

**BEREC – Body of European Regulators for Electronic Communications**

Subject: Telenor Hungary's response to the public consultation on the draft BEREC Common Position on Mobile Infrastructure Sharing (BoR(18) 236)

18 January 2019

Telenor Hungary (Telenor Magyarország Zrt. 2045 Törökbálint, Pannon út 1.) highly appreciates and would like to thank BEREC the opportunity to comment on the on the draft BEREC Common Position on Mobile Infrastructure Sharing. As a general remark we would like to express our acknowledgement for dealing with this important issue.

We appreciate and fully support that BEREC has made 5G a strategic priority in its Medium-Term Strategy 2018-2020, with the aim of enabling European-scale solutions that may help reap the benefits of early and coherent implementation of 5G in terms of innovation, productivity and growth in the internal market. Enabling 5G and promoting innovation in network is a common objective shared by mobile network operators and BEREC and we appreciate all the efforts made by the European regulators to contribute to the removal of potential hurdles to a smooth and quick implementation of 5G in the Member States. We understand that the Common Position is one of the instruments that is meant to serve this purpose and we welcome this. However, in our opinion the draft document needs to be substantially revised in order to reflect and help BEREC's commitment to further improve the consistent application of regulatory rules and to enhance its working methodology. We explain our opinion below following the structure of document.

We are available to engage further cooperatively with BEREC and the national regulatory authorities on this subject.

**1. Comments on the Introduction section**

First of all we would like to point out that the purpose of the draft document and the Common Position is unclear and we suggest describing it more accurately. The whole document seems to imply that the assessment of mobile infrastructure sharing agreements is a typical duty or obligation of the NRAs acting under the electronic communication legislation. On the contrary, however, the assessment of network sharing agreements – including mobile infrastructure sharing - only exceptionally falls under the competence of the NRAs. As demonstrated under section 2.1.2. of the draft BEREC document the legal instruments provided for authorities by the European Directives or by the Code on electronic communications with regard to sharing is almost exclusively the enforcement/imposition of infrastructure sharing obligations (i.e. an ex ante type of intervention). This is and should be a largely different exercise from the ex post assessment of commercial agreements of undertakings for which infrastructure sharing can be an example. Nevertheless, the draft document completely misses this important differentiation and as a result sets the factors which it consider most likely to be relevant



for NRAs with regard to their enforcement competence related to mobile infrastructure sharing agreements in a way that can be confusing. While the objectives to be achieved when exercising these ex ante and ex post competences could partly coincide, since they share the general objectives of an effective competition, the same is not valid for the parameters (as referred to in para 3.2.2 of the draft BEREC document) to be considered.

## **2. Comments on the Background section**

### **2.1. Legal framework**

The draft states that it describes the objectives and powers of competent authorities (being the NRA or another authority) in the telecommunications-specific legal framework relevant for the infrastructure sharing agreements and addresses also the legal instruments provided for achieving the objectives. In our view however, the proper description of powers is missing entirely from this subsection and as a result the document does not define well the conditions under which regulatory procedures concerning network sharing can be initiated and what their outcome can be. This regrettably does not help legal certainty, and creates an uncertain environment for investments in the sector.

#### **2.1.1. The objectives given by the European telecommunication regulatory framework**

We suggest to elaborate more in this subsection that the new connectivity objective included in the Code – which translates into the aiming for the highest capacity networks and services economically sustainable in a given area - is as important as the already existing three other primary objectives of the sector specific regulation. For the matter of completeness, the text shall mention the objective related investment promotion introduced by the Code under provisions on general objectives. Although the text highlights that the new framework emphasizes that competition includes infrastructure-based competition, but ignores that statements in the Code that both efficient investment and competition should be encouraged in tandem, in order to increase economic growth, innovation and consumer choice and that competition can best be fostered through an *economically efficient level of investment* in new and existing infrastructure, complemented by regulation, where necessary, to achieve effective competition in retail services.

#### **2.1.3. Role of general competition law**

The draft BEREC Common Position correctly acknowledges that any network sharing can also be subject to competition law assessment under Article § 101 (1) of the TFEU. However, the legal and institutional background for competition policy procedures and interventions is quite clear and established by several decades of case law, and therefore a 3-page summary on this is on the one hand can be seen as disfunctional (overly detailed considering the length of the whole document) and on the other hand can be misinterpreted (not robust enough to reflect all indispensable details of a competition law assessment). Therefore, we suggest removing Appendix 1 entirely from the document.

The draft states that in some situations NRAs – within their specific competences in the respective Member State – might be obliged to apply competition law based principles when adopting decisions on the basis of the relevant sector legislation and that it cannot be excluded that parallel procedures under ex ante regulation and EU competition law may apply with respect to different types of competition problem(s) identified on the relevant market(s). As we noted above, much greater clarity would be needed in the document when explaining the framework of these respective competences and processes.

## **2.2. Benefits and drawbacks related to sharing agreements**

We suggest revising and improving the discussion of the benefits and drawbacks of infrastructure sharing in order to avoid confusion and inaccuracy in the final document.

### **2.2.1. Potential benefits of infrastructure sharing**

One of the major problems is that the three types of infrastructure sharing analysed in the document are quite different regarding their features and their possible impact. BEREC handles the impact of the three types together and tries to indicate where major differences occur. In several cases, however, it is not clear which type of network sharing is concerned for a given impact mentioned in the paper.

Most of the misconceptions are related to the active RAN sharing agreements. The most important point we would like to raise is that RAN sharing does not result in any decrease in the number of independent mobile networks and a downgrade from infrastructure-based to service-based competition. Therefore, features and impacts of RAN sharing agreements are closer to passive sharing than to roaming, which, as we describe under the following subsection, is not a type of mobile network sharing but a simple wholesale service.

In our view, important benefits of mobile network sharing are missing from the draft BEREC Common Position, especially those related to active sharing. One of the key benefits of most active sharing agreements is larger coverage than existed absent the agreement. Larger coverage is not only the incidental consequence of the cost savings, as it is described in the paper, but the key goal of most active sharing agreements. Most active network sharing agreements result in larger covered territory, denser networks, optimized locations, and enhanced and more efficient RAN operation. These effects generate significant consumer benefits due to better indoor and/or outdoor network coverage, and better signal availability and quality.

Active network sharing agreements also result in faster network rollout than would otherwise occur, which is crucial in case of launching new technologies like 5G. This positive impact can already be seen in cases of active network sharing related to the development of 4G networks. Faster rollout leads to services being available earlier, and greater coverage than in its absence. Further important benefits of MOCN-type active sharing agreements are higher up- and download speeds, higher throughput and higher network efficiency due to spectrum sharing.

The importance of faster network roll out associated with active sharing should be considered by NRAs in relation with the European policy initiatives and targets as well. The EU on political level has decided to place Europe at the forefront of 5G and has agreed on some important instruments supporting the fast rollout of 5G infrastructure and services. We - in accordance with the view of the most European stakeholders - are on the opinion that regulation plays a significant role in shaping the roll out of 5G, and such role should be positive and supportive towards the 5G deployment. Undoubtedly, the significant investments required for the timely roll out need to be encouraged by a consistent regulatory framework and supporting regulatory activity from the NRAs. Moreover, it is also commonplace that infrastructure sharing is needed and necessary for 5G deployment and in many cases it will be physically not feasible to deploy multiple RANs for example due to environmental protection considerations (especially in the case of small cells). Therefore BEREC should acknowledge the benefits of network sharing agreements and active sharing in particular in relation of 5G deployment.

When the draft BEREC Common Position discusses enhancing consumer choice (Benefit 3), it is misleading to state that infrastructure sharing allowed the preservation of service-based competition in certain geographic areas where individual deployment of a network is too burdensome and inefficient. This statement may be to some extent valid for roaming cooperation but does not hold for active sharing. As we explain later, active sharing does not lead to only service-based competition since the mobile networks remain independent even with sharing. Enhancing consumer choice is therefore a more important benefit in the case of active sharing because it allows access to different independent mobile networks for customers in areas that would have been covered later or would have remained white spots absent the active sharing agreement.

### **2.2.2. Potential drawbacks of infrastructure sharing**

The discussion of drawbacks also contains some inaccuracies in our opinion.

The first drawback mentioned in the draft is reduced investment incentives. It is true that the motivation behind network sharing is to reduce investment costs for each party, but this should not be automatically taken as a drawback regarding social welfare. The key point in the assessment should be whether the decrease in the investment leads to consumer harm directly or indirectly due to the lessening of competition or not. The existence of independent networks plays a key role in this question. Sharing some element of the network (e.g. passive infrastructure) does not necessarily result in the disappearance of independent networks. As we explained above, active sharing agreements often lead to faster rollout, the earlier launch of new technologies and services and larger coverage, which are contradictory to the decreasing investment incentive concern described in the document. According to the draft the main reason for the reduced investment incentive is that any gains from an investment are shared with other parties. This may be true in asymmetric situations like roaming, where only one party invests and the other service-based competitor uses its infrastructure. Active sharing agreements, however, are usually symmetric, and both parties invest in the network. Moreover, sharing the costs of network deployment and operation means they



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become cheaper, and a larger, better network can be built and operated than absent the agreement.

The concern related to the reduced ability to compete is overbroad. According to the draft document the parties' network architectures become the same or very similar, and therefore coverage and quality of service will be closely aligned and the operators have fewer opportunities to differentiate their service offerings. Again, this concern as it is described in the paper is true for roaming only, but misleading in the case of active sharing agreements.

In RAN sharing agreements, especially with MORAN, the coverage of certain technologies can be different since the use of different spectrum bands and network technologies, carrier aggregation, the introduction of new technologies and switching off old ones can all be implemented unilaterally and independently by the operators. The ability to compete independently does not diminish in this case.

In addition, RAN sharing typically affects coverage and other technical quality parameters attached to it in a positive way. The closer an operator is to this maximum the better for its customers as the value of the service increases for all of them. Even if an active sharing will result in greater similarity in coverage of the participating operators, this coverage will be higher than in the standalone scenario. Therefore, coverage is an important differentiator only if there is a shortage of it, not when it is abundant (as it is more and more the case in European countries). In addition, the options and incentives to differentiate in coverage and capacity remain, especially to business customers with special coverage and capacity needs. This argument is also valid for other technical parameters, too, like capacity, although not identically: as opposed to coverage, capacity is less dependent on the active sharing.

Service quality also can be different in the case of RAN sharing since it is highly dependent not only on the RAN but also on the core network, which is not shared. As we already emphasized, recognition of the role of separate, independent core networks and its impact on the differentiation and network independency is completely missing from the paper. The core network is the very essence of service provision and differentiation. Technical differentiation consists of setting and managing service parameters, service access and usage rights, authentication, and network resource allocation to the individual customers. Technical differentiation occurs mostly in the core. Non-core technical differentiation is the only area where RAN sharing may have an impact. On the other hand it also must be noted that a proper assessment on the opportunities for and relevance of differentiation should also take into consideration the high level of standardization of mobile networks and services. Therefore as an overall conclusion, it cannot be stated that RAN sharing results in a significantly reduced incentive to compete for the parties.

Drawback 2: The draft BEREC Common Position acknowledges that some information sharing is necessary between the parties in network sharing, but then concludes that "this presents an obvious risk relating to tacit collusion." According to the well-defined theory on tacit collusion, this statement is oversimplified and lacks the necessary foundation and very likely cannot be proven in any specific case.



The main reason for our opinion is that the consistent economic theories of tacit collusion are based on the tacit collusion of all major firms in the market (except the so-called mavericks), otherwise it is not sustainable. As network sharing usually occurs between two MNOs and at least a third full MNO is typically active on the respective national market, one cannot simply assume that stable collusion between all major MNOs can be possible or more effective based on partial information sharing between only two firms.

### **3. Comments on the Common Position**

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

We agree with the intention of the draft BEREC Common Position that a common and consensus-based typology promotes better understanding, not only between NRAs but also between all interested and affected parties. That is why it is particularly important to have a clear and methodologically sound typology, which can serve as a reliable common input to business and regulatory decisions.

The types of sharing listed under passive sharing in 3.1.1 are relevant and acceptable. It may be better if "Co-location" were renamed to "Location sharing", in order to avoid the connotations related to this term extensively used in fixed access regulation. In this part, the wording of "common use" is correct as it still evidently holds that each party controls its own active network and no control of any signal is involved.

The transition from passive to active sharing is rather gradual than sharp. This can be seen through the dilemma the paper describes in relation to the antennas. With active sharing, it is important to state that all important elements of the services remain under the control of the respective parties. RAN sharing of particular spectrums with MORAN or MOCN are typical forms of active sharing. MOCN involves sharing of the spectrum too, but it should not be concluded that because of the joint use of spectrum it follows that the control of the communication service provided to the customers is not retained. This is an imperative difference compared to roaming where the roaming customer technically simply receives the host network's services, and not its own provider's. That is why it is very confusing to consider roaming as a form of active sharing (though this confusion has existed for many years). With active network sharing, almost the full range of service differentiation capabilities remain with the sharing parties; there is no appreciable impact on the differentiation as a result of MORAN sharing. Sharing is a joint operation with control and ability to differentiate, while roaming is a wholesale access service with minimum control of the service provision and quality. Therefore, we propose not to consider roaming as a type of infrastructure sharing; it should belong to a different access service category.

It is also unclear why the draft BEREC Common Position makes proposes the use of "other sharing types" as a class of sharing. We kindly propose to add more information of the purpose of this classification. With regard to the technological as well as the economic characteristics of the production process, the backhaul, the transmission or even part of the core network can be shared beside the RAN. It is true that the sharing is more extensive if more elements of the network and the corresponding services are shared. However, the differentiation capabilities are reduced differently with different



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elements. Sharing backhaul or transmission does not lessen the operators' control at all. Shared RAN or even spectrum can also bring significant efficiency benefits.

The core network constitutes the most intelligent part of the network and it is the centre of the differentiation capabilities. However, even with a shared core, which would be the deepest form of active sharing, a large amount of control and differentiation would still be held by the cooperating operators individually. Though core network sharing is not an existing practice now, but with the complexity of 5G networks it may become economical and efficient to share some core functionalities, especially when the geographic decentralisation of some core network elements is required; and still, networks could operate as independent mobile network operator entities.

It is very important and should always be recognised that most of the economic differentiation happens in the core part of the network, and there is no evidence that it has been shared in any existing agreement.

### **3.2. Important objectives and factors to consider when assessing mobile network infrastructure sharing agreement**

As a general remark we would like to note that the document includes a conclusion that, among other cases, the Common Positions shall be followed in that case if the national law provides the NRA with the power to assess sharing agreements. We suggest the document to be even more precise in stating that the assessment of a sharing agreement by an NRA does not necessarily mean the application of the Common Position. In many countries the national law needs to define the objectives, the subject matter and the framework of an administrative proceeding in which a public authority like the NRA is entitled to act. For this reason, the material shall include that the application of the Common Position – and especially of the parameters described under 3.2.2. - may require local law authorization for the NRA to carry out such type of assessment.

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

We agree that effective competition is one of the most important objectives and this is indeed mentioned repeatedly in the document. However, compared again to the decades-long case law of competition law, the draft BEREC Common Position does not clarify what kind of definition of effective competition should be used by the regulatory authorities, so in our view it would be certainly beneficial to add these references to provide more guidance.

From a well-defined definition of effective competition used in the competition domain, one should then derive a comprehensive and consistent methodology to assess the welfare effects of network sharing. To quote the competition law reference again, this is clearly done by the European Commission in the 2010 Guidelines on Horizontal Agreements and in the 2004 Horizontal Merger Guidelines. However, no such universal approach is detailed in the draft BEREC Common Position on the methodologies to be applied by NRAs, although that would be very much needed.

We must note that based on those more well-defined concepts and methodologies, the DG Competition of European Commission still conducts 6-8 month long inquiries on mobile telecom mergers, which is a more extreme form of telecom consolidation, and only after these detailed case-by-case analyses are they in the position to make a final assessment on the parties' behavior. The draft BEREC Common Position unfortunately lacks these foundations, and can be interpreted as audacious making some universal statements that mostly imply negative considerations with regard to infrastructure sharing. We think BEREC should be cautious not to set out general restrictive recommendations that may create uncertainty or generate hurdles contrary to its strategic goals.

### **3.2.2. Common position (CP3) on the parameters to consider when assessing network sharing agreements in order to achieve/maintain the above mentioned objectives**

We explain where in our opinion the conclusions of this subsection are inaccurate. Even if it was the case that these parameters are indeed those that worth to be considered by NRAs when exercising their regulatory competence with regard to mobile infrastructure sharing, definite conclusions could not be made based on these simple indicators, only after a careful empirical evidence-based analysis on a case-by-case-basis.

#### **RAN sharing does not result in only service-based competition**

Interpreting RAN sharing as a form of service-based competition is the major failure of the draft BEREC Common Position. The concept of service-based competition has been used in the regulation of fixed telecom markets, where regulation wanted to support the entry of competitors without access networks by obliging incumbent operators to provide wholesale access services (ULL, bitstream access, call origination and termination) to them under regulated conditions. On the mobile markets, MVNOs represent the major group of service-based competitors using the networks of the MNOs, but in most cases on commercial terms. National roaming is another form of service-based competition on the mobile markets which, however, most often occurs as a temporary regulatory instrument with the aim of facilitating entry.

An assessment suggested by the draft BEREC Position which treats RAN sharing as a form of service-based competition is fundamentally flawed. A regulatory intervention which is based on this assessment would result in lower than achievable technical efficiency and a significant loss of consumer/social welfare.

RAN sharing fully fits into the concept of infrastructure-based competition. Participants of these agreements are MNOs who have made significant network investments, including into the radio access network. RAN sharing does not mean that operators use the other operator's RAN, it only means that the same radio and antenna serves both operators' access networks. The common radio handles both operators' frequency bands, which may be different. The spectrum used by the operators respectively was acquired in a competitive process and constitutes a significant amount of investment. Parties of a RAN sharing agreement have the ability to differentiate their services not only in commercial but also in basic technical features.



## **The geographic scope/feasible level of competition**

The draft BEREC Common Position suggests three groups of geographic areas according to the expected direct profitability of sites, and links up this typology with a misunderstood concept of infrastructure-based competition. Based on this faulty classification, the paper then suggests a regulatory approach on the false premises below:

- infrastructure-based competition on mobile markets is identical to MNO competition with their own standalone network (or using passive sharing at worst)
- the feasibility of infrastructure-based competition is directly related to the direct profitability of a site or geographic region
- direct profitability of a site or geographic region determines the innovation and incentives to compete in network and service provision, by implicitly assuming that innovation is local and not network-wide and this activity only occurs in profitable regions.

First and foremost, it needs to be clarified that any form of mobile network sharing we propose to be considered as active sharing (that is, leaving out roaming) is fully compatible with the concept of infrastructure-based competition. This means that even with active sharing, the operators compete with their own infrastructures, and control their services provided to their customers. Jointly operated network elements simply help in economising on costs, thereby improving the return on investment and profitability of the operation of the network.

Second, it is evident that the feasibility and efficiency of network deployment and service provision in less profitable regions is enhanced by network sharing, and active network sharing can serve as a means to the increase of geographic coverage, thereby leading to an increase in infrastructure-based competition. The view presented in the draft BEREC Common Position is myopic and leads to serious misunderstandings about the way mobile networks are rolled out.

MNOs are incentivised to increase their geographic coverage because they compete with the whole network. Direct site profitability is not a good proxy of rollout decisions, as positive direct network effects also need to be considered. Besides, mobile site profitability is a virtual, calculated number since revenues cannot be assigned unequivocally and precisely to the sites, unlike in the case of fixed services where revenues are directly and unambiguously related to customer access. The draft BEREC Common Position mistakenly ignores that mobile network availability and the benefits of its use are very different from fixed ones. For a fixed network the provision of access at a fixed location is the unit of the deployment decision, and also it is the factor that determines unequivocally whether the service is available for a particular customer at the particular location or not. In case of the mobile service, the customer's perception of service availability and the comparative value of the mobile service of a particular operator depends on the availability of this operator's network at different locations. Of course, service availability at home and at the workplace are included with considerable



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weight, but many other locations are also relevant. From this it follows that network and service availability on less or even unprofitable locations also play a part in customer experience and judgement. Based on this fact, it is evident that the fixed network logic of network deployment, availability and coverage cannot be applied to mobile networks.

According to the logic of the mobile network business, cost reductions at more profitable locations free up CAPEX and OPEX which can be directed to network deployment and operation higher costing areas. Prohibiting active sharing and therefore cutting down opportunities for cost reductions at more profitable locations eliminates the financial source of network deployment at the least profitable edges, thereby decreasing the opportunities for improving coverage and the quality of the whole network. The resignation on the relevant business logic and using an inadequate geographic classification can have far-reaching consequences for mobile network development, and the implementation of new technologies.

Another factor of the MNO coverage decision is the fulfilment of the coverage requirements imposed by the regulator in the spectrum award process. These obligations are usually imposed, but do not take local profitability into account.

MNOs have manifold incentives to increase coverage in spite of the negative direct profitability of a site or a region. As long as the cooperation between operators enhances the efficiency and service quality and does not decrease the competition in the retail and wholesale mobile services, the regulators should not interfere with MNO business decisions.

Third, we strongly disagree with assumptions on the deployment of network innovations and the drivers of this process. In our view no plausible rationale exists for restricting the implementation of relevant new features and technologies in densely populated areas, so implementation has to be considered market-wide. Sharing might affect the deployment process, as some coordination is needed between the parties to manage the implementation, but it should not result in significant delays if the cooperation was carefully designed to efficiently handle the issues around network development.

As active sharing is evidently compatible with infrastructure-based competition, there is no reason to differentiate between sites or locations with regard to the regulatory classification of favourability of active network sharing elaborated in the draft Common Position. Sharing is an opportunity to reduce costs and enhance coverage, quality and technical efficiency. The only reasonable location-based differentiation is the identification of those locations where sharing is a strong necessity because of scarcity, protection of the environment, extreme building and operation costs or other reasons therefore regulatory assistance should be provided promoting connectivity and sustainable competition under these circumstances.

### **Shared information between the sharing parties and its impact on their ability to compete**

This relates to increased coordination, which might be a valid concern. However, it is worth mentioning that the risk of negative (anticompetitive) impacts can be mitigated or



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eliminated by the proper design of the information sharing process and by proper organisational or institutional solutions.

In addition, the statement in the draft regarding the negative consequences of joint decision-making, namely the delay in network deployment and the negative incentive to invest seems to be speculative. As we said above, real active sharing agreements rather result in faster network rollout and larger coverage than absent the agreement; no delay or hold-back problem has emerged so far with existing network sharing agreements. Therefore there is no proper empirical evidence supporting the argument presented in the draft BEREC Common Position.

#### **4. Indicative analysis of different types of network sharing, according to the above mentioned objectives and parameters**

Based on the above concerns we propose to remove this section entirely from the document as it can negatively prejudice future analysis of the NRAs even if does not intend to do so.

A handwritten signature in black ink, appearing to be "Gábor Körösi".

Gábor Körösi

Director of Regulatory and Public Affairs

Telenor Hungary