

BEREC strategy 2026 – 2030

Mission statement

BEREC aims at fostering independent, forward looking, consistent and high-quality regulation of digital infrastructures and services for the benefit of Europe and its citizens

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This document sets out BEREC's strategy for 2026 – 2030 providing guidance to organize and prioritize 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 pertinent and aligned with future developments, BEREC will reassess its strategic priorities over the course of the period. Accordingly, BEREC will revise the strategy before 2030 when necessary to respond to potential substantial changes in the sectoral regulation, including its mandate, considering in particular the upcoming review of the legal framework.

ABOUT BEREC

The Body of European Regulators for Electronic Communications (BEREC) was established in 2009 and is currently governed by Regulation (EU) 2018/1971 (BEREC Regulation). BEREC is composed of all independent National Regulatory Authorities (NRAs) of the European Union (EU). The Agency for Support for BEREC (BEREC Office), seated in Riga, supports BEREC in fulfilling its tasks. The European Commission (EC) is a full member of the Management Board governing the BEREC Office and participates in BEREC's work without voting rights. The BEREC Regulation includes the possibility for NRAs of third countries to take part in BEREC's work albeit without voting rights, if those third countries have signed specific agreements with the EU.

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. BEREC is an evidence-based body providing independent expert advice and is recognised for fostering the internal market. It possesses broad expertise in economic market regulation, grounded in rigorous analytical work. Drawing on such capability, BEREC is well placed to effectively deal with the evolving challenges of infrastructures and services.

BEREC cooperates with other EU bodies, competent authorities of third countries and international organisations in accordance with Article 35 of the BEREC Regulation. Within the EU, BEREC maintains a close relationship with several EU institutions, bodies, offices, agencies and advisory groups. Beyond the EU, BEREC has also a tradition of working together with regulators in other parts of the world through regular dialogue, on a formal or an informal basis, with its equivalent networks of regulators in other regions of the world, international institutions and third countries NRAs.

BEREC is committed to upholding a high level of transparency and accountability. In this regard, working practices include conducting public consultations on draft documents, holding

public debriefings after each Plenary meeting, and maintaining a structured dialogue with sector related associations and stakeholders by means of workshops, meetings, and the annual Stakeholders Forum, where BEREC presents its current activities and planned work.

By means of the present Strategy, BEREC takes stock of key market and technological developments (section I) along with policy and legislative changes (section II) in order to shape its high-level priorities (section III).

I. MARKET AND TECHNOLOGICAL DEVELOPMENTS

BEREC keeps pace with technological advancements and market trends in the electronic communications sector, as well as with changes in the digital economy affecting electronic communication networks and services (ECN/S), market dynamics, and end-user rights.

Some of the key technological challenges in the sector to consider over the coming years include the migration from legacy networks to Very High-Capacity Networks (VHCN) and the deployment, evolution, and interoperability of 5G, 6G and non-terrestrial networks (NTNs) which enhance speeds, enable ultra-low latency functions, provide greater network capacity and extend network slicing functionalities. In addition, artificial intelligence (AI)-driven network management is expected to be enhanced in the next years. These technologies can foster the implementation of industrial automation, sensor networks, Internet of Things (IoT), smart cities, and immersive experiences like extended reality (XR) and holographic communication.

5G advanced and future 6G architectures envisage NTNs as part of the integrated network architecture, providing seamless switching between terrestrial and satellite networks. NTNs could reinforce network resilience and address the digital divide by connecting remote areas and by increasing the use of non-geostationary Low Earth Orbit (LEO) satellite constellations, with systems operating direct-to-device communications (D2D). NTNs can help ensure basic internet connectivity in areas where terrestrial networks are not conveniently available while in yet another domain, submarine cables are the backbone of fixed global connectivity and more fixed deployments are expected.

Robust ECN/S are essential for delivering digital services, and in turn, technologies like AI and data processing accelerate the transformation of ECN/S. Continuous cloud-based solutions and enhancements are reshuffling multiple market segments and value chains that are intertwined or adjacent to the electronic communications sector. Edge Computing brings reduced-latency advantages, derived from the proximity of data processing to end users, which can support real-time analytics for applications like autonomous vehicles, video streaming, and industrial IoT. The increasing shift to Cloud and virtualization of ECN/S has resulted in operators moving from hardware-centric networks to more flexible, software-defined networks, which facilitate scalability, cost-efficiency, and can support dynamic applications-based on AI and IoT. This shift relies heavily on clusters of high-scale, high-performance data centres, which serve as critical hubs for cloud computing, data storage and distribution, and AI processing.

Electronic communications operators are increasingly leveraging AI to enhance network performance, automate operations, and accelerate digital transformation. Indeed, AI is

increasingly used, among other use cases, to optimize performances, (i.e. enable predictive maintenance), while on the consumer side, Al-driven chatbots are increasingly being used for customer interaction and support.

Increasing demand for more environmentally sustainable technologies and practices may require the deployment of energy-efficient infrastructures, recycling programmes, and ecodesign principles used in for manufacturing and the provision of services.

The ever-growing need for robust network security requires enhancements, including the adoption of zero-trust models, future quantum encryption technologies, secure authentication models, and continuous monitoring to protect against increasing cybersecurity threats.

As network transformation accelerates, some electronic communications operators aim to redefine their service portfolios, increase their market share and reduce operational costs through asset restructuring. Such developments facilitate the entry of business models focused on specific services (e.g., towercos or wholesale-only providers, among many others).

The electronic communications sector is significantly affected by the continuous evolution of the broader digital landscape. The digital ecosystem is developing into a complex network of heterogeneous partnerships and agreements among highly diverse actors — often engaged in client—supplier relationships, and at times reliant on key resources (e.g. data processing services and infrastructure) concentrated among a limited number of providers.

Large content and application providers (CAPs) that have deployed their own CDN, data centres and ECN infrastructure such as NTNs or submarine cables, and now they increasingly rely on their own capacity to deliver services which were previously sourced mainly from traditional ECN/S providers. Large CAPs can influence market dynamics by providing products and services that sometimes compete with or complement those of ECN/S.

The convergence of ECN/S and other digital infrastructures and services may come with multiple challenges, particularly in terms of legal certainty and the consistency of EU and national sectoral regulations, which may overlap. Moreover, ECN/S and cloud/edge computing networks and services are increasingly being provided through customized and integrated solutions (which can include other technologies and services, e.g. Al or IoT). These developments lead to increasing interrelation, integration and interdependence in the provision of both data processing and ECN/S. Such an evolution is taking place in a context where the provision of cloud services has raised questions in terms of market concentration, sovereignty, sustainability, access to resources, user adoption, interoperability, data privacy-related issues (i.e. data sovereignty, monetization, security, integrity), and cybersecurity - all of which may impact electronic communications.

Number-based voice and messaging traffic continues to decrease due to the substitution trend by Number-Independent Interpersonal Communication Services (NI-ICS). In the case of the market for business services, there has been an observed increase in demand for customized value-added services involving ECN/S and other digital products (e.g. 5G private network solutions including connectivity, IoT, data analytics, AI, sensors, etc).

Interoperability and compatibility standards promote diversity of supply of various technologies and allow for comparison among different products and services. However, such standards can also be used opportunistically by certain market players to maintain or erect barriers to entry for competitors or innovators and restrict competition.

II. POLICY AND LEGISLATIVE DEVELOPMENTS

As an established and experienced body well-versed in the digital sector, BEREC recognises the need to continuously adapt to evolving conditions and emerging challenges. In this context, BEREC plays a key role in contributing to the development of future EU legislation. This role will be pursued through a constructive and open dialogue with EU institutions, drawing on the insights, experiences, and best practices of NRAs, comprehensive stakeholder consultations, and robust data collection efforts aimed to support informed decision-making.

In 2022, the EU established the overarching digital targets of the EU <u>Digital Decade Policy Program</u> to be achieved by 2030. These include ensuring that all end users at a fixed location are covered by a gigabit network and that all populated areas are covered by mobile networks with performance, at least equivalent to that of 5G.In line with these digital targets, the EC presented a set of actions in 2023 aimed to make Gigabit connectivity available to all citizens and businesses across the EU by 2030. This includes the <u>Gigabit Infrastructure Act</u> (GIA), to facilitate network deployments, and the <u>Gigabit Recommendation</u>, to provide guidance to NRAs on SMP regulation to incentivise gigabit networks deployment and which featured an exploratory consultation on the future of the connectivity sector and its infrastructure. This exploratory consultation led to the publication of the EC's <u>White Paper – "How to master Europe's digital infrastructure needs?"</u> in 2024.

This White Paper sets out the context for future proposals, namely the review of the European Electronic Communications Code (EECC) by 21 December 2025 and the Digital Networks Act (DNA). Also, the EC launched in 2025 the consultation for the revision of the Recommendation on relevant markets. In parallel to the publication of this White Paper, came a Recommendation on Secure and Resilient Submarine Cable Infrastructures, which identified actions to assess and improve the security and resilience of submarine cable infrastructure and to support their deployment and upgrade. In addition, the EU Action Plan on Cable Security was published in 2025 to further protect this category of critical infrastructure.

The EU is also enhancing secure ECS across Europe. In 2022, the third flagship EU space program was launched, following Galileo and Copernicus, <u>Infrastructure for Resilience</u>, <u>Interconnectivity</u>, <u>and Security by Satellite</u> (IRIS²: The new EU Secure Satellite Constellation). The objective of this initiative is to provide secure communications, enhance connectivity in underserved areas and reinforce the EU technological sovereignty.

After the adoption of the EECC in 2018, EU legislation on digital markets and services has rapidly evolved with the enactment of several key regulations, including the <u>Digital Markets Act</u> (DMA, 2022), the <u>Data Governance Act</u> (DGA, 2022), the <u>Digital Services Act</u> (DSA, 2022), the <u>Data Act</u> (DA, 2023), <u>Cybersecurity of Network and Information Systems Directive</u> (NIS 2, 2022), the <u>Critical Entities Resilience Directive</u> (CER, 2022), the <u>European Media Freedom Act</u> (EMFA, 2024), the <u>Cyber Resilience Act</u> (CRA, 2024) and the <u>Artificial Intelligence Act</u>

(AIA, 2024), among others. These new digital regulations have established several specialized groups with competencies in the digital domain, including the DMA High-Level Group (HLG), the European Data Innovation Board (EDIB), the European Board for Digital Services (EBDS), the European Artificial Intelligence Board (AIB), and the European Board for Media Services (EBMS).

Throughout 2024, three high-level reports (<u>Letta</u>, <u>Draghi</u> and <u>Niinistö</u>) were published, outlining measures to strengthen the EU's internal market, enhance EU economic competitiveness, and ensure common security. While these reports take a broad, cross-sectoral approach, they all address at varying levels issues affecting electronic communications regulation.

Building on the recommendations provided by these reports, the EC introduced an <u>EU</u> <u>Competitiveness Compass for the EU</u> in January 2025, as a roadmap to restore The EU's global competitiveness while ensuring secure and sustainable prosperity. This Compass emphasizes the relevance of regulatory simplification and single-market integration and includes key initiatives to accelerate infrastructure investment, such as the DNA, the EU Cloud and AI Development Act (CAIDA), the Space Act, and measures to strengthen the EU's role in AI.

Based on the Digital Decade Policy Programme and the <u>Fit for 55 package</u>, several EU legislative proposals on environmental matters were adopted or are being developed, some of which tackling also the digital sector.

Additionally, the EC evaluated the functioning of the Roaming Regulation in June 2025 and has begun preparatory work to develop a Digital Fairness Act (DFA) proposal, which will focus on consumer protection online and will complement the DSA. This legislation will address unethical techniques and commercial practices related to dark patterns, marketing by social media influencers, the addictive design of digital products and online profiling. The DSA's review is due in 2027 and the first review of the DMA in 2026. The EC has also launched the Data Union Strategy initiative, which seeks to simplify data rules in order to allow businesses and other organisations to share data more seamlessly and at scale. In connection with this initiative, the EC has also put forward a Digital Omnibus, which will be the first step of the Digital Package on Simplification, aimed at streamlining the EU's digital rulebook specifically for cybersecurity, AI and data. Electronic communications are also listed among the strategic services of the EC Apply AI Strategy, which forms part of the broader AI Continent Action Plan.

BEREC keeps committed to providing data and expertise to support the development of the EU electronic communications regulatory framework, without prejudice to the EC's rights of initiative, prerogatives and the competences of the co-legislators (Council and the European Parliament).

III. HIGH-LEVEL STRATEGIC 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 to 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.

Priority 1. Promoting full connectivity and the Digital Single Market

Connectivity has a pivotal role in today's society and economy given its multifaceted and evolving strategic importance across sectors. BEREC will continue to promote ECN/S by adopting a comprehensive approach to its work, covering all key infrastructures - terrestrial, space and submarine – as well as fixed, wireless, emerging virtual and cloud-related solutions, together with the enabling digital infrastructures and technologies which support these developments.

BEREC will aim to ensure the harmonised application of the EU legislation, to incentivise operators to invest efficiently by fostering predictability and to empower citizens and businesses to benefit from high-quality connectivity at affordable prices. At the same time, BEREC will support policies and regulatory instruments aimed at strengthening competition and efficient infrastructure investment as well as innovation. BEREC will also contribute to more horizontal legislative processes by drawing on national experiences and data-driven tools, in order to ensure consistent regulatory implementation of all applicable rules regarding connectivity. Together, these actions aim to further the development of the EU Digital Single Market.

In line with the EU Digital Decade targets for 2030, BEREC will promote the access to connectivity infrastructures, enhancing coverage and take-up, while remaining technology and service neutral. BEREC will prioritize initiatives that improve the market conditions for the development and adoption of secure, competitive, and reliable VHCN, fixed and wireless, across the EU. In this regard, BEREC will continue to provide guidance for access to infrastructure to facilitate both VHCN deployment and faster take-up. BEREC will uphold a pro-efficient-investment and pro-competitive approach to ex ante access regulation, whether symmetric, asymmetric or a combination thereof, as deemed necessary to achieve widespread connectivity.

BEREC will also provide for the consistent implementation of related legislative obligations and incentives to deploy advanced networks, i.e. those EECC provisions in relation to setting common standards and criteria and the implementation of the GIA. BEREC will continue to support NRAs in their work accompanying the migration to fibre networks and the copper switch-off. This support will be aimed at promoting incentives for a swift transition towards

advanced networks while ensuring that the rights of end users and access seekers are duly safeguarded throughout the process, as well as effective competition. In addition, BEREC will consider the how the market is migrating to 5G SA (Standalone) and how the set-up of 6G networks may develop. BEREC will also follow how the backhauling demand for these networks is met. BEREC will additionally examine the development of relevant digital infrastructures and services such as cloud-based network infrastructure, data centres, data processing services and content delivery networks (CDNs).

In line with its comprehensive approach, BEREC will analyse key network trends in wireless connectivity, with a focus on the following areas: examining shared mobile and wireless access; seamless connectivity between mobile and fixed networks and assessing the impact of edge computing; cloudification; softwarization; and 'as-a-service' models, including Application Programming Interface (API) developments. Interesting trends involve cutting-edge functions of 5G SA and future 6G networks, as well as their potential to nourish data driven ecosystems, such as those based on IoT data collection, and BEREC stands ready to contribute to their evaluation.

Additionally, developments in connectivity triggered by the growing impact of NTN communications constitute an area that continues to be of interest to BEREC. Developments in the area of satellite communications raise issues regarding jurisdiction, interoperability, spectrum management, standardization, interference, and competition and consumer. As MNOs increase cooperation with satellite operators, further questions arise regarding competition dynamics, end users' rights, cybersecurity or lawful interception. As a result, the evolving strategic function of NTNs, their interplay with terrestrial infrastructures, and the broader implications they may have in the provision of connectivity, are all topics that BEREC stands ready to contribute to. With regard to the connectivity provided by submarine cables, BEREC will continue to follow their roll out and resilience (see Priority 4 below).

BEREC will also continue playing a fundamental role in relation to the Roaming Regulation, which represents a key pillar of the European Single Market. It will actively contribute to the future implementation, monitoring, and review of the Regulation through robust data collection, stakeholder engagement, and the provision of expert input aimed at further enhancing the effective functioning of the Regulation at both wholesale and retail levels. BEREC remains committed to follow closely market and technological developments, as well as competitive aspects in the field of Machine-to-Machine (M2M) communications and IoT – including under conditions of permanent roaming - while being aware of the broad and evolving variety of business cases as well as supporting the further development of the single market. BEREC will also maintain its focus on addressing issues related to rest-of-the-world roaming, including roaming with the neighbouring countries and regions, like Moldova, Ukraine and the Western Balkans, and with particular attention to ensuring adequate safeguards and transparency for roaming users. Furthermore, BEREC will continue to support developments in the regulation of intra-EU communications by providing its expertise and data-driven insights, thereby contributing to the further advancement of the European Single Market in the interest of end users.

Priority 2. Supporting competition-driven and open digital ecosystems

Open and competitive markets are fundamental drivers of innovation, investment, and end user welfare. Sector-specific regulation in electronic communications transformed monopolistic structures into more competitive markets, allowing consumer choice and incentivizing investment in cutting-edge networks and innovative services. While significant progress has been made in lowering barriers to entry across most of these markets, challenges remain. BEREC stands ready to address this priority based on its established multidisciplinary expertise, grounded in sound analysis, in support of competition-driven and open digital ecosystems.

Ex ante market regulation of ECN/S continues to provide targeted and flexible tools through tailored and proportionate remedies addressing the problems identified in market analyses. BEREC will continue to offer its expertise to assess markets, facilitating deregulation where competition is effective, while prioritizing measures to stimulate competition and efficient investment in less competitive regions, particularly rural and underserved areas. Some of the specific issues that BEREC aims to address concerning market regulation in the coming years include the following: i) geographical segmentation; ii) access to civil engineering or physical infrastructure, as it remains crucial in some Member States where this is the prevailing form of access for VHCN deployment; iii) business services, taking into consideration barriers to entry such as the complexities of the services or multi-site provision.

BEREC will consider the consequences of market developments such as consolidation, vertical separation and assets divestment. This will include assessing the potential or observed impact on end users, on the value chain and on investment incentives, as well as the role of emerging new players or providers in adjacent markets and their interaction with ECN/S providers. Concerning potential market developments which may lead to the emergence of tight oligopolies, BEREC will assess regulatory approaches to address issues determined by such market structures.

The provision of ECN/S are linked with other digital services and infrastructures (e.g., IP interconnection, data processing services, AI, CDNs or social networks, etc.), which make up the digital ecosystem.

BEREC contributes actively to the development and implementation of the DMA, being part of the DMA HLG and cooperating closely with the EC in the implementation of interoperability obligations imposed on NI-ICS providers designated as gatekeeper. BEREC will draw on its experience to continue monitoring developments in digital markets and provide for the implementation of digital regulations (particularly the DA and the DMA) and their evolution, including the upcoming DMA review in 2026.

Additionally, BEREC will continue to closely follow developments in the field of AI, including, among other aspects, the opportunities and challenges it presents within the electronic communications sector, as well as its potential impact on the general openness of the internet. In doing so, BEREC will collect insights from market developments and relevant stakeholders,

so as to continue to build the necessary expertise that may support the further refinement and improvement of the EU regulatory framework on AI.

EU legislations impacting digital infrastructure and services are closely interrelated and need to be applied in a coherent and efficient manner, fostering legal certainty and avoiding unnecessary red tape for the stakeholders. With a view to simplification, BEREC is committed to provide advice for fostering the alignment of forthcoming digital frameworks, namely the DNA and the Cloud and AI Development Act, along with existing regulations such as the DA or the DMA. BEREC therefore emphasizes the importance of ensuring coherence in the definitions and scope of these various legislative texts. Additionally, BEREC will advocate for coordination among all relevant bodies to safeguard coherence, providing clear and consistent guidelines to the users and providers, facilitating compliance, enabling a predictable environment for cross-sectoral regulatory dialogue and building evidence-based regulatory proposals.

Priority 3. Empowering end users

BEREC remains committed to ensuring a high and consistent level of end users' protection, maintaining a technology-neutral regulatory approach, and strengthening cooperation with EU institutions, NRAs, and industry. As markets evolve, BEREC will continue to promote transparent, competitive, sustainable, and innovation-friendly conditions safeguarding users' rights and access to services.

BEREC will continue considering market and technical developments from an end user perspective to ensure transparency, enabling end users to make informed decisions.

Social networks and NI-ICS are increasingly entwined with traditional electronic communications, blurring the boundaries between service categories. In this context, it is essential to keep end users' rights updated, to adapt obligations and contract terms to remain relevant, due to continuously evolving digital services and business models.

BEREC will continue to provide a structured framework for the consistent implementation of the Open Internet Regulation (OIR) in line with the BEREC Open Internet Guidelines, particularly focusing on new differentiated services and quality of services (QoS), network slicing, transparency obligations, traffic management practices and specialised services.

Special attention will be paid to address digital exclusion. Affordability and connectivity remain the primary needs of end users in electronic communications, taking into consideration that connectivity serves as the essential gateway to digital services and platforms. Additionally, BEREC will assess potential new sources of digital divide that may emerge due to new technologies and other elements of the digital ecosystem. This includes considering insights from behavioural economics to address growing consumer vulnerabilities arising from design choices and behavioural strategies implemented by market players. Promoting accessibility for all end users will remain at the forefront of BEREC's efforts to achieve the highest level of user protection and digital inclusion.

While end users are benefitting from new and enhanced connectivity thanks to the migration to VHCN, the process of phasing out legacy networks will have to be closely monitored to prevent negative impacts with regard to current and future migrations processes. At the same time, ensuring the availability, continuity and interoperability of Number-Based Interpersonal Communications Services (NB-ICS) such as voice calls and SMS remains relevant, particularly in the transition to advanced mobile technologies and phasing out of legacy networks. As voice and messaging services are increasingly shifting towards NI-ICS, it is important to maintain end users' protection, a level playing field for functionally equivalent services and diversity of service providers.

BEREC will strive to enhance end users' trust and safety in ECS acknowledging that the prevention of fraud in the digital environment requires strong cooperation among all relevant stakeholders. The increased use of AI is bringing both opportunities and challenges for end users such as innovative solutions to improve accessibility for users with disabilities, but also increasingly sophisticated fraudulent practices. BEREC is following those developments and is contributing from its experience and expertise in the sector to ensure that end users benefit from the advantages of AI, while minimizing its risks.

Priority 4. Contributing to environmentally sustainable, secure and resilient digital infrastructures

BEREC will focus on environmental sustainability, security and resilience of ECN/S as strategic horizontal considerations to the existing objectives of the EECC. BEREC will work to support the development of a secure, resilient and environmentally sustainable digital ecosystem, where ensuring continuity of ECS requires coordinated strategic, operational, and technical measures, as well as the harmonized implementation of such measures.

BEREC's vision under this strategic priority is that the electronic communications sector in the EU designs and builds future-proof digital infrastructures which minimise Greenhouse Gas (GHG) emissions and which use resources in a sustainable manner. These infrastructures should also be sufficiently robust and adaptable to withstand cyber-security challenges and to respond to crises.

BEREC considers that resilient ECN are essential for the functioning of society and the economy, particularly during crises. This applies to both physical (terrestrial and NTN) and virtual networks. Current and future ECN must be resilient in the face of challenges and emergency situations posed by (cyber)security attacks, technological transitions, geopolitical tensions, physical incidents and the increasing prevalence of extreme adverse weather conditions due to climate change.

Environmental Sustainability

Advancing environmental sustainability generally represents a crucial societal priority and is of critical importance for the long-term viability of network deployments. BEREC's work will reflect a comprehensive approach to sustainability considering technological and regulatory advancements in relation to the broader digital infrastructures, such as data centres. BEREC also highlights that digital technologies are key elements for responding to the climate

challenge and for achieving international and European environmental goals - including the Paris Agreement and the European Green Deal. In that respect, connectivity would be a critical enabler for the decarbonisation of other sectors, including energy, transport and agriculture. At the same time, it is important that the underlying digital infrastructures and technologies are also environmentally sustainable.

In this context, BEREC supports the concept that providers of ECN/S should take the associated environmental impact of new deployments into account. Furthermore, ECN/S providers should also consider best practices, including eco-design principles and fit-for-purpose data collection regarding environmental impact.

BEREC will consider two distinct yet interrelated approaches: i) mitigation, which refers to reducing and/or minimizing the negative environmental impact caused by human activity, and ii) adaptation, which refers to the resilience of networks in the face of likely increasing extreme adverse weather events.

BEREC will approach the environmental sustainability of digital infrastructures and user equipment considering GHG emissions and the use of resources, such as water, raw materials etc. The analysis must be multicriteria, multi-stage and multi-component, based on Life Cycle Assessment (LCA).

While BEREC acknowledges the environmental sustainability opportunities brought about by new and emerging technologies and services (e.g., Al optimisation improving energy efficiency in networks, network virtualization reducing the amount of critical raw materials needed to deploy networks), it is also aware of the environmental footprint of these technologies and services. Commonly agreed methodologies and indicators to measure and report on the environmental impact of ECN/S and digital products will be essential to enable and support effective environmental sustainability measures in the ICT sector in line with the European Green Deal. BEREC will investigate the main factors of the digital environmental footprint, identifying a robust, relevant and efficient set of widely endorsed, science-based indicators and harmonised methodologies. BEREC remains committed to contributing to the development of sustainability indicators in the context of the EU Code of Conduct for the sustainability of telecommunications networks, with a view to enhancing transparency regarding the environmental footprint of the sector and providing sound expertise to support potential advancements in the regulatory framework.

Cybersecurity and resilience

In the context of evolving geopolitical dynamics and in light of natural disasters increasingly driven by climate change, cybersecurity, networks and essential services resilience and reinforcing EU technological sovereignty by improving EU's digital self-sustainability have become matters of utmost importance for safeguarding communications and data across the EU. These aspects are more critical than ever, both for current networks and for those of the future.

The new security obligations introduced by the NIS2 and CER Directives represent significant instruments for addressing challenges related to security and resilience. However, they also have a considerable impact on operators' costs, market competition, and ultimately on

consumer pricing. BEREC, the NIS Cooperation Group, and ENISA are engaged in ongoing exchanges aimed at sharing insights and supporting effective compliance.

Looking ahead, technological advancements such as the deployment of 6G and the development of quantum communication applications over the coming decades will introduce further challenges. While quantum computing poses a threat to existing encryption protocols used in today's communication networks -necessitating a transition to post-quantum cryptographic (PQC) solutions - quantum encryption is expected to enhance security by preventing potential eavesdroppers from stealing and cloning the necessary encryption key/(s) to datasets, so data can effectively be securely communicated.

BEREC acknowledges that cybersecurity and resilience in the context ECN/S are highly multifaceted issues. Risks arise not only at the software level, but also in relation to hardware and physical infrastructure, all of which must be duly considered.

BEREC considers that ensuring service continuity requires the implementation of strategic, operational, and technical measures to mitigate risks. ECN/S infrastructure must be designed with resilience in mind, capable of addressing a wide range of threats and vulnerabilities. In this regard, BEREC is a valuable forum for NRAs to exchange views, share experiences on national resilience strategies, and disseminate best practices. Such exchange could help foster a common understanding of cybersecurity and resilience in relation to ECN/S, including the necessary levels of protection, associated implementation measures and costs, and potential approaches to overcoming emerging challenges.

In particular, BEREC will focus on enhancing the resilience of networks against hybrid threats, including those that target or exploit the supply chain. Through its work in this area, BEREC underscores the importance of ongoing improvements in crisis management, legislative frameworks, and energy resilience.

Priority 5. Strengthening BEREC's capabilities and continuous improvement

BEREC's Action Plan 2030 sets the ambition of strengthening BEREC's agility, independence, inclusiveness, and efficiency as a centre of expertise. In line with this vision, BEREC is continuously reviewing and improving its working practices to promote greater efficiency, high-quality deliverables, transparency and environmental sustainability.

Data-driven regulation has proved to be effective in regulating the electronic communications sector. Robust and relevant data provide evidence for BEREC's analysis, opinions and reports, which are also built upon the experience and expertise of its members. Thus, the data and information gathered by BEREC are important tools to carry out the NRAs' tasks, inform policymakers and stakeholders and to better enable end users to benefit from choice, quality and competitive prices.

The regulatory activity should be proportionate, targeted, and mindful of implementation costs for all stakeholders. BEREC is considering means to simplify and reduce bureaucracy across all areas of its work, both on its own initiatives and when providing advice to EU institutions. More specifically, BEREC will continue promoting the harmonization of data collection across

the EU, to minimize administrative burden for stakeholders while strengthening the internal market. To this end, BEREC will seek to leverage the latest automation and IT tools.

BEREC and its members have successfully developed and implemented regulatory tools for non-discrimination, access remedies and price control, QoS measurement, transparency measures in relation to end users and undertakings, and number portability. BEREC will continue to be at the forefront of sharing and developing regulatory best practices and guidelines for an effective ECN/S regulation. BEREC will explore the potential of adopting state-of-the-art ICT, including AI tools, to ease its tasks and reduce the burden on stakeholders.

BEREC prioritizes effective communication to ensure transparency, build trust, and strengthen its relationships with stakeholders and key target audience. By fostering open dialogue and delivering clear, consistent messages, BEREC enhances its engagement with stakeholders, supports informed decision-making, and upholds its commitment to accountability. BEREC remains committed to continuously improving its interactions with all stakeholders and ensuring all outputs remain relevant. BEREC will aim to ensure that its work processes remain transparent and that it reaches the relevant audiences. BEREC aims to maintain a high level of trust from stakeholders, to position itself as a trusted third party in stakeholder dialogues and in its engagement with the EU Institutions and other parties.

Given the high cybersecurity threat that BEREC and the BEREC Office are facing due to the mandate of BEREC and the location of its premises, further efforts will be dedicated to enhancing cybersecurity. In addition, BEREC's data also needs to be carefully secured and best practices in data warehousing will therefore be employed.

IV. INSTITUTIONAL AND INTERNATIONAL COOPERATION

In an increasingly global and interconnected digital ecosystem, 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. Where appropriate, and subject to prior approval by the EC, BEREC may seek to establish formal working arrangements.

Institutional cooperation

BEREC cooperates regularly with the RSPG in the context of the radio spectrum peer review process established by the EECC as well as with the NIS Cooperation Group and ENISA for the implementation of the 5G toolbox and the Cybersecurity Action Plan designed in Nevers, France in 2022. BEREC collaborates with the European Conference of Postal and Telecommunications Administrations (CEPT) on numbering related matters and contributes to the implementation of the DMA as a member of the High-Level Group.

BEREC will continue to collaborate and exchange information with other EU regulatory platforms and bodies. The exchange of views about practical issues of digital regulation is

increasingly important to ensure the coherent and efficient implementation of the EU legislation. In view of the sectoral developments, BEREC will endeavour, in the context of network cloudification, to strengthen its relations with the EDIB, in charge of the DA implementation, and with the EEA (European Environment Agency) in relation with BEREC's activities in sectoral environmental sustainability. Considering the increasing relevance of market access through NTNs, BEREC also aims to initiate relations with the European Agency for the Space Programme (EU SPA). Other relevant bodies in the implementation of digital and market policies are the European Data Protection Board (EDPB) and the European Competition Network (ECN).

BEREC recognizes the importance of collaboration with relevant standardization bodies on topics for which BEREC is competent such as QoS, infrastructure sharing, sustainability or the implementation of the EECC standardization provisions.

Finally, BEREC's objectives to harmonize and streamline indicators and data collection would benefit from further cooperation with Eurostat.

International cooperation

The global nature of digital services means that policies, legislation and regulation from other parts of the world are becoming increasingly important. BEREC benefits from cooperation with NRAs and with other international regulatory networks, policymakers and institutions involved in electronic communications matters from outside the EU. This cooperation allows for the exchange of views on cross-border and common issues, and to closely follow global trends in technology and changing business models. Moreover, non-EU regulatory networks have been expressing great interest in the EU's regulatory approach.

BEREC's international activities complement the policies of the EU in terms of both cooperation topics and priority regions with which to cooperate. BEREC will continue supporting EU initiatives, such as the <u>Global Gateway</u>, with its expertise and in close cooperation with the EC. Following the request of the EC, BEREC has contributed to European initiatives such as the provision of technical support for the implementation of the Western Balkans regional roaming agreement. BEREC will continue supporting the NRAs of countries which are on track to or will seek to enter the EU roaming area.

BEREC aims to continue and further strengthen its long history of cooperation with NRAs' regulatory networks in other regions, namely EMERG (European Mediterranean Regulators Group), REGULATEL (Latin American Forum of Telecommunications Regulatory Entities) and EaPeReg (Eastern Partnership Regulators' Network). Furthermore, BEREC has also signed Memorandums of Understandings (MoUs) with the NRAs of the United States (FCC), Canada (CRTC) and India (TRAI).

Finally, BEREC also cooperates in electronic communications matters with other international institutions such as the International Telecommunication Union (ITU) and the Organisation for Economic Co-operation and Development (OECD).

ANNEX - ACRONYMS

AI - Artificial Intelligence

AIA - Artificial Intelligence Act

AIB - Artificial Intelligence Board

API - Application Programming Interface BEREC - Body of European Regulators for

Electronic Communications

BEREC Office - Agency for Support for

BEREC

DA - Data Act

DFA - Digital Fairness Act

DGA - Data Governance Act

DMA - Digital Markets Act

DNA - Digital Networks Act

DSA - Digital Services Act

D2D - Direct-to-Device

CAIDA - Cloud and AI Development Act

CAPs - Content and Application Providers

CDN - Content Delivery Networks

CEN - European Committee for Standardization

CENELEC - European Committee for

Electrotechnical Standardization CEPT - European Conference of Postal

and Telecommunications Administrations

CER - Critical Entities Resilience Directive

CRA - Cyber Resilience Act

CRTC - Canadian Radio-television and Telecommunications Commission

EaPeReg - Eastern Partnership Electronic Communications Regulators Network

EBMS - European Board for Media Services

EC - European Commission

ECN - European Competition Network

ECN/S - Electronic Communications

Networks and Services

EDPB - European Data Protection Board

EDIB - European Data Innovation Board

EEA - European Environment Agency

EECC - European Electronic

Communications Code

EMERG - European Mediterranean

Regulators Group

EMFA - European Media Freedom Act

ENISA - European Union Agency of Cybersecurity (formerly, European Naturals and Information Security Agency)

Network and Information Security Agency)

ETSI - European Telecommunications Standards Institute

EU - European Union

EUROSTAT - Statistical Office of the European Union

EU SPA - European Agency for Space Programme

FCC - Federal Communications Commission of the United States of America

FTTH - fibre to the home

FWA - Fixed Wireless Access

GHG - Green House Gas

GIA - Gigabit Infrastructure Act

ITU - International Telecommunication Union

IoT - Internet of Things

IRIS² - Infrastructure for Resilience, Interconnectivity, and Security by Satellite

MoU - Memorandum of Understanding

M2M – Machine to Machine communication

NB-ICS – Number Based Interpersonal Communication Services

NI-ICS - Number Independent Interpersonal Communication Services

NIS 2 - Network and Information Systems Directive

NRAs - National Regulatory Authorities

NTN - Non-Terrestrial Networks

LCA - Life Cycle Assessment

LEO - Low Earth Orbit

OECD - Organization for Economic

Cooperation and Development

OIR - Open Internet Regulation

PQC - Post-Quantum Cryptographic

SMP – Significant Market Power

Regulatel - Latin American Forum of Telecommunications Regulatory Entities

RSPG - Radio Spectrum Policy Group

TRAI - Telecom Regulatory Authority of India

VHCN - Very High-Capacity Networks

XR - Extended Reality

5G SA – 5G Standalone