout of 5G Stand Alone (SA) and the increasing possibility of differentiated services on mobile networks. The workshop

[17] Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code, https://eur-lex.europa.eu/eli/dir/2018/1972/oj/eng

[18] Proposal for a Regulation for the Digital Networks Act (DNA) | Shaping Europe’s digital future, see: https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-digital-networks-act-dna

provided a platform for NRA representatives to discuss relevant topics, raise questions, and engage with invited experts.

The workshop discussions, including contributions from participating telecom operators and the EC, underscored a demand by some stakeholders for greater regulatory clarity on 5G network slicing. Although no specific areas requiring additional guidance were identified, there was broad consensus that the current Open Internet Regulation neither hinders innovation nor poses an obstacle to the deployment or development of 5G network slicing.

In response to stakeholders' calls for clearer guidance, BEREC launched the project 'Further Guidance on 5G Network Slicing.' The resulting guidance will be incorporated into thematic guidelines, which will be referenced in the general OIR Guidelines. The project is scheduled for completion by the end of 2026.

As in previous years, BEREC facilitated the sharing of information among NRAs to ensure consistent application of the OIR across all relevant topics. In 2025, BEREC members continued to collaborate on improving their respective Internet Access Services (IAS) quality measurement tools, introducing new tools where necessary. The relevant working group forum served as a hub for the exchange of best practices, promoting a cohesive approach to regulating the open internet.

5. International roaming developments

Roaming charges in the EU and the European Economic Area (EEA) were abolished on 15 June 2017.

When the Roaming Regulation[19] entered into force, it allowed consumers to use their mobile phones anywhere in the EU, just as in their home country, without any additional surcharges ('Roam Like at Home' – RLAH). Only in exceptional cases may operators levy a surcharge for EU roaming.

In July 2022, the new Roaming Regulation (EU) 2022/612 came into force. This regulation contains RLAH provisions and additional provisions about QoS, transparency, emergency communications, VAS, etc.

To assess the competitive developments and the impact of RLAH on EU/EEA roaming markets, BEREC regularly collects data from NRAs on changes in retail and wholesale charges for regulated voice, SMS and data roaming services. These also include wholesale charges applied to balanced and unbalanced roaming traffic.

BEREC must also collect data on wholesale roaming agreements that are not subject to the maximum wholesale roaming charges, and on the implementation at wholesale level of contractual measures relating to permanent roaming or preventing anomalous or abusive use of wholesale roaming access for purposes other than roaming. BEREC uses these data to report regularly on the evolution of pricing and consumption patterns in the Member States for both domestic and roaming services, changes in actual wholesale roaming rates for unbalanced traffic between roaming providers, and the relationship between retail prices, wholesale charges and wholesale costs for roaming services.

[19] Regulation (EU) 2015/2120, published in the Official Journal of 26 November 2015, amending Regulation (EU) No 531/2012)

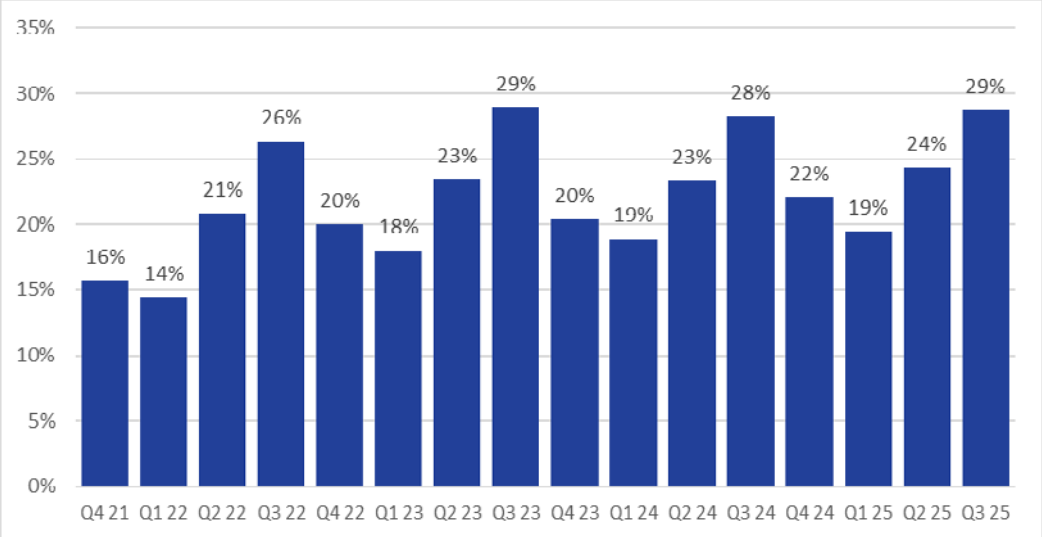
The 2022 Regulation slightly amended the data collection provisions, moving from biannual to annual data collection and adjusting the indicators. The introduction of RLAH services, coupled with the growing demand for data services, has changed the international roaming market. One relevant outcome of this is that RLAH services have triggered a substantial increase in roaming traffic between EU/EEA members.

According to the 32nd BEREC Report on International Roaming Benchmark Data (BoR (26) 28)[20], the European roaming market continued to grow in 2025, slightly in terms of the number of users and more so in the volume of data consumed while roaming.

The share of EU/EEA subscribers who roamed at least once per quarter reached 29% in Q3 2025, matching the previous peak observed in Q3 2023 (see Figure 3). This sustained level of roaming activity suggests that RLAH has become a deeply embedded aspect of consumer behaviour across the EU/EEA. While seasonal fluctuations remain visible, the data from the 32nd data collection are almost identical to those from the 31st collection, indicating consistent roaming patterns throughout the year.

FIGURE 3: Percentage of subscribers roaming at least once in the concerned quarter in the EEA, compared with the total number of subscribers with roaming-enabled subscriptions

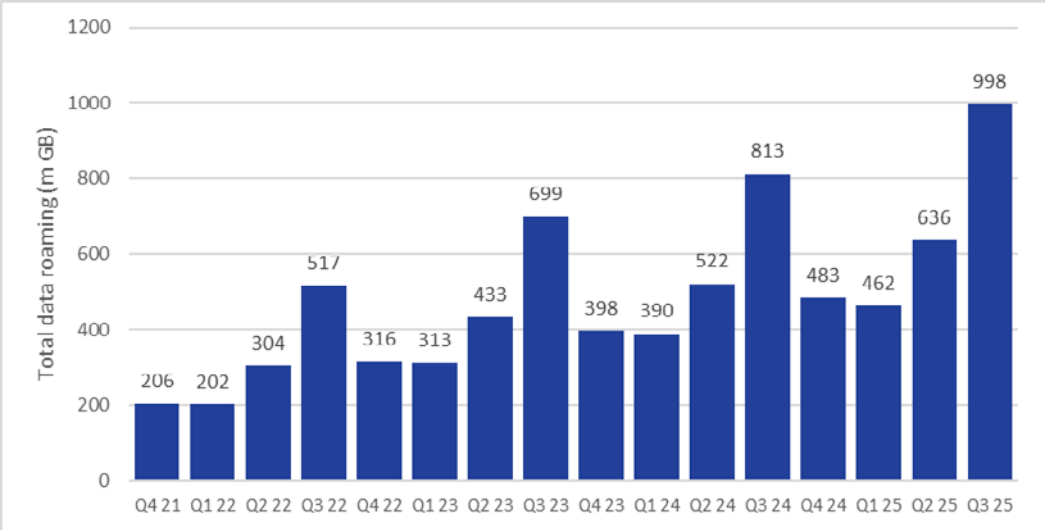
Source: BEREC



[20] BoR(26)28,32ndBERECInternationalRoamingBenchmarkandMonitoringReport,12.03.2026, see https://www.berec.europa.eu/en/all-documents/berec/reports/32nd-berec-international-roaming-benchmark-data-and-monitoring-report

IIn terms of data consumption, total roaming volumes reached a record 997.84 million GB in Q3 2025, up from 814.30 million GB in Q3 2024 – a 23% year-on-year increase (see Figure 4). This growth reflects not only increased international travel but also users' increased consumption while abroad.

FIGURE 4: Total data roaming volumes in the EEA per quarter
Source: BEREC



Overall, the data collected by BEREC in 2025 highlights a robust and expanding roaming market, with growing reliance on mobile data by subscribers across quarters.

6. Conclusions

Europe has set ambitious connectivity targets, aiming to achieve full connectivity- namely gigabit connectivity for all and 5G in all populated areas. As a key player in shaping the regulatory landscape, BEREC supports these objectives by facilitating the roll-out of high capacity networks, promoting open digital markets, and fostering competition and innovation to deliver full connectivity for both households and businesses. In 2025, tangible progress was made, with substantial advances towards this goal.

The use of NGA networks and VHCNs continues to increase, as does 5G coverage. By mid-2024, the NGA availability (including VDSL, VDSL2 Vectoring, DOCSIS 3.0, DOCSIS 3.1 and FTTP) in the EU had reached 94.1% of households, representing a 1.2 percentage point increase compared with June 2023.

Mobile broadband take-up in the EU continued to grow in 2024, with the average number of mobile data subscriptions per 100 people (aged 16-74) reaching nearly 90%, up from 86.5% in 2023.At the same time, 5G coverage reached 94.35% of the EU households, up from 89.05% in 2023.

National differences persist, reflecting geographical and historical variations across countries. However, the ongoing standardisation of regulatory practices is contributing to the development of a single European digital market. Regulations such as the Open Internet Regulation and the Roaming Regulation, together with the new Gigabit Infrastructure Act, highlight the tangible benefits of this market for businesses and individuals across Europe.

Part B.

ANNUAL REPORT ON BEREC ACTIVITIES IN 2025

in accordance with Article 22 of Regulation (EU) No 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office)

1. Introduction

Part B of this Annual Report presents BEREC's activities in 2025 in accordance with Article 22 of the BEREC Regulation.

The Report focuses on the workstreams and priorities set out in the BEREC Work Programme 2025 and reports on progress made during the year. This work was primarily carried out by BEREC's Working Groups. The final documents reflecting these outputs, including BEREC Guidelines, Opinions, Reports, and other deliverables were published following approval by BEREC's Board of Regulators.

The objectives of BEREC's work in 2025 were aligned with the BEREC 2021–2025 Strategy, its three high-level priorities - promoting full connectivity, supporting sustainable and open digital markets and empowering end-users, as well as the priorities related to institutional and international cooperation. In addition, facilitating the effective implementation and consistent application in all areas of the EECC, the OIR and the Roaming Regulation and the GIA constituted important cross-cutting themes within the strategic framework.

BEREC also provided guidance to the co-legislators and the EC on a number of initiatives this year, such as those related to Digital Decade Policy Programme (DDPP) connectivity indicators.

BEREC has worked extensively on a number of key tasks entrusted to it by the co-legislators, including market monitoring and technological developments and assessing their impact on the application of end-user rights and on the functioning of the general authorisation framework.

Over the course of the year, much of BEREC's work shifted from issuing Guidelines on the implementation of the EECC to assess future technological and market developments in electronic communications and the digital ecosystem. Through its cooperation with other competent institutions and stakeholders, BEREC continuously ensures that future network technologies meet their connectivity targets in line with European values and interests (e.g. in relation to (cyber)security, the protection of end users, and environmental sustainability challenges).

Furthermore, BEREC has continued its contribution to the implementation of the Digital Markets Act by providing opinions on Meta's interoperability reference offers, and responding to the EC's consultation on the DMA review. BEREC has also welcomed the opportunity to provide input into the EC's Call for Evidence on the Digital Networks Act by providing its expert-driven perspective on the proposed initiative.

2. Work Programme 2025

2.1. Strategic priority 1: Promoting full connectivity

2.1.1. Update of criterion 3 of the BEREC Guidelines on very high capacity networks

The BEREC Guidelines on very high capacity networks (BoR (20) 165[21], paragraph 18) set out four criteria and any network meeting at least one of these criteria is considered to be a very high capacity network. Criteria 1 and 2 result directly from the definition of the term 'very high capacity network' in the EECC (Article 2(2)), while criteria 3 and 4 are also based on data collected from network operators. Criteria 3 and 4 state that any network providing a fixed-line (criterion 3) or wireless connection (criterion 4) that is capable of delivering, under usual peak-time conditions, services to end users with a specified quality of service (performance thresholds for criterion 3 or 4) is considered to be a very high capacity network.

According to Article 82 of the EECC, 'BEREC shall update the guidelines by 31 December 2025, and regularly thereafter'. BEREC already updated criterion 4 in 2023 (BoR (23) 164) and criteria 1 and 2 do not need to be updated as they do not depend on technological developments. The objective of this project was to review criterion 3, based on data from fixed network operators. To that end, data collection questionnaires were updated to include more advanced access technologies (e.g. MG.fast, DOCSIS 4.0) than were available in 2020. Two comprehensive questionnaires[22] were sent to fixed network operators in April 2024. Over a period of eight weeks, more than 105 responses were received and analysed in detail.

No major technological development has taken place. The technologies which were considered in 2020 (i.e. G.fast 212 MHz and DOCSIS 3.1) continue to be the most advanced non-fibre access technologies. Moreover, any development in reported values between 2019 and 2024 is significantly smaller than the data dispersion observed in both 2019 and 2024 datasets, and falls within the same order of magnitude as the data rate estimation accuracy. Additionally, there is no discernible technological evolution to account for this numerical difference.

Therefore, the updated Guidelines maintain the existing performance thresholds as they were validated and confirmed by the data collected in 2024, with the remark that they refer to the transport layer protocol payload (and not to the IP packet payload).

Furthermore, these Guidelines also include the contributions, comments and insights garnered during the public consultation on its first draft[23]. In total, four

[21] BoR (20) 165, BEREC Guidelines on very high capacity networks, see: https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-very-high-capacity-networks

[22] Questionnaire 1 – Questionnaire for fixed network operators with fibre to the building (FTTB) and in-building copper twisted pair and Questionnaire 2 – Questionnaire for operators of a hybrid fibre coax (HFC) network with fibre rolled out up to the building

[23] Public consultation on the draft BEREC Guidelines on very high capacity networks, see: https://www.berec.europa.eu/en/public-consultations-calls-for-inputs/public-consultation-on-the-draft-berec-guidelines-on-very-high-capacity-networks-0

stakeholders provided their contributions, which were then summarised and presented in the BEREC Report on the outcome of the public consultation.

With this last update, BEREC updated all aspects of the original Guidelines by the end of 2025, as mandated by the EECC. According to Art. 82 of the EECC, BEREC shall regularly update the Guidelines after 2025. The timing of the next review of the Guidelines will depend on the mature deployment and significant penetration of new technologies.

Documents:

BoR (25) 182: BEREC Guidelines on very high capacity networks
BoR (25) 181: BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines on very high capacity networks

2.1.2. Progress Report on Managing copper network switch-off

In recent years, the topic of migration and copper switch-off has been a very strong focus for BEREC. Indeed, this has been the subject of five separate BEREC workstreams since 2019.

Effectively managing migration and copper switch-off is particularly important to safeguard competition and the rights of end users. The EECC sets out the expectation that NRAs should be able to monitor network operators' initiatives for the migration from legacy copper networks to VHCN and to facilitate this process by, where necessary, establishing the conditions for an appropriate migration process. The NRAs shall take the EC's new Gigabit Recommendation[24] into utmost account, which includes the recommendations for the decommissioning of the copper network. The Commission's White Paper 'How to master Europe's digital infrastructure needs?' of February 2024 identified the migration from legacy copper to newly deployed fibre networks as a key process in easing the transition to the new connectivity ecosystem and as a contribution to the EU's green objectives. At the same time, the White Paper suggests that migration and the copper switch-off will encourage the take-up of new services and thus contribute to a better return on fibre investment and to meeting the Digital Decade targets[25].

Following BEREC (22) 69 report on a consistent approach to migration and copper switch-off, BoR (25) 66 BEREC Progress Report on managing copper network switch-off provides an update on the progress of copper switch-offs in Europe and a more detailed description and analysis of the rules set by the NRAs for the migration and switch-off process. It further describes practices that have proven to facilitate the migration and copper switch-off process and provides relevant lessons learnt in the most advanced countries, both on the process itself and how it is regulated. The report is based on a survey conducted in spring 2024 to which 31 European NRAs responded, including the 27 EU countries.

[24] Commission Recommendation on the regulatory promotion of gigabit connectivity, C(2024) 523 final of 6.2.2024, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=PI_COM%3AC%282024%29523

[25] Commission White Paper "How to master Europe's digital infrastructure needs?", COM (2024)81 final of 21.2.2024, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2024%3A81%3AFIN

Furthermore, this report also includes the contributions, comments and insights garnered during the public consultation on its first draft[26]. In total, 15 stakeholders provided their contributions that were summarised and presented in the BEREC Report on the outcome of the public consultation.

Documents:

BoR (25) 66: BEREC Progress Report on managing copper network switch-off
BoR (25) 65: BEREC Report on the outcome of the public consultation on the draft BEREC Progress Report on managing copper network switch-off

2.1.3. BEREC Guidelines on the coordination of civil works according to Art. 5(6) of the Gigabit Infrastructure Act

After reaching political agreement in February of 2024, the new Gigabit Infrastructure Act (GIA) entered into force on 11 May 2024[27]. The GIA aims to encourage the roll-out of VHCNs so that such networks can be rolled out faster and at a lower cost. The GIA replaces the Broadband Cost Reduction Directive (BCRD)[28] from 2014.

In Article 5(6) of the GIA, the co-legislators' task BEREC, in close cooperation with the Commission, with the provision of Guidelines on apportioning the costs associated with the coordination of civil works, the criteria that the dispute settlement bodies (DSBs) should follow when settling disputes falling within the scope of this Article, and the criteria for ensuring sufficient capacity to accommodate foreseeable future reasonable needs if coordination of civil works is refused.

Comprehensive questionnaires were distributed to the NRAs/DSBs, and a Call for initial stakeholder input was published on the BEREC webpage as part of the data gathering process that began in July 2024. Over a period of eight weeks, more than 50 stakeholders and 30 NRAs submitted their input. The main points from these Guidelines showed:

(i) Directly attributable costs should be borne by the party causing these costs;
(ii) Shared costs should be analysed on a case-by-case basis, based on objective criteria. Formulas are suggested;
(iii) Time constraints defined in GIA (1 month to settle the disputes) are demanding. Consequently, information sharing during the settlement needs to be swift;

[26] Public consultation on the draft BEREC Progress Report on managing copper network switch-off, see: https://www.berec.europa.eu/en/public-consultations-calls-for-inputs/public-consultation-on-the-draft-berec-progress-report-on-managing-copper-network-switch-off

[27] Regulation (EU) 2024/1309 of the European Parliament and of the Council of 29 April 2024 on measures to reduce the cost of deploying gigabit electronic communications networks, amending Regulation (EU) 2015/2120 and repealing Directive 2014/61/EU (Gigabit Infrastructure Act), 08.05.2024, see: https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=OJ:L_202401309

[28] Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks of 15 May 2014, see: https://eur-lex.europa.eu/eli/dir/2014/61/oj/eng

(iv) Transparency on the information requirement is provided through a list of suggested information demands;
(v) Article 5(4) allows refusals of requests to coordinate civil works in certain circumstances;
(vi) This refusal is only possible if the refusing party deploys physical infrastructure with sufficient capacity for future 3rd party-access; and
(vii) A methodology is provided in the last section of the guidelines.

Furthermore, these Guidelines also include the contributions, comments and insights garnered during the public consultation on their first draft[29]. In total, 17 stakeholders provided their contributions that were then summarised and presented in the BEREC Report on the outcome of the public consultation.

These Guidelines are applicable as of the date when the relevant provisions of the GIA take effect, i.e. 12 November 2025.

Documents:

BoR (25) 140: BEREC Guidelines on the coordination of civil works according to Art. 5(6) of the Gigabit Infrastructure Act
BoR (25) 141: BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines on the coordination of civil works according to Art. 5(6) of the Gigabit Infrastructure Act

2.1.4. BEREC Guidelines on access to in-building physical infrastructure according to Article 11(6) of the Gigabit Infrastructure Act

In Article 11(6) of the GIA, the co-legislators task BEREC, in close cooperation with the Commission, with the provision of Guidelines on the terms and conditions of access to in-building physical infrastructure, including on the application of fair and reasonable terms and conditions, and the criteria that the national dispute settlement bodies should follow when settling disputes.

Comprehensive questionnaires were distributed to the NRAs/DSBs, and a Call for initial stakeholder input was published on the BEREC webpage as part of the data gathering process that began in July 2024. Over a period of eight weeks, more than 50 stakeholders and 30 NRAs submitted their input. The main points from these Guidelines showed:

(i) In-building physical infrastructure should generally be provided for free when owned by the building owner;
(ii) When it is not provided for free, any pricing should be based on evidence;
(iii) Delays should be kept reasonable;
(iv) Sharing fibre itself (when suitable) rather that in-building infrastructures, appears a good practice in many situations;

[29] Public consultation on the draft BEREC Guidelines on the coordination of civil works according to Art. 5(6) of the GIA, see: https://www.berec.europa.eu/en/public-consultations-calls-for-inputs/public-consultation-on-the-draft-berec-guidelines-on-the-coordination-of-civil-works-according-to-art-56-of-the-gigabit-infrastructure-act

(v) Time constraints defined in GIA (1 month to settle the disputes) are demanding. Consequently, information sharing during the settlement needs to be swift; and

(vi) Transparency on the information requirement is provided through a list of suggested information demands.

The Guidelines also include the contributions, comments and insights garnered during the public consultation on their first draft[30]. In total, 20 stakeholders provided their contributions that were then summarised and presented in the BEREC Report on the outcome of the public consultation.

These Guidelines are applicable as of the date when the relevant provisions of the GIA take effect, i.e. 12 November 2025.

Documents:

BoR (25) 142: BEREC Guidelines on access to in-building infrastructure according to Art. 11(6) of the Gigabit Infrastructure Act
BoR (25) 143: BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines on access to in-building infrastructure according to Art. 11(6) of the Gigabit Infrastructure Act

2.1.5. BEREC Input to European Commission's Guidance on Article 3 of the Gigabit Infrastructure Act

Article 3(13) of the GIA empowers the Commission, in close cooperation with BEREC, to issue Guidance on the application of the rules on Access to existing physical infrastructure. In mid-October 2024, the Commission initiated its work on those guidelines. In the first half of 2025, BEREC submitted feedback on the comprehensive draft questionnaires, which were subsequently sent to stakeholders, NRAs and Member states. This consultation[31] ran from 17 June 2025 until 30 September 2025. BEREC itself did not provide a response to the questionnaire, however BEREC members did. Moreover, BEREC provided relevant experiences to the Commission during a meeting with the Commission.

2.1.6. Report on the regulation of physical infrastructure access

Facilitation of access to physical infrastructure is seen as an important factor to incentivise the deployment of very high capacity networks (VHCNs), where this infrastructure exists and is deemed adequate for use, reducing the costs associated with networks rollout.

This BEREC report provides insights into how physical infrastructure access was treated in Europe, primarily through significant market power-based (SMP) regulation, describing changes in regulatory approaches and depicting perspectives

[30] Public consultation on the draft BEREC Guidelines on access to in-building infrastructure according to Art.11(6) of the of the GIA, see: https://www.berec.europa.eu/en/public-consultations-calls-for-inputs/public-consultation-on-the-draft-berec-guidelines-on-access-to-in-building-infrastructure-according-to-art116-of-the-gigabit-infrastructure-act

[31] See: https://digital-strategy.ec.europa.eu/en/news/commission-launches-consultation-guidance-application-gigabit-infrastructure-act

on the need to access physical infrastructure to deploy fixed VHCNs. The information is based on a comprehensive data-collection exercise carried out in mid-2024 from 29 European countries.

The report provides an overview of the means of access to physical infrastructure in Europe (irrespective of whether it is owned by telecommunications or non-telecommunications operators), and the strategies used by electronic communications operators when expanding their networks and making use of physical infrastructure elements. Other topics presented in the report relate to how data is collected from non-telecommunications operators, how the physical infrastructure elements are treated in the market analyses and the corresponding remedies imposed when SMP is found, along with expectations for the future regarding physical infrastructure treatment. Finally, the document also includes considerations on the interplay between asymmetric and symmetric regulation in relation to access to physical infrastructure.

BEREC's research so far has shown that many NRAs regulate access to physical infrastructure through the SMP rules, which underscores the importance of this regulatory tool, allowing for potential deregulation of other downstream markets. The asymmetric and symmetric regulatory regimes are seen broadly as complementary, with asymmetric rules typically used when stricter transparency or pricing obligations imposition were necessary. NRAs have identified concerns about pricing heterogeneity for physical infrastructure elements.

The draft report was subject to public consultation that was open from 10 December 2024 until 19 February 2025. BEREC received 13 contributions that were taken into consideration in the final version of the report, which has been approved at the 63rd BEREC plenary meeting in June 2025.

Documents:

BoR (25) 76: Report on the outcome of the public consultation of the draft BEREC Report on the regulation of physical infrastructure access
BoR (25) 77: BEREC Report on the regulation of physical infrastructure access

2.1.7. BEREC Report on the evolution of private and public 5G networks in Europe

The Board of Regulators adopted the 'BEREC Report on the evolution of private and public 5G networks in Europe' at the 62nd Plenary meeting (13 March 2025). This report sets out BEREC's preliminary views on the status, needs, and regulatory issues concerning the implementation of private 5G networks in Europe, from NRAs perspective. BEREC's views are predominantly based on an internal survey to NRAs, which highlights that, at the time of data collection, few dedicated frameworks for private networks have been implemented, and those that have, are designed to meet specific needs in countries. Furthermore, the definitions of private networks vary per country. As a result of its preliminary analysis, BEREC considers that at the time the report was drafted, the case for further harmonisation of frameworks for private networks is inconclusive. BEREC is also aware that EU Member States are taking different approaches regarding definition, registration, numbering and spectrum issues and that the EC's objective (through the Radio Spectrum Committee) is to harmonise dedicated radio frequency ranges for private networks.

The report concludes by setting out that the frequency range 3400-4200 MHz is the most common band for private 5G networks in Europe. The drivers of 5G private networks are varied and include deploying specifically the technical features of 3GPP based private networks in private settings such as a low latency or a very high availability. There may also be considerations with regard to optimising security or privacy of business information, as well as reasons related to cost efficiency, the need to implement very specific solutions and avoiding vendor lock-in.

Document:

BoR (25) 33: BEREC Report on the Evolution of Private 5G Networks and interrelation with public networks in Europe

2.1.8. BEREC External workshop on the technological advances as security opportunities and challenges for network resilience

In 2024 BEREC was tasked to identify the most relevant cybersecurity and resilience issues and challenges related to new technological developments that need to be addressed in an external workshop in order to discover good practices and experiences worth sharing. For that purpose, a survey was conducted requesting network operators to provide information on a number of questions related to resilience, the use of satellite systems, and protection of submarine cables, multivendor strategies and security approaches taken by the operators. This survey helped to identify some of the most relevant issues and challenges. After the analysis of the responses, it was decided to organise two external workshops; one in 2024 focused on network resilience with the associated report adopted in 2025, and the second in 2025, reported on here, on challenges related to technological advancements.

The workshop was organised as a part of the ENISA Telecom and Digital Infrastructure Security Forum 2025 held on 20 March 2025 in Amsterdam. This was the first time that the Forum was jointly organised by BEREC and ENISA. The report summarises the key takeaways of the presentations organised by BEREC at the conference, which explored how new and advanced technologies are used to enhance the protection of electronic communication networks. The event brought together leading experts in the field of cybersecurity and network security who are actively working to improve the resilience and security of telecommunications infrastructure in an increasingly digital and connected environment. It featured lessons learned, current practices and innovative tools and methodologies.

Document:

BoR (25) 82: Summary of the BEREC sessions at ENISA Telecom and Digital Infrastructure Security Forum 2025

2.1.9. External workshop on the competitive effects of strategic fibre networks deployment, including in the context of copper switch-off

The workshop held on 26 June 2025 focused on capturing the interactions between operators investing (individually or collectively) in fibre rollout, the impact of these interactions on the competition dynamics, and, if competition was impeded, the regulatory response that the operators deem necessary to counteract the dysfunctionalities identified.

The debates with the operators revolved around the concept of "strategic fibre deployment", described through two perspectives:

- as a risk that is taken into account in the investment decision by factoring in the possibility of another operator deploying in the same area and reducing the expected returns (the higher the risk of being overbuilt, the higher the probability of reassessing the investment priorities) and
- as an anti-competitive conduct meant to prevent other operators from deploying in a given area.
- BEREC hosted operators from France, Germany, Italy and Austria. An operator in France set out its experience, which formed the main example of the first perspective, while other operators in Germany, Italy and Austria focusing at least partially on the second perspective. Naturally, each case is significantly shaped by the status of network rollouts in the country of discussion, the incident regulations and the specifics determined by geography, population density and propensity to invest.

In France, the measures undertaken by ARCEP have structured the FTTH rollout, achieving comprehensive coverage and widespread availability. In Germany, the views of the operators are split as regards the reasons for the delay in fibre rollout, but relatively recently fibre deployment was considered of 'overriding public interest', with the intention of building up joint ventures and municipal partnerships to speed up the granting of permits while preserving competition. In Austria, very little parallel deployment has been seen in practice, as state-aid projects played an important role in rural deployment. Stakeholders in Austria asked for limitation of the coordination of civil works to avoid potential strategic behaviours and increased transparency through a cross-sectoral database. Finally, in Italy, an operator was sanctioned by an antitrust authority for excluding competitors through unprofitable FTTC investments, regulatory gaming, and predatory pricing, in several types of areas.

The workshop was well attended, with over 131 participants representing over 35 nationalities.

Document:

BoR (25) 126: Summary of the BEREC external workshop on the competitive effects of strategic fibre networks deployment, including in the context of copper switch-off

2.1.10. Submarine cables connectivity in Europe

During 2025, BEREC actively cooperated with various stakeholders, including the EC, to share knowledge and experience and to receive diverse inputs on submarine cable challenges.

In order to provide an overview of the domestic submarine cables in BEREC member countries (i.e. location, extension, age, funding, etc.) and the main purpose for their deployment, BEREC developed the Report on domestic submarine cables connectivity in Europe (BoR (25) 171). The report was open to public consultation from 11 June to 11 July 2025.

The report reviews the ex-ante economic regulatory regime adopted in each BEREC member country and its evolution, presents three case studies and identifies some potential challenges and emerging trends.

In order to have a better overview of the domestic submarine cable systems ensuring communication services in Europe and the main purpose of their deployment, BEREC collected information from its members, through a dedicated questionnaire which was organised in two sections:

- Section 1, aimed at collecting information on the submarine cables, and
- Section 2 on ex-ante economic regulation regime for submarine routes.

On 9 December 2025, BEREC held the public virtual workshop on 'Submarine cable connectivity: Competition & market dynamics, ex-ante economic regulation and future challenges' with speakers representing international regulatory authorities or networks (such as the ITU, ANATEL and NTRA), and other relevant stakeholders including the ESCA[32], ASN[33], Disruptive Analysis and the EC.

Stakeholders shared their views on the current state of play of the telecommunications submarine connectivity in Europe and other areas, such as Latin America or the southern Mediterranean Sea, with a focus on the competition and market dynamics, the ex-ante economic regulatory regime applied, as well as the main emerging and future challenges.

On 10 October 2025, BEREC also participated in the CEF Community Digital Conference, in Brussels, and shared some conclusions of its report on domestic submarine cables in Europe in the panel where the State Aid and Regulatory Aspects of Digital Backbones Connectivity was discussed.

Documents:

BoR (25) 171: BEREC Report on domestic submarine cables connectivity in Europe
BoR (25) 170: BEREC Report on the outcome of the public consultation on the Draft BEREC Report on submarine cables connectivity in Europe

[32] ESCA: European Subsea Cables Association
[33] ASN: Alcatel Submarine Networks

2.1.11. Follow up internal workshop on direct-to-mobile device satellite connectivity

Direct to mobile-Device satellite (D2D) connectivity is already available in different forms, such as a capability to send SOS messages via satellite on certain newer smartphones. Different spectrum options are currently being pursued by satellite service providers in this field of communications, (i) in cooperation with terrestrial mobile network operators (MNOs) and re-using spectrum rights of use assigned to MNOs, or (ii) using the dedicated spectrum resources of mobile satellite service (MSS) already assigned to satellite operators. The World Radio Conference 2027 includes a number of relevant satellite agenda items which may result in further spectrum opportunities supporting direct to mobile-device services[34].

BEREC invited RSPG to participate at an internal BEREC workshop consisting of three sessions with invited expert presenters (28 May, 24 September and 17 October) on topics associated with direct to mobile-device satellite communications with a selection of invited speakers (see the agenda in the Summary Report[35]). Building on BEREC's previous work, the main focus of the workshop was on direct to unmodified-handsets (D2D) satellite communications and the roles and relationships of the different organisations that may cooperate in providing the D2D solutions from satellite infrastructures. In particular, BEREC aimed to identify the high-level architectures and most relevant interfaces, customers, end-users, and other relevant network elements involved in D2D services and applications.

BEREC asked presenters to set out in their opinion, which non-spectrum related regulatory functions or criteria for market access should be covered on a European level, and which on a national level. Some speakers were asked to identify challenges and possible solutions to satellite connectivity in Europe.

BEREC also sought information about the following aspects:

1) Handover between networks, (re)routing of signalling and media (generative signal routing),
2) Roles of different network elements where relevant (e.g. Gateways),
3) Legal intercept practicalities,
4) End-user choices (and QoS issues), and
5) Competition dynamics and cooperation.

BEREC aims to continue assisting NRAs to reflect and brainstorm on relevant consumer, competition and jurisdiction issues, including on the aspects best suited for potential international (EU level) coordination. BEREC is also mindful of the wider D2D proposition and may explore other non-terrestrial network use cases (including IoT, private networks and hybrid networks).

Document:

BoR (25) 167: Summary report on Internal Workshop on Direct to Device Satellite Communication

[34] Agenda Items – 1.12, 1.13 and 1.14 at the World Radio Conference.

[35] BoR(25) 167, Summary report on Internal Workshop on Direct to Device Satellite Communication, 08.12.2025, see: https://www.berec.europa.eu/system/files/2025-12/BoR%20%2825%29%20167_Report%20on%20Internal%20Workshop%20on%20Direct%20to%20Device%20Satellite%20Communications.pdf

2.1.12. Update to BEREC Guidelines on Geographical surveys of network deployments

The updated draft BEREC Guidelines on Geographical Surveys of Network Deployments aim to provide a comprehensive framework for NRAs and Other Competent Authorities (OCAs) to conduct geographical surveys of network reach, enabling them to assess the deployment of electronic communications networks and identify areas where investment is needed. The guidelines build on the existing framework (BoR (20) 42), incorporating new aspects to ensure that geographical surveys are accurate, reliable, and improving the comparability of survey results across the EU.

The BEREC guidelines provide a step-by-step approach to conducting geographical surveys, including the definition of survey objectives, the selection of data sources, and the analysis of results. They also provide guidance on the use of metrics and indicators to measure network deployment, including coverage, capacity, and quality of service metrics.

The updated guidelines include several key changes and updates, such as the introduction of premises activated as an optional requirement for fixed broadband, the declaration of some speeds as optional for fixed broadband, and the consideration of issues such as network capacity for Fixed Wireless Access (FWA) networks when determining FWA coverage. The guidelines also provide guidance on the use of cell edge coverage as an alternative approach to assess mobile network coverage, and the consideration of multiple classes to represent indoor coverage quality.

They also reinforce the verification of geographical surveys by providing a direct reference to the BEREC Guidelines on the verification of survey information (BoR (21) 82) and reflect recent updates in the BEREC VHCN Guidelines (latest version BoR (25) 182)

Overall, the updated BEREC Guidelines on Geographical Surveys of Network Deployments provide a comprehensive and flexible framework for NRAs to conduct geographical surveys, enabling them to make informed decisions about network deployment and investment.

Note: The public consultation[36] of draft guidelines closed on 9 February 2026. The contributions received are being analysed to examine whether the draft guidelines need to be adjusted. The final version of the updated guidelines is foreseen for adoption by 67th Plenary meeting in 2026.

Document:

BoR (25) 184: Draft Updated BEREC Guidelines on Geographical surveys of network deployments

[36] See: https://www.berec.europa.eu/en/public-consultations-calls-for-inputs/public-consultation-on-the-draft-updated-berec-guidelines-on-geographical-surveys-of-network-deployment

2.1.13. Follow up to BEREC Opinion on the EC's methodology for the mapping of QoS coverage on Connectivity Indicators for the DDPP

The Digital Decade Policy Programme 2030 (DDPP), established by Decision (EU) 2022/2481, sets out to guide Europe's digital transformation by establishing digital targets and objectives in areas such as digital skills, infrastructure, and public services. As part of this initiative, the European Commission is required to monitor Member States' progress towards these objectives, and to this end, has developed key performance indicators (KPIs) for each digital target, as outlined in Implementing Decision (EU) 2023/1353.

In 2024, the Commission announced a draft 'Roadmap for a two-stage approach for the development of a methodology for the mapping of QoS coverage for mobile and fixed broadband services' and subsequently sought BEREC's opinion on this methodology. The aim of this methodology is to develop further the current KPIs to enable more comparable results among countries and to facilitate the mapping of QoS coverage for fixed wireless and mobile broadband, particularly 5G.

In response, BEREC provided its 'Opinion on the methodology for the mapping of QoS coverage of connectivity indicators for the DDPP' (BoR (24) 188) in July 2024, welcoming the ultimate goal of increasing harmonisation in evaluating and reporting 5G coverage and network performance across the EU. However, BEREC expressed concerns that the methodology's outcomes should not be expected to cater to separate activities, such as providing QoS information to end-users or supporting regulatory decision-making, as existing tools already cater to these needs.

BEREC also raised concerns regarding the implementation of the methodology, including the costs to be borne by operators and authorities, and emphasised the importance of simplification and flexibility in considering operational values used by operators in their planning tools. The EC's plan to conduct small-scale tests to gather information about the challenges in implementing the methodology was welcomed by BEREC, which considered the lessons learned from these tests to be crucial in determining the need for and suitability of the methodology.

In June 2025, the EC published a second draft of the methodology for public consultation, which was open for feedback until 27 June 2025. BEREC submitted a technical note to the EC commenting on this second draft, covering general, technical, and implementation aspects. While BEREC acknowledges the value of the EC's initiative to develop a harmonised methodology for assessing QoS of 5G networks, it does not endorse the methodology at this stage, instead welcoming it as a constructive basis for further technical and policy dialogue.

2.1.14. BEREC Input to the European Commission's consultation on the revision of the Recommendation on relevant markets susceptible to ex-ante regulation

As a part of the of the review process of the Recommendation on relevant markets (RRM) susceptible to ex ante regulation, and as a first step in the collaboration with the EC, BEREC has prepared a response to the targeted consultation which ran between 17 June and 30 September 2025[37] . Following the consultation and the analysis of the received input, the EC will prepare a draft Recom-

[37] See: https://digital-strategy.ec.europa.eu/en/news/commission-launches-consultation-revision-recommendation-relevant-markets

mendation, which will be consulted with BEREC. BEREC's Opinion on this draft Recommendation shall be taken into utmost account by the EC when preparing the final version of the new Recommendation.[38]

BEREC's input is structured along three main topics:

(i) the current status of ex ante regulation in Europe,
(ii) the foreseen market developments that could have a non-negligible impact on the relevant markets in the timeframe of the review and
(iii) consideration of the importance of the Recommendation for protecting effective competition.

In its concluding remarks, BEREC underpins the importance of the RRM as an instrument with a pivotal role in ex ante regulation, putting emphasis of the detrimental effects that can be foreseen if a premature removal takes place. Moreover, despite the recently-observed deregulatory trend, which is proof that regulation was successful and NRAs withdrew remedies where it was not necessary anymore, BEREC holds that a full deregulation of the markets currently included in the RRM will be neither justified or appropriate in the foreseeable future.

Document:

BoR (25) 146: BEREC Input to the European Commission's consultation on the revision of the Recommendation on relevant markets susceptible to ex ante regulation

2.2. Strategic priority 2: Thriving sustainable and open digital markets

2.2.1. BEREC contribution to the implementation of the Data Act

In the Data Act (DA), the independent national competent authorities with experience in electronic communications services are considered to be well-placed to ensure the application and enforcement of cloud-related provisions. Some BEREC members have already been designated as the national competent authority responsible for the application and the enforcement of (some chapters of) the Data Act, and more members are likely to be soon.

BEREC planned several bilateral meetings with relevant stakeholders to discuss the:

(i) measures taken to comply with the DA provisions, in particular concerning contractual obligations, switching charges and data transfer charges for in-parallel use of several providers and portability and interoperability requirements, and
(ii) changes made by companies (e.g. switching provider) and
(iii) first impact of the entry into force of the DA.

[38] Note that this response to the targeted consultation should not be construed as BEREC's opinion, which will follow at a later date once the Commission produces its draft Recommendation.

In this context, two questionnaires were prepared by BEREC experts to start bilateral meetings with stakeholders, representing end users and providers, in January 2026.

BEREC experts also organised and participated in various experience sharing and learning events, where the EC and the NRAs presented the results of their studies.

2.2.2. Implementation of the Open Internet Regulation and the BEREC Open Internet Guidelines

In October 2025, BEREC published its annual report on the implementation of the Open Internet Regulation (OIR), Regulation (EU) 2015/2120, marking the ninth year of the Regulation's application. The report covered the period from 1 May 2024 until 30 April 2025 and provided a comprehensive overview of the activities undertaken by NRAs in enforcing the OIR and adhering to the associated BEREC Open Internet Guidelines.

To compile the report, BEREC collected data from 30 NRAs through an internal questionnaire, which consisted of 27 questions covering all relevant aspects of the OIR. The responses from Montenegro (ME) were considered separately, as the OIR is not directly applicable to this country. The data was supplemented with publicly available information on open internet cases and investigations conducted during the reporting period, offering valuable insights into the implementation of the OIR.

The report's structure was closely aligned with the provisions of the OIR, providing a detailed analysis of the Regulation's application. While the report was not exhaustive, it provided a comprehensive overview of the key developments and trends in the open internet domain. To support NRAs in their mandate to 'closely monitor and ensure compliance' with the OIR, BEREC hosted a forum for informal discussions on the consistent application of the Regulation. This forum enabled NRAs to share experiences, exchange key decisions in national cases, and foster uniform application of the Regulation amidst rapidly evolving markets and technologies. Additionally, the forum served as a platform for sharing insights into market developments relevant to open internet provisions, facilitating a deeper understanding of the complex issues at play.

Document:

BoR (25) 125: BEREC Report on the implementation of the Open Internet Regulation

2.2.3. Collaboration on internet access service measurement tools

In 2025, BEREC continued to facilitate collaboration among its members to enhance the quality and effectiveness of their internet access services (IAS) measurement tools. The Open Internet Working Group provided a platform for exchanging best practices on deploying and evolving national measurement tools, including considerations for supporting new technologies.

Building on its previous efforts, BEREC had published an updated version of the BEREC Net Neutrality Regulatory Assessment Methodology (BoR (22) 72) in 2022, which complemented the Net Neutrality measurement tool specification (BoR (17) 179). These documents laid the foundation for establishing a harmonised measurement framework, a key priority for BEREC. The Open Internet

Working Group played a crucial role in facilitating collaboration among National Regulatory Authorities (NRAs), enabling the exchange of information, experiences, and best practices related to national tool deployment.

BEREC's collaboration with NRAs on national measurement tool deployments focused on two primary objectives:

a) Sharing knowledge and best practices: Providing a forum for NRAs to share information, exchange experiences, and discuss best practices related to deploying and evolving national measurement tools, including considerations for supporting new technologies. This workstream also explored optimal collaboration strategies to maximise the benefits of existing NRA cooperation on measurement tools development and deployment.

b) Promoting harmonisation: Supporting interested NRAs in transitioning towards a harmonised measurement tool by promoting collaboration, enhancing measurements, and fostering the sharing of code or components among NRAs.

By pursuing these objectives, BEREC aimed to promote a coordinated approach to IAS measurement, ultimately enhancing the overall quality and consistency of these tools across the region. This coordinated approach would enable more effective monitoring and regulation of internet access services, ensuring a better internet experience for users.

2.2.4. Report on Infrastructure sharing as a lever for ECN/ECS environmental sustainability

Infrastructure sharing in the telecommunications sector, which includes passive (e.g. towers and ducts) and active sharing (e.g. transmission equipment and antennas), has the potential to reduce environmental impact through decreased infrastructure duplication, energy conservation and reduced material consumption. By consolidating physical assets and technology, shared infrastructure can significantly lower carbon emissions, land use and use of resources. These environmental gains also address energy consumption, raw materials usage and electronic waste, creating a positive contribution to the environmental footprint of ECNs and ECSs. This report explores infrastructure sharing as a lever for environmental sustainability in ECNs and ECSs, aligning with broader EU objectives to reduce the ICT sector's environmental impact. As a response to the EU Green Deal and the UN Agenda 2030, BEREC examines how regulatory tools might enhance the environmental performance of telecommunications by minimising the footprint associated with network deployment and operation. It capitalises on previous publications from BEREC on infrastructure sharing and bases its analysis on a survey circulated among NRAs within BEREC and on a consultation of stakeholders at a technical workshop. This report was a carry-over deliverable to 2025. The public consultation on the draft report was open until 31 January 2025, whereas the final report was approved at 63rd Plenary meeting in 2025.

Documents:

BoR (25) 68: BEREC Report on Infrastructure Sharing as a lever for ECN/ECS Environmental Sustainability
BoR (25) 67: BEREC Report on the outcome of the public consultation on the draft BEREC Report on Infrastructure-sharing as a lever for ECN/ECS environmental sustainability

2.2.5. BEREC work on Artificial Intelligence

In 2025, BEREC considered relevant issues on Artificial Intelligence (AI). In particular BEREC considered the integration of AI in the telecommunications sector. The purpose was of the workstream was to develop an overview of the use of AI in the telecommunications sector in Europe, updating and complementing the analysis developed in the BEREC Report on the impact of AI solutions in the telecommunications sector on regulation (BoR (23) 93). As part of this work BEREC met in May 2025 with the relevant telecom associations – Connect Europe, ECTA and GSMA – which gathered input from their members to capture their real-world experiences and insights.

BERECs exchanges with stakeholders revealed that telecom operators are already using AI technologies in a variety of domains within their organisations, including network and capacity planning, quality of service optimisation and traffic classification, security optimisation and threat detection, and network fault issue remediation and customer order management.

BEREC also held an internal workshop to share and discuss about the AI solutions which NRA use to support regulatory tasks, the lessons that can be learnt (e.g. regarding barriers to implementation), as well as how and where the application of AI could be further explored. The workshop particularly focused on: AI solutions for market surveillance, competition analysis and spectrum management; AI solutions for knowledge-sharing on AI regulation; adoption of guidelines or principles on the use of AI tools; experience-sharing on concrete challenges & legal, data and security implications.

2.2.6. BEREC contribution to the implementation of the Digital Markets Act

On 6 September 2023, the EC designated Meta in relation to its number-independent interpersonal communication services (NI-ICS) WhatsApp and Messenger. Meta must comply with the interoperability obligation since 7 March 2024 for WhatsApp and since 6 September 2024 for Messenger.

According to Recital 64 DMA, the designated gatekeeper should publish “a reference offer laying down the technical details and general terms and conditions of interoperability” with its NI-ICS, and the EC can consult BEREC “in order to determine whether the technical details and the general terms and conditions published in the reference offer that the gatekeeper intends to implement or has implemented ensures compliance with this obligation”.

In 2025, BEREC published its Opinion on Meta’s reference offers to facilitate Messenger and WhatsApp interoperability under Article 7 of the Digital Markets Act. This BEREC opinion provides specific comments on Meta’s reference offers for Messenger and WhatsApp interoperability that follow the list of minimum criteria for the reference offer defined in BEREC report on the interoperability of

NI-ICS[39] and build on the two previous opinions that BEREC delivered in 2024 on the proposed solutions for WhatsApp interoperability (one on the draft reference offer[40] and one on the final reference offer[41]).

In addition, according to Article 53 DMA, the EC should evaluate this regulation and report to the European Parliament, the Council and the European Economic and Social Committee by 3 May 2026, and subsequently every three years.

In this context, BEREC welcomed the opportunity to contribute to the EC public consultation on the first review of the DMA launched in July 2025[42]. BEREC response focused on those services and technologies which fall within – or are closely connected to – its regulatory remit, that is NI-ICS, cloud computing services, AI, and data collection and cooperation with national authorities, European networks and the European Commission.

In addition, BEREC is a member of the DMA High-Level Group (HLG). The role of the HLG is to provide the European Commission with advice and expertise relevant for any general matter of implementation or enforcement of the DMA and the promotion of a consistent regulatory approach across different regulatory instruments, as well as to provide expertise to the European Commission on the need to amend, add or remove the DMA rules to ensure that digital markets across the Union are contestable and fair.

BEREC also actively contributed to three DMA HLG subgroups on data-related obligations, interoperability and AI.

Documents:

BoR (25) 21: BEREC Opinion on Meta's reference offers to facilitate Messenger and WhatsApp interoperability under Article 7 of the Digital Markets Act.
BoR (25) 119: BEREC response to the European Commission's consultation on the first review of the Digital Markets Act.

[39] BoR (23) 92, BEREC report on interoperability of Number Independent Interpersonal Communication Services (NI-ICS), 08.06.2023, see: https://www.berec.europa.eu/system/files/2023-06/BoR%20%2823%29%2092%20BEREC%20Report%20on%20interoperability%20of%20NI-ICS.pdf

[40] BoR (24) 19, BEREC Opinion on Meta's draft reference offer to facilitate WhatsApp interoperability under Article 7 of the Digital Markets Act, 15.02.2024, see: https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-opinion-on-metas-draft-reference-offer-to-facilitate-whatsapp-interoperability-under-article-7-of-the-digital-markets-act

[41] BoR (24) 78, BEREC Opinion on Meta's reference offer published in March 2024 to facilitate WhatsApp interoperability under Article 7 of the Digital Markets Act, 04.06.2024, see: https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-opinion-on-metas-reference-offer-published-in-march-2024-to-facilitate-whatsapp-interoperability-under-article-7-of-the-digital-markets-act

[42] Consultation on the first review of the Digital Markets Act, see: https://digital-markets-act.ec.europa.eu/consultation-first-review-digital-markets-act-2025-07-03_en

2.2.7. Stock taking of NRAs application of Article 52(2) for wholesale access obligations

In March 2025, BEREC distributed a questionnaire to all its members to gather national experiences with the provision of wholesale access when Member States grant, amend or renew rights of use for radio spectrum pursuant to Article 52(2) of the European Electronic Communications Code (EECC). The report offers a snapshot of market conditions as of April 2025, compiling information from the NRAs' responses and presenting a fact-based overview of the situation they described.

Based on the data provided by the NRAs, the main findings are:

- Before the introduction of Article 52(2) of the EECC or its transposition into national law, 11 NRAs imposed conditions for provision of wholesale access, while 14 NRAs did not impose conditions for provision of wholesale access when granting, amending, or renewing rights of use for radio spectrum during frequency authorisation processes;
- After the transposition of Article 52 into the national legislation, 10 NRAs held no spectrum award procedures since the transposition of Article 52 into the national legislation. Four NRAs held at least one spectrum award procedure, with conditions for provision of wholesale access attached to at least one of them, while 11 NRAs held at least one spectrum award procedure but did not attach conditions for provision of wholesale access to any of them;
- Two NRAs designated a Mobile Network Operator (MNO) with Significant Market Power (SMP) under the market analysis procedure in accordance with Article 67(2) of the EECC, and obligated the provision of wholesale access. 22 NRAs have not designated an MNO with SMP, while one NRA did not provide answer, and
- At the time of the questionnaire, one NRA set out that they intend to consider taking appropriate measures pursuant to Article 52(2) in their upcoming awards. 17 NRAs set out that they are uncertain at this time about taking appropriate measures pursuant to Article 52(2) in upcoming awards, or that their decisions will depend on market developments at the appropriate time and in the context of their deliberations on future potential awards. Seven NRAs did not provide an answer.

Document:

BoR (25) 69: BEREC Report on Stock-taking of NRAs application of Article 52(2) for wholesale access obligations

2.2.8. Advancing towards environmental data collection on ECN/ECS and contributing to future code of conduct on ECN/ECS sustainability

Following its previous work on sustainability indicators, in 2025 BEREC has provided written inputs to the European Commission on its draft Code of Conduct for the sustainability of telecommunications networks. This work will continue as a carry-over project and in 2026 BEREC will focus on supporting the implementation of the EU Code of Conduct. As part of this follow-up, BEREC will establish the groundwork for an ad hoc data collection through a questionnaire on

the implementation of key sustainability indicators, which NRAs will be invited to distribute to their market players. This activity will prepare the basis for future, harmonised environmental data collection and enable the assessment of the environmental footprint of the ICT sector, contributing to data-driven regulatory decision-making.

2.2.9. BEREC external workshop on environmental footprint of satellite constellations

On 25 September 2025, BEREC held an external workshop to understand the environmental footprint of satellite constellations, complementing its previous work on satellite communications. This workshop brought together representatives from key stakeholders: regulators, experts in space and satellite, international bodies and industry players to explore the environmental aspects of the satellite systems and build a comprehensive overview of existing initiatives and stakeholder perspectives.

The workshop included a discussion on existing studies on life cycle environmental impact assessment of satellite constellations and related challenges (such as limited data availability, environmental damage mechanisms, etc.). It also addressed challenges related to space debris, light pollution (in particular with regard to astronomical observations, weather forecasting and disruptions to natural nocturnal ecosystems) and planetary boundaries, including Earth and Outer Space/Orbit resources, as well as the environmental impact of the construction and maintenance of ground infrastructure (e.g. satellite dish installations and data centres). In addition, advancements in sustainable satellite design were presented.

The workshop included presentations from the EC's Directorate General for Defence Industry and Space (DG DEFIS), the European Space Agency (ESA), the UN COPUOS Scientific and Technical Subcommittee (STSC), the International Telecommunication Union (ITU), the French National Centre for Space Studies (CNES), Glasgow Caledonian University and University of Strathclyde. The workshop concluded with presentations from industry representatives and a panel discussion among the stakeholders from Amazon, Eutelsat, Aéro Décarbo, GSOA and Telesat.

A video recording[43] of the workshop has been published on BEREC's public YouTube channel for a wider outreach.

Document:

BoR (25) 169: BEREC Summary Report on the external workshop on environmental footprint of satellite constellations

2.2.10. BEREC External Study on Data Centres

Data Centres (DCs) are a fundamental element for providing cloud services, as well as a large part of the IT services supplied to citizens and companies by various actors, including platform providers and AI-based services. These DCs are

[43] BEREC external workshop on the environmental footprint of satellite constellations, see: https://youtu.be/UqEv_82N2iM?si=3mz4TgzmKVqxqOEd

connected via high-speed dedicated electronic communication networks (ECNs) that are regulated by NRAs. Additionally, as expressed in the European Commission's "White Paper - How to master Europe's digital infrastructure needs?", the converging ecosystem, where a boundary between the "traditional" providers of digital networks and services on the one hand, and the providers of e.g. cloud services on the other hand, becomes increasingly blurred, highlights the need of ensuring a more holistic regulatory approach.

The objective of the proposed work was to gather a general understanding of the number, characteristics, location and actors deploying/using DCs in Europe, its key dependencies (as ECN infrastructure (either active and or passive), or energy), as well as sustainability considerations and future trends, with the aim of defining the areas where BEREC and NRAs can better support EU and national institutions and actors to ensure that Europe, its citizens and companies benefit from DCs.

As yet, there is a lack of clarity regarding the future regulatory approach to this topic. This BEREC study considered relevant issues and trends associated with establishing (selecting a location) and maintaining data centres, and possible changes in opportunities and threats regarding environmental impact. BEREC sought insight on this topic, observing that multiple measures and sustainability indicators should be considered to promote energy efficiency. Interested readers can find more information on the outcome of the study at this link: External Study on Data Centres[44], which was completed in December 2025 but adopted by the Board of Regulators at the start of 2026.

2.3. Strategic priority 3: Empowering end-users

2.3.1. BEREC report on switching and termination of contracts

The switching process is a key element in the market for ensuring effective competition in a competitive environment. The efficiency and transparency of the process are paramount, together with the level of trust end users place in it. Only when end users have confidence in the switching procedure will they fully benefit from it, thereby enabling effective market competition, which ultimately serves their interests through potential price reductions and eventually better quality of service.

This project builds on the continuity of the work done by BEREC in 2018, resulting in a report that collated information from NRAs on the approaches to switching across different communications services (BoR (19) 27). Additionally, the switching of the providers was also addressed in other BEREC projects, such as the BEREC workshops on end-user rights (in 2022 and 2024), as well as in the BEREC Opinion under Article 123 of the European Electronic Communications Code (BoR (24) 180).

BEREC received answers from 30 NRAs via a questionnaire drafted for the purpose of gathering data on the switching and number portability process. The data collected for this report shows that while the regulatory framework has been implemented efficiently, certain specific challenges remain, particularly in relation to disincentives encountered during the switching process. Differences in implementation across Member States are also evident; however, these do not

[44] BoR (26) 01, External Study on Data Centres, 30 January 2026, see: https://www.berec.europa.eu/en/all-documents/berec/reports/external-study-on-data-centres

necessarily indicate a lack of harmonisation. It is important to highlight the specific circumstances of each Member State as well as the end-users' expectations and behaviours, which may vary. This highlights the need for a degree of flexibility that enables Member States to respond swiftly and effectively to practical challenges that may arise, considering their specific national conditions. In some cases, it can be observed that there are specific areas that require further consideration, but these assessments are not part of this report.

The result of this report shows that various data can have an impact on the process of provider switching and terminating contracts. The data should help to better inform end users, and help operators and NRAs, to enhance end-users' awareness and empower them to exercise choice and seek electronic communications products/services that best suit their preferences and needs.

This fact-finding report is divided into three main sections. The first section examines the switching and porting processes, including their implementation and all the actions required for completing those processes. The second section considers the main disincentives and challenges identified in relation to the switching/porting procedures and terminating contracts. The final section addresses the specific end users' rights in the context of the switching and porting process.

This report is a carry-over deliverable to 2026. The public consultation was open until 30 January 2026. The final report is to be approved at 67th Plenary meeting in 2026.

Document:

BoR (25) 183: Draft BEREC Report on switching and termination of contracts

2.3.2. BEREC external workshop on practical issues preventing number misuse and possible fraudulent activities as a result of impact of new technologies

Over the years, the fraudulent activities and misuse of numbering resources have increased significantly. It has affected end-users, and market players. A lack of trust in the authenticity of numbers can lead to broader concerns regarding privacy, security, and trustworthiness in digital interactions.

Recent BEREC activity on end-user rights assessment under Article 123 of the EECC showed increasing trend related to fraudulent activities in digital environment (the third most significant market development, according to the opinion of NRAs). With increased choice of digital products to the end-users, there comes an opportunity for fraudsters and a high risk of end-user harm due to fraudulent activities, making the protection of end-users against fraud more and more complex.

The workshop was structured into four key sessions:

1) Overview of the problem – Establishing the context by emphasising the impact on end-users and the end-user perspective.
2) Market players' measures and tools – this session was intended to explore technical solutions and strategies to combat fraud, also with a focus on AI-driven approaches.

3) The role and practices of NRAs – this session was dedicated to regulatory measures and other initiatives implemented by national regulators.
4) Panel discussion – bringing together regulators, market participants, and other stakeholders to address cross-sectoral and cross-border challenges, particularly in the context of the ongoing EECC review.

The workshop was well attended, with more than 230 onsite and online participants and 20 speakers throughout the 4 sessions.

Speakers underlined the need for continued collaboration between various actors. Also, proper technical solutions, efficient enforcement of the requirements established, together with education of the experts and end-users, should be key in the developing environment.

Having in mind all discussions during this workshop, it is important that BEREC is also kept well informed about relevant issues related to end-user trust in digital services and the digital ecosystem. In doing so, BEREC will be equipped with relevant information about the changing world and the outcome of newly adopted legislation in order to actively contribute to fostering collaboration among all relevant actors involved in the prevention of fraudulent activities.

Document:

BoR (25) 129: Summary Report on the BEREC Workshop on practical issues preventing number misuse and possible fraudulent activities

2.3.3. BEREC-BEUC Joint workshop on end-user rights

The BEREC-BEUC joint workshop was an opportunity to bring together regulatory bodies and civil society organisations, especially consumer organisations, in order to discuss all factors which could potentially impact European consumers in a rapidly developing digital environment. The potential effects of relevant aspects such as quality of service, coverage, information and marketing practices were covered as part of the workshop. By engaging in this comprehensive discussion, the workshop sought to identify actionable insights and policy recommendations or legislative changes, especially taking into account the BEREC Opinion on Article 123 and the European Commission's views on the review of Title III of Part III on end-user rights, which can empower consumers and strengthen their position in the digital marketplace. The workshop was well attended, with more than 140 onsite and online participants and 20 speakers throughout the 4 sessions.

2.3.4. Internal workshop on aspects of 2G and 3G phaseout

On 16 July 2025, BEREC held an internal workshop at expert level to discuss aspects of the phaseout of 2G and 3G mobile technologies in European countries. The workshop was conducted internally to enable experts to exchange views and experiences in a more holistic setting as compared to what is typically facilitated in an external workshop format that is usually open to registration by other interested parties, who often join for their own information purposes. As a result, the summary report[45] provides only a high-level overview of main discussion points so that BEREC's stakeholders may be broadly informed about the contents of the internal workshop. Also of note, the decision to phaseout 2G and 3G mobile technologies is a matter for operators, but regulators may have a remit to regulate matters that impact on end users such as service continuity for important services such as adequate 112 access and of services such as voice calls, SMS and internet access.

Document:

BoR (25) 135: Summary report on the outcome of the internal workshop on aspects of 2G and 3G mobile technology phase-outs

2.3.5. BEREC external workshop on digital services' ecodesign for greener networks and ICTs

On 30 April 2025, BEREC held an external workshop to deepen its understanding of the means to implement ecodesign principles to digital services for greener networks and ICTs.

The aim was to identify the existing tools, frameworks, and best practices that enable the development of digital services that are sustainable-by-design. This workshop gathered a number of representatives from stakeholders: regulatory public authorities, agencies, end-user associations, academics, market players and environmental specialists to build a comprehensive overview of existing initiatives and stakeholder perspectives on digital services' ecodesign.

The workshop included presentations from the EC's Directorate General for Communications Networks, Content and Technology (DG Connect), German Environment Agency, the French NRA (ARCEP), leading academic researchers and industry specialists (Nokia, CCIA, Ericsson and the Green Software Foundation).

The event concluded with presentations from panellists and a panel discussion.

A video recording [46] of the workshop has been published on BEREC's public YouTube channel for a wider outreach.

[45] BoR (25) 135, Summary report on the outcome of the internal workshop on aspects of 2G and 3G mobile technology phaseouts, see: https://www.berec.europa.eu/system/files/2025-10/BoR%20%2825%29%20135_Summary%20report%20on%20the%20outcome%20of%20the%20internal%20workshop%20on%20aspects%20of%202G%20and%203G%20mobile%20technology%20phaseouts.pdf

[46] BEREC external workshop on the ecodesign of digital services for greener networks and ICTs, see: https://youtu.be/vJz6hFIrd1w?si=0-A-sqWPF9F-b6k2

Document:

BoR (25) 130: BEREC Summary Report on external workshop on digital services' ecodesign for greener networks and ICTs

2.3.6. BEREC-ECASEC: Guidelines on mitigating smishing

Due to priorities and workloads of both it was decided to postpone this project item to 2026, and to consider taking a broader look at 'combating fraud' (like commercial fraud, smishing, phishing, spoofing, SMS pumping, abuse of SMS sender ID registry and so on) with smishing being just one type of online fraud.

2.4. Cooperation with EU institutions and institutional groups

2.4.1. Implementation of BEREC's Medium-Term Strategy for relations with other institutions and international cooperation

The BEREC strategy 2021-2025 recognises the growing convergence of issues in the field of electronic communications worldwide and the increasingly global nature of electronic communication networks and electronic communications services. These trends mean that policies, legislation and regulation must be seen from a more global perspective.

As stated in this strategy, BEREC has benefited since its foundation from the cooperation of NRAs and other international regulatory networks, policymakers and institutions involved in communications, including outside the EU. This cooperation has been formalised and strengthened since 2021 by BEREC's Medium-Term Strategy for international cooperation (IC MTS)[47].

The IC MTS addresses the need for BEREC to establish and maintain relationships with external parties for the execution of BEREC's tasks. In evaluating BEREC's international commitments it explains in a detailed and transparent manner what type of cooperation and engagement could be envisaged with each of its international partners. In line with Article 35 of Regulation (EU) 2018/1971, the IC MTS is to be factored in when drafting BEREC international activities in its multi-annual work programmes.

In 2025, BEREC continued its efforts to promote dialogue and cooperation with key external stakeholders. At the beginning of the year, BEREC organised a quadrilateral BEREC–EMERG–REGULATEL–EaPeReg summit in Barcelona, where regulatory networks discussed regional developments, emerging trends in electronic communications, and the future of regulation. Later in the year, BEREC organised a study visit to the United Kingdom to exchange views on shared regulatory challenges in the current political and economic environment, as well as other developments in electronic communications and digital technologies. Throughout the year, BEREC also maintained regular contacts with its international partners by participating in their meetings and through bilateral engagements.

[47] See: https://www.berec.europa.eu/en/document-categories/berec/berec-strategies-and-work-programmes/berecs-medium-term-strategy-for-international-cooperation-for-the-period-2022-2025

International cooperation remains a strategic component of BEREC's work and its collaborative approach in the upcoming mid-term period (2026–2030), as reflected in the new BEREC Strategy 2026–2030[48] adopted at the end of 2025.

Document:

BoR (25) 34: BEREC Calendar of international meetings and events in 2025

2.5. BEREC's other tasks

2.5.1. BEREC Strategies 2026-2030: Mid-term strategy, International and Institutional

This document sets out BEREC's strategy for 2026 – 2030 providing guidance to organise and prioritise its work towards clearly defined objectives. It reviews and consolidates the previous three strategies (Strategy 2021 – 2025, the Medium-Term Strategy for relations with other institutions and the Medium-Term Strategy for International Cooperation) along with the Action Plan 2030 setting up BEREC's objectives in view of the latest and expected market, technological and regulatory developments relevant for the next five years. To ensure that its strategy remains relevant and aligned with future developments, BEREC will reassess its strategic priorities over the course of the period.

BEREC is the main body for cooperation and exchange of views among the NRAs. It has been tasked to provide its professional expertise, either upon request or on its own initiative, as an advisory body to the EU institutions. BEREC's responsibilities include identifying regulatory best practices and developing common positions, as well as producing opinions, guidelines and reports with the overall objective of a consistent and fit-for-purpose application of the regulatory framework for electronic communications. By means of the present Strategy, BEREC takes stock of key market and technological developments along with policy and legislative changes in order to shape its high-level priorities.

BEREC's actions align with the four overarching objectives of the EECC: i) incentivising connectivity, access and take-up of VHCN; ii) promoting competition; iii) contributing to the development of the internal market; and iv) ensuring the interests of the citizens of the Union. These four objectives serve as the strategic foundation of for BEREC's activities. In BEREC's 2030 Action Plan, in addition to these policy objectives, consideration was made of three new priorities: a) ensuring the security and resilience of networks and services, b) contributing to the achievement of environmental sustainability goals, and c) strengthening BEREC's agility, independence, inclusiveness, and efficiency as a centre of expertise. Along these lines and with the objective to align BEREC's Strategy and its 2030 Action Plan, these elements are now reflected in Priorities 4 and 5 of this strategy.

BEREC wishes to highlight that all priorities are closely interrelated and should be considered as a unified and coherent whole, in order to maintain a mission-driven and consistent roadmap for advancing the EU's digital transition.

[48] See: https://www.berec.europa.eu/en/all-documents/berec/berec-strategies-and-work-programmes/berec-strategy-2026-2030

Priority 1. Promoting full connectivity and the Digital Single Market
Priority 2. Supporting competition-driven and open digital ecosystems
Priority 3. Empowering end users
Priority 4. Contributing to environmentally sustainable, secure and resilient digital infrastructures
Priority 5. Strengthening BEREC's capabilities and continuous improvement

Under the institutional and international cooperation, BEREC acknowledges the crucial importance of continued exchanges with EU bodies, competent authorities of third countries, and international organisations. Accordingly, BEREC will continue its efforts to foster dialogue and cooperation with relevant external actors, as stipulated in Article 35 of the BEREC Regulation.

BEREC ad hoc work

2.5.2. Ad hoc input to the EU Institutions/NRAs

In January 2025, the EC approached BEREC regarding collecting information on the General Authorisation conditions and other applicable rules. The EC focused on gathering feedback from NRAs regarding specific national rules, reporting obligations, and conditions that are most challenging for cross-border providers. The EC aims to identify areas where simplification or harmonisation of conditions could reduce burdens, particularly concerning administrative charges, lawful interception, data protection, and crisis preparedness. Additionally, the EC will explore opportunities to align European Electronic Communications Code provisions with other legislative acts, such as the Digital Services Act and the e-Privacy Directive.

BEREC coordinated and collected inputs for the EC questionnaire and shared them with the EC.

2.5.3. Peer review process and engaging with RSPG

BEREC and the Radio Spectrum Policy Group (RSPG) agreed on working arrangements on 13 June 2019 (see also BoR (19) 100). The arrangements set out cooperation methods for BEREC's participation in the Peer Review Forum. This was done with regard to the requirements of Article 35 of the EECC. The cooperation methods are as follows:

- to use the Peer Review Forum as an instrument of peer learning; to promote the view that the Peer Review Forum is the best way forward as it convenes national NRAs and other competent authorities with expertise on comparative or competitive selection procedures pursuant to the electronic communications' regulatory framework;
- to cooperate in the implementation of the Peer Review Forum;
- to appoint liaison officers in both BEREC and the RSPG to strengthen the relationship between the two bodies and to facilitate the implementation of this arrangement. The Wireless Network Evolution Co-Chairs are BEREC's liaison officers.

The Peer Review Forum is convened by the RSPG only when required. The responsibilities for adopting and publishing reports on Peer Review are set out in Article 35(7) and (9) of the EECC, and these fall to RSPG to deliver also having regard to the RSPG Rules of Procedure. In 2025, the following meetings took place:

- PRF on February 13 concerning assignment of radio frequencies from 800 MHz, 900 MHz, 1500 MHz, 2100 MHz and 2600 MHz bands in Slovakia;
- PRF on February 26 concerning assignment of radio frequencies in the band 24.25-26.5 GHz (lower 26 GHz band) in Italy;
- PRF workshop on April 2 and 3 addressing special events including 2024 Summer Olympic Games, the evaluation of mobile spectrum awards and the 26 GHz band;
- PRF on November 17 concerning assignment of radio frequencies in the band 2300 – 2360 MHz and 2500 – 2690 MHz in Austria.

2.5.4. Ad hoc work to support reinforcing EU's cybersecurity and resilience capabilities

In 2025, the ad-hoc activities of BEREC included collaboration with the NIS Cooperation Group (NIS CG), ENISA, and the European Commission. Key actions included the continuation of the implementation of the strategic and technical recommendations of the NIS CG's follow-up report to the Nevers Call. As part of the Report's Strategic Recommendation SR3 ("Create transparency on the landscape of suppliers and M(S)SPs used for fixed networks, fibre technology, submarine cables, satellite networks and other important ICT suppliers"), BEREC conducted a European-wide survey of fixed network and satellite network operators. The survey aimed at providing an overview of the origin and/or controlling country of the different suppliers that operators are using, and in particular, to see whether there are any potential supply chain vulnerabilities and dependencies on suppliers from outside the European Union (EU)/European Economic Area (EEA). BEREC's main role was to collect and anonymise the data from operators before sharing it with the NIS CG for analysis. The BEREC BoR was briefed on the survey results and it was agreed that a comprehensive BEREC internal report should be drafted in 2026.

In the face of continuously evolving legislation (NIS2 Directive, Critical Entities Regulation, Cyber Resilience Act, Cybersecurity Act, Cyber Solidarity Act), BEREC continuously monitors the developments in the sector and through these identified topics for future projects as for example in the area of cyber fraud.

2.5.5. BEREC Input to the European Commission's Call for Evidence on the Digital Fairness Act

On 17 July 2025, the EC published a Call for Evidence and a public consultation on its planned Digital Fairness Act (DFA) legislative initiative, which is expected in 2026.

The EC's consultation aimed to gather the views of all relevant stakeholders on how to ensure fairness for consumers and businesses in business-to-consumer

transactions within the digital single market, improve legal certainty, ensure effective enforcement, and prevent market fragmentation. The feedback collected during the consultation will contribute to the impact assessment and inform the legislative proposal, ensuring that the initiative reflects real-world challenges/trends and stakeholder concerns and gives due consideration to the impact assessment. In this context, it is important to note the close interlink between the forthcoming DFA and the future Digital Networks Act (DNA). Ensuring temporal and material consistency between these two initiatives would help prevent potential overlaps or gaps, while supporting a more integrated approach to fairness and connectivity within the EU digital framework.

BEREC welcomed the opportunity to participate in the Call for Evidence and expressed its views in a format of open input, especially about the necessity of sectoral legislation.

BEREC considers that sectoral provisions of the EECC, such as those on contract termination and switching, number portability, quality of service and accessibility, provide the necessary safeguards to address the particularities of electronic communications markets. In this regard, BEREC also highlighted the important role of NRAs in safeguarding end-user rights. Their technical expertise and legal powers to collect market data, monitor practices and address disputes can contribute to ensuring that horizontal and sector-specific consumer protection frameworks operate in a coherent and complementary manner.

Furthermore, Part III of the EECC contains access to emergency communications as well as universal service provisions, which are crucial to grant end-users with connectivity options and increase digital inclusion by ensuring access to the Internet to all and in an affordable way to end-users with low income or special social needs.

These rights are tailored to the specific characteristics of ECS markets and must not be weakened or superseded by the new DFA. Also, the sectoral regulatory framework has evolved and been refined through subsequent instruments and considers the growing complexities of bundled digital services and the difficulties of switching ECN/ECS providers. BEREC also noted that sectoral end-user protection is strongly interlinked with other sectoral provisions, such as those on competition, innovation, technological developments, and security, which together assist in ensuring that end-users benefit from transparent, fair, and future-proof digital markets. This is especially the case when measures addressing these aspects usually have a direct or indirect impact on end-users of ECS.

Document:

BoR (25) 158: BEREC Input to the European Commission's Call for Evidence on the Digital Fairness Ac

2.5.6. BEREC Input to the European Commission's Call for Evidence on the Digital Networks Act

The European Commission published on the 6th of June 2025 a Call for Evidence on its planned Digital Networks Act legislative initiative (Call), which is envisaged in January 2026.

The Call aimed to address barriers to cross-border business operations, boost innovation, and increase investment in digital infrastructures, including fibre,

5G, and cloud-based networks. It is particularly focused on creating a unified single market, enhancing consumer welfare, fostering industrial competitiveness, ensuring security and resilience, and promoting environmental sustainability. The Call also explored policy options such as simplifying regulations, improving spectrum management, addressing access rules, and strengthening governance frameworks.

BEREC provided its expert-driven perspective on the proposed initiative. BEREC advocates for a pro-competitive approach that preserves ex-ante regulation, ensures efficient spectrum management, and supports harmonisation without undermining national circumstances. Additionally, BEREC seeks to emphasise the importance of regulatory independence, structured cooperation with other EU bodies, and the need for a data-driven approach to reduce the environmental impact of digital technology. It also plans to highlight concerns regarding overly ambitious uniform targets for copper switch-off and the feasibility of a pan-European wholesale access product.

Spectrum management

BEREC highlights that spectrum management remains a crucial public policy tool for Member States. Harmonisation of technical standards, equipment, and spectrum availability plays an indispensable role in achieving connectivity and exploiting economies of scale. However, BEREC emphasises that telecom markets across Europe remain predominantly national in scope, which necessitates consideration of national circumstances in regulatory frameworks. Earlier spectrum awards have been linked to better outcomes regarding 5G population coverage and the availability of two 5G networks per Member State. BEREC remains unconvinced of the merits of licence durations exceeding fifteen years, as longer durations may hinder efficient spectrum use, limit market contestability, and reduce opportunities for new market entry. Periodic and cyclical licence awards are considered essential to safeguard the efficient use of scarce radio frequency resources, promote competition, and foster investment.

Access regulation

Ex-ante regulation has proven instrumental in opening structurally monopolistic markets to new players, fostering sustainable competition, and incentivising efficient investments in high-speed connectivity. Evidence from the State of the Digital Decade 2025 report shows that Very High Capacity Networks (VHCN) coverage in Europe reached 82.5%, with an annual growth rate of 4.9%. Fibre coverage grew significantly by 8.4% annually, covering 69.2% of EU households in 2024. BEREC urges caution regarding the removal of the Recommendation on relevant markets, as this tool provides clarity to all actors and supports regulatory consistency across Member States. Available data confirms that markets currently listed in the Recommendation continue to exhibit characteristics justifying ex-ante regulation in most Member States.

Copper network switch-off

Copper switch-off is seen as a meaningful contributor to achieving the Digital Decade Connectivity Targets and EU environmental goals. Fibre networks offer significant energy efficiency benefits and improved service quality for end users. However, BEREC notes that uniform targets for copper switch-off across Member States may be overly ambitious due to differing national circumstances. Immutable technical difficulties in some Member States constrain fibre deployments, making uniform and binding deadlines potentially inappropriate. BEREC recommends non-binding indicators to incentivise progress while avoiding the rigidity of legal obligations.

Simplification

Simplification of the European legislative framework for electronic communications and digital networks should aim to streamline provisions and reduce administrative burdens without compromising valuable pro-competition or end-user protection measures. BEREC suggests that data collection procedures could be automated and harmonised across the Union to enhance efficiency while preserving regulatory effectiveness. Universal Service provisions should be simplified carefully to avoid creating local monopolies or reducing competition.

Governance

BEREC attaches fundamental importance to the single market goal, which guides its regulatory harmonisation efforts. Its current two-tier structure has provided regulatory effectiveness and institutional stability, enabling it to meet statutory goals. Strengthening BEREC's role in enhancing regulatory consistency depends on ensuring alignment and harmonisation of National Regulatory Authorities' mandates across Member States. Structured cooperation with other EU-level bodies operating in interrelated areas of digital policy, such as cybersecurity and artificial intelligence, is essential to promote coherent regulatory outcomes and avoid duplication of efforts.

Environmental sustainability

The environmental impact of digital technology is a priority for BEREC, which recommends including sustainable digital infrastructures and services among the general objectives of the Digital Networks Act. Fibre networks, which replace copper, contribute to EU environmental targets through energy efficiency. BEREC supports measures aligning connectivity goals with environmental sustainability, emphasising the need for a data-driven regulatory approach to achieve these objectives.

Document:

BoR (25) 101: BEREC Input to the European Commission's Call for Evidence on the Digital Networks Act

2.5.7. BEREC Input to the European Commission's public consultation on the revision of the Merger Guidelines

In the context in which the EU Merger Guidelines (MG) used for the assessment of the competitive impact of mergers – both between actual or potential competitors[49] and between companies active at different levels of the supply chain or in neighbouring markets[50] - have been applied for more than 15 years now, the EC started a process for their revision. Since the time of the adoption of the currently applicable MG, markets have evolved significantly, driven by elements such as innovation, the growing need for resilience, and varying levels of investment intensity across sectors. Merger assessments have also become more complex. Against this background, between 8 May and 3 September 2025, the EC carried out a general public consultation, as well as an in-depth consultation on particular technical aspects of interest[51].

Considering that the telecoms sector is actively impacted by mergers and acquisitions and taking due account of the reshaping role that these market movements have had on competition throughout the last decade, BEREC acknowledged the importance of its contribution to the revision of the Guidelines, based on its sectoral expertise. BEREC consider that forward looking, merger control should continue to play a pivotal role in ensuring that competition remains effective, since uncontrolled consolidation in the telecoms sector could lead to tighter oligopolies dominated by a few large players and accompanied by a deterioration of the competitive situation in the sector under NRAs remit.

BEREC's input firstly discusses the evolving market realities, showcasing its observations on the transformation of the electronic communications sector. Then, it provides an overview of the MGs, touching on the high-level objectives as proposed by the EC and the concept of significant impediment to effective competition (SIEC), and considers the market structures in telecoms, particularly the tendency of concentration. Further on, BEREC expresses its point of view regarding the relationship between competitiveness, competition, innovation, investment and consolidation. Finally, BEREC reflects on market power assessment in merger cases.

The input concludes with a strong emphasis on competition as the primary driver of investments, cautions against lowering the appraisal landmarks to promote consolidation in an inherently uncertain setting, without strong, compelling evidence on the benefits, and underscores, once more, the geographical dimension of the telecommunications markets (i.e. national/regional) which should always be a defining dimension of the evaluation exercise.

Document:

BoR (25) 114: BEREC Input to the European Commission's public consultation on the revision of the Merger Guidelines

[49] Horizontal Merger Guidelines, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=oj:JOC_2004_031_R_0005_01

[50] Non-horizontal Merger Guidelines, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=oj:JOC_2008_265_R_0006_01

[51] Review of the Merger Guidelines, see: https://competition-policy.ec.europa.eu/mergers/review-merger-guidelines_en

2.5.8. BEREC Opinion on the Review of the Delegated Regulation setting Union-wide Termination Rates (Regulation (EU) 2021/654)

The Commission Delegated Regulation (EU) 2021/654 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate ('Delegated Regulation') requires the Commission to review the Delegated Regulation every five years, as stipulated in Articles 75(2) and 75(3) of the Code. This review process involves assessing whether the imposition of single maximum Union-wide termination rates remains necessary and taking in the utmost account, the opinion of BEREC. This ensures the regulatory framework remains fit for purpose in a rapidly evolving telecommunications landscape.

On 16 June 2025 the Director-General of DG Connect sent a letter to the BEREC Chair 2025 and requested a BEREC Opinion on the review of the Delegated Regulation.

The Opinion is structured in five chapters, covering the major topics and broadly following the questions asked by the Commission to all stakeholders. With the exception of one additional question addressed only to BEREC, these questions are identical to those of the public consultation opened on 16 June 2025.[52] The BEREC Opinion does not answer all questions as some are more addressed to individual NRAs while the Opinion contains the collective view of BEREC based on a survey among NRAs. It also takes into account the results of the 2025 Update of the mobile cost model for roaming and voice call termination[53] in order to assess whether the level of the single maximum Union-wide mobile voice termination rate needs to be adjusted.

General conclusions

Conclusion Chapter I **"Effects/Contribution of the Eurorates to the objectives of the Code, harmonisation, market dynamics, prices, operators, interconnection agreements, etc.":**

Overall, it can be said that the introduction of the Eurorates did not cause a major impact on market dynamics, wholesale/retail prices etc. mainly due to the fact that the pre-existing termination rates regulation on the basis of the pure LRIC cost standard had already decreased the termination rates to a low level (efficient cost level).

With regard to the reduction of the regulatory burden, the answer was clearly positive – the introduction of the EU cost model instead of national cost models reduced the regulatory burden for NRAs, and to a certain extent also for operators. The Eurorates also simplified and harmonised the termination rates regulation. However, it was also stated that the risk of misbehaviour by market participants does not go away and NRAs need to retain powers to intervene particularly in case non-price problems arise. A few times, the potential problems of cost recovery (in particular for operators in smaller markets) were pointed out.

[52] Voice call termination services – Review of Regulation setting EU-wide rates and associated legislative proposal

[53] 2025 Update of the mobile cost model for roaming and voice call termination in the EU | Shaping Europe's digital future, published on 22 July 2025. The fixed cost model was published in 2019 and has not been updated since then.

With regard to non-EU operators, the problem of spoofing was mentioned several times, as well as non-reciprocity.

Conclusions Chapter II **"Non-price problems (still requiring national regulation) such as access, one-off fees, cost allocation between termination and transit services, etc.":**

While the Eurorates addressed pricing issues of termination services, some specific issues – particularly related to access and transit fees, non-discrimination and transparency obligations – have been identified by some NRAs, which in some cases have required direct interventions from them. Indeed, the Delegated Regulation has not addressed any non-price competition problems, leaving the space for specific (although isolated) anti-competitive behaviour which may be specifically addressed through regulatory interventions at the national level, for which **NRAs should be equipped with the necessary tools and regulatory powers**.

Finally, it is worth pointing out the definitions of termination service in the Delegated Regulation should **be technologically and service neutral**. BEREC believes that termination services to be considered as subject to the Delegated Regulation may be realised under all types of interconnection (physical and logical), irrespective of the technology used.

Conclusions Chapter III **"Non-EU operators (calls originating from numbers of non-EU/EEA operators) problems such as non-reciprocity, fraud (spoofing), etc.":**

BEREC identified a l**ack of transparency** as EU/EEA operators are generally unable to determine which non-EU/EEA operators apply termination rates equal to or lower than the Eurorates. However, so far, no information is available in any public Annex on the EC website, leading to the conclusion that no non-EU/EEA country applies a regulation consistent with the one in place in the EU/EEA. Therefore, BEREC recommends that the next review of the Delegated Regulation clearly indicates the country codes to which Eurorates apply. BEREC recommends that the EC should publish a list of non-EU/EEA countries with regulation close to that of the EU to assist EU/EEA operators in applying Eurorates (or not) to calls originating outside of the EU/EEA. In that vein, and building on the technical challenges noted earlier, the imposition of some form of controls or reciprocity measures with third countries may also be advisable to avoid the benefits of Eurorates being diminished through unfavourable trading with third countries.

On the other side, the termination rates applied by EU/EEA operators to calls from numbers of non-EU/EEA countries vary widely and international operators do not know which termination rates are applied by EU/EEA operators. BEREC therefore suggests the creation of a specific summary sheet hosted by NRAs or BEREC, where operators would directly include their voice termination rates.

A problem mentioned several times is the **risk of fraud** and identification of caller origin. In general, operators of third countries or even transit operators could spoof CLI, in order to avoid termination rates higher than Eurorates. Thus, BEREC considers it appropriate to consider potential measures to address such fraud, in particular in cases of systemically fraudulent calls in bulk, operators may be further empowered to exclude such calls from being charged in accordance with the Eurorates.

Conclusions Chapter IV **"Proposals for improvement, including the question of whether Eurorates level should be adjusted":**

Regarding the reporting obligation of Article 75.3 of the EECC, BEREC considers it sensible to remove this obligation or reduce the frequency of the reporting and replace the individual NRA reports with a BEREC report to reduce the resources needed for the reporting.

With regard to the level of the Eurorates, BEREC considers it important that the cost modelling assumptions are realistic for all operators, also those active in smaller markets. In light of the results of the Updated cost model and absence evidence of hardship on operators or excessive prices for end-users, BEREC considers it justified **to maintain the current level** of the Eurorates. BEREC proposes to set up an expert group to discuss these costing/pricing aspects in more detail.

Document:

BoR (25) 138: BEREC Opinion on the Review of the Delegated Regulation setting Union-wide Termination Rates (Regulation (EU) 2021/654)

BEREC's other tasks under EU legislation

2.5.9. BEREC Opinion about the functioning of the Roaming Regulation

BEREC submitted its response to the European Commission's request for expert views on Regulation (EU) 2022/612 on roaming on public mobile communications networks within the Union ('Roaming Regulation'), in the context of the 2025 Review Report foreseen by the Regulation.

BEREC's input is based on responses gathered through a BEREC survey among stakeholders and NRAs in the European Economic Area (EEA) during the summer of 2024. Additionally, BEREC has utilised data from the BEREC International Roaming Data Benchmark Report, compiled annually to provide a comprehensive dataset from operators and NRAs on relevant market developments.

Document:

BoR (25) 48: BEREC Opinion on Regulation (EU) 2022/612 on roaming on public mobile communications networks within the Union

2.5.10. 31st BEREC International roaming benchmark data and monitoring Report

This Report presents the results of the combined data collection on European international roaming services and the transparency and comparability of retail roaming tariffs undertaken by BEREC. The Report covers the period 1 October 2023 – 30 September 2024, i.e. the 4th quarter of 2023, 1st quarter of 2024, 2nd quarter of 2024 and 3rd quarter of 2024. BEREC has also collected data on connected objects/devices and its related traffic/revenues at retail and wholesale level since the 26th data collection.

Document:

BoR (25) 26: 31st BEREC International Roaming Benchmark Data and Monitoring Report

2.5.11. 6th Intra-EU communications Benchmark Report

The Report presents the results of the 6th data collection on Intra-EU communications by BEREC, conducted after the implementation of the Regulation. Prior to this, BEREC also gathered data for a six-month period (1 October 2018 – 31 March 2019) to establish a baseline before the Regulation's implementation.

The Report covers the period from 1 April 2024 to 31 March 2025, divided into two periods: from 1 April 2024 to 30 September 2024, and from 1 October 2024 to 31 March 2025. This corresponds to the 2nd, 3rd, and 4th quarters of 2024, and the 1st quarter of 2025. The figures presented in this Report are based on data collected from NRAs. The full set of data collected for this purpose are included in an accompanying .xlsx file and published in the Supporting Documents area.

Document:

BoR (25) 128: Intra-EU communications BEREC Benchmark Data Report April 2024 - March 2025

2.5.12. 5th Ukraine monitoring report

Following the ongoing full-scale war against Ukraine launched by Russia on 24 February 2022, BEREC has closely monitored the telecommunications sector's response to the crisis and welcomed the measures voluntarily provided by EU operators. To gain a comprehensive understanding of what has been implemented by operators, BEREC started collecting information from NRAs and operators already in March 2022. In May 2022, April 2023, and April 2024, BEREC continued with a second, third, and fourth data collection exercise, with the aim of gathering more detailed information covering not only the retail measures applied by European Economic Area and Ukrainian operators but also the relevant wholesale measures agreed in the Joint Statement.

This Joint Statement, which was first signed in April 2022 and has been renewed several times, most recently in July 2025, establishes a stable framework to help people fleeing the war against Ukraine stay in touch with family and friends back home and maintain access to information. The measures include affordable or free calls, measures to cover calls to fixed line numbers in Ukraine and ensure sustainable inter-operator prices, which allow operators to provide consumers with cross-border calls at an affordable rate. BEREC and the Ukrainian NRA, NCEC, were tasked with monitoring the implementation of the agreed measures and therefore launched this fifth round of data collection.

Document:

BoR (25) 81: BEREC Analysis Monitoring of the Joint Statement agreed between Ukraine and EU Operators

2.5.13. BEREC Opinion on Intra-EU communications Implementing Regulation

On 7 March 2025, BEREC received a letter from the European Commission requesting BEREC's opinion on the draft Commission Implementing Regulation (CIR) for the application of Regulation (EU) 2015/2120 of the European Parliament and the Council (hereinafter the 'Intra-EU Communications Regulation') concerning fair use, based on typical usage patterns, and anti-fraud measures for intra-EU communications services. BEREC analysed the draft CIR and provided its expert views about the proposed provisions.

Document:

BoR (25) 57: BEREC Opinion on the Implementing Regulation on intra-EU communications

Monitoring quality, efficiency and sustainability

2.5.14. WACC parameters' Report according to the EC Notice

In its sixth[54] Weighted Average Cost of Capital (WACC) parameters Report, BEREC calculates the WACC parameters following the non-binding Commission's WACC Notice on the calculation of the cost of capital for legacy infrastructure in the context of the Commission's review of national notifications in the EU electronic communications sector of 6th Nov. 2019[55]. The cost of capital is the core element of any regulatory pricing decision NRAs take. The Notice aims to ensure a consistent calculation of the WACC by NRAs, thereby contributing to the development of the internal electronic communications market.

The BEREC Report provides a detailed explanation of the calculation process, allowing NRAs to follow the steps from start to end and fully understand the logic behind the calculation, thus enabling them to replicate the results. This ensures that NRAs are confident in the robustness of the results, which are derived using state-of-the-art professional standards and in line with the Commission's Notice, as well as best regulatory practices where flexibility is allowed.

A complexity of the Notice and the WACC parameters Report is the calculation of an EU-wide ERP (equity risk premium). Based on the calculations described in Chapter 6 BEREC considers that the appropriate value of the single EU-wide ERP is 5.96 % (= arithmetic mean ["AM"]). As the same methodology as last year was used, the minor increase from 5.95 % in 2024 to 5.96 % in 2025 is attributable to factual developments. In comparison to last year, the level of ERP is stable with a small increase by 0.01 points, in line with the "European ERP" evaluated by Dimson/Marsh/Staunton dataset with a difference of 0.06 % from 4.53 % (AM, 2024 Yearbook) to 4.59 % (AM, 2025 Yearbook). This shows that the shock following the Russian aggression against the Ukraine and the subsequent increase in inflation (and consequently interest rate increases by Central Banks) has been largely absorbed and is in line with the stabilisation of the economic conditions in

[54] The five previous BEREC WACC parameters Reports are available on the BEREC website, see: www.berec.europa.eu, BEREC WACC parameters Report 2020 (BoR (20) 116); BEREC WACC parameters Report 2021 (BoR (21) 86); BEREC WACC parameters Report 2022 (BoR (22) 70), BEREC WACC parameters Report 2023 (BoR (23) 90), BEREC WACC parameters Report 2024 (BoR (24) 102).

[55] See: https://digital-strategy.ec.europa.eu/en/library/commission-publishes-notice-calculation-cost-capital-legacy-infrastructure

comparison to previous years. The inflation rate continues to decrease in 2024, but at a much lower rate than in 2023 which explains that the ERP remains substantially constant.[56]

Since 2021, BEREC estimates additionally a separate EU/EEA-ERP for exclusive use by Nkom (Norway), ECOI (Iceland) and AK (Liechtenstein)[57].

The BEREC peer group comprises 14 companies this year remaining identical to last year's, as no new peer fulfilled the requirements.

In section 7.2 (Taxes and inflation) BEREC finds that inflation rates are levelling out around the ECBs target level of 2% and the effect of a temporarily increased inflation rate, as described in last year's report[58] is easing, thus the provision (60) in the Gigabit Connectivity Recommendation (EU) 2024/539 of 6th February 2024 should presently be less of an issue to NRAs.

BEREC publishes the estimated WACC parameter values and NRAs are assumed to take into account those parameter values when carrying out their own calculations for their national regulatory decisions, but they do have some flexibility within this framework to take account of national specificities. BEREC observes that over time most NRAs follow the Notice and use the BEREC parameter values in their national decisions.

For reference by NRAs the Report is to be published before 1st July 2025 when the Commission applies it according to the Notice when reviewing NRA's notifications in the EU electronic communications sector.

Document:

BoR (25) 64: BEREC Report on WACC parameter calculations according to the European Commission's WACC Notice of 6th November 2019 (WACC parameters Report 2025)

2.5.15. Report on regulatory accounting in practice

The 21st Regulatory Accounting in Practice (RA) annual report summarises the findings of a detailed survey of regulatory accounting systems in the context of access markets across Europe. Information has been gathered from NRAs and covers the implementation of regulatory cost accounting methodologies in national markets. It includes the state of play in terms of remedies of market regulation and focuses on price control, and the way in which it is defined in practice. The report also provides (i) certain structural parameters of each country, (ii) WACC methodologies applied by NRAs and WACC values currently in force focusing on the implementation of the corresponding European Commission WACC Notice on the calculation of the cost of capital for legacy infrastructure.

[56] Cf. for a more detailed analysis Ch. 6.5 below and the UBS Global Investment Returns Yearbook 2025 Summary Edition, published on 4th March 2025 at Global Investment Research & Insights | UBS Global, see: https://www.ubs.com/global/en/investment-bank/insights-and-data/2025/global-investment-returns-yearbook-2025.html

[57] As no data is available for Liechtenstein, the separately estimated EU/EEA-ERP includes only data for Norway and Iceland

[58] BEREC WACC parameters Report 2024 BoR (24) 102, section 7.2.

The document offers an up-to-date factual report on the regulatory accounting frameworks implemented by NRAs and an assessment of the level of consistency achieved. Where possible, trends and comparisons with data collected in the past years are illustrated.

The report focuses on the analysis of services in key wholesale markets: Wholesale Local Access (former Market 3a/2014, now Market 1/2020), Wholesale Central Access (Market 3b/2014) and Wholesale high quality access (former Market 4/2014, now Market 2/2020 – Wholesale Dedicated Capacity).

In line with previous reports, it also provides information about the regulatory and competitive framework in each member state, such as the presence of a geographical regulation, the equivalence model applied, the application of retail margin squeeze tests, and the regulation of cable networks. A brief analysis of symmetric remedies is included. Outcomes of the survey are simply reported in a descriptive form.

The report also looks at annualization methodologies provided by respondent NRAs. As in last year's report, accounting information for specific products in Market 1/2020, such as copper access (including LLU, SA, SLU), fibre access (FLLU, VULA), dark fibre access and duct access have been further analysed; with respect to last year's report separate information on fibre sub-loop unbundling (FSLU) and pole access have been included.

An evaluation of the implementation of the Recommendation 2013/466/EU on consistent non-discrimination obligations and costing methodologies (NDCM) is also reported (par. 3.5). In this context some new elements about BU models are reported. The NDCM has been updated and substituted in February 2024 by the new Gigabit Recommendation[59]. Where regulatory decisions at the cut-off date for this report of 1 April 2025, were taken on the basis of the Gigabit Recommendation, this has been reported accordingly, still a considerable number of decisions are referring to the NDCM. Also, the report monitors the new elements provided for in the Gigabit Recommendation in the general regulatory context.

Furthermore, as in previous reports, in order to include factors influencing NRAs regulatory strategy, additional structural data (e.g. population, market and competitive structure, infrastructure) have been collected from NRAs (chapter 4).

In Chapter 5 the report delivers an extended survey on WACC parameters, mainly focusing on Market 1/2020. The WACC chapter summarises the main methodologies currently used by NRAs and sets out the reasons behind the estimation of single parameters needed to evaluate the cost of capital under the Capital Asset Pricing Model (CAP-M) model. The focus this year remains the reporting of the application of the 2019 Commission WACC Notice by NRAs.

[59] On 23rd February 2023, the European Commission invited BEREC to provide the Commission with an opinion on the draft "Gigabit Recommendation", and BEREC published its Opinion on the 5th May 2023 (BoR (23) 83). The Recommendation (EU) 2024/539 on the regulatory promotion of gigabit connectivity (Gigabit Recommendation) was published on 19th February 2024.

Key Findings

The Regulatory Accounting annual report gives an overview of the main remedies imposed on SMP operators in relevant markets susceptible to ex-ante regulation. Specific focus is given to the relevant costing methodologies, applied in relation to the corresponding price control schemes, adopted by NRAs for single products. As in the last year, the increased use of geographic regulation (either by market segmentation or differentiated remedies) is analysed. Furthermore, the interplay of SMP regulation and symmetric regulation (both acc. to Art. 61.3 of the EECC and acc. to the BCRD/GIA) is looked at.

The actual trend in the regulatory practice is not following a straight line. From one side there is a reduction of ex ante regulation over time by some NRAs. However, it can happen that the need for ex ante regulation can arise in previously deregulated markets due to a detriment of competitive constraint at retail level, specifically in cases when s 'lighter' regulatory approach is no longer sufficient to spur investment in VHCN or provide fair access to networks necessary to promote competition. Considering that the base of ex ante regulation follows the three criteria test, it can happen that also in a fully or partially deregulated market, competitive conditions can worsen in a way that ex post intervention is not enough to address the corresponding competitive problems. In this light some new recent proposals can be seen, still under consultation, from RO and BG, that are proposing to take again into consideration the possibility to apply an ex-ante (SMP) framework after years of fully deregulated access markets, at least in some geographical areas where VHCN has been available for several years.

Regarding the general regulatory trend, some NRAs are proposing to fully deregulate all markets due to the fact that commercial agreements are the main instrument used by operators to access to SMP products – PL[60]) or to fully deregulate the wholesale local access markets leaving access to civil infrastructure remedies regulated in an specific standalone Physical Infrastructure Access Market still to be defined – ES[61]. Some NRAs are applying symmetric regulation together with SMP remedies. Mostly, the regulatory obligations on copper and VHCN products are still widely imposed on the legal basis of the SMP framework. For the first time more VHCN than copper access products are regulated in market 1/2020.

The detailed product by product analysis on the wholesale access level has shown that ex ante regulation is applied by NRAs in a more targeted way using the flexibility of the EECC provisions to tailor the regulatory obligations to the specific competition and infrastructure situation identified in the market analysis (also from a geographical point of view).

The overall picture of the cost accounting methodologies (chapter 3) is relatively stable in comparison to last year with just a small number of changes by NRAs since last year. There are clear preferences for price control methods (cost orientation alone or in combination with price cap, but the overall picture is more differentiated), cost base (current cost accounting – CCA) and allocation method-

[60] In PL a proposal for full deregulation of WLA and WCA is ongoing.

[61] In July, the CNMC deregulated markets 1/2020 and 3b/2014. Previously, regulation in these markets applied to only around 30% of the population due to geographical segmentation. The CNMC is currently working on a standalone PIA market to ensure the continuation of civil infrastructure remedies, and Telefónica has submitted a set of commitments in this market that is currently under assessment. On the other hand, Wholesale Dedicated Capacity (market 2) remains regulated in Spain due to Telefónica's high market share in the corporate segment.

ologies (mainly long run incremental costs (LR(A)IC), with fully distributed costs (FDC) preferred only for few products). The degree of consistent application of methodologies in accordance with the EU Regulatory Framework continues to be high and accommodates the use of elements or parameters that reflect national circumstances.

The RA report 2025 provides an analysis more oriented on single products (increasing the scope of monitoring) with respect to the previous editions. As in the 2024 report, the 2025 report collects information on 19 main products, two more than the 2022 and 2023 reports (there were 13 in 2015), as reported in Figure 2, taking into account a separate view of underground civil infrastructures (ducts) and aerial civil infrastructures (poles), as well as including separate information on access to the fibre sub loop unbundling with respect to previous years.

The regulation of legacy products in market 1/2020 and 3b/2014 remains frequent: 56% (2024: 63%) of EU NRAs still maintain SMP remedies on ULL and 41% on market 3b/2014 over legacy copper network (reduced from 48% compared to last year's report). There is a substantial decrease of the number of NRAs that regulate services on copper products that become less and less relevant (ULL, SLU and BTS legacy). A more stable situation can be found in the access market based on NGA/VHCN, with only a few NRAs having removed regulation since 2021 and others that have started regulating new access products, including duct access. The regulatory obligations have been removed consistently for the legacy terminating segment products (market 2/2020), due to the advanced decommissioning of the legacy technologies like PDH and SDH.

Concerning VHCN products a reduction trend is not evident and it seems that regulatory obligations are adjusted in light of different investment dynamics and needs. The SMP regulatory remedies have been applied by NRAs generally towards a single national SMP operator. In some cases, the SMP regulation has been applied to more than one SMP operator.

Civil infrastructures access is the main regulatory instrument in some countries and this is the case where VHC networks are already widespread and copper-based NGA service is not present, or where a symmetric framework is applied as the main instrument of regulation (often together with SMP regulation). In general, where the regulatory framework is mainly based on passive access products the market is also more concentrated. In some group of countries where infrastructure competition is the main instrument of competition, SMP regulatory framework, even if still present, provides only an indirect competitive constraint. Full deregulation or reduced regulatory pressure are present when there is efficient infrastructure competition; this is the case mainly where cable is widespread or where a wholesale only model is present as a competitor.

The number of NRAs that face different competitive conditions across their national territory thus justifying a geographically differentiated approach (in terms of market definition or remedies application) has increased in comparison to last year for most markets/products. More than 75% of NRAs that regulate market 1/2020 apply a geographical approach to regulation, specifically for VULA-H (last year was about 70%). The increasing trend prevails notwithstanding the deregulation cases of the corresponding product. Looking at geographically differentiated regulation, the deregulated areas range from 5% of households up to 95% for local and central access products, more often between 20% and 50%, increasing in comparison to last year's report.

Most NRAs apply the whole set of remedies when SMP regulation is imposed on a specific product/market, where access obligation in combination with non-discrimination are the most frequently applied remedies.

Within the copper network, ULL is still the most regulated product. Focusing on RA in general, accounting separation is often imposed together with the cost accounting obligation. Some NRAs consider it necessary to impose both obligations in order to ensure that robust regulatory accounting information is available for each product. This rationale is related to the fact that accounting separation is useful for vertically integrated undertakings by using cost models to supplement price control measures in order to prevent unfair cross-subsidies (e.g. if the result of the cost model is higher than the cost derived from the accounts of the SMP operator), and when the regulatory framework, in perspective, can become less intrusive.

As a stable result during previous years, cost orientation remains the most commonly used price control method and it is applied mainly for legacy products, while retail minus is mainly used for VULA and market 3b/2014 products (Figure 7 - Fig. 19).

The Economic Replicability Test (ERT) as a price control methodology is still mainly used complementarily to cost orientation, albeit an increased use of the ERT at least for NGA/VHCN wholesale products as a price control method can be observed, suggesting it is a substitute with respect to cost orientation, in line with the Commission NDCM Recommendation (2013/466/EU) and the Gigabit Recommendation (2024/539/EU) and the price flexibility tool according to Art. 74 of the EECC.

Cost orientation for FTTH is more frequent when a legacy network based on copper is still relevant for NGA products (FTTC), where a stronger relation of substitution with respect to a legacy copper product may occur. In case no intermediate steps like FTTC for VHCN transition exist, more flexibility is granted when regulating FTTH, e.g. with the application of ERT. The relevance of the legacy copper network for NGA take-up (e.g. the case of FTTC) appears to be correlated to remedies imposed in access markets as well as on the level of the price flexibility tool according to Art. 74 of the EECC, irrespective of the application of non-discrimination rules such as Equivalence of Inputs (EoI).

Overall, the application of EoI models is increasing over the years. The cumulative percentage of EoO and/or EoI is higher in relative terms in case of VULA (FTTH) as well as for market 3b/2014.

With regard to the cost base CCA is by far the most commonly used methodology for all markets. The situation remains stable in comparison to last year.

The most frequent cost allocation approach is LRIC/LR(A)IC, for almost all products/markets. In the access market (market 3a/2014) a preference for LRIC/LR(A)IC can be found. In general, when LR(A)IC/LRIC is chosen as the main category, the most common approach is Bottom-up. FDC is a frequent approach for duct access, specifically for legacy reusable legacy infrastructure, but has been decreasing since last year. There is no “transition” from LR(A)IC to FDC.

For copper LLU most NRAs apply a cost orientation alone/LRIC-LR(A)IC/CCA approach. Generally, there is an increase in the use of the combination of cost orientation/price cap with BU-LRIC approach and a reduction of accounting methodologies based on FDC; TD approach is by far less frequent.

A more in-depth analysis on the application of the 2013 NDCM Recommendation, and where relevant the 2024 Gigabit Recommendation, has been carried out. The survey shows that the Recommendations provide enough flexibility for NRAs to consider the most appropriate regulatory approach to promote investment and take up of VHCN in light of specific national conditions as well as promoting competition.

The analysis of the structural data (chapter 4) confirms that countries start from very different points in terms of population, topography, infrastructure and market situation etc. These factors influence the regulatory strategy of NRAs for the wholesale access markets.

Compared to the BEREC WACC parameters Report 2025 (BoR (25) 64), the present BEREC Regulatory Accounting Report WACC chapter (chapter 5) is of a more descriptive nature, aiming at reporting and analysing NRAs WACC calculations "as is" as well as showing the evolution over time, in line with previous versions.

Regarding the WACC, the in-depth survey and the update provided in this report (chapter 5) highlights that all NRAs use the Capital-Asset-Pricing-Model (CAPM)[62] and hence similar parameters for determining the WACC. However, the value of these parameters naturally differs reflecting different national financial market conditions. The statistical analysis (regression) of the data shows – in line with the previous exercises – that the differences of the final WACC values over time are mainly explained by parameters in the WACC calculation that are more "country related" such as the RFR and Tax rate, with a less relevant role for "sector-specific" parameters such as beta, gearing and debt premium. This is consistent with survey results on "used methodologies" that confirm that beta, gearing and debt premium are estimated mainly on a 'notional' basis (see also Appendix II of Ch. 5) by NRAs for a long time prior to the WACC Notice.

Summing up, 18 NRAs from previous reports plus DK this year, are considered to fully apply the WACC Notice (AT, CZ, DE, ES, FR, HR, HU, IS, IT, LI, LU, LV, NO, PL, PT, SE, SI, SK, DK), including countries that use the appropriate flexibility considering the fact that those cases have been commented on and accepted by the Commission in the notification process according to Art. 32 of the EECC.

By taking into account only the most recent estimation over time (last three most recent values for each NRA) in the pooled regression analysis, we observe that the most relevant country specific parameters in explaining differences are RFR and Tax. Notional parameters such as Beta, gearing, ERP and debt premium, provide a less important contribution to explaining differences in final WACC values - in the proposed order of relevance. This outcome shows that the application of the WACC Notice starts to have a visible effect in converging notional values, also considering that the WACC Notice provides some flexibility for NRAs to choose the peer group for the beta and gearing estimation to better reflect national circumstances. Among notional parameters, Beta is becoming more relevant for explaining the differences between EU NRAs and this can be related to different aspects: the estimation of this parameter may address the country situation, as allowed by the Notice and it has been less stable in recent years than in the past due to a change in the risk profile of telecom operators (this can be indirectly seen in the different frequencies of WACC updates).

Overall, the 2025 data confirms a consistent approach to regulatory accounting. The latter indicates that NRAs are providing predictable regulatory environments in their countries. The convergence of regulatory accounting approaches

[62] Cf. BoR (13) 110.

for wholesale access markets needs to bear in mind that wholesale access markets are reflecting different national market situations and structural factors influencing the regulatory strategy.

Future development

As can be seen from the results above the Report confirms a trend towards a consistent application of regulatory accounting frameworks by NRAs. This also reflects clearly convergence in the application of the 2013 Recommendation on consistent non-discrimination obligations and costing methodologies and its successor, the 2024 Gigabit Recommendation. In 2026 the report will continue to look at the application of regulatory accounting with regard to key access products (e.g. fibre) and will maintain an in-depth analysis of the methods as well as the national market situations in which they are applied. Further to this, the focus of the report will be further adapted in the light of the EECC provisions and the way in which NRAs apply the provisions to deal adequately with the developments in markets and technology including in geographical terms. The analysis of the interplay between SMP regulation and symmetric regulation (Art. 61 EECC or BCRD/GIA) will be continued.

Regarding the WACC calculation, the report data will continue to be collected based on the methodology and input parameters actually used by NRAs to estimate the rate of return on capital employed, and the impact of both on the result will be considered. Furthermore, the convergence of WACC calculations through the application of the 2019 Commission WACC Notice will be assessed.

Document:

BoR (25) 168: BEREC Regulatory Accounting in Practice Report 2025

2.5.16. BEREC input to the EC's Call for Evidence on the Digital Decade Policy Programme

The EC call for evidence launched on 25 November 2025 examines whether the Digital Decade objectives and targets for 2030 remain aligned with the rapidly evolving tech landscape since their adoption in 2022. The contributions to the call will help inform the EC's upcoming 2026 review of the policy programme guiding Europe's digital transformation. The review will explore ways to further align policy with funding opportunities in the context of the next Multiannual Financial Framework. It will also evaluate how to improve engagement through structured channels for regions, cities and local actors, which are critical for delivering the benefits of digitalisation to citizens and small and medium-sized enterprises.

In its input to the EC's call for evidence[63] on the Digital Decade Programme (DDPP)[64], BEREC welcomed the opportunity to contribute to the review of the objectives of the DDPP and subsequently of the indicators to measure progress towards the targets.

[63] See: https://www.berec.europa.eu/en/all-documents/berec/opinions/berec-input-to-the-european-commissions-call-for-evidence-on-the-digital-decade-policy-programme

[64] See: https://digital-strategy.ec.europa.eu/en/library/digital-decade-policy-programme-2030

European regulators emphasise that the updated targets and indicators shall ensure the promotion of competition, connectivity, the internal market and the protection of end-user rights in line with the policy objectives set out in the EECC. The updated DDPP targets should be both ambitious and realistic. They should be achievable within the envisaged timeframe. Clear, measurable targets that leave no room for interpretation will facilitate effective monitoring of implementation. They will also ensure that progress at the national level can be assessed fairly and that performance across countries can be objectively compared.

In the conclusion of its high-level input, BEREC highlights that the independent national regulatory authorities with their technical expertise can contribute to high-quality outcomes in the definition of indicators and in the measurement and monitoring progress towards the achievements of set targets and that the DDPP review represents a good occasion to formalise the NRAs' involvement in such process.

Document:

BoR (25) 195: BEREC Input to the European Commission's Call for Evidence on the Digital Decade Policy Programme

2.6. Stakeholder engagement

2.6.1. Stakeholder Forum

BEREC Stakeholder Forum in 2025 – the 13th edition – showed just how far BEREC has come with its signature event. It has reached a new attendance record by having over 1200 online connections and 600 registered participants from 261 organisations, representing 49 countries.

The growing interest in the event has significantly levelled up the requirements and quality standards of it. In 2025, for the first time, the event was moved to a professional conference centre. The Forum had a broader focus, engaging telecom & mobile network operators, companies and a wide range of industry stakeholders; it also had its traditional and well-attended Meet & Greet sessions with the BEREC Working Group Co-Chairs.

The major annual BEREC public event proved to be an excellent opportunity to enhance the dialogue with the interested parties, improve consistency in implementing EU regulatory rules and practices, and exchange views on BEREC's areas of work. The panellists discussed major challenges facing the digital market and examined how to ensure that end-user rights are upheld amid rapid technological evolution. The invited speakers also explored issues related to competitive markets, with particular emphasis on the forthcoming Digital Networks Act and the future of market-power regulation in this context.

2.6.2. BEREC Annual Report

The BEREC Annual Report for 2024 provides a summary of BEREC's 2024 work, including the deliverables that were set out in BEREC's Work Programme 2024.

It highlights the key developments and market trends in the electronic communications sector in Europe over the past 12 months, and puts its focus on market dynamics and the development of EU policies and regulatory practices. The report presents the perspectives of BEREC, based on the collective expertise and knowledge of the NRAs. In addition, it describes BEREC's contribution to the development of the electronic communications sector in Europe. The analysis presented in this report includes qualitative reasoning based on information from the activities of BEREC Working Groups and quantitative data based on periodic BEREC data collection exercises and other public documents.

Document:

BoR (25) 75: BEREC Annual Report 2024

2.6.3. BEREC Communications Plan 2025

The BEREC Communications Plan 2025 covered the communications work and projects scheduled for the year. The objective was to strengthen the perception of BEREC as an independent, European, forward-looking expert body and support the overall strategic objectives of BEREC. These included promoting full connectivity, supporting sustainable and open digital markets, and empowering end-users. The Communications Plan runs alongside the BEREC External Communications Strategy, which sets out BEREC's overall approach to communications.

In 2025, BEREC celebrated its 15th anniversary by reflecting on its contributions to Europe's digital landscape. Through a dedicated social media campaign[65] featuring short videos[66], the BEREC Chair, the incoming BEREC Chair, the BEREC Office Director, and the Co-Chairs of the BEREC Working Groups highlighted the progress made over the years. They also shared a forward-looking perspective - reaffirming BEREC's commitment to remain a future-oriented, independent European expert body that supports a regulatory approach fostering connectivity, competition, open digital ecosystems, and end-user empowerment, while guiding the development of sustainable, secure, and resilient digital networks.

Several major educational and awareness-raising campaigns were launched. Using a variety of tools and communication channels, each campaign focused on a specific area of BEREC's work. There was a campaign addressing the empowerment of end users[67], including developments affecting end-user rights, with the aim of ensuring strong consumer protection as services evolve. Another cam-

[65] See: https://www.linkedin.com/posts/body-of-european-regulators-for-electronic-communications-berec-_berec15-empoweringeuconnectivity-telecoms-activity-7370782675990728704-Ev12?utm_source=share&utm_medium=member_desktop&rcm=ACoAABz1nOMBDH-mYR4RE7_8qeSROQgR5PeYA31M

[66] See: https://www.youtube.com/playlist?app=desktop&list=PL1OCFxZ_M15fBuJNOG5Gdb-vp3qSfcgQWI&cbrd=1

[67] See: https://www.linkedin.com/posts/body-of-european-regulators-for-electronic-communications-berec-_berecforum-empoweringeuconnectivity-telecomregulation-activity-7308790950057680896-afYI?utm_source=share&utm_medium=member_desktop&rcm=ACoAABz1nOMBDHmYR4RE7_8qeSROQgR5PeYA31M

paign[68] explained the evolution of public and private 5G networks in Europe. A separate initiative[69] highlighted the technological advances as security opportunities and challenges for network resilience. Another campaign presented[70] the BEREC Guidelines on access to in-building physical infrastructure and the coordination of civil works, and informed stakeholders on progress in managing the copper network switch-off. In addition, a multi-annual social media campaign[71] was launched to raise awareness of the threats posed by digital fraud, including practical tips[72] on how to avoid being scammed. The campaign also included a production of the first-ever BEREC podcast[73].

To showcase the specific work carried out by each BEREC WG, a series of animated videos were developed[74]. These videos were also used to promote the BEREC Stakeholder Forum Meet & Greet sessions.

In its day-to-day communications activities, BEREC continued organising its regular public events, such as public debriefings and the Stakeholder Forum, covered all important BEREC external engagements, regularly updated its main communications platform (the website), published news items and press releases on key achievements, produced audio-visual and digital content, ran other social media campaigns and kept up its media relations.

2.6.4. Developing the BEREC Work Programme 2026

The BEREC Work Programme for 2026 was adopted by the Board of Regulators at the plenary meeting in December 2025. The priorities for 2026, as identified by the Board of Regulators, are set out in the BEREC Work Programme. Such priorities are non-exhaustive and may be complemented by other emerging topics of interest during the year.

The objectives of the Work Programme are based on the BEREC Strategy 2026¬-2030[75], with a close focus on its high-level strategic priorities: (1) promoting full connectivity and the Digital Single Market; (2) supporting competition-driven and open digital ecosystems; (3) empowering end-users; (4) contributing to environmentally sustainable, secure and resilient digital infrastructures; and (5) strengthening BEREC's capabilities and continuous improvement. This Work Programme also reflects BEREC's institutional and international cooperation.

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[68] See: https://www.linkedin.com/posts/body-of-european-regulators-for-electronic-communications-berec-_berecpublic-5g-networks-activity-7308066164721553408-NnTQ?utm_source=share&utm_medium=member_desktop&rcm=ACoAABz1nOMBDHmYR4RE7_8qeSROQgR5PeYA31M

[69] See: https://www.linkedin.com/posts/body-of-european-regulators-for-electronic-communications-berec-_berecpublic-berec-publicconsultation-activity-7306337700473651200-fbl6?utm_source=social_share_send&utm_medium=member_desktop_web&rcm=ACoAABz1nOMBDHmYR4RE7_8qeSROQgR5PeYA31M

[70] See: https://www.linkedin.com/feed/update/urn:li:activity:7401244859900100608

[71] See: https://www.linkedin.com/feed/update/urn:li:activity:7407696899140665344

[72] See: https://www.berec.europa.eu/en/all-topics/digital-fraud

[73] See: https://www.youtube.com/watch?app=desktop&si=yPn-sBLIE8f7dqHK&v=Zx4A4JJt-jL4&feature=youtu.be

[74] See: https://www.youtube.com/playlist?app=desktop&list=PL10CFxZ_M15cVg-CUS1ZU-W4e_5hijuvfS&cbrd=1

[75] BoR (25) 189, BEREC Strategy 2026-2030, 04.12.2025, see: https://www.berec.europa.eu/en/all-documents/berec/berec-strategies-and-work-programmes/berec-strategy-2026-2030

This Work Programme seeks to be consistent with the vision, targets and roadmaps for Europe's digital transformation by 2030, set out in the Digital Compass and the Policy Programme 'Path to the Digital Decade', the EU Global Gateway strategy (2021) and the European Green Deal (2020). In addition, the Work Programme 2026 aims to align with the European Commission's new EU priorities for electronic communications. The European Commission introduced the EU Competitiveness Compass in January 2025 as a roadmap to restore Europe's global competitiveness while ensuring secure and sustainable prosperity. The Compass emphasises regulatory simplification and single-market integration, and includes key initiatives to accelerate infrastructure investment, such as the Digital Networks Act (DNA), the EU Cloud and AI Development Act, the Space Act, and measures to strengthen the EU's role in AI. BEREC's priorities align with the EU Competitiveness Compass (2025), particularly its emphasis on restoring Europe's digital competitiveness through regulatory simplification, investment incentives, and proportionate solutions that respect the structural diversity of Member States' markets. The Compass will therefore serve as a horizontal benchmark for the entire Work Programme.

This Work Programme was developed against the backdrop of the review of the regulatory framework for electronic communications and in the context of preparations for the upcoming DNA, which may – together with the review of the EECC and the BEREC Regulation – allow for simplification and further harmonisation and upgrading of the current sectoral rules. The Work Programme focuses on the 2026 legislative discussions, and provides expert independent advice to the co-legislators and the European Commission.

In addition to the expected legislative changes, institutional changes may also arise as the Commission intends to carry out an evaluation in compliance with its guidelines and, thereby, assess the performance of BEREC and the BEREC Office in relation to their objectives, mandate, tasks and location. In particular, the evaluation shall address the possible need for modifying the structure or mandate of BEREC and the BEREC Office, and the financial implications of any such modification. BEREC will, in any case, continue to actively contribute with its expertise to support evidence-based policymaking and implementation.

Regarding the promotion of full connectivity and the Digital Single Market, BEREC will continue to support the roll-out and uptake of very high-capacity networks (VHCNs) across the EU. It will focus on enabling sustainable investment, removing deployment barriers, improving cross-border coordination, and helping to achieve the Digital Decade connectivity targets by 2030. In terms of supporting competition-driven and open digital ecosystems, BEREC will closely monitor evolving digital value chains, including the increasing interdependence between electronic communications and digital services and infrastructure, specifically, cloud services. The objective is to maintain and promote fair competition, encourage innovation, and prevent new market bottlenecks while ensuring the regulatory framework remains proportionate and future-proofed. When it comes to empowering end-users, BEREC will place a strong focus on user rights, including contract clarity, switching, accessibility and affordability. It will also consider how emerging technologies such as AI, metaverses, and extended reality may impact the end-user experience, privacy, and trust, with particular attention to digital inclusion and bridging the digital divide. In relation to contributing to environmentally sustainable, secure and resilient digital infrastructures, BEREC aims to support the green and digital transitions by encouraging energy efficiency, sustainability and circular practices within the sector. At the same time, it will promote stronger cybersecurity and network resilience in response to evolving threats and increasing dependence on digital infrastructure. Lastly, regarding

strengthening BEREC's capabilities and continuous improvement, the organisation will focus on enhancing its internal agility, knowledge base and transparency. It will improve data gathering and analysis, reinforce collaboration among NRAs, and build deeper institutional and international partnerships in order to remain an independent and reliable source of regulatory expertise.

The 2026 Work Programme has been developed in an inclusive and transparent manner, involving contributions from BEREC's Working Groups, NRAs, EU institutions and other relevant stakeholders. It also addresses feedback received via public consultations and the annual Stakeholder Forum. Such input helps to ensure that BEREC remains responsive to market needs, regulatory developments and end-user expectations.

Document:

BoR (25) 186: BEREC Work Programme 2026

ANNEXES

Annex 1.
Meetings with the European institutions and other European Union bodies

A. MEETINGS WITH THE EUROPEAN COMMISSION

Dates/place	Event
7 March, Brussels, Belgium	4th meeting of the High-Level Group for the Digital Markets Act
31 March, Brussels, Belgium	EC-BEREC Workshop
10 April, online meeting	2nd meeting of the AI sub-group to the DMA High-Level Group
20 May, Brussels, Belgium	5th meeting of the DMA Data related obligations sub-group to the HLG for the DMA
20 May, Brussels, Belgium	3rd meeting of the Article 7 DMA sub-group to the HLG for the DMA
15 July, Brussels, Belgium	EC Workshop on Governance
16 July, Brussels, Belgium	Meeting with EC Executive Vice-President, Ms. Henna Virkkunen
18 September, Brussels, Belgium	EC Workshop on Access
23 October, Riga, Latvia	Participation in the visit of the European Commission Executive Vice-President, Ms. Henna Virkkunen to the BEREC Office
29 October, online meeting	Meeting with Prof Emanuele Tarantino, Chief Competition Economist of the European Commission at DG Competition
5 November, Brussels, Belgium	3rd meeting of the AI sub-group to the HLG for the DMA
12 November, online meeting	6th meeting of the DMA Data related obligations sub-group to the HLG for the DMA
4 December, Brussels, Belgium	DG COMP's workshop: "Review of the EU Merger Guidelines"
18 November, online meeting	4th meeting of the Article 7 DMA sub-group to the HLG for the DMA
12 December, Brussels, Belgium	5th meeting of the High Level Group for the Digital Markets Act

B. MEETINGS WITH THE EUROPEAN PARLIAMENT/EUROPEAN COUNCIL

Dates/place	Event
19 March, Brussels, Belgium	Meeting with MEP Kobosko in the EP
23 September, Brussels, Belgium	Participation in the EP ITRE Committee meeting

C. MEETINGS AND WORKSHOPS WITH OTHER EU BODIES

Dates/place	Event
20 March, Amsterdam, The Netherlands	ENISA Telecom and Digital Infrastructure Security Forum 2025

Annex 2.
Public debriefings and BEREC engagement with stakeholders

Dates/place	Event
05 March 2025, Barcelona, Spain	Four-lateral BEREC, EaPeReg, REGULATEL and EMERG Summit
20 March 2025, Virtual meeting	Public debriefing on the outcomes of the 62nd BEREC ordinary meetings
20 March 2025, Amsterdam, The Netherlands	ENISA Telecom and Digital Infrastructure Security Forum 2025
31 March 2025, Brussels, Belgium	BEREC - European Commission High Level Workshop
01 April 2025, Brussels, Belgium	13th BEREC Stakeholder Forum
30 April 2025, Hybrid (Brussels, Belgium and virtual)	External workshop on the ecodesign of digital services for greener networks and ICTs
21 May 2025, Hybrid (Brussels, Belgium and virtual)	External workshop on practical issues preventing number misuse and possible fraudulent activities as a result of impact of new technologies
11 June 2025, Virtual meeting	Public debriefing on the outcomes of the 63rd BEREC ordinary meetings
26 June 2025, Hybrid (Brussels, Belgium and virtual)	BEREC Workshop on the competitive effects of strategic fibre networks deployment, including in the context of copper switch-off
25 September 2025, Hybrid (Brussels, Belgium and virtual)	External workshop on the environmental footprint of satellite constellations
08 October 2025, Hybrid (Brussels, Belgium and virtual)	Public debriefing on the outcomes of the 64th BEREC ordinary meetings
15 October 2025, Hybrid (Brussels, Belgium and virtual)	BEREC-BEUC joint workshop on end-user rights
09 December 2025, Virtual meeting	Public debriefing on the outcomes of the 65th BEREC ordinary meetings
09 December 2025, Virtual meeting	BEREC public workshop on submarine cable connectivity: Competition & market dynamics, ex-ante economic regulation and future challenges

Annex 3. International events[76]

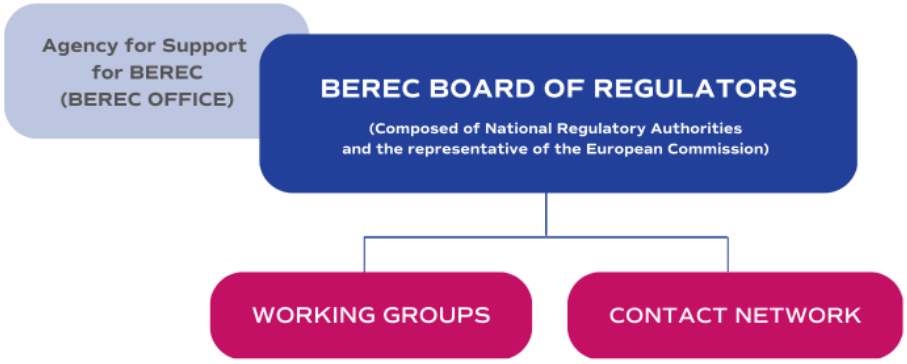
Dates/place	Event
14 January 2025, Brussels, Belgium	FTTH Policy Dialogue: Paving the Way for a Sustainable and Future-Proof Connectivity in Europe
28 January 2025, Brussels, Belgium	The European 5G Conference by Forum Europe
19 February 2025, Brussels, Belgium	Forum Europe/Amazon Web Services: Future of Connectivity in Europe
24 February 2025, Budapest, Hungary	ITU Regional Development Forum for Europe
26 February 2025, Madrid, Spain	Digital Summit Latam
03 March 2025, Barcelona, Spain	Meeting with Meta
03 March 2025, Barcelona, Spain	Meeting with Opensignal
03 March 2025, Barcelona, Spain	Meeting with Microsoft
03 March 2025, Barcelona, Spain	Meeting with CISCO
03 March 2025, Barcelona, Spain	Meeting with Connect Europe
03 March 2025, Barcelona, Spain	Meeting with the OECD
03 March 2025, Barcelona, Spain	BEREC Tour
04 March 2025, Barcelona, Spain	BEREC-GSMA Round Table
04 March 2025, Barcelona, Spain	Meeting with the FCC
04 March 2025, Barcelona, Spain	Meeting with AT&T
04 March 2025, Barcelona, Spain	Meeting with Cellnex Telecom
04 March 2025, Barcelona, Spain	Meeting with Amazon Web Services
04 March 2025, Barcelona, Spain	Meeting with Google
04 March 2025, Barcelona, Spain	Amazon Web Services Tour
04 March 2025, Barcelona, Spain	Huawei Tour
05 March 2025, Barcelona, Spain	Bilateral meeting with EaPeReg

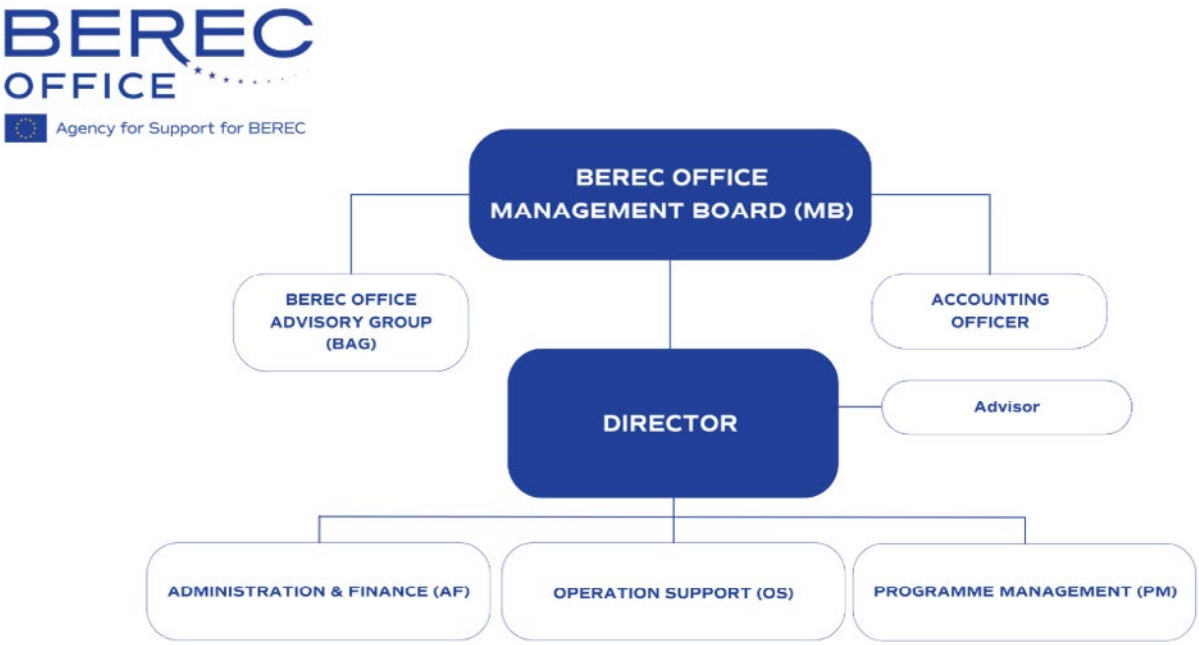
[76] For more information see: https://berec.europa.eu/en/berec-chairmanship

Dates/place	Event
05 March 2025, Barcelona, Spain	Signature of the Working Arrangements with Moldova
05 March 2025, Barcelona, Spain	Bilateral meeting with TRAI
05 March 2025, Barcelona, Spain	4-Lateral Summit
05 March 2025, Barcelona, Spain	Networking (various stakeholders)
18 March 2025, Brussels, Belgium	IIC Europe Digital Media and Communications Forum
19 March 2025, Brussels, Belgium	Digital Sovereignty - “Open RAN as an opportunity for Europe"
26 March 2025, Amsterdam, the Netherlands	FTTH Council Europe Conference
27 March 2025, Brussels, Belgium	Politico Live/GSMA Europe - “Scaling up Europe’s telecoms sector”
09 April 2025, Rome, Italy	Telecommunications of the Future
10 April 2025, Brussels, Belgium	ECTA/VAT-M
23 April 2025 - 24.04.2025, London, United Kingdom	TowerXchange Meetup Europe 2025
30 April 2025, Brussels, Belgium	BEREC Sustainability WG workshop on ecodesign
20 May 2025 – 21 May 2025, Skopje, North Macedonia	AEC Conference
21 May 2025, Brussels, Belgium	BEREC End User WG workshop on fraud and misuse
21 May 2025 – 23 May 2025, Berlin, Germany	GITEX EUROPE 2025
27 May 2025, Brussels, Belgium	CEER Conference
29 May 2025 – 30 May 2025, Ankara, Turkey	15th International Electronic Communications and Postal Regulators Conference
03 June 2025 – 04 June 2025, London, United Kingdom	Small Cells World Summit
17 June 2025, Baku, Azerbaijan, and online	EaPeReg Plenary
18 June 2025, Geneva, Switzerland	EBU Network Technology Seminar
17 June 2025 – 19 June 2025, Montevideo, Uruguay	REGULATEL - BEREC meeting

Dates/place	Event
15 July 2025, Brussels, Belgium	European Commission Workshop on Governance
16 July 2025, Brussels, Belgium	Meeting with Connect Europe
29 July 2025, Madrid, Spain	IEEE 802 Plenary
01 September 2025 – 02 September 2025, Cartagena de Indias, Colombia	20th International Regulation Workshop of the Communications Regulation Commission of Colombia
31 August 2025 – 03 September 2025, Riyadh, Saudi Arabia	CST Event Panel alongside ITU (GSR-25) on Cross-Sector and International Regulatory Collaboration
15 September 2025 – 16 September 2025, London, United Kingdom	BEREC Study Trip 2025
17 September 2025, Brussels, Belgium	Wik Conference 2025 "What direction for digital policy in the geopolitical era?"
18 September 2025, Brussels, Belgium	European Commission Workshop on Access
18 September 2025, Brussels, Belgium	ITRE Committee
29 September 2025 – 30 September 2025, Budva, Montenegro	ITU-EKIP Regional Regulatory Forum for Europe on Building a Resilient and Human-Centric Digital World
07 October 2025, Brussels, Belgium	Google: "Knowledge sharing session on cloud and the Digital Networks Act"
22 October 2025 – 23 October 2025, Riga, Latvia	Techritory 2025
23 October 2025, Brussels, Belgium	Oxera roundtable discussion
23 October 2025, Riga, Latvia	Visit of the European Commission Executive Vice-President, Ms. Henna Virkkunen, to the BEREC Office
14 November 2025, Virtual meeting	NCEC Annual Conference "Stay Connected 2025"
27 November 2025 – 28 November 2025, Bled, Slovenia	Miniboard 2026 kick-off meeting

Annex 4.
BEREC and the BEREC Office: organisational structure[77]





[77] For more information see: https://www.berec.europa.eu/en/berec/organisational-charts

Annex 5.
BEREC Members and observers of the Board of Regulators (end of 2025)

List of the members and observers of the Board of Regulators established pursuant to Article 7 and Article 35(2) of Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office).[78]

Country (if applicable)	Title	Name, Surname	Name of organisation	Member or observer
Albania	Mr	Gentian Sala	Electronic and Postal Communications Authority of Albania, AKEP	Participant
Austria	Mr	Klaus Steinmaurer	Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR-GmbH)	Member
Belgium	Mr	Michel Van Bellinghen	Institut Belge des Postes et Télécommunications (IBPT / BIPT)	Member
Bosnia and Herzegovina	Mr	Draško Milinović	Communications Regulatory Agency of Bosnia and Herzegovina (RAK)	Participant
Bulgaria	Mr	Ivan Dimitrov	Communications Regulation Commission (CRC)	Member
Croatia	Mr	Tonko Obuljen	Croatian Regulatory Authority for Network Industries (HAKOM)	Member
Cyprus	Mr	George Michaelides	Office of the Commissioner of Telecommunications and Postal Regulation (OCECPR)	Member
Czechia	Mr	Marek Ebert	Czech Telecommunication Office (CTU)	Member
Denmark	Mr	Frederik Rygaard	Danish Business Authority (DBA)	Alternate Member
Estonia	Ms	Kristi Talving	Consumer Protection and Technical Regulatory Authority (ECPTRA)	Member
Finland	Mr	Jarkko Saarimäki	Finnish Communications Regulatory Authority (FICORA)	Member
France	Mrs	Sarah Jacquier-Pelissier	Autorité de régulation des communications électroniques, des postes et de la distribution de la presse (ARCEP)	Member
Germany	Ms	Daniela Brönstrup	Federal Network Agency (BNetzA)	Member
Greece	Mr	Konstantinos Masselos	Hellenic Telecommunications and Post Commission (EETT)	Member
Hungary	Mr	András Koltay	National Media and Infocommunications Authority (NMHH)	Member
Iceland	Mr	Hrafnkell Gislason	Electronic Communications Office of Iceland (ECOI)	Participant

[78] Composition of the Board of Regulators pursuant to Article 7 and Article 35(2) of Regulation (EU) 2018/1971, see: https://www.berec.europa.eu/en/berec/composition-of-the-board-of-regulators-pursuant-to-article-7-and-352-of-regulation-eu-20181971-1

Country (if applicable)	Title	Name, Surname	Name of organisation	Member or observer
Ireland	Mr	Robert Mourik	Commission for Communications Regulation (COMREG)	Member
Italy	Mr	Giacomo Lasorella	Autorità per le Garanzie nelle Comunicazioni (AGCOM)	Member
Kosovo	Mr	Nazim Rahimi	Regulatory Authority of Electronic and Postal Communications (ARKEP)	Participant
Latvia	Ms	Alda Ozola	Public Utilities Commission (SPRK)	Member
Liechtenstein	Mr	Rainer Schnepfleitner	Office for Communications / Amt für Kommunikation (AK)	Participant
Lithuania	Ms	Jūratė Šovienė	Communications Regulatory Authority (RRT)	Member
Luxembourg	Mr	Luc Tapella	Institut Luxembourgeois de Régulation (ILR)	Member
Malta	Mr	Jesmond Bugeja	Malta Communications Authority (MCA)	Member
Moldova	Mr	Sergiu Gaibu	ANRCETI	Participant
Montenegro	Mr	Milan Radulovic	Montenegro Agency for Electronic Communications and Postal Services (EKIP)	Participant
North Macedonia	Mr	Jeton Akiku	Agency for Electronic Communications (AEC)	Participant
Norway	Mr	John-Eivind Velure	Norwegian Communications Authority (NKOM)	Participant
Poland	Mr	Przemyslaw Kuna	Office of Electronic Communications (UKE)	Member
Portugal	Mrs	Sandra Maximiano	Autoridade Nacional de Comunicações (ANACOM)	Member
Romania	Mr	Valeriu Zgonea	National Authority for Management and Regulation in Communications (ANCOM)	Member
Serbia	Mr	Dragan Pejovic	Regulatory Agency for Electronic Communications and Postal Services (RATEL)	Participant
Slovak Republic	Mr	Ivan Martak	Regulatory Authority for Electronic Communications and Postal Services (RÚ)	Member
Slovenia	Mr	Marko Mišmaš	Agency for Communication Networks and Services of the Republic of Slovenia (AKOS)	Member
Spain	Mrs	Alejandra Iturriaga de Gandini	Comisión Nacional de los Mercados y la Competencia (CNMC)	Member
Sweden	Mr	Dan Sjoblom	National Post and Telecommunications Agency (PTS)	Member
The Netherlands	Mr	Rex Leijenaar	Authority for Consumers and Markets (ACM)	Member

Country (if applicable)	Title	Name, Surname	Name of organisation	Member or observer
Ukraine	Ms	Liliia Malon	National Commission for the State Regulation of Electronic Communications, Radio Frequency Spectrum and the Provision of Postal Services (NCEC)	Participant
	Mr	Roberto Viola	European Commission	Participant

Annex 6.
Plenary meetings of the Board of Regulators in 2025

Dates/place	Event	Agenda and Conclusions
13 March 2025, Virtual meeting	62nd BEREC ordinary meetings	62nd Plenary
05-06 June 2025, Iceland	63rd BEREC ordinary meetings	63rd Plenary
02-03 October 2025, Bulgaria	64th BEREC ordinary meetings	64th Plenary
04-05 December 2025, Malta	65th BEREC ordinary meetings	65st Plenary

Annex 7.
Meetings of the Contact Network established prior to the Board of Regulators

Dates/place	Event	Agenda and Conclusions
20 February 2025, Virtual meeting	1st BEREC Contact Network meeting	CN1
15-16 May 2025, Portugal	2nd BEREC Contact Network meeting	CN2
11-12 September 2025, Bosnia and Herzegovina	3rd BEREC Contact Network meeting	CN3
13-14 November 2025, Latvia	4th BEREC Contact Network meeting	CN4

Annex 8.
Publicly available documents approved by the Board of Regulators in 2025

A. BEREC OPINIONS

Document number	Description	Date
BoR (25) 04	BEREC Opinion on Phase II case SE/2024/2555-2556	23 January 2025
BoR (25) 21	BEREC Opinion on Meta's reference offers to facilitate Messenger and WhatsApp interoperability under Article 7 of the Digital Markets Act	03 March 2025
BoR (25) 48	BEREC Opinion on Regulation (EU) 2022/612 on roaming on public mobile communications networks within the Union	28 March 2025
BoR (25) 57	BEREC Opinion on the Implementing Regulation on intra-EU communications	14 April 2025
BoR (25) 138	BEREC Opinion on the EC review of the Delegated Regulation setting Union-wide termination rates	02 October 2025
BoR (25) 114	BEREC Input to the European Commission's public consultation on the revision of the Merger Guidelines	02 September 2025
BoR (25) 146	BEREC Input to the European Commission's consultation on the revision of the Recommendation on relevant markets susceptible to ex ante regulation	30 September 2025
BoR (25) 195	BEREC Input to the European Commission's Call for Evidence on the Digital Decade Policy Programme	22 December 2025

B. BEREC REPORTS

Document number	Description	Date
BoR (25) 26	31st BEREC International Roaming Benchmark Data and Monitoring Report	13 March 2025
BoR (25) 33	BEREC Report on the Evolution of Private 5G Networks and interrelation with public networks in Europe	13 March 2025
BoR (25) 64	BEREC Report on WACC parameter calculations according to the European Commission's WACC Notice of 6th November 2019 (WACC parameters Report 2025)	05 June 2025
BoR (25) 85	Draft BEREC Report on submarine cables connectivity in Europe	05 June 2025
BoR (25) 77	BEREC Report on the regulation of physical infrastructure access	05 June 2025
BoR (25) 69	BEREC Report on Stock-taking of NRAs application of Article 52(2) for wholesale access obligations	05 June 2025
BoR (25) 68	BEREC Report on Infrastructure Sharing as a lever for ECN/ECS Environmental Sustainability	05 June 2025
BoR (25) 66	BEREC Progress Report on managing copper network switch-off	05 June 2025
BoR (25) 81	BEREC Analysis Monitoring of the Joint Statement agreed between Ukraine and EU Operators	05 June 2025
BoR (25) 82	Summary of the BEREC sessions at ENISA Telecom and Digital Infrastructure Security Forum 2025	05 June 2025
BoR (25) 135	Summary report on the outcome of the internal workshop on aspects of 2G and 3G mobile technology phaseouts	02 October 2025
BoR (25) 130	BEREC Summary Report on external workshop on digital services' ecodesign for greener networks and ICTs	02 October 2025
BoR (25) 129	Summary Report on the BEREC Workshop on practical issues preventing number misuse and possible fraudulent activities	02 October 2025
BoR (25) 128	Intra-EU communications BEREC Benchmark Data Report April 2024 - March 2025	02 October 2025
BoR (25) 125	BEREC Report on the implementation of the Open Internet Regulation	02 October 2025
BoR (25) 126	Summary of the BEREC external workshop on the competitive effects of strategic fibre networks deployment, including in the context of copper switch-off	02 October 2025
BoR (25) 183	Draft BEREC Report on Switching and Termination of contracts	04 December 2025
BoR (25) 167	Summary report on Internal Workshop on Direct to Device Satellite Communication	04 December 2025
BoR (25) 171	BEREC Report on domestic submarine cables connectivity in Europe	04 December 2025

Document number	Description	Date
BoR (25) 169	BEREC Summary Report on the external workshop on environmental footprint of satellite constellations	04 December 2025
BoR (25) 168	BEREC Regulatory Accounting in Practice Report 2025	04 December 2025

C. BEREC PUBLIC CONSULTATIONS

Document number	Description	Date
BoR (25) 32	BEREC Summary Report on the outcome of the public consultation on the draft BEREC Report on the evolution of private and public 5G networks in Europe	13 March 2025
BoR (25) 76	Report on the outcome of the public consultation of the draft BEREC Report on the regulation of physical infrastructure access	05 June 2025
BoR (25) 67	BEREC Report on the outcome of the public consultation on the draft BEREC Report on Infrastructure-sharing as a lever for ECN/ECS environmental sustainability	05 June 2025
BoR (25) 65	BEREC Report on the outcome of the public consultation on the draft BEREC Progress Report on managing copper network switch-off	05 June 2025
BoR (25) 143	BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines on the access to in-building infrastructure according to Article 11(6) of the Gigabit Infrastructure Act	02 October 2025
BoR (25) 141	BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines on the coordination of civil works according to Article 5(6) of the Gigabit Infrastructure Act	02 October 2025
BoR (25) 181	BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines on very high capacity networks	04 December 2025
BoR (25) 170	BEREC Report on the outcome of the Public consultation on the Draft BEREC Report on submarine cables connectivity in Europe	04 December 2025
BoR (25) 188	BEREC Report of the outcome of the public consultation on the draft BEREC Strategy 2026-2030	04 December 2025
BoR (25) 185	BEREC Report of the outcome of the public consultation on the draft BEREC Work Programme 2026	04 December 2025

D. STRATEGIES, ANNUAL WORK PROGRAMME AND ANNUAL REPORTS

Document number	Description	Date
BoR (25) 01	Outline BEREC Work Programme 2026	30 January 2025
BoR (25) 75	BEREC Annual Report 2024	05 June 2025
BoR (25) 80	Draft BEREC Strategy 2026-2030	05 June 2025
BoR (25) 136	Draft BEREC Work Programme 2026	03 October 2025
BoR (25) 186	BEREC Work Programme 2026	04 December 2025
BoR (25) 189	BEREC Strategy 2026-2030	04 December 2025
BoR (25) 194	Leading digital Europe: BEREC adopts Strategy 2026-2030	09 December 2025

E. REGULATORY BEST PRACTICES (COMMON APPROACHES/POSITIONS, GUIDELINES, METHODOLOGIES)

Document number	Description	Date
BoR (25) 35	Draft BEREC Guidelines on Very High Capacity Networks	13 March 2025
BoR (25) 84	Draft BEREC Guidelines on the access to in-building infrastructure according to Article 11(6) of the Gigabit Infrastructure Act	05 June 2025
BoR (25) 83	Draft BEREC Guidelines on the coordination of civil works according to Article 5(6) of the Gigabit Infrastructure Act	05 June 2025
BoR (25) 142	BEREC Guidelines on the access to in-building infrastructure according to Article 11(6) of the Gigabit Infrastructure Act	02 October 2025
BoR (25) 140	BEREC Guidelines on the coordination of civil works according to Article 5(6) of the Gigabit Infrastructure Act	02 October 2025
BoR (25) 182	BEREC Guidelines on Very High Capacity Networks	04 December 2025
BoR (25) 184	Draft Updated BEREC Guidelines on Geographical surveys of network deployment	04 December 2025

Annex 9.
Board of Regulators electronic voting procedures

Subject	Comments round Date/link to documents	Voting round Date/link to documents
Draft BEREC Opinion on Phase II case SE/2024/2555-2556	15 January 2025	22 January 2025
Draft Outline BEREC Work Programme 2026	17 January 2025	28 January 2025
Appointment of BEREC representatives to the High-Level Group for the Digital Markets Act	13 February 2025	17 February 2025
Draft BEREC Opinion on Meta's reference offers to facilitate Messenger and WhatsApp interoperability under Article 7 of the Digital Markets Act	18 February 2025	27 February 2025
Working arrangements concerning participation of the NRA of Moldova in the work of BEREC and BEREC Office	28 February 2025	03 March 2025
Draft BEREC Opinion on Regulation (EU) 2022/612 on roaming on public mobile communications networks within the Union	21 March 2025	26 March 2025
Draft Decision of the Board of Regulators on the appointment of the Planning and Future Trends Working Group Co-Chair	02 April 2025	03 April 2025
Draft BEREC Opinion on the Implementing Regulation on intra-EU communications	04 April 2025	10 April 2025
Draft Project Requirements Document (PRD) on BEREC input to EC public consultation on the revision of the Merger Guidelines	26 May 2025	29 May 2025
Draft Project Requirements Document (PRD) on BEREC expert views on the EC review of the Delegated Regulation setting Union-wide termination rates	01 July 2025	04 July 2025
Draft BEREC Input to the European Commission's Call for Evidence on the Digital Networks Act	04 July 2025	09 July 2025
Draft PRD on the BEREC Input to the European Commission's Call for Evidence on the Digital Fairness Act	21 August 2025	26 August 2025
Draft BEREC Input to the EC's public consultation on the revision of the Merger Guidelines	27 August 2025	01 September 2025
Draft BEREC response to the EC public consultation on the DMA Review	08 September 2025	17 September 2025
Draft BEREC Input to the European Commission's consultation on the revision of the Recommendation on Relevant Markets susceptible to ex ante regulation	19 September 2025	25 September 2025
Draft Project Requirements Document (PRD) on the BEREC Further Guidance on 5G Network Slicing	22 September 2025	26 September 2025
Draft BEREC Input to the European Commission's Call for Evidence on the Digital Fairness Act	06 October 2025	16 October 2025
Draft BEREC Input to the European Commission's Call for Evidence on the Digital Decade Policy Programme	16 December 2025	19 December 2025

Annex 10. List of abbreviations/acronyms

BEREC	Body of European Regulators for Electronic Communications
BoR	Board of Regulators
CAPM	Capital Asset Pricing Model
CN	Contact Network
DA	Digital Act
DC	Data Centre
DDPP	Digital Decade Policy Programme
DESI	Digital Economy and Society Index
D2D	direct to unmodified-handsets
DMA	Digital Markets Act
DOCSIS	Data Over Cable Service Interface Specification
DSA	Digital Services Act
DSBs	Dispute Settlement Bodies
EaPeReg	Eastern Partnership Electronic Communications Regulators Network
EC	European Commission
ECS	Electronic Communications Services
ECN	Electronic Communications Networks
EEA	European Economic Area
EECC	European Electronic Communications Code
ENISA	European Union Agency for Network and Information Security
EoI	Equivalence of Inputs
ERP	Equity Risk Premium
ERGA	European Regulators Group for Audiovisual Media Services
ERT	Economic Replicability Test
EU	European Union
FDC	Fully-Distributed Costs
FTTB	Fibre-To-The-Building
FTTC	Fibre-To-The-Cabinet
FTTP	Fibre-To-The-Premises
IAS	Internet Access Services
ICS	Interpersonal Communication Services
IP	Internet Protocol interconnection
ISP	Internet Service Provider
ITRE	European Parliamentary Committee on Industry, Research and Energy
ITU	International Telecommunications Union
LLU	Local Loop Unbundling
LTE	Long-Term Evolution
MNO	Mobile Network Operator
NCA	National Competition Authority
NGA	Next Generation Access
NI-ICS	Number-Independent Interpersonal Communication Services
NIS	Network and Information Systems
NRA	National Regulatory Authority
OCA	Other Competent Authority
QoS	Quality of Service
OTT	Over-the-top
REGULATEL	Latin American Forum of Telecommunications Regulators

RA	Regulatory Accounting in Practice
RFR	Risk Free Rate
RSPG	Radio Spectrum Policy Group
SMP	Significant Market Power
SMS	Short Message Service
TD	Top-down
ULL	Unbundled Local Loop
VDSL	Very-High-Bit-Rate Digital Subscriber Line
VHCN	Very High Capacity Network
VPN	Virtual Private Network
VULA	Virtual Unbundled Local Access
WACC	Weighted Average Cost of Capital

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BEREC
Body of European Regulators
for Electronic Communications