

BEREC High-Level input on the Commission's White Paper on "How to master Europe's digital infrastructure needs?"

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Introduction

This high-level input provides the BEREC's¹ views on the European Commission's (hereinafter, the "EC") *White Paper - How to master Europe's digital infrastructure needs?*². Published for public consultation on 21 February 2024, the document invites to a reflection on the future of digital networks within the context of broader EU strategic objectives. It elaborates on technological and market trends, highlights certain challenges, and proposes scenarios for public policy actions. Being fully aware of the evolving market and technological landscape, and leveraging its deep and longstanding expertise in the digital sector, BEREC welcomes the opportunity to contribute to this debate and is prepared to play a leading role in addressing the current and future challenges facing a data-driven society and economy. In this context, BEREC commits to actively participating in ongoing, constructive dialogue with the European Commission to collaboratively determine the most effective strategies for action.

The strategy of policy actions proposed in the White Paper is structured around three pillars. BEREC generally agrees with the scenarios outlined under pillar I, "*Creating the 3C Network - Connected Collaborative Computing*", and pillar III, "*Secure and Resilient Digital Infrastructures for Europe*". BEREC believes that the proposed measures along these two pillars can significantly enhance both the security and resilience of connectivity and computing infrastructures, as well as bolster Europe's competitiveness and innovation capabilities in the digital sector. Given the expertise and specific competencies of BEREC and its member National Regulatory Authorities, this input primarily addresses pillar II, titled "*Completing the Digital Single Market*".

BEREC developed its vision for an EU regulatory environment fit for the digital age and the global context in its 2030 Action Plan³. BEREC observes that market and technological trends

¹ The Body of European Regulators for Electronic Communications (BEREC) is the EU institution gathering independent national regulatory authorities responsible for electronic communications markets. Its tasks include issuing opinions and providing advice to the EU institutions on any technical matter regarding electronic communications and to the EC in relation to the preparation of legislative proposals in the field of electronic communications.

² <https://digital-strategy.ec.europa.eu/en/library/white-paper-how-master-europes-digital-infrastructure-needs>

³ BoR (23) 48, BEREC Action Plan for 2030, 9.3.2023, see: <https://www.berec.europa.eu/en/document-categories/berec/others/berec-action-plan-for-2030>. The Action Plan develops around five strategic orientations: i) fostering national and international connectivity to reach the objectives of Europe's Digital Decade by 2030; ii) facilitating an open and sustainable internet ecosystem and supervising the evolution of the digital landscape; iii) providing for the security and resilience of the networks and services; iv) contributing to the achievement of environmental sustainability goals and v) strengthening BEREC's agility, independence, inclusiveness, and efficiency as a centre of expertise.

are not only changing how we communicate by means of new services, but also in relation to the internet ecosystem, which is experiencing the entry of new players, the changing roles of traditional players, the rise of new competition bottlenecks in the value chain and the removal of others. New challenges related to ensuring the end-users' rights and cybersecurity in such new context have emerged and the regulatory focus is expanding to actively contribute to achieving sustainability goals.

This evolution requires a holistic perspective for electronic communications' regulation, also in the light of its ever-increasing interplay with the wide body of European digital legislation.

BEREC notes that the White Paper is programmatic in nature; thus, BEREC will be in a position to provide a fully-fledged assessment of it only once its high-level principles and regulatory options are translated into concrete legislative proposals. In this context, by the end of 2025, the EC is required to carry out a review of the functioning of the European Electronic Communications Code⁴ (hereinafter: the Code), evaluating in particular the effectiveness of the current market regulatory tools and the scope of universal service. The EC shall also publish a report on the application of end-users' rights⁵ and potentially submit a legislative proposal to amend the relevant parts in the Code, after taking into utmost account BEREC' opinion due by the end of 2024. This specific review procedure is set in the Code.

The Commission shall also carry out an evaluation of the performance of BEREC and the BEREC Office pursuant to Article 48 of the BEREC Regulation.

The ideas outlined in the White Paper are to be read in conjunction with the complementary analysis of regulatory areas not covered by this initiative. Such combined efforts should result in a potential future regulatory framework for electronic communications covering digital infrastructure regulation, end-users' rights, internet openness and, the appropriate institutional design. Additionally, these concepts shall be further fine-tuned based on the assessments required under the Code.

In this context, BEREC notes that while it may be premature at this juncture to derive final conclusions on the effectiveness of the Code, also given its relatively recent implementation, it is important to continue gathering and analysing evidence to support the policy process. This

⁴ According to Article 122 of Directive (EU) 2018/1972 establishing the European Electronic Communications Code

⁵ Pursuant to Article 123 of the Code.

will help to evaluate comprehensively the full potential of these rules, including complementary legislations such as the GIA, in achieving the EU's digital objectives.

BEREC maintains that the current framework is positively contributing towards the achievement of the Digital Decade connectivity objectives.

Despite its diversity and unique challenges, Europe is making significant progress in developing high-quality connectivity infrastructures, highlighting the effectiveness of the EU's regulatory model.

In the light of the aforementioned considerations, BEREC presents its detailed expert view on the concepts outlined in the White Paper in the document annexed to this high-level paper. These can be summarised as follows:

1. Objectives and scope of the electronic communications' legislative framework

BEREC shares the view that the availability of high-quality, affordable, reliable, sustainable, open and secure connectivity for everybody and everywhere in the Union, including in rural and remote areas, is key for ensuring that both citizens and the overall EU economy benefit from the advantages of digitalisation.

BEREC underlines the role of electronic communication networks and services (ECN-ECS) regulation as a cornerstone for EU digital competitiveness. Fostering fair competition and safeguarding end users' rights is essential to ensure that connectivity is provided under the right conditions (i.e. availability, affordability, quality, transparency) and to offer choices that ultimately enable EU users and industry to access and provide digital enabled services and drive innovation in the digital sector. While recognizing the crucial importance of European competitiveness and economic security for a prosperous European digital sector, their formal incorporation into the policy framework should not undermine the currently pursued objectives, which include promoting connectivity, competition, and protecting end-users' rights. Overall, European competitiveness and economic security can only be fostered across the economic fabric, without being constrained to predefined undertakings, and without foregoing or deprioritising the other goals enshrined in the electronic communications' legislative framework.

It is also crucial to recognise the importance of identifying and addressing the specific challenges that national markets, including smaller ones, could face. A uniform approach could potentially overlook the specific needs and conditions of local markets.

BEREC welcomes the proposed introduction of the environmental sustainability objective in the sectoral legislative framework and the significant attention given to environmental issues in the White Paper. BEREC shares the EC's ambition to promote the development of sustainable networks and technologies in support of environmental transition goals. The potential of the digital sector to enhance sustainability in other sectors (e.g., energy, transport, construction, agriculture, smart cities and manufacturing) is indeed significant. At the same time, it is important to take into account the environmental footprint of digital technologies and minimize it. BEREC and its members have already undertaken significant work on the sector's environmental transition, which can provide valuable insights to the EC. BEREC remains committed to a productive collaboration to address the challenges that lie ahead. Formalising the environmental sustainability goal as a sectoral one would furthermore help meeting such challenges and enable NRAs to gather necessary environmental data to inform regulatory decisions.

BEREC is also of the opinion that a strategic Union-wide approach to security and resilience of critical digital infrastructures is essential for the EU's economic security and agrees that terrestrial, non-terrestrial and submarine connectivity solutions have a complementary role for maintaining uninterrupted services all around Europe and with the rest of the world.

BEREC supports the intention of reflecting on the appropriate scope of the framework to ensure that the definitions and categories of ECN-ECS remain fit for purpose and suitable to meet the relevant public objectives as well as legal certainty. Key technical and market developments such as the transition towards cloud-based networks, the evolution of interpersonal communication services (ICS) and the increasing role of content delivery networks (CDNs), content and application providers (CAPs) and operating system (OS) in the provision of ECN/ECS, including open internet access services, significantly impact the current scope and definitions in the electronic communications sector.

Over the last decade the electronic communications ecosystem has indeed changed significantly and is far more complex, now increasingly requiring input to cloud services to host switching capabilities, while traditional equipment manufacturers have partly also become

software providers and traditional communication services (calls and text messages) are now increasingly supplied via apps that provide their services “on top” of the telecom stack. The result of this is that digital services and infrastructure are increasingly intertwined, and the traditional telecom sector now only forms a portion of a much larger digital ecosystem.

An analysis of the relevance and appropriateness of the current categories of ECN-ECS seems important, to ensure that telecom regulations align with market and technology trends, and equivalent services are governed by uniform regulation. However, any further legislative or regulatory interventions within the wider digital domain and in the Computer Continuum, as outlined in the White Paper, will necessitate comprehensive discussion, in light of the interplay among the different pieces of EU legislation impacting the digital ecosystem.

With respect to internet openness, BEREC calls for maintaining such rules in the electronic communications legislative framework (i.e., the open internet regulation). It is crucial to ensure that the end-users’ ability to access and provide services and content of their choice is preserved, not only concerning the Internet, but also to the wider digital ecosystem and the Computer Continuum. This approach benefits both innovation and end-user welfare.

2. The single market for electronic communications networks and services: its specificity

The single market is one of the regulatory objectives of BEREC and its members. In the electronic communications sector, cooperation between the national and EU levels for market regulation has always been close and consistently focused on achieving the single market objective. Such efficient cooperation between national and EU layers is facilitated by a robust institutional framework, which includes instruments such as an EC’s veto power on market definition and SMP designation, a double-lock veto on NRAs’ proposed remedies, and a significant BEREC role in the process. Also, uniform EU regulatory measures are already in place at legislative level, such as those on termination rates, intra-EU communications, roaming and the open internet.

Overall, the electronic communication sector stands out as one of the most harmonised in the EU. While further EU harmonisation could be considered via targeted regulation to facilitate the deployment of specific services (e.g. addressing bottlenecks for cross-border provision of

IoT services or NFV, promoting openness and standardization of network APIs), from a market analysis perspective, broadband markets are predominantly sub-national. Consequently, the potential to identify transnational markets as envisaged in the Code, at the EC request, has not been applied so far.

Some of the measures proposed in the White Paper suggest a range of provisions aimed at further advancing the EU single market. This is inferred, *inter alia*, by the proposed one-stop-shop system for market entry of core networks and core network services providers, proposals around spectrum management and pan-European remedies.

Most of the strategies of ECN-ECS providers are, however, linked to national circumstances, given the local nature of networks and diverse market dynamics. In this respect, ECN-ECS providers have a clearly rooted national footprint driving company choices that would explain the, so far, limited cross-border operations or lack of cross-border services provision even when the same providers are present in different countries. The provision of ECN-ECS at EU scale, therefore, appears to respond mainly to strategic business decisions rather than to regulatory levers.

Against this backdrop, measures focused on regulatory centralisation appear as forced top-down initiatives aimed at prompting market consolidation without addressing a clearly identified underlying problem. Such measures could negatively impact competitive dynamics, potentially leading to reduced end user choice, lower quality and higher prices.

The positive market developments in terms of competition and consumer welfare achieved thus far are indeed not irreversible, should competition and innovation be hampered. Furthermore, focusing on scale that may lead to concentration of markets to a few large pan-European operators, as a means to allegedly increase overall European competitiveness, appears to be unjustified given the lack of empirical evidence supporting such a claim. In several Member States, it is indeed the small fiber operators active at subnational level that are heavily investing in infrastructure and innovations, competing with larger operators, and driving prices down, thereby benefiting EU citizens.

BEREC believes that European competitiveness can be effectively fostered by preserving and promoting competition across the digital ecosystem. Encouraging consolidation dynamics would not necessarily lead to a better or faster roll-out of digital infrastructure. In this context, it would be key maintaining a flexible regulatory toolbox for the NRAs.

BEREC is concerned about the EC's proposal of introducing the Country-of Origin approach to authorising market entry for core networks and core network services providers. This measure, which is unclear in terms of scope, does not address issues arising from the functioning of the General Authorisation scheme, which has so far proven effective in regulating market entry for electronic communications providers. The proposal also presents some risks such as encouraging forum shopping practices and posing challenges for NRAs in adequately protecting end-users and ensuring the reliability of their financial sources, as required by Article 9 of the Code. Jurisdictional complexities may also arise, depending on the overall applicable national legislation in the country of service or network provision. Furthermore, some Member States mandate that the critical network components must be located within their jurisdiction or must be capable of being relocated to their territory.

3. Market regulation

In terms of electronic communications market regulation, BEREC maintains that before putting forward any review of the current system, and especially such a significant rethinking of the current access regulation regime that proposes substantial shift from ex-ante to ex-post intervention, a thorough analysis of its functioning would have to be carried out.

BEREC believes that the electronic communications EU regulatory framework has proven effective and can be largely deemed successful in delivering adequate results to the market by the promotion of a competitive environment. Overall, EU citizens benefit from high-quality services at affordable prices, VHCNs are being deployed at an accelerated pace, while wholesale access agreements and partnerships between operators are increasingly established through commercial negotiations in a regulated framework.

The current ex-ante regulatory framework has proven to be a successful model to open the markets, fostering competition, encouraging investment and enhancing citizens' welfare. This could serve as a model for the broader digital ecosystem regulation. Any significant shift from ex-ante to ex-post intervention, or from national/local to pan-European regulation, must be accompanied by strong justifications. Such changes could potentially undermine the competitive process, particularly in rural areas, where the competitive dynamic brought about by regulation may be compromised if regulation is lifted. Furthermore, there is a risk to the

investment in VHCNs. Indeed, many operators have made significant investments in VHCN infrastructure while relying on the current regulatory framework, which is still relevant.

Regarding the shift from ex-ante to ex-post intervention, removing all markets from the Recommendation identifying markets susceptible to ex ante regulation at EU level is perceived to be unjustified based on the state of the EU ECN-ECS' markets. This is especially pertinent - considering the persistent competition problems in the wholesale broadband markets⁶. Such a move would restrict the NRAs' possibility to promptly and effectively intervene ex-ante when a market failure is identified in a specific market. This risk is particularly high in regions where economic constraints limit the viability of multiple infrastructures. Without appropriate ex-ante intervention tailored to local conditions, there is a heightened risk of monopolistic practices becoming entrenched. Hence, it is important that NRAs keep a flexible ex ante regulatory toolbox to address those situations.

Also, the introduction of standardised wholesale access remedies to be applied across the Union – as proposed in the White Paper - raises several practical implementation questions (see Annex for details), particularly due to the varying technical features of networks even at regional level within the Member States. In addition, if not allowing for local and national remedies, the proposed shift from data-driven regulation to the introduction of remedies by legislation is expected to result in less flexibility and adaptation to address bottlenecks and market barriers identified, an increased regulatory burden on undertakings, that would likely see their investment amortisation periods displaced, as well constrain NRAs' room to implement regulatory solutions, with a disproportionate burden on them too.

⁶ There are still 24 countries that regulate market 1 of wholesale local access provided at a fixed location, 20 countries regulating the previous market 3b on wholesale central access provided at a fixed location for mass-market products and 16 countries regulating market 2 of wholesale dedicated capacity.

4. The institutional layout in the electronic communications' sector

BEREC acknowledges that, given the evolving market and technological trends mentioned above and detailed in the Annex, some targeted adjustments to the sectoral institutional design may be considered, with careful consideration that structure should align with function. Therefore, it is essential to assess the potential adaptations to the current EU governance of the electronic communications sector, only after obtaining a clear understanding of the comprehensive changes in the goals, scope, concepts, regulatory tools, etc of a new regulatory framework.

In this context, BEREC considers it important to revisit the proposals previously outlined by the EC during the last review of the electronic communications' legislative framework. Specifically, it is critically important to establish at EU level a wider and harmonised set of regulatory competencies to be entrusted to NRAs. Such an initiative would significantly enhance the effectiveness of BEREC's actions in advancing the single market.

BEREC is committed to contributing to identifying the necessary refinements to the current system, advocating for the definition of a lean EU governance framework for digital matters.

In this regard, BEREC acknowledges the wide array of legislative instruments introduced by the EU co-legislators to deal with digital issues from different perspectives. BEREC is of the view that any new legislative intervention, especially in this domain, should be weighted also on the background of the relevant regulatory burden introduced on undertakings as well as competent NRAs. The current EU legislative acts dealing with digital matters establish a complex regulatory framework, where the enforcement-related burdens must be considered to ensure both legal coherence and certainty.

Against this backdrop, it may be prudent to delegate selected regulatory powers to the EU level with a view to handling EU-scale issues in the electronic communications sector, insofar as such issues call for a trans-national approach (as it is already the case for the DSA and DMA governance-related solutions in what concerns very large online platforms and very large online search engines), with the involvement of individual NRAs through a collective decision making process . However, BEREC reiterates the intrinsically local dimension of the electronic communications markets, as acknowledged in various parts of the White Paper.

Drawing on its long-standing experience in the electronic communications sector, including in relation to key drivers for infrastructural investment and ultimately the development of digital services, BEREC can contribute its expertise in close cooperation with the European Commission and the co-legislators, to shape the future of Europe's digital sector.. Additionally, BEREC can play a pivotal role in data collection (e.g., by developing regular long-term market monitoring activities on various issues raised by the White Paper) and in mapping connectivity indicators as set out in the Digital Decade Policy Programme.

BEREC is committed to fostering the development of digital connectivity in a consistent manner, in a both open and sustainable way, providing the necessary legal certainty across numerous EU legal interventions. Predictability is indeed crucial for maintaining operators' incentives to invest in digital infrastructures and services.

Therefore, BEREC stands ready to provide its expertise and advice to the EC and the European co-legislators to ensure that a suitable and robust regulatory regime is designed for the future of digital infrastructures, to the benefit of all the stakeholders involved in this transformative process.