BREKO
German Broadband Association

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Via email: PC_Guide5G@berec.europa.eu
BEREC
EWG Working Group, Co-Chairs

31 July 2020

Contribution to the public consultation on the draft BEREC Guide to the BEREC 5G Radar and 5G Radar

Dear Sir/Madam,

BREKO is the leading German fibre association and represents the competitors. It has more than 360 members composed of networks operators and providers, municipal utilities, and private companies. BREKO's members are responsible for 60% of new fibre deployment in the German market and carry the lion share in the achievement of the German 2025 connectivity targets. Moreover, with annual investments of more than € 2 billion BREKO members make a significant contribution to the European market economy.

Complementary to our response on the BEREC report on the *impact of 5G on regulation and the role of regulation in enabling the 5G ecosystem* from September 2019, we would like to take this opportunity to comment on the BEREC 5G Radar and to share our perspective from the competitors in the German market.

While BREKO concurs with BEREC that many aspects of regulation are involved in the 5G ecosystem, we would like to emphasise the substantial role of fibre networks in enabling technical and business innovation in various vertical markets, i.e. energy, government, health care and interconnectivity. Fixed Very High Capacity (VHC) networks and in particular fibre networks are the

necessary prerequisite for many of the proposed 5G services and use cases, which make it a major driver of economic growth and serving societal needs. As such, it is important to prioritise the accelerated roll-out of fibre to achieve the envisaged 5G ecosystem within the given draft strategy for 2021-2025. That being said, BREKO considers FTTB/H networks, which have the highest technological performance standards, to be genuine fixed VHCN according to BEREC's VHCN guidelines. Consequently, the roll-out of FTTB/H networks must be a cornerstone of 5G regulatory framework.

The following part of this submission will provide BREKO's feedback on some of the regulatory aspects identified by the 5G report with regards to their relevance and timing.

1. **Network and application security:**
   BREKO fully agrees with BEREC on the fact that 5G networks and applications running over 5G networks are vulnerable to exploitation. In order to limit serious damage to critical infrastructure and services, BREKO suggests focusing on decentralised and fixed networks. A wider range of system manufacturers and network operators can make a significant contribution to cybersecurity. Moreover, decentralised and fixed networks are less susceptible to external interventions and the potential damage in the event of a successful cyber-attack can be limited, because it does not entirely depend on a single network. Considering the fact that legislative initiatives already exist on a national level, it is likely that this issue will be addressed relatively soon. Therefore, **BREKO concurs with BEREC's assessment regarding the timing of 2021, however, disagrees on its relevance, which we give a medium rating**.

2. **New bottlenecks, dominance and monopolies:**
   BREKO concurs with the statement that 5G use cases may increase dependency on data for market access, which may lead to network effects creating or strengthening dominant players, i.e. digital platforms, who have incentives to frustrate access sharing of the proprietary data. Thus, it is important to give network providers the necessary tools to safeguard the functioning of their infrastructure. This could be done by minimising their liability associated with illegal third-party content, which would ultimately increase the trust in digital services. Furthermore, future legislation must also ensure fair market conditions, which support all market participants, in particular competitors, who are often the drivers of innovation and accelerate the deployment of digital infrastructures. Taking these factors into consideration, **BREKO agrees with BEREC on this topic's timing by 2023, however suggests assigning it moderate/medium relevance.**

3. **Interoperability:**

In our opinion, a higher number of service providers and localised networks will increase the importance of interoperability of networks, especially concerning fixed networks and end user connectivity. A lack of technological compatibility could lead to negative effects on competitions on the retail and the wholesale level alike. That being said, interoperability will allow verticals to easily switch between new service providers, therefore, it is essential that new standardisation processes consider the important role of fixed networks, which can reliably provide high bandwidth, especially in comparison to all other technologies. This will lastly influence end-user choice and the way customers select an adequate network provider without prevalent issues such as operator-lock-in. As a result, **BREKO evaluates interoperability as moderately/highly relevant with a timing until 2023.**

4. **Backhaul, fronthaul, anyhaul:**

BREKO welcomes BEREC's key focus on fibre roll-out, which is the only reliable foundation for mobile technologies and its applications. Hence, NRA's should be encouraged to primarily strengthen the promotion of fixed-VHCN. Given their performance and the performance thresholds, which have previously been defined by BEREC in the guidelines on very high capacity networks, 5G technologies can only be considered supplementary to fibre networks. Moreover, there will be an increased demand for bandwidth in the future, that includes connections to the Radio Access network (RAN) and the x-haul respectively. Only fibre connections are capable of meeting these high-performance standards, which will be demanded from customers and IoT. A timely roll-out of fibre is thus a prerequisite for the success of a functioning 5G ecosystem. To accelerate the deployment of fibre infrastructure it is necessary to incentivise further infrastructure sharing and open access to fair market conditions. For this reason, regulators should prevent the potential market foreclosure from dominant network operators. With that in mind, it is important to safeguard existing and emerging market dynamics and to encourage access offers and the negotiated deployment of fibre.

The FTTB/H connection of 5G base stations is a functioning market that should not be impaired by regulation. Already today, there is large interest among FTTB/H network operators to cooperate with 5G network operators and the connection of 5G base stations is a crucial part of their business models. There is a balance of negotiation power between operators, which under no circumstances should be distorted by introducing new regulatory measures. Moreover, emerging markets should not be distorted prematurely, as this would remove incentives to build fibre networks, which constitute the indispensable foundation for the 5G roll-out and the provision of 5G services. In other words, imposing regulatory measures on FTTB/H networks under construction, would be to the detriment of fibre rollout and thus,

would not promote but considerably hinder the connectivity of VHC-networks. Consequently, **BREKO agrees with BEREC on this issue's high relevance, as it is necessary to encourage and strengthen the deployment of fibre networks by 2021/22**.

5. **Small cells:**

   BREKO acknowledges that the connection of small-area wireless access points or small antennas is a crucial part of the timely deployment of 5G networks. However, as already mentioned above, an existing fibre network infrastructure is a precondition for small cells to deliver their high-capacity, increased coverage and advanced connection speeds. We agree with BEREC's stipulated assessment that the roll-out of small cells is very costly and that this will require initiatives to seek means for a cost-effective infrastructure deployment, such as infrastructure sharing and co-investment initiatives. More specifically, the deployment of small-area wireless access points will require an increase in shared-use and co-deployment of telecommunication infrastructures. In that sense, BEREC will have to prevent overregulation and protect existing deployment incentives. In Germany, these tools already are an essential part of the competitor's deployment strategy, playing an important role in meeting the national connectivity targets. Furthermore, small cells should only be considered as a suitable alternative to connect individual households, when fixed networks are not financially and economically feasible**. BREKO concurs with BEREC's rating, which is highly relevant and a timing until 2023.**

6. **Coverage and state aid:**

   BREKO fully supports the extension of broadband high-connectivity coverage to rural areas and would like to underscore the crucial role BREKO members play in connecting white spots and increasing coverage in Germany. Integral to the success of this endeavour are state aid programmes which prioritise and encourage economically viable deployment. The introduction of new requirements associated with 5G should therefore not be to the detriment of existing fibre funding schemes. This would otherwise disincentivise future projects and curb the roll-out process in general. Additionally, new state aid programmes in other technologies rather than fibre should be required to consider existing coverage in order to prevent double coverage in specific areas. **BREKO gives state aid to meet coverage targets a high relevance and a timing until 2022.**

7. **Fixed-Wireless-Access:**

   BREKO recognises the importance of Fixed Wire Access (FWA) as one of the early 5G use cases and supports the competitive offer of FWA services. However, FWA should be considered as complementary to fibre networks. Mobile network technologies just like any other non-FTTB/H network, cannot generally be considered equivalent to fixed broadband. The BEREC guidelines on VHCN set out the criteria and QoS thresholds which determine a VHCN. BREKO highlights that FWA should be referenced with the parameters for fixed VHCN (criterion 3). Thus, it cannot be assumed that the technological developments of FWA will enable mobile networks to match the expectations that customers already have with regard to fixed broadband services. Furthermore, BEREC should not prematurely consider mobile networks as substitutable with wired networks since they legitimately outperform fixed networks with regards to their speed and reliability. This is not expected to change in the short and medium term. Rather, NRAs should have the authority to decide on a case by case basis whether an FWA-network fulfils the requisite criteria to be considered equivalent to a fixed VHCN. For these reasons, **BREKO gives the topic of FWA a high relevance and a timing of 2022-23.**

8. **Sustainability:**

   Overall, BREKO fully agrees with BEREC that digital technologies have a major contribution to the success of sustainability. High performance digital infrastructures enable resource and energy efficiency and play a key role in achieving the climate and sustainability objectives of the European Green Deal and the transformation to the circular economy. That being said, BREKO contends that 5G will only develop its full potentials concerning sustainability, if it is based on an extensive fibre infrastructure. Hence, it cannot be assumed that 5G is the most sustainable alternative of all technologies. In fact, fibre networks must be a core component of any sustainable digital solution, since fibre is the backbone of 5G. Due to these long lasting effects on the regulatory framework, and because fibre networks also provide the highest bandwidths, it is of utmost importance to prioritise fibre to ensure long term technological sustainability. Moreover, fibre infrastructures will continue to set the standards for mobile communications for the unforeseeable future. They consume less energy than their counterparts over their comparably long-life span and require low maintenance, leading to less material usage over time. Fibre networks should be fully used by open access agreements to avoid the deployment of parallel infrastructures and 5G operators should avoid double coverage. This approach results in higher efficiency and a decrease in energy and recourse. Moreover, it prevents rebound effects because energy consumption is optimally managed. **BREKO rates sustainability as moderately relevant and with a timing until 2022.**

Overall, BREKO would like to underscore the wide scope of the 5G regulatory framework, which will enable innovation, productivity and growth in the internal market. The key to the success of 5G and ultimately the impact of 5G on regulation will be determined by the regulator's commitment to fibre networks, because fibre is the prerequisite of a functioning 5G ecosystem.

Should you have any further questions, please do not hesitate to contact us at any time.

Yours sincerely,

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