



## GSMA / ETNO response to the BEREC public consultation on Feasibility study on development of coverage information for 5G deployments

28 November 2019

The GSMA and ETNO associations, which represent the interests of telecoms operators, welcomes the opportunity to comment on BEREC's feasibility study on development of coverage information for 5G deployments. We hope the following detailed comments can serve as a constructive contribution to BEREC's deliberations on its study.

### General remarks

The telecommunications industry already has an open dialogue with verticals and will continue to work with verticals as 5G deployment evolves. This can be seen across a variety of industry sectors, for example automotive (as shown by the GSMA's membership in the European Automotive Telecommunications Alliance (EATA<sup>1</sup>), manufacturing (as shown by the presence of a number of leading mobile operators in the 5G-ACIA<sup>2</sup>) and ports<sup>3</sup>. Differently to consumer markets, there are no comparable negotiation asymmetries and contracts are often individualised, supplying what a business customer demands for. Any potential issues are usually directly addressed within commercial interaction between MNOs and verticals. MNOs currently provide maps with respect to national coverage for 2G, 3G 4G. The time is not ripe to provide this type of information about 5G which is currently only still being deployed. When more experience and knowledge will be acquired with 5G, MNOs's will be able to provide coverage maps with respect to this service. With respect to 2G, 3G and 4G only coverage maps are provided because any other information with respect to QoS details is difficult to provide and verify on an accurate and consistent basis among all MSs and operators. Furthermore 5G requires a higher level of caution with providing information that could be a threat for competition among MNOs

As such, it is our view that the publication and making available of information on coverage also with regard to 5G will be driven mainly by interactions between operators, developers of 5G applications for verticals and end users. It is in that context that the needs of developers and users will be discovered, which will inform operators' choices on the basis of what kind of coverage information is required for

<sup>1</sup> "About: EATA - European Automotive Telecom Alliance." EATA. <https://eata.be/about-us/>.

<sup>2</sup> "About." ZVEI. <https://www.5g-acia.org/about-5g-acia/>.

<sup>3</sup> See for example, <https://www.huawei.com/en/industry-insights/outlook/mobile-broadband/xlabs/insights-whitepapers/5g-smart-port-whitepaper>

their customers. The willingness of GSMA and ETNO members to provide accurate service and coverage information to verticals is a given due to the incentive of winning customers and building positive 5G business cases. The same applies to inter-carrier relations, which are highly competitive.

Beyond that, we fall under a variety of detailed transparency obligations for the sake of protecting consumers.

Beyond information from operators, private third parties usually provide valuable additional transparency to e.g. verticals and developers. There are in fact several external suppliers of information on coverage and network QoS, that gather information through drive tests or crowdsourcing. Often such providers are even directly supported by telecommunication operators.

Furthermore, the consultation also places significant emphasis on the 'self-build' by verticals to support their own connectivity requirements. This should not involve spectrum that is set-aside by national regulators exclusively for verticals in core mobile bands, which risks being underused and can undermine fair spectrum awards. It should also be noted that the identified 'benefits' of self-build as set out in the consultation (e.g. secured networks, guaranteed QoS) do not depend on the ability to self-build or having access to their own licensed spectrum.

In summary, and as already indicated by the feedback to BEREC's NRA survey of February 2019, firstly, it is indeed premature to consider mandatory information requirements on the coverage of 5G deployment aimed at verticals since there is no market failure identified. Secondly, it is premature to specify the exact information required. As 5G is still emerging, it is too early to set very detailed guidelines and reporting requirements on 5G coverage; also it will be mainly driven by demand thus it is again too early to be aware of the services MNOs will be providing. Furthermore, requiring 5G coverage maps in this early stage of 5G deployment could reveal sensitive information about cell site locations and even customer locations, such as in cases where 5G is deployed in high-band spectrum for specific enterprise customers. In fact when in future the information about 5G coverage will be provided (probably in the framework of article 22 EEC) such data should be published in an aggregated form among different operators' data in order to prevent divulgence of sensitive commercial information. We therefore recommend that BEREC should maintain a watching brief in this area, only intervening if there are market failures which can otherwise be addressed and taking into account that the market is characterised by business customers, who have much different needs and are in a very different position than consumers.

## 1. Introduction and aims of this feasibility study

### Comments on scope and approach of the study:

- In this consultation, it is mentioned: "it is envisaged that NRAs may have a role to play for example in the provisioning of coverage information and QOS aspects of future 5G networks that cater for the needs of the verticals".
  - While we understand that NRAs can help to foster 5G deployment, notably contributing to efficient spectrum allocation and through measures supporting investment, we question the goal of this study.

- Network operators and verticals will work together in the framework of commercial agreements. Furthermore, the temptation to provide elements of 5G networks to verticals in some sort of regulated form will potentially introduce a bias in the relations between these actors.
- Even if the publication of network coverage/QoS information were to be required (which we do not agree with), there would be a number of feasibility challenges associated with this. For example:
  - Generating reports concerning network QoS etc for enterprise requirements that are dynamic (temporal, spatial) will require significant effort on the MNO side to produce, disproportionate to the expected benefits that may possibly materialise.
  - In order to be a valuable report for verticals, a harmonised and well defined metric is required to ensure that reports of different MNOs can be compared. It is not currently obvious what this metric would be and how it would be measured.
  - As communication networks are in constant change and evolution, the value of such a report is limited to a dedicated point in time/time interval, and risks becoming obsolete very quickly.
  - Dynamic QoS related network information could be sensitive competitive to MNOs depending on the metric, as it might disclose sensitive network information.
- Furthermore, as the consultation notes “it is envisaged that it will not be possible to specify a single set of requirements for all given verticals because the connectivity requirements for each vertical depend on the nature of the respective use-case and different use-cases may exist within a given single vertical”. This is a very practical challenge. There remain differences of opinion on requirements within verticals and across verticals on what the requirements should be. For example:
  - There remains a difference of opinion within the automotive industry on the preferred technological approach to Cooperative Intelligent Transport Systems (specifically, whether Cellular V2X or ITS G5).
  - In the recent ‘5G vertical user workshop’ organized by 3GPP in Brussels in 2019, it was noted in the slides circulated after the event as follows: “Verticals need to make sure, to align their views in a way that their requirements are met per release, to plan their requirements so that they can be processed in different WIs and to move parts of their work into more general WIDs (e.g. URLLC)”.<sup>4</sup>
  - As such, as a general public report on network QoS (or other parameters) would contain insufficient information specific to a single given case, its benefit to a given vertical would be limited. Furthermore, verticals may not be in the position to enumerate their specific requirements, be it due to a difference of opinion on technical issue within a specific

<sup>4</sup> 3GPP. “3GPP Rel-17 Work on Vertical Topics.” Presentation, 5G Vertical User Workshop, organized by 3GPP. Brussels. 12-13 February 2019.

[https://www.global5g.org/sites/default/files/2nd%205G%20Vertical%20WS\\_3GPP%20Release%2017%20Work%20on%20Vertical%20Topics\\_20190709.pdf](https://www.global5g.org/sites/default/files/2nd%205G%20Vertical%20WS_3GPP%20Release%2017%20Work%20on%20Vertical%20Topics_20190709.pdf)

sector (i.e. automotive sector on CITS) or due to the business models of some verticals being insufficiently developed to define their precise needs with respect to coverage information.

## 2. Views on the benefits of NRA provisioned information for verticals

BEREC is asking the following:

Would there be benefits in regulatory actions to stimulate the roll-out and take-up of 5G such as by providing information on coverage and QoS of 5G networks, which could include 'coverage maps' displaying the QoS characteristics of 5G networks over location and trends over time? Would there be benefits to providing information in this way? Is it technically feasible to do so?

### GSMA / ETNO comments:

- MNOs and business customers across a variety of verticals already include QoS parameters and other related performance requirements as part of their contractual arrangements. In case verticals would have specific needs in that respect, such as knowing the maximum upload bandwidth, MNOs can provide coverage maps including information related to bandwidth today. If coverage information of 5G were to be provided, it would be necessary to differentiate between frequencies e.g. 700 MHz, 3,5 GHz, 26 GHz. as User Equipment will not cover all areas.
- The key feature of 5G networks in combination with network slicing will be the ability to assure performance parameter, e.g. minimum bandwidth for dedicated user group. Giving customers a view on this (e. g. media companies for live video transmission) is indeed beneficial and already happens as a matter of course. Customers that have specific requirements will also have significant countervailing buyer power and will be well able to ensure that providers meet their needs.
- Regardless, addressing the specific needs of verticals, which can vary in terms of characterization and importance, will be part of the case by case discussions between the verticals and the operators. Even, at the early stage, implementation of 5G features will be done step by step by the industry, including verticals. All the related cases cannot enter into some sort of planned QoS to be rendered public, such as a regulatory reference offer. As BEREC recalls, we do not deny the benefits rendered to consumers by the previous and current work on coverage information. However, by going further to address the specific needs of specific industries, a role already fulfilled by commercial business relations, we argue that BEREC seeks to go beyond its mandate.

## 3. BEREC's call for further information, observing views from preliminary surveys

BEREC is asking the following:

Is it necessary that in order to make qualified decisions regarding the electronic communications networks and services suited best for their current and future business, verticals need information on coverage of 5G?

**GSMA / ETNO comments:**

- Article 22 of the EECC establishes that NRAs and/or other competent Authorities shall, by 21 December 2023, conduct a geographical survey of the reach of ECNs capable of delivering broadband and shall update it at least every three years thereafter. This geographical survey may also include a forecast of the reach of Broadband networks, including VHCN.
- These surveys that will be rendered public, to the extent they do not contain business secrets, will be potentially used by verticals in order to build up their business perspective. If necessary, further details will be part of bilateral discussions between the said verticals and network operators. The final arrangement, if any, will take on potentially different formats, from capacity delivery to partnership. Regardless, this will be done under the commercial terms agreed by the parties.
- As such, the relevant Authority must leave these discussions to the stakeholders and must not take the risk of introducing bias in these negotiations.