

Public debriefing plan

First part

- Draft Report on the entry of large content and application providers into the markets for electronic communications networks and services
- Draft Report on cloud services and edge computing

Q&A session

Second part

- BEREC Opinion on Meta's draft reference offer to facilitate WhatsApp interoperability under Article 7 of the Digital Markets Act
- BEREC ongoing work on the high-level position on Artificial Intelligence
- Early call for inputs to the BEREC Work Programme 2025 and 12th BEREC Stakeholder Forum programme
- BEREC updates

Q&A session

Draft Report on the entry of large content and application providers into the markets for electronic communications networks and services

Digital Markets Working Group
Chiara Caccinelli (Arcep) and Margarida Melo Santos (ANACOM)

Overview

- The report gives an overview of the presence and impact of large CAPs on the markets for ECN and ECS in Europe. It presents their strategies and business models, the market dynamics, as well as CAPs' relations with traditional ECN/ECS providers in terms of competition, cooperation and interdependence
- It provides three case studies where significant investments by large CAPs are taking place i) CDNs, ii) submarine cables and iii) internet relay services
- It also presents some cases where ECS/ECN providers' ability to provide access to the network and/or to some functionalities and technologies may be affected
- It builds on a questionnaire sent to 9 major CAPs (Akamai, Amazon, Apple, Cloudflare, Dazn, Google, Meta, Microsoft and Netflix) and 3 workshops organised with stakeholders on submarine cables, internet relay services and cloud services

Main take-aways - CAPs' presence in EEA

Overview of 9 major CAPs' points of presence (= physical location or facility that houses network equipment (e.g. servers and routers) to interconnect with other networks)

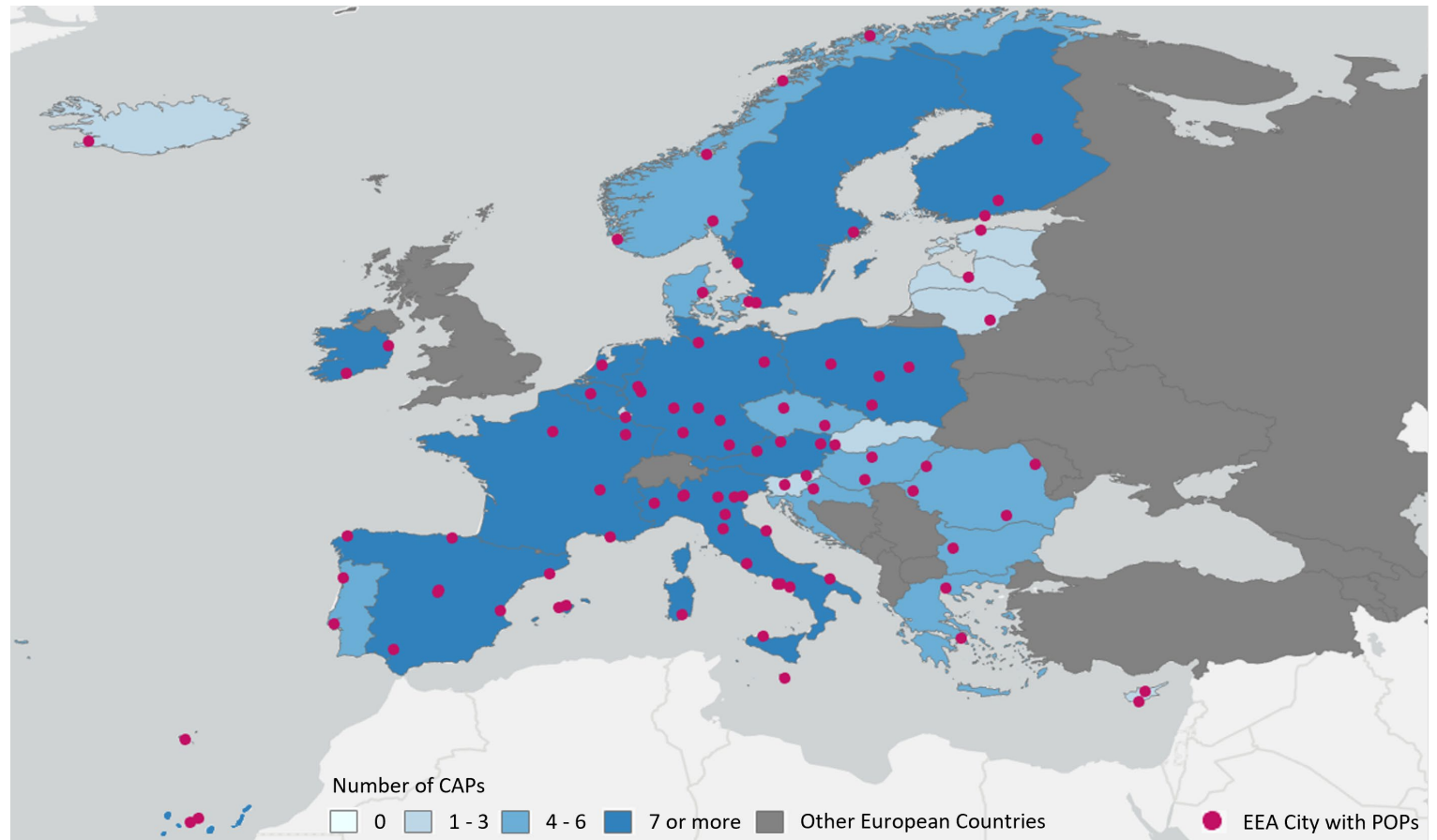


Figure: Nine large CAPs' presence and PoPs in EEA countries

Source: BEREC

Main take-aways - CDN

- The commercial CDN services market is concentrated around few players / concentration expected to grow significantly in the coming years
- Previously, large CAPs relied on commercial CDNs providers for their services, but in recent years they have been increasingly rolling out their own CDN infrastructure networks
- CAPs mostly use their CDNs for self-provision, but also partly provide CDN services to third-parties
- The roll-out of CDNs by large CAPs – often on the internet service provider (ISP)'s network (i.e. on-net CDN) – exerts competitive pressure on the business model of transit providers
- On-net CDNs allow to reduce capacity costs for ISPs by locating content closer to end-users

Main take-aways - Submarine cables

- The ecosystem has significantly evolved in the last years
- Large CAPs have transformed from mere direct or indirect customers of wholesale capacity, to the owners and investors in transport network infrastructure
- Large CAPs deploy submarine cables primary to their own use, while traditional ECS/ECN providers still play a key role on the transmission of data for other CAPs, connecting areas which may not be economically profitable
- Large CAPs' investments have limited impact on the global network resilience

Main take-aways - Internet relay services & potential restrictions

Internet relay services

- Used to ensure confidentiality by encrypting the data traffic directly on the users' devices or in the users' domain
- User uptake does not seem to be significant at the moment but such services deserve to be monitored because of their potential impact on traffic flow, on the utilisation of an internet access providers' current interconnections, and, as a consequence, on the decentralised approach of the internet architecture

Other potential restrictions by OS providers

- OS providers can sometimes restrict ECN/ECS providers' ability to correctly give access to services or to the network itself
- Typical examples include the access to 5G slicing functionalities or other restrictions to the provision of the slices, the potential implications of provider-specific solutions for standardised services (e.g. RCS), as well as the difficulties that some MVNOs and smaller mobile operators seem to face in setting up some functionalities of the devices or in configuring the network profile when eSIMs are used

Future work

- The increasing investment of CAPs in data centres in Europe and their impact on the provision of ECN/ECS
- Submarine cables: provide a detailed overview of the routes' level of congestion and resiliency in each country
- Issues raised by the MVNOs associations on potential restrictions imposed by OS providers (by means of questionnaires, interviews or workshops with MVNOs, OS providers and consumer associations) and the potential effects on IoT
- The impact of large digital platforms on business communications services (usually bundled with other services such as cloud and software) and the implications for the ECS providers

Public consultation

- Open to public consultation **from 13 March until 24 April 2024**
- Final version of the report and summary of responses to the PC expected for mid-October 2024

Draft Report on cloud services and edge computing

**Planning and Future Trends Working Group
Maria Ruiz Merida (CNMC) and Ola Bergstrom (PTS)**

Context

General objectives

- Understand technical and market developments and the interlink between ECN/S and cloud/edge services
- Support DA enforcement

Methodology

- Extensive desk research including
 - External study on the trends and cloudification, virtualization, and softwarization in telecommunications
 - Recent cloud studies by ACM, OFCOM and French NCA
- Interviews with providers and associations

Scope

- Cloud and edge services: definitions and taxonomies
- Cloud and edge services in the EU
- Cloud Market characteristics
- Interoperability, standards and switching
- Cloud and electronic communications interplay
- Regulatory considerations
- Future Trends

Next steps

- Public consultation until **24 April 2024** (extended deadline)
 - Structure
 - Views on the different parts of the draft report
 - 7 Questions on specific issues
 - Possibility to upload a document (proposals to be linked to specific parts of the report)
 - Not necessary to respond to all questions proposed to submit the contributions
- Final approval and publication, **October 2024**.
- Workshop on Digital Networks Developments: Players and Strategies. 14 March. 10:00
 - Keynote speech from BEREC Chair
 - Presentation of the [external study on the trends and cloudification, virtualisation, and softwarisation in telecommunications](#)
 - Presentation of BEREC draft report on cloud and edge computing services
 - Presentation of BEREC's draft report on the entry of large CAPs providers into the markets for ECN/S



BEREC Opinion on Meta's draft reference offer to facilitate WhatsApp interoperability under Article 7 of the Digital Markets Act

Digital Markets Working Group
Chiara Caccinelli (Arcep) and Margarida Melo Santos (ANACOM)

Context (1/2)

- On 6 September 2023, the European Commission (EC) designated six gatekeepers and 22 core platform services under the Digital Markets Act (DMA);
- Meta has been designated in relation to, among others, its number-independent interpersonal communication services (NICS) WhatsApp and Messenger;
- Meta was therefore required to provide interoperability with these services pursuant to Article 7 of the DMA, until 7 of March 2024;

Context (2/2)

- According to Recital 64 of the 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”;
- On 29 January 2024 the European Commission formally requested BEREC to produce an opinion on Meta’s draft reference offer (RO) for WhatsApp interoperability under Article 7 DMA;
- On 15 February 2024 BEREC Opinion was submitted to the EC;
- BEREC is currently reviewing Meta’s final reference offer which was published on 7 March.

Content (1/3)

In its report on interoperability of NI-ICS (BoR (23) 92, June 2023), BEREC had published a **list of minimum criteria for the gatekeeper's reference offer under the DMA**. BEREC built the opinion on Meta's draft RO around these minimum criteria, among which:

- **General remarks**: the RO offer should be assessed as regards its potential to reach the objective of reducing barriers to entry for alternative NI-ICS providers and allow for market contestability. The dialogue with the potential interoperability seekers of the RO is very important.
- **Description of the service and specification of the relevant basic functionalities and their features/facilities**: details which should be added concerning the technical definition and documentation of the relevant interfaces and standards to be used.
- **Reachability/discoverability and rules concerning opt-in/opt-out**: BEREC recommends that user consent to be discoverable should be explicitly given.
- **User location & consequences in case of roaming** are important aspects that a RO must include

Content (2/3)

- **Public availability:** the RO must contain all information necessary for any interoperability seeker to assess general, technical and commercial conditions provided, thus the complete reference offer must be publicly available and easy-to-be-found on the gatekeeper's and the EC's website.
- **Service level agreements and service level objectives:** a RO should set accurate Service Level Agreements (based on the internal Service Level Objectives if official objectives are not available).
- **Key performance indicators** are useful for a quantifiable and transparent measure of performance for specific objectives. They should be included in the RO, as well as in the compliance report that the gatekeeper has to provide.
- **Data security and data protection rules**
- **Security requirements**
- **Rules on dynamic adjustments** should be actively notified to all involved actors

Content (3/3)

- **Term, suspension, and termination:** the possibility for the gatekeeper to suspend interoperability should be exclusively limited to legal or technical reasons or else specific cases/exceptions foreseen in the DMA.
- **Indemnification**
- **Rules on dispute resolution between providers:** dispute resolution mechanisms are commonly used in electronic communications markets. While the DMA does not include a similar mechanism, it should still be possible to build on this sectoral experience.
- **Contact and technical support**
- **Updating mechanism for the RO:** updating mechanism for the RO should be introduced and aligned with other updates.



BEREC ongoing work on the high-level position on Artificial Intelligence

**Digital Markets Working Group
Chiara Caccinelli (Arcep) and Margarida Melo Santos (ANACOM)**

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Context

- On 9 January 2024 the EC launched two calls for contributions on competition in generative Artificial Intelligence (AI) and virtual worlds (VW)
- BEREC decided to reply with a high-level position addressing AI and VW with a more holistic perspective building on its broader expertise
- BEREC high-level position on AI will be **published on 15 March**

Content

- Short presentation of AI and VW **value chains**
 - **AI, VW and ECN/ECS**: i) AI and VW need good ECN/ECS to thrive (VHCN with low latency, cloud and edge computing) and ii) reference to report on AI in ECN/ECS
 - **Competition dynamics**: reliance on 4 essential inputs (computing power (and related cloud services), data, financial resources and technical expertise) gives structural competitive advantages. Plus, ability to engage in anticompetitive behaviour.
 - **“Openness” & end-users’ empowerment**: while beneficial in some cases, AI also has the potential to shape the way users access content online, thus potentially affecting their freedom of choice. End-users’ empowerment will be crucial
 - **Environmental footprint and sustainability**: while some AI-based services could enable more sustainable solutions across the markets, AI systems need to be sustainable to contribute to the green transition
 - Highlighting some risks related to **cybersecurity**
- Current legislations (e.g. DMA, DSA, Data Act, AI Act) can address some of the issues. BEREC will continue to cooperate with relevant institutions to tackle these new challenges

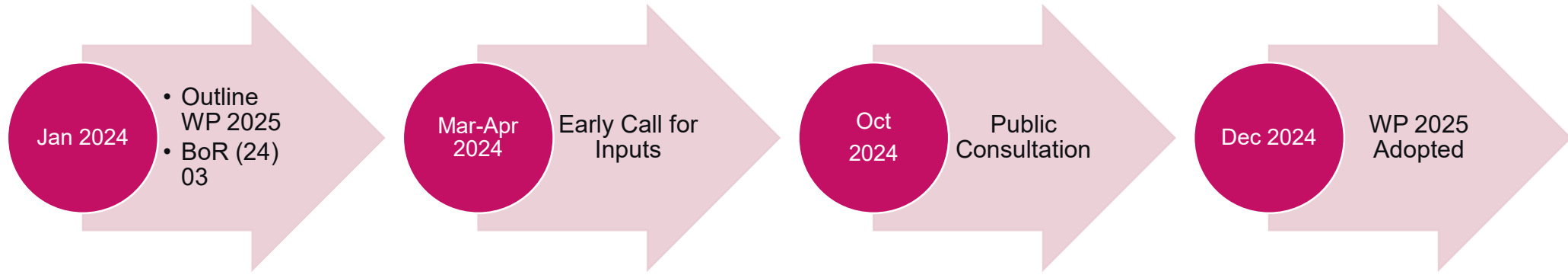


Early call for inputs to the BEREC Work Programme 2025 and 12th BEREC Stakeholder Forum

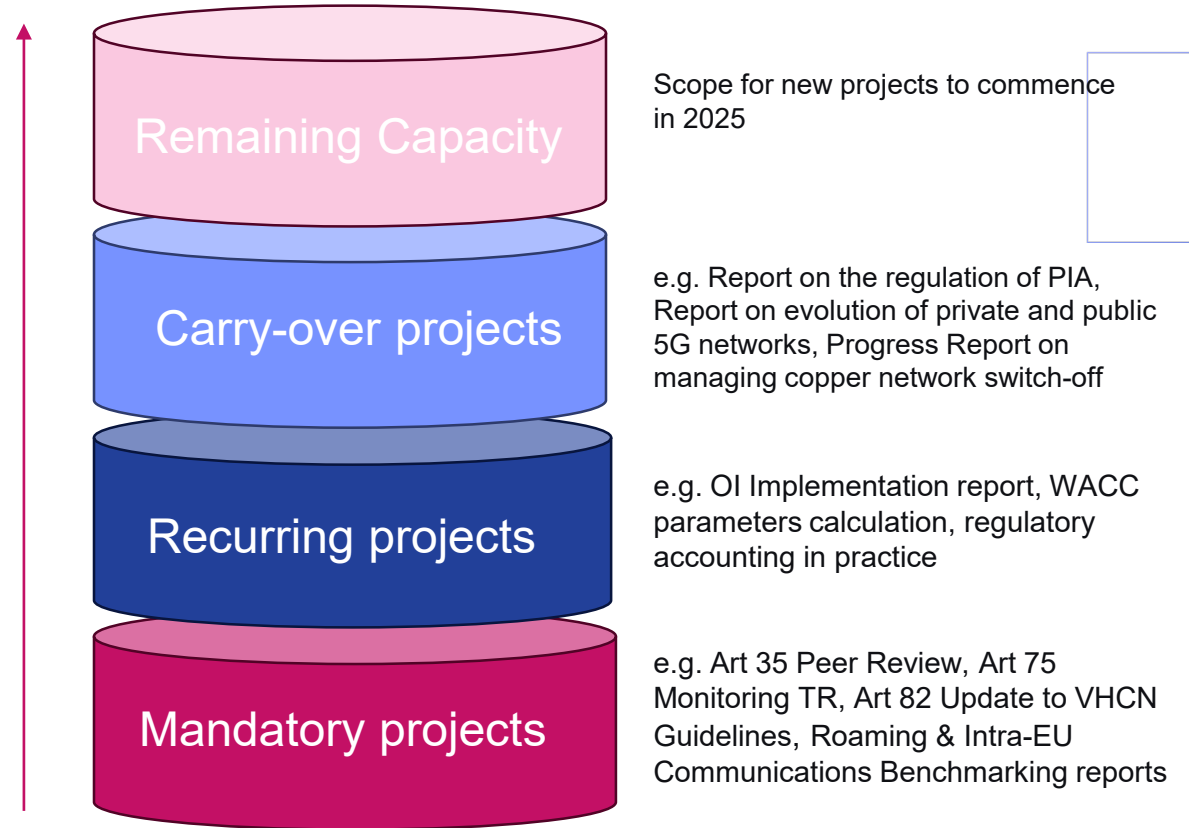
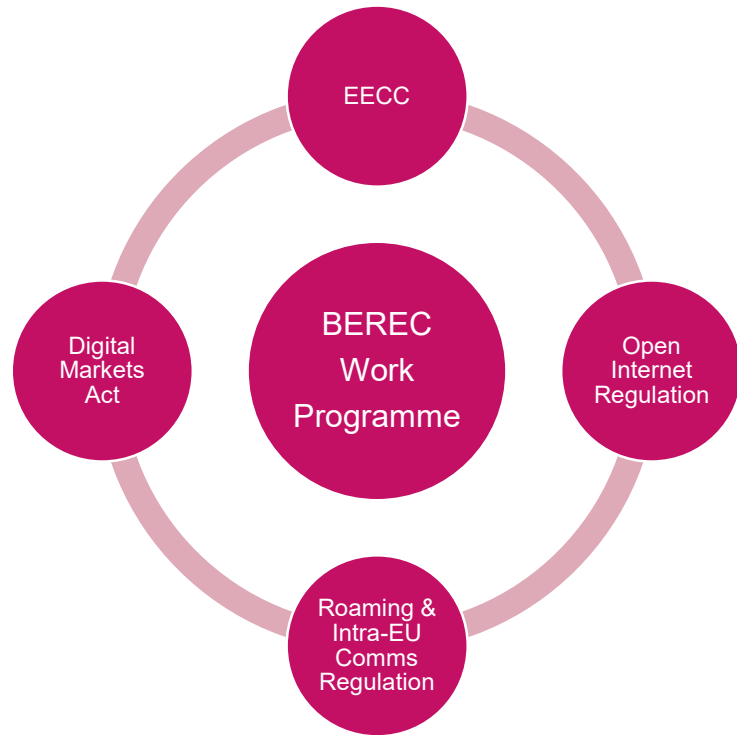
Incoming BEREC Chair
Robert Mourik (ComReg)

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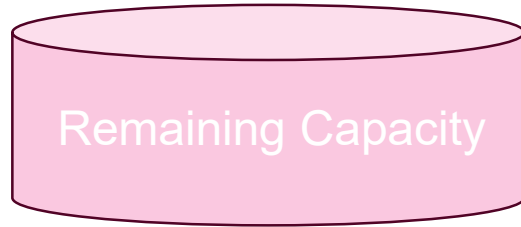
BEREC Work Programme 2025



Work Programme 2025



Work Programme 2025



BEREC's strategic priorities are:

1. Promoting full connectivity
2. Supporting sustainable and open digital markets
3. Empowering end-users

Format of contributions

- The title of the proposal,
- Which of BEREC's high-level strategic priorities, set out in its Strategy 2021-25, the project best addresses,
- A short description of the project, which will allow BEREC to adequately consider its merits and any particular issues/developments the project is to address,
- The preferred format of BEREC's output, e.g. a report, workshop, guidelines, etc.
- The name of the proposer, the organisation he/she represents and relevant contact details.

Stakeholder Forum - Tuesday 26 March 2024

- 09:00 - 13:00 **Meet & Greet session in the morning**
- 13:45 - 14:15 Opening Remarks & Stakeholder Engagement (Q&A - Chair and Incoming Chair)
Presentation on BEREC Outline WP 2025 and Call for stakeholder's inputs
- 14:15 - 14:35 ***How to master Europe's digital infrastructure needs?***
Keynote speech – Roberto Viola, Director General, DG Connect
- 14:35 – 15:35 Panel discussion:
 - Kamila Kloc, Director, Digital Decade and Connectivity, DG Connect
 - Prof Konstantinos Masselos, President EETT and BEREC Vice-Chair 2024
 - Richard Feasey, Independent industry consultant
 - Ingrid Malfait-Guilbaud, Director European Affairs, Iliad Group
 - Carlos Rodríguez Cocina, Director of EU Affairs & Head of Brussels Office, Telefonica
- 15:35 – 16:00 Coffee break

Stakeholder Forum - Tuesday 26 March 2024

16:00 – 17:00

Panel 2 – *The increasing importance of security and resilience in digital infrastructure*

Scene setting: Mr. Oleksandr Zhyvotovskiy, Chair of the NCEC

Perspectives from:

- Mr. Oleksandr Zhyvotovskiy, Chair of the NCEC
- Sheila Becker, Head of Network and Information Systems' Security, ILR, Luxembourg
- Ian Levy, Distinguished Engineer and VP, Amazon
- Kate Labunets, Assistant Professor, Department of Information and Computing Sciences, Utrecht University
- Jaakko Wallenius, Vice President, Chief Security Officer, Elisa Oyj

17:00 – 17:10

Closing Remarks

17:10 – 19:00

Networking reception

Stakeholder Forum - Tuesday 26 March 2024



12th BEREC Stakeholder Forum

Registration form

Hotel Le Plaza Brussels

Please choose your type of participation: *

- I will attend the 12th BEREC Stakeholder Forum in person
- I will follow the 12th BEREC Stakeholder Forum online

This event is free of charge.



BEREC updates

BEREC Chair 2024
Tonko Obuljen (HAKOM)

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Other recent BEREC documents

During the 58th BEREC Plenary meeting the following documents were also approved and published on our website:

- ✓ Summary Report of the workshop on Internet of Things: perspectives and competition
- ✓ 30th BEREC international Roaming Benchmark Data Report (including Annex on Western Balkan countries)
- ✓ BEREC Report on the outcome of the public consultation on the draft BEREC Report on Member States' best practices to support the defining of adequate broadband internet access service (IAS)
- ✓ BEREC Report on Member States' best practices to support the defining of adequate broadband internet access service (IAS)
- ✓ BEREC Report on the outcome of the public consultation on the draft BEREC Guidelines detailing Quality of Service (QoS) parameters
- ✓ BEREC Guidelines detailing Quality of Service (QoS) parameters

BEREC updates

- EC White paper “How to master Europe's digital infrastructure needs?”
- BEREC study trip to Brazil

Public consultations

Document title	Deadline
Early call for input to the BEREC Work Programme 2025	9 April 2024
Draft Report on the entry of large content and application providers into the markets for electronic communications networks and services	24 April 2024
Draft Report on cloud services and edge computing	24 April 2024

Upcoming events

- **14 March 2024** workshop on Digital Networks developments: players and strategies (virtual)
- **26 March 2024** 12th BEREC Stakeholder Forum (hybrid, in Brussels)
- **9 April 2024** workshop on End-user rights (hybrid, in Brussels)
- **11 April 2024** workshop on ex ante regulatory experience concerning commitments, wholesale-only undertakings and commercial agreements review (hybrid, in Brussels)

Let's stay in touch!



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