



Joint GSMA-ETNO response to the BEREC public consultation on the BEREC Common Position on Mobile Infrastructure Sharing

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GSMA-ETNO Comments on BEREC's Common Position

Introductory Remarks on the Impact of 5G

The BEREC common position on mobile infrastructure sharing takes a backwards-oriented view on competition in mobile telecommunication services. For these common positions to be valid for the future, they need to at least take into consideration both, how mobile markets have developed and future the evolution of access networks, in particular the changes when it comes to 5G networks. These future aspects need to be reflected in the analysis in order to ensure a competitive digital infrastructure for Europe.

5G will substantially change the overall network configuration and management, notably:

- 5G will provide true convergence of access networks among fixed, mobile, WiFi and satellite networks;
- Network architecture will be largely virtualised to enable network sharing opportunities without compromising MNO differentiation possibilities. For example, MNOs can have different NVF (Network Virtualised Functionality) software, while sharing the same access network hardware, which in turn can be owned by a neutral host hardware; and
- 5G will see all operators compete on services produced outside of core and access networks, with services and devices having network-agnostic access.

As a consequence, the technical evolution towards 5G is shifting the parameters of competition outside the network access layer. Active network sharing, as we know today, may simply not play the same role in a 5G ecosystem.

Therefore, the impact of active network sharing (as defined today) on competition is overestimated in the document. In the upcoming 5G environment, the access network ecosystem will be even more competitive as more technologies come into play. At the same time, this entails that a single operator probably may not operate a fully-fledged fixed, mobile, WiFi and satellite network without partnerships or sharing of various sorts. On the service level, the access layer services will be IP based, hence in direct competition with the OTT IP-based services.

Given this change in the network ecosystem, the need and rationale for sharing could increase, be it passive or active form. The savings enabled by sharing in terms of deployment costs can be very significant and make a difference in reaching the profitability thresholds, required for investments to be pursued.

Therefore, BEREC should be cautious not to set out restrictive recommendations that may create uncertainty or generate chilling effects on future innovation, thereby slowing down the introduction of 5G and the achievement of EU connectivity goals. BEREC should rather increase legal certainty for efficient investments that avoid redundant infrastructure and result in environmental and public health benefits.

General Remarks

In order to be able to invest in 5G and ensure an efficient roll-out, operators will also, to a larger extent, potentially require network sharing in order to reduce infrastructure costs.

We agree with BEREC's view that it is of utmost importance to recall that the majority of infrastructure sharing agreements in Europe are the result of commercial agreements, which, as such, are not subject to an ex-ante evaluation. Network operators decide if sharing is an efficient operation as well as which form it should take. With an exception of few cases foreseen in the regulatory framework, the sharing decisions are the responsibility of the operators.

Ex-ante conditions on the sharing of mobile infrastructure should be avoided as the commercial agreements between the parties and ex-post anti-trust legislation are sufficient and prevent regulatory actions from causing market distortions. In particular, in order to avoid creating uncertainty for investments, the conditions associated with the use of the spectrum should not undergo changes that introduce additional obligations on top of the assignment of frequencies. The exception should apply only if market analysis demonstrates that the existence of market failure cannot be solved by commercial agreements between the parties without regulatory intervention. Even in case of regulatory sharing decisions, the NRAs should take into account the specificities of every case.

In the case of ex-post intervention, the competent authority would be the NCA, whose intervention and considerations should remain out of the scope of the BEREC document that is "limited to NRAs acting under the electronic communication legislation". In this sense, the Appendix 1 on the role of general competition law is also out of scope of the draft BEREC paper and goes beyond BEREC competences.

The draft document states that the aim of the Common Position is to provide NRAs with the criteria to assess commercial agreements on mobile infrastructure sharing between operators. However, several points of the document refer to the obligation imposed by NRAs to share infrastructures. For example, in paragraph 3.2, among the cases where the NRA is to assess the sharing arrangements, there is a reference to the sharing obligations enforced in the context of spectrum tenders (s. in particular Art. 52 of the EECC), while chapter 4 also refers to obligations several times.¹

It is therefore necessary to clarify, first of all, the contexts in which the Common Position applies. In fact, these contexts are extremely different:

- 1) Assessment of the commercial agreements between operators on infrastructure sharing.
- 2) Enforcement of the infrastructure sharing obligations.

The first is an ex-post context where the negative (e.g. restriction of competition) and positive (e.g. cost reduction and better network coverage) effects are assessed.

¹ We note that since the document refers to the possible need to impose the infrastructure sharing obligation under Art. 52 EECC in the above-mentioned paragraph 3.2, it is unclear why the cases where the NRAs may impose the sharing obligation under Art. 12 of the Framework Directive and under art. 61.4 of the EECC are not quoted as well.

The second is an ex-ante context in which the opportunity to intervene and remedy a potential market failure, which would lead to sub-optimal outcomes, such as weak competition and poor network coverage, is assessed.

While the objectives to be achieved (as referred to in para. 3.2.1 of the draft BEREC paper) could partly coincide in the two cases, since they are the general objectives of an efficient and effective competition, the same is not valid for the parameters (as referred to in para 3.2.2 of the draft BEREC paper) to be considered when the sharing agreements are to be assessed.

The ex-post context, parameters should in fact assess if the agreement between operators has not in any way distorted competition and jeopardised the achievement of the above-mentioned objectives.

In an ex-ante context when a potential obligation for sharing is considered, on the other hand, the parameters should assess if it is necessary and justified to impose regulation due to a demonstrated lack of a effective market competition, or the presumption thereof, which does not allow for the achievement of the regulatory objectives.

This confusion is also sometimes about which authority has the competence to assess - according to BEREC - whether an agreement should be limited or subject to conditions. Overlapping competences of two or more authorities investigating competition law compliance of the same cooperation agreement may increase the complexity of regulatory compliance of network sharing agreements. This would decrease the incentive of MNOs to enter into such cooperation agreements, much to the detriment of the public interest.

2.1 Legal Framework

For the regulatory objectives, as outlined in paragraph 2.1.1, to be in line with the EECC and the European Commission's 5G Action Plan, they should also include the promotion of investments, innovation of new generation networks and deployment of 5G networks.

As indicated by BEREC, it is important to promote the interests of EU citizens. In this regard, it should be emphasized that the EECC also promotes the availability of high-capacity fixed and mobile networks and the maintenance of network and service security.

With regard to the description of powers of NRAs under the EU legal framework referred to in paragraph 2.1.2. (i), it is important to note that whereas the EECC provides NRAs with the power to impose national and regional roaming obligations in the context of license conditions, such powers are not foreseen by the current Authorization Directive. NRAs may attach conditions on coverage and/or quality as foreseen in Annex B of the Authorization Directive, whereas access obligations such as national roaming under the current legal framework can be imposed following the process of Art. 16 Framework Directive and Art. 8 ff. Access Directive. The Radio Spectrum Policy Program quoted by BEREC did not materially change the EU Directives in this regard (s. Art. 1 (2) of Decision 243/2012/EU).

With regards to the reference of BEREC to the Broadband Cost Reduction Directive and to the fact that the Authority can impose the price of access to the operators' physical infrastructures in case of disputes, BEREC should take into account that the Directive has a wide scope, is addressed to the utility infrastructures as well as those of the TLC operators, and furthermore that any impositions on the price must (according to Article 3 of the Directive):

- assure the recovery of costs including, in the case of mobile infrastructures, the costs related to the frequency resources;
- evaluate the impact on the business plan of the operator granting access.

2.2 Benefits and drawbacks related to sharing agreements

Regardless of the type of spectrum sharing agreement implemented, it should not lead to inefficient spectrum usage. If inefficient spectrum usage was imposed, the risk of inefficient spectrum usage should also be mentioned as a drawback.

An additional benefit is that commercial agreements may lead to a greater deployment of advanced networks and in particular of 5G.

Comments on Drawback 1: Reduced incentives to invest/ability to compete

- The description of reduced incentives to invest in a shared network does not provide a nuanced or accurate picture of the potential effects of network sharing. The section should increase its value by differentiating between different forms of network sharing, thereby also showing the competition parameters that the operators will be subject to under various network sharing arrangements.
- In our opinion, the operator's ability to compete on the downstream markets is not necessarily reduced by engaging in network sharing as the most differentiation happens in the core network and IP layer, which are not shared. If such a statement is to be included, it should at least be backed up by arguments and not just a reference to unidentifiable reports of 2011 and 2018.

Comments on Drawback 3:

- This is not a drawback for the customer, since the customer can only use its host network. Shared networks usually possess more safeguards to preserve resilience.

3.1. Common position (CP1) on the typology of infrastructure sharing types

BEREC should clarify that the forms of sharing indicated include sharing models that present complexities from a technical and management point of view. For these it would be necessary to carry out in-depth analysis by paying due attention in terms of security and quality of service provided to users, having the necessary standards (particularly in relation to the interface between management systems) and having the availability of products by vendors.

Furthermore, any form of infrastructure sharing should be technically evaluated to assess its feasibility and compliance with the spectrum usage conditions. In particular, too stringent electromagnetic field emission (EMF) limits may constitute an obstacle to some infrastructure sharing scenarios (e.g. site sharing with base stations of different operators). It is therefore appropriate that these limits are as defined and harmonized as possible at the European level, hence minimizing the impact on the sharing of infrastructures. This would favour the efficient and sustainable deployment of new generation networks.

3.1.1. Passive sharing

Suggested considerations with respect to the definition of "Passive sharing":

- The definition could be linked to the fact that it does not require active operational coordination between network operators.
- The sentence - "Passive elements are sometimes referred to as "unpowered components" as these elements usually do not require a power supply" - might bring more confusion than clarity and should therefore be considered for removal.

3.1.2. Active sharing

Suggested considerations with respect to definition of Active sharing:

- The definition should also mention that active sharing in many cases includes sharing or joint operations and maintenance.

3.1.3. Other sharing types

No comment.

3.2. Important objectives and factors to consider when assessing mobile network infrastructure sharing agreements

In accordance with our comment on section 2.1.2 (i) above, it should be clarified in section 3.1 (1.) that the broad set of competences listed are available under the future regime following transposition of the EECC, and not, with the exception of ambitious coverage obligations, under the current Authorisation Directive (s. above; cf. Annex B of Directive 2002/20/EC).

3.2.1. Common position (CP2) on the main objectives to be pursued when considering network sharing agreements

The trade-off between competition intensity and investment as described under paragraph 3.2.1. Point “a) Infrastructure based competition” is not as simple and linear as otherwise stated. In fact, there is a level of competition intensity that maximises the investment of mobile operators: investments stagnate when the level of competition is above or below this aforementioned state. This inverted-U relationship of competition and investment has been demonstrated in various studies (Birglauer, Ecker & Gugler 2013, Hounqbonon & Jeanjean 2015, HSBC 2015). Therefore, the linear statements that larger operators’ market share and lower competition lead to the lower incentive to invest should be corrected. The last sentence of point a) under this paragraph seems to indicate markets in which an operator has a large market share is evidence of non-functioning infrastructure-based competition. This may not be the case, as has been seen, for example, in Norway. The last sentence in the section should therefore be followed by a new statement: “Whether this potentially could have influence on the competition, it shall be subject to careful assessment on a case by case basis.”

Moreover, BEREC should clarify that the various objectives mentioned should be taken into account equally; there is no prioritization between the objectives included in paragraph 3.2.1. The EECC has several objectives and all of them should be taken into account at same level. Therefore, BEREC should state in a clearer way that promoting connectivity, investments and innovation in networks (in particular 5G) are important objectives when it comes to spectrum sharing agreements. A reference on the need to promote investment conditions as an objective, as well as ways to achieve the said objective, should also be mentioned in paragraph 3.2.1. This can be linked with the principle that sharing agreements should rely on commercial agreements.

3.2.2. Common position (CP3) on the parameters to consider when assessing network sharing agreements

The list of parameters proposed is to be considered as relative since each case assessment will depend on its real circumstances and conditions. The draft BEREC paper correctly recognizes that “*assessing infrastructure sharing agreements will require evidence-based analysis on a case-by-case basis*”. The proposed criteria should not be considered as a closed list nor be applicable to all circumstances. The

parameters listed by BEREC seem to be only those which enable achieving the objective of preserving the competition, i.e. the parameters which enable a risk assessment on the decrease in competition due to infrastructure sharing. Instead, the parameters which enable an assessment on the other objectives of infrastructure sharing reported by BEREC (e.g. better connectivity, efficient use of spectrum, cost reduction) are not listed.

These other objectives should be considered as parameters (i.e. network coverage, spectrum use, cost reduction) and taken into consideration in the network sharing assessment.

Furthermore, other parameters should be added, such as difficulties in obtaining the permits for the roll-out of sites, difficulties in finding spaces and areas for the roll-out of sites and concerning urban areas, the applicable EMF limits. All these parameters must be considered when evaluating the opportunity and rationales for making a sharing agreement.

Under paragraph 3.2.2. point 1. d) and point 2., reference is made to the geographic scope dividing the different areas. This qualification of these areas, which depend on the population density and the following conclusions for network sharing, simply focus on just one aspect that plays a role on the geographical scope of network sharing. Other relevant factors include topology of the country, existing network grids, consistency of the network versus “swiss cheese” problems (i.e. handover coordination between own and shared network), limited antenna availability, space/weight and other construction restrictions on antennas. As such, using population density as the sole criteria for geographic scope seems arbitrary.

Under paragraph 3.2.2, point 3. BEREC qualifies active sharing as the least preferred form of infrastructure sharing in a blanket statement that is too undifferentiated. For instance, there is a big difference in ability and incentive to compete between RAN sharing and national roaming. RAN sharing does not impede differentiation between MNOs. Under RAN sharing, individual MNOs continue to separately operate their own core networks and IP platforms and may always pursue unilateral build-outs. This is due to the fact that (i) RAN has a limited influence on differentiating factors such as capacity, coverage and service functionality, which are primarily dependent on other network layers such as the core network, spectrum and passive infrastructure, and (ii) new (IP-based) services are RAN-agnostic (network virtualization). Therefore, the broad statement in the common position (CP3) should be adjusted accordingly.

Under paragraph 3.2.2, point 1. f) and point 5. disregard that true network sharing is, by nature, a long-term agreement, as no operator would commit to these massive network investments without long term certainty, similar to investments in spectrum. Therefore, this should not be a decisive criteria as sharing agreements are not intrinsically inflexible. Therefore, the merit of point 5 is questionable as the content and explanations given are unconvincing and do not adequately defend the statement.

GSMA-ETNO Comments on BEREC's Indicative analysis of different types of network sharing

4.1. Passive sharing

No comment.

4.2. Active Sharing

As a general observation and as stated above, RAN sharing does not impede innovation or differentiation between MNOs. Under RAN sharing, individual MNOs continue to separately operate their own core networks and IP platforms and may always pursue unilateral build-outs.

Erroneously, paragraph 4.2 of the draft BEREC paper assumes that in densely populated areas infrastructure competition is possible in all cases. Clearly the draft BEREC paper mutualises the fixed infrastructure model to mobile, which is a wrong approach. With the advent of 5G and smaller radio cells, active sharing is best suited in dense areas. Although for different reasons, mutualisation is also beneficial for rural areas, both now and in the future.

Going back to the statements in paragraph 3.2.2 under Point 2, this geographical subdivision seems arbitrary and therefore the analysis cannot produce meaningful results. The analysis should look at the impact of the scope of infrastructure sharing in a more differentiated manner. The split of areas does not take into account that "areas" in a mobile network is almost always a mixture of the three described areas. Establishing active sharing in only one of the areas would therefore not be technically feasible or in most cases not even economically viable. This should be taken into account when assessing active sharing arrangements.

One should also take into account that the required density of 5G networks could necessitate active sharing to accommodate the possibility to deploy a fully-fledged 5G network for more than one (first mover) operator and also to fulfill environmental protection needs.

Including such general and superficial conclusions entails a significant risk of bias with the NRAs, which may apply these in a mechanical manner without considering local market conditions. Encouragement of case-by-case analysis should be more underlined in the paper.

4.3. Spectrum sharing

Many new technology advances have granted operators the ability to differentiate even when spectrum is shared, which means that alleged competition issues as a consequence of active sharing can be reasonably addressed.

In parallel, spectrum sharing is very important in rural areas where regulators impose minimum throughput.

However, paragraph 4.3 of the BEREC draft paper needs to more clearly state that not all areas where infrastructure competition is not feasible would require spectrum sharing. In some cases a MORAN agreement can be sufficient to make the business case positive. When BEREC refers to spectrum pooling as a solution for areas where infrastructure competition is not feasible, this does not refer to the same areas as under point 2 of paragraph 3.2.1.

4.4. National roaming

Before concluding that the objectives and efficient spectrum management and usage are not likely to be met, one should also take into consideration the frequency portfolio of the national roaming operator.

4.5. Other situations where network sharing agreements could be possible, but in duly justified conditions

Active sharing can be very beneficial not only for legacy technologies as mentioned (2G, 3G etc.) but also for upcoming technologies like 5G, as previously described.

Also, under point 1 of paragraph 4.5, it is questionable whether this not only concerns national roaming and not network sharing in the actual sense.

Appendix 1 - Role of general competition law

It is not clear why the report contains an appendix related to competition law that is not in the remit of BEREC's competences.

We thank BEREC for the opportunity to comment on its draft and look forward to working with BEREC on these important topics.