



Huawei Submission to the public consultation on the BEREC Strategy 2021-2025 and BEREC WP 2021

BEREC Strategy 2021-2025

Huawei welcomes the opportunity to provide early inputs towards the draft BEREC Strategy 2021-2025 and would like to put forward some proposals based on our views on the outline for BEREC Strategy 2021-2025. We have chosen to comment not on all strategic priorities or work items but to focus our submission on those which are of higher relevance for Huawei:

As an introduction Huawei wants to support basic changes made to the BEREC Strategy. We see the new 5 years term for the Strategy, in line with the legislative cycle of the EU institutions, as a positive step forward showing that BEREC is acting embedded in the wider European institutional ecosystem. Also, the enhancement of the mission statement from the telecom markets towards larger digital markets rightly points out the technological change and development having huge impact on the sectors BEREC is responsible for.

Market, Technological and Policy Developments

BEREC describes very well the market, technological and policy developments in its new draft Strategy. In particular 5G, digitalization of society, new concentrated market structures with a view to digital platforms, new technologies like AI and big data accompanied by meta-developments like climate change pose significant challenges to an institution like BEREC, requiring appropriate and sustainable answers.

BEREC should impose stricter and more forward-looking building regulation to guarantee that all new homes have FTTH-readiness to support gigabit broadband. The housing developers must work with network operators to install internet speeds of over 1,000 megabits per second (Mbps) in new-build homes, and set the cost cap of per dwelling, which would be relatively low cost in the context of total construction costs. The involvement of ETSI and other organizations at a regional level would be helpful.

As stated in the draft strategy, "5G is expected to create an ecosystem for technical and business innovation involving vertical markets...an appropriate



regulatory framework needs to be in place as well, e.g. spectrum regulation, access regulation to ensure access to sites, infrastructure sharing etc.”

- 3GPP R16 will be released in the mid of 2020, based on the past experience, mature industry vertical applications will emerge within 2 years, a supportive policy would be very important for R16 massive deployments.
- Hence we believe “regulation streamline “across different regulation bodies, for example, a consistent policy and regulation across telecom, transportation, vehicle industry would be fundamental for 5G assisted autonomous driving. We would encourage BEREC to organize such discussion session and promote best practices from member states.

Network slicing will play a key role for operators to engage industry verticals and provide SLA based industry services. However, we notice there could be potential discordance with article 3.1 of the “European Net Neutrality Rules” . It would be highly appreciated if BEREC could organize continuous discussions on the compliance of network slicing and open internet regulation, given the speed of innovation and technological developments. BEREC should be closely monitoring the situation together with operators and suppliers.

We agree that artificial intelligence (AI) will impact the telecom industry in various aspects. Operators use AI technologies to understand network events in real time and dynamically optimize their networks for service delivery. Supporting intelligent operation and maintenance through AI can help operators to solve problems more efficiently and greener, such as real-time anomaly detection, locating problems, error diagnosis, and troubleshooting. BEREC needs to create a better regulatory environment to drive the new application of AI moving forward.

However, it may need more clarity that how AI technologies will be employed “in regulated areas, potentially affecting efforts in net neutrality, end user rights, data protection, competition (in terms of data economy) or security”. According to the report from Tractica/Ovum, the leading AI application in the telecom industry will be network or IT operations monitoring and management, virtual digital assistants (VDAs) for customer service and marketing, intelligent customer relationship management (CRM) systems, customer experience management, and cyber security. These AI applications will help operators deliver better solutions and meet their regulatory



obligations more effectively, instead of negatively affect the efforts in compliance. Also, an isolated regulatory framework for AI-based telecom products would place barriers to a prosperous telecom market, which is becoming the largest AI market forecasted by Tractica/Ovum, with telecom AI software revenue growing from USD315.7 million in 2016 to USD11.3 billion in 2025 at a compound annual growth rate (CAGR) of 48.8%. Huawei supports BEREC's work on AI and would like to encourage BEERC to do more and proactively to support policymakers to find the right regulatory framework for AI.

We suggest BEREC could measure to expand the coverage of broadband, 4G, and 5G, especially in the rural areas are crucial to build an inclusive and sustainable digital society. "Making sure that everyone has the ability and capacity to participate in the digital society" has become one of BEREC's strategy transiting to a wider digital ecosystem. In recognition that a sustainable digital society will only be possible with the inclusion of all citizens, Huawei is committed to bring digital to every person, home and organization for a fully connected, intelligent world through our TECH4ALL initiative. We believe that along with building network infrastructure and applications, initiatives to bridge the huge digital divide between different regions and groups of people are equally important. Therefore, measures to improve the digital skills of individuals and society as a whole, and help SMEs enhance digital capabilities are expected. We can work together with BEREC and support rural connectivity. Huawei would like to encourage BEREC to further work on sharing of infrastructure and enabling future gigabit connectivity based upon hybrid of fibre and 5G-empowered fixed wireless access to the premises.

BEREC should publish a report in 2021 studying how the advanced ICT technologies like fibre and 5G could contribute to net zero. Standardized performance and sustainability indicators for technology like fibre or 5G are desired in assessing the way forward to climate neutrality. The EU Green Deal and BEREC have recognized the importance of the ICT sector in achieving climate neutrality and digital technologies are a critical enabler for pursuing the sustainability goals across different sectors. We share the same visions: according to Huawei GIV projections, in 2025, average carbon emissions per ICT connection will drop to 15kg, a massive decrease of 80% relative to 2015 levels. Thus, Huawei has constantly improved its products and technologies to be more energy efficient so as to reduce carbon emission



and to contribute to environmental sustainability. In terms of achieving a sustainable digital market, encouraging investment as well as competition on energy efficiency technology and exploring innovative ways in which the telecoms and digital sector at large can help mitigate the impact on climate change are highly desired.

An adequate and smart infrastructure ensuring optimal interconnection and sectoral integration across Europe are needed. Institutional cooperation with the European Environment Agency is desired. In order to optimize the digital technology's potential as an enabler contributing to environmental sustainability, an adequate and smart infrastructure ensuring optimal interconnection and sectoral integration across Europe are needed. Increased cross-border and regional cooperation will allow reaping the full benefits of the modernization and transformation of Europe's economy and reduce carbon footprint at the same time. Also, institutional cooperation with internal agency like European Environment Agency could further assist BEREC on adding an environmental focus to its work streams.

EU's newly Circular Economy Action Plan recognizes ICT sector as the priority in achieving net zero in 2050. We agree with the vision and we believe that the plan should ultimately pursue a balanced approach in developing a fully digitalized society. Therefore, it is crucial to substantiate duties along the whole value chain contributing environmental sustainability. Primarily imposing obligations on telecoms or supplies would be neither effective nor justified.

Strategic priority 1: Promoting full connectivity & Institutional cooperation

- The success for full-fiber networks requires long-term and broader thinking in order to achieve a vision of a simple, open and level playing field for diversity and innovation. If Europe truly aspires to be a digital player, as opposed to simply being a digital consumer, then digital infrastructure policy needs to set its sights far further out than 2025 targets for coverage at 1Gbit/s, including how to improve the coverage and speed in rural areas.
- Bandwidth demand will move on over time, but fibre itself is a one-off. BEREC should encourage as far as possible the full panoply of future-



looking technologies (NG-PONs, 5G/6G, Wi-Fi 6/7 and their successors), and the symmetric upstream and downstream FTTH gigabit bandwidth in the digital ecosystem. This is likely to be better achieved by less agnosticism about the type of infrastructure deployed.

- There should be joined-up thinking between telecoms/ICT and environmental policy. The EU's new Green Deal sets, by global standards, ambitious carbon-neutrality goals. During 2019, clear signals were given that telecoms operators in Europe are getting more serious about greenhouse gas targets and the circular economy. There are few examples of green clauses in telecoms policy and planning, or in national broadband plans. Creating and managing duct infrastructure could remove barriers to the deployment of other environment-friendly non-ICT infrastructure in the future. Pro-competition policy should not short-sightedly delay the decommissioning of older and inefficient telecoms networks. FTTH networks can make a major contribution to operator efficiency, and a combination of obligations and rewards for those that deploy FTTH should be countenanced.
- We highly appreciate BEREC's work on connectivity, with European Union's 2025 target of urban and transport route 5G coverage, this would be fundamentally important to the development of 5G and digital society, however, to mitigate "digital divide", **it would be of the same importance for rural 5G coverage in the long term.** BEREC's work on promoting rural 5G coverage would echo industry's orchestration and support.
- It would be highly appreciated if BEREC could help to reduce 5G deployment barriers as the following, **which should be priorities for 5G development in the coming 1-2 years.**
 - **EMF:** During the last 2 years, we observed different response on 5G EMF issue, it would be highly appreciated if BEREC could support public health organizations work on EMF issue, to provide science based facts and actual network based test results, and promote best practice from member states. Plus, support European commission's EMF recommendation to update as ICNIRP latest guideline on EMF 2020. BEREC could support harmonized EMF limits within EU single digital market

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- and promote a standard EMF measurement methodology. This could be done by issuing a report including recommendations.
- **Site and facility access:** We welcome BEREC's work "to prevent potential problems in terms of lack of coverage and refusal of access to bottleneck facilities. Duct and pole access and dark fiber may also become increasingly relevant.", since this would be utmost important for roll out of 5G networks. For example, European Commission's work on permit-exempt deployment regime for small-area wireless access point would greatly reduce barriers for hotspot network deployment. BEREC could promote the best practices in the member states and assist more such opening policy for the Telecom industry.

Spectrum: Unfortunately enough, the BEREC Strategy and the WP outline contain little to nothing about spectrum, despite frequencies being a major factor for competition in the telecom sector with high impact on the ability to invest for operators. Thus, it is of utmost importance that BEREC is closely cooperating with RSPG – based upon the MoU signed in 2019 – in particular on spectrum assignment mechanisms. We recommend that 5G spectrum license fee should be managed in a reasonable and economically viable scale, promotion of best practice in different countries to ease financial burden on operators, and make 5G business case viable, and support European 5G target to the benefit of EU citizens. More work needs to be done by BEREC in that respect to secure a competitive and healthy investment environment for telecom operators.

- During the entire process of EU 5G cyber security recommendations, from the 5G risk assessment reports submitted by member states in July 2019 to the 5G Cyber Security Coordination Risk Assessment Report released by the EU in October, 2019, to the 5G Toolbox released by NIS CG and the implementing requirements for the EU toolbox released by the European Commission in January 2020, each phase achievement is closely related to the close cooperation of multiple parties, sufficient internal discussions, and rational thinking and decision-making. ENISA, NIS CG, BEREC, and all member States have made great efforts. Huawei welcomes Europe's decision, which enables Huawei to continue participating Europe's 5G roll-out. This



non-biased and fact-based approach towards 5G security allows Europe to have a more secured and faster 5G network.

- Huawei welcomes BEREC's continued cooperation with ENISA and NIS CG to further implement the European Commission's 5G cyber security recommendations, assist in the toolbox development process, promote the toolbox implementation in all member States, to ensuring that future network technologies are in line with European values and interests (security, protection of the end-user, environmental challenges etc.).
- Huawei believes that implementation by EU 5G toolbox should not conflict with existing legislation in the policy area of trade, telecommunications, and cyber security. Implementation of the EU 5G toolbox should avoid any ambiguity and instead follow a pragmatic approach to risk mitigation measures based on the principle of 'zero trust' to offset any possible influence from a foreign government.
- Huawei advocates that Governments of EU member states develop impartial and non-discriminatory cybersecurity laws and regulations as well as technical standards. Governments of EU member states should support greater public-private sector collaboration that promotes the widespread acceptance and implementation of international norms of responsible behavior as well as confidence-building measures in cyberspace.
- Huawei fully agrees with the points of Mr. President in the Chair's webinar on BEREC Strategy 2021-2025 and Work Programme 2021 that security and 5G should not be only on the information and experience sharing, but also safeguarding competition. Competition has to be sustainable otherwise it is not competition. In the EU 5G market, Huawei's participation will inject more vitality into the full market competition. Huawei has been in Europe for almost 20 years and has a proven track record on security. We will continue to work with European government and industry to develop common standards to strengthen the security and reliability of the networks.
- BEREC should play a more active role regarding cybersecurity, which goes beyond information and experience sharing. BEREC should be



the informed voice of reason and a safeguard for proper implementation of the toolbox, in order to avoid overshooting action that will distort and weaken competition in the electronic communication sector and beyond in the digital markets. All the measures have to be implemented in a consistent way, as there is a tendency towards multiplications of efforts and complex regulations. BEREC has to play an important and active role in this context because otherwise competition and finally end-users will be negatively impacted.

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Strategic priority 2: Supporting sustainable and open digital markets

- Regarding the digital market, we suggest that BEREC can adopt practical measures, such as establishing organizations, providing open access to data, and building up ecosystems.
- We think that the overall role of BEREC in connection with the digital markets is to ensure a level-playing-field between the broader digital sector and the telecom sector as well as an open ecosystem. BEREC should be active there without overshooting or producing “solutions in search of a problem”. Therefor BEREC not only may, but must investigate data-centric approaches and data-driven regulation principles to ensure a level-playing-field in the interest of a strong European Telecommunications industry in converging digital markets. BEREC has to safeguard that the rules for digital services are consistent with the rules for the telecom industry.

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BEREC WP 2021

Huawei welcomes the opportunity to provide early inputs towards BEREC's Work Programme 2021 and would like to put forward some proposals based on our views on the outline for BEREC WG 2021:

All of us recognizing ICT's importance to economical and societal development of a country, and the infrastructure connectivity is the Cornerstone of ICT development. The development of ICT and relevant infrastructure connectivity cannot be realized by solely relying on participants within the ICT ecosystem, such as network element providers, network operators, downstream platform, application and content providers. Instead, it requires support from the government in three major aspects: investment, innovation, as well as competition. The government plays a vital role in forming a favorable environment to enable the fast and healthy development of infrastructure connectivity.

BEREC can do a lot in facilitating investment and fast deployment of VHCN in Europe. Such work should always happen in close cooperation with all stakeholders. This is why Huawei welcomes the commitment of BEREC "to continuously improving its interaction with stakeholders to ensure that its output stays relevant." We also support practices like 2-stage consultations, which include an early input by stakeholders followed by a public consultation. On this basis we want to make some suggestions to the work items that have been proposed by BEREC itself in the Outline BEREC Work Programme 2021 and presented during the Webinar of the Chairs 1 April:

- **A consistent approach to migration & copper switch off**

We see it as high priority that BEREC is following up on its workshop about the migration from legacy networks. This topic needs careful consideration in order not to frustrate investment made and to ensure fair competition in this sensitive transition period. A close interaction with stakeholders has to be guaranteed to avoid distortions in the market.

- **Workshops on NRA experience with 5G city networks**



This topic is highly relevant and should be made a priority of BEREC. Huawei could contribute to the workshop on 5G city networks to give input about technical solutions and practical barriers to deployment etc. Based upon such a workshop, necessary regulatory measures could be defined to support 5G roll-out.

- **Report on regulatory treatment for backhaul**

Backhaul infrastructure is key for enabling 5G and VHCN deployment in non-densely populated areas. BEREC plans to give guidance on how to apply in market analysis the relevant provisions regarding backhaul. This is of high relevance for the market to facilitate deployment. If support needed Huawei can contribute with its expertise in such a report, that should be done with a maximum involvement of all stakeholders.

- **Report on key elements of the functioning of the EECC**

BEREC wants to monitor the impact and effectiveness of the newly introduced provisions of the EECC, with a view to collecting data for future reviews. As the EECC clearly wants to drive the deployment of VHCN, such a monitoring would help drawing the right conclusions from the day-to-day application of the framework and support a faster roll-out. Therefore we would see this as a priority for BEREC's work programme.

- **Economic analysis of digital markets and Internet value chain**

Despite not being further specified this work is based upon previous work by BEREC on e.g. the impact of devices on the open use of the Internet and the economic features of digital platforms. This is of course highly relevant to a wide range of industry players. This work should only be done by BEREC in close cooperation with relevant stakeholders. Emphasis should be laid on sufficient opportunity for input by stakeholders already early stage e.g. in form of workshops, questionnaires and in a second stage via a public consultation.