



ecta RESPONSE

**TO THE PUBLIC CONSULTATION BY BEREC
ON THE**

**DRAFT BEREC GUIDELINES ON
VERY HIGH CAPACITY NETWORK**

BoR (20) 47

30 APRIL 2020

1. Introduction

1. **ecta**, the **European competitive telecommunications association**,¹ welcomes the opportunity to comment on BEREC's draft Guidelines on very high capacity networks², based on art. 82 of the European Electronic Communications Code (hereinafter: 'EECC' or 'Code').
2. The concept of very high capacity networks (hereinafter: 'VHCNs') is key to the future of the regulation of electronic communications markets in the European Union and thus to the prospects for their development and economic growth.
3. **ecta** recognises the centrality of this concept notably in regard of the future control of market power, as this stands to be reshaped through the introduction of novel rules for co-investment projects that will benefit from a relaxation of otherwise applicable obligations.
4. With the introduction of a general objective that entails promotion of connectivity as well as access to and take-up of VHCNs, **ecta** wishes to emphasize that especially access to VHCN marks a critical element going forward. Without such access, the benefits of VHCN will be delayed and competition is likely to suffer. At the same time, regulation to support VHCN must form an integral part of a wider regulatory approach promoting connectivity.
5. **ecta therefore urges BEREC to state, with greater clarity and purposiveness, the role that VHCNs are assigned in the Code. Such statement should notably bring out the partial, and to a significant extent: prospective, role that these networks play relative to current market reality.**
6. **A more precise account of the objective laid down in art. 3(2)(a) EECC is equally required in this respect to ensure that the aim of guaranteeing benefits for *all* end-users remains plainly in view as the overarching roof over all regulatory intervention and authorised provisioning activity under the Code. **ecta** considers the references, at paragraph 3 of the draft, to general policy documents (that have no legal value) insufficient to this end.³**
7. **Indeed, much more than making reference to external policy documents, the Guidelines should, upon adoption, contain an unequivocal statement of their scope of application *within* the Code.**
8. **While examples as set out in paragraph 4 of the draft provide some orientation in this regard, **ecta** believes it to be far more decisive to underline here the limitations to the applicability of the Guidelines, notably as regards co-investments under art. 76 EECC. Not to clarify this is likely to prompt unnecessary contention and disputes and reduce legal certainty and consistency of application, to which the Guidelines are to contribute, as BEREC recognises. Therefore, their final version**

¹ <https://www.ectaportal.com/about-ecta>

² BoR (19) 189, 3.10.2019.

³ Furthermore, **ecta** also observes that they run counter to the restricted scope of relevance that the draft guidelines define for themselves relative to other policy instruments, cf. BoR (20) 47, para. 24, at 12.

should clearly and prominently state early on their non-application to co-investment situations.

9. Below, **ecta** explains its concerns over the draft Guidelines as these relate to:

- **Underlying data and assumptions (section 2);**
- **The performance thresholds and their derivation (section 3);**
- **The proposed update of the Guidelines (section 4).**

10. As a transversal remark applicable to the consultation document in its entirety, **ecta** wishes to highlight that the pervasive and significant inaccuracies in cross-referencing, the tangled and non-transparent presentation of key elements, as well as the disjunct and oftentimes inaccessible exposition, including plainly erroneous drafting,⁴ has made comprehensive and thorough review significantly more difficult.

11. Nevertheless, **ecta**'s review suggests, inter alia, that the performance thresholds for both wireline and wireless networks have been incorrectly determined and should be revised.

12. **To constitute an acceptable foundation for future administrative practice and to provide an appropriate model for future adaptations, ecta calls on BEREC to address these issues prior to adoption.**⁵

13. **Finally, ecta emphasises that administrative practice building on the Guidelines must not hinder or otherwise negatively affect competitive market development. A closing section elaborates on this, drawing together relevant considerations relating thereto.**

2. Underlying data and assumptions

2.1. The evidence base

14. The consultation document describes the data collection process in section 4.6 and provides further details on the questionnaires used and the responses received and considered in Annex 2.

15. **ecta** notes that 150 responses for fixed and 32 responses for a clarified questionnaire on mobile technologies were received, with a total of 86 and 20 responses taken into account, respectively, for each network type, corresponding to 57% and 63% of the responses.

16. As an introductory observation, **ecta** has been unable to confirm the figures that BEREC states for the responses into account by questionnaire type on the basis of its reported analysis. It thus appears that only 16 (or 50% of) responses on mobile access technologies were effectively considered, amounting to one fifth less than what is stated. At the same

⁴ E.g., '241. Figure 13 shows that the category of the twisted pair cable used is in most cases (88%) category 5e and in about one third of the cases category 5 and category 6 and rather rarely category 6A (16%) and category 7 (4%).'

⁵ Section 3 below contains suggestions to this end.

time, the total number of responses from FTTH operators analysed appears to amount to 29 or around 12% more than what is stated in overview.

17. A review of the figures reported by BEREC in terms of their geographical distribution shows significant imbalances in the responses by country. In total, eight Member States in respect of fixed network questionnaires and 16 Member States and Switzerland in respect of the mobile network questionnaire⁶ received no consideration in the analysis. At the same time, the top-4 jurisdictions in terms of responses effectively considered accounted for 54% and 50% of all such responses for fixed and mobile networks, respectively. For the only fixed access network technology for which BEREC specifically reveals these figures,⁷ operators from three Member States account for 52% of the total responses considered.
18. This means that reported market operational realities in a limited number of Member States are proposed to be given a preeminent role in defining the starting point for a consistent application of the definition of very high capacity networks itself.
19. [ecta](#) is concerned about the representativeness of this approach and its consequences as long as its findings remain unvalidated by a wider operator base that reasonably captures the diversity of deployment contexts throughout the EU.
20. These concerns are further aggravated by the fact that the already small populations of G.fast, DOCSIS and LTE-A respondents are further reduced to four effectively considered respondents in the first, eleven and six in the second,⁸ and thirteen in the third case when selecting by the best technology⁹ to determine the relevant performance thresholds. Adjusting for certain methodological problems, this implies that four out of 150 potentially qualifying operators (or 2.7%) define the thresholds for wireline and eight out of 32 (or 25%) the corresponding thresholds for wireless networks across 30 countries listed in the report.
21. The limitations to the representativeness of these data becomes even more apparent when considering that the draft guidelines provide only high-level description and no analysis or discussion of the precise technology specifications and their parametrisation. Similarly, usage conditions and environmental factors are only acknowledged in the most basic terms, without being further analysed.¹⁰
22. As a first step to addressing this issue, [ecta](#) invites BEREC and especially its members to engage in exchange with operators after closure of the consultation to further extend and consolidate the evidence base across the jurisdictions they represent.

⁶ The statement with regard to mobile technologies is based on a total of 20 responses as reported in Table 3, at 30, and is without prejudice to the data validation issue pointed out in the preceding paragraph.

⁷ Fixed network with fibre to the multi-dwelling building and Ethernet on the in-building twisted pair cable (Cat. 5 or higher).

⁸ The uneven numbers of cases considered reflect the difference in use of DOCSIS 3.1 in downlink and uplink settings, cf. Table 4, at 36.

⁹ Cf. BoR (20) 47, para. 30, at 12.

¹⁰ E.g. BoR (20) 47, para. 39, at 14 and para. 107, at 27.

23. This should be coupled with a monitoring strategy to trace the evolution of VHCN capabilities in light of ongoing technological evolutions as well as concept development to ensure that the basic terms and ideas underpinning the Guidelines become widely accessible and readily understood. Further to the comments up to this point, **ecta** provides additional points in the remainder of this contribution to orient work in a systematic manner to facilitate consistent application.

2.2. Key undocumented assertions and conceptual choices

24. In addition to the above concerns regarding the representativeness of operator responses and the thresholds based upon them, **ecta** also notes that the draft in several places relies on a number of assertions and conceptual decisions that remain undocumented and/or without supporting argument, including:

- The typicality of copper and coax access for end-user services provided from the distribution point;¹¹
- The relatively uncommon character of Ethernet deployment on in-building twisted pair cables;¹²
- The parameters selected to define the best possible mobile network technology (60 MHz carrier aggregation, 4x4 MIMO streams)¹³ as well as the scenario specifications for mobile networks¹⁴;
- The difference in approach to scoping operators' experiences with current usage scenarios for wireline/wireless network technologies, and notably the justification for an equipment-centric approach to the latter as opposed to a user-centric approach to the former.¹⁵

25. Considering the importance of these factors to both the consultation draft and its results as well as to future guidance development and application, **ecta** calls on BEREC to clearly set out its reasons and accompanying evidence in the final Guidelines.

3. The performance thresholds: Derivation and application

26. The definition of performance thresholds serves BEREC to establish the similarity of functioning between networks based on fibre to the distribution point at the serving location and other networks not, or not to the same extent, reliant on fibre up to that point.

27. In conceptually developing these thresholds, BEREC relies on the criteria set out in art. 2(2) EECC.

¹¹ BoR (20) 47, para. 28f, at 12.

¹² BoR (20) 47, para. 113, at 29.

¹³ BoR (20) 47, para. 101e, at 25.

¹⁴ BoR (20) 47, para. 105d, at 27.

¹⁵ BoR (20) 47, para. 107c+d, at 25.

28. Relying on an end-user-centric interpretation, similar network performance in the sense of that provision is defined as achievable end-user quality of service in terms of those criteria.
29. The performance thresholds to be met for a network to achieve such similarity relative to networks based on optical fibre elements to the distribution point are accordingly expressed as the end-user quality of service achievable on the latter under usual peak-time conditions in wireline (performance thresholds 1) and wireless settings (performance thresholds 2).
30. [ecta](#) appreciates that the draft generally supports a strict construal of the notion of similar network performance, reflecting [ecta](#)'s initial comments on the questionnaires.
31. At the same time, [ecta](#) notes that the derivation of the thresholds to establish such similarity, as set out in the consultation draft, is complex and not easily accessible. The subject matter being technical in nature, [ecta](#) recognises that a certain degree of complexity may be unavoidable, but finds at the same time that the presentation of relevant underlying information and reasoning is spread over various parts of the document, making it difficult and time-consuming to follow. This issue is exacerbated by erroneous cross-referencing throughout the document. Such presentation appears particularly inappropriate at this stage of consultation when the underlying reasoning—that BEREC has never comprehensively outlined prior to or during the data collection process—is at issue and needs to be carefully scrutinised.
32. As a general remark, [ecta](#) would therefore suggest that the text be reorganised to differentiate between application guidance, principles and method of derivation and the concrete application of the latter in the present case. This should also help to address, at least partly, the abovementioned issue of inaccessibility.
33. Going forward, it is [ecta](#)'s vision that such reorganisation would effectively permit to provide a reference both for application and for considering possible adjustments to the performance thresholds. The specific data and the analysis thereof used to derive threshold values in the current draft would thus only be retained for historical reference.
34. Specifically with regard to the analysis presented, and beyond the evidentiary concerns already outlined in chapter 2 above, [ecta](#) has especially difficulties following BEREC's proposed approach regarding the performance thresholds associated with criterion 4, i.e. end-user quality of service on a wireless network with fibre connectivity to the base station.
35. These difficulties are rooted in conceptual, methodological and analytical reservations towards BEREC's chosen approach.
36. In what follows, [ecta](#) illustrates these reservations specifically with regard to the derivation of the downlink/uplink data rate as the key defining quality of service parameter among the thresholds associated with criterion 4 to identify similar network performance for wireless networks. The final subsection illustrates how these concerns also affect the derivation of the performance thresholds 1.

3.1. Conceptual concerns

3.1.1. *Differential treatment of wireline and 5G technologies*

37. A first conceptual issue is linked to the unexplained difference in treatment of 5G technology relative to wireline technologies, leading to the inclusion of the latter, but the exclusion of the former.
38. As regards non-consideration of 5G technology for purposes of the present guidelines, [ecta](#) first notes that the phrasing of the draft is ambiguous when it refers to it having been impossible to take the fifth generation fully into account.¹⁶ This effectively suggests that some consideration may have been given to the topic, but it remains unclear how this looked like and what reasons led to its exclusion.
39. Secondly, commercial deployments of 5G were registered in 2018 both inside and outside of the EU. BEREC argues that 5G ‘had not yet been deployed ... *to a relevant extent*’,¹⁷ respectively that it had not yet ‘reached mature deployment and significant penetration’¹⁸.
40. Beyond the difficulty of finding any legal basis for those criteria (see further section 4 below), [ecta](#) also observes that they appear to contradict BEREC’s emphasis on ‘the newest technologies used’, especially to the extent that this emphasis applies, ‘even if they are only deployed *by a small number of operators in the EU*’.¹⁹
41. Furthermore, [ecta](#) is aware that some of its members were already engaged in 5G field trials at the time of data collection, thus meeting the standard of already deployed technologies invoked by BEREC.²⁰ The exclusion of such trials is all the more perplexing when considering the explicit inclusion of LTE field trials.²¹
42. Taken together, there would thus seem to be sufficient basis for considering already available 5G performance and [ecta](#) would encourage BEREC to do so as far as possible in finalising the performance thresholds in the guidelines.
43. Furthermore, the text of the guidelines should be revised to address the inconsistencies identified above. [ecta](#) considers in this respect that the only decisive factor in determining whether or not to include a given technology, notably in a forward-looking perspective, should be its demonstrated operational capability. All other parameters should be abolished, notably where they are likely to impair and thus reduce innovation incentives and insulate legacy technologies.

3.1.2. *Limitation of wireless networks to mobile technologies*

44. A second conceptual issue concerns the limitation of wireless networks to mobile access technologies, which the consultation draft justifies by arguing that end-user services

¹⁶ BoR (20) 47, para. 23, at 12.

¹⁷ BoR (20) 47, para. 36, at 13; italics added.

¹⁸ BoR (20) 47, para. 23, at 12.

¹⁹ BoR (20) 47, para. 34, at 13; italics added.

²⁰ Ibid.

²¹ BoR (20) 47, para. 101, at 26.

provided wirelessly are typically based on a mobile network as opposed to, for example, a public WLAN.²²

45. This limitation appears especially problematic in the transition to 5G as a technology generation incorporating both mobile and fixed wireless access solutions.²³
46. In line with an approach interpreting network delivery capability in operational terms to derive performance thresholds, **ecta** asks BEREC to generally remove the consideration of typicality in this context, i.e. in relation to both fixed and wireless networks.
47. In order to preserve technology neutrality and maintain innovation incentives and opportunities for competitive differentiation, **ecta** considers it important that, by default, all wireless technologies should be able to qualify for consideration in defining relevant thresholds. Indeed, BEREC should explicitly weigh potentially exclusionary effects of focussing on only one technology. This seems all the more relevant where in the fixed technology space, two access technologies have been considered. Otherwise, the undesirable consequence could be to exclude entire technology classes from consideration as very high capacity networks.

3.1.3. The treatment of fixed wireless access

48. A third conceptual issue concerns the treatment of fixed wireless access specifically.
49. Already in its initial response on the consultation questionnaires, **ecta** had explicitly called for inclusion of questions dedicated to fixed wireless access.²⁴
50. BEREC in its call to complete these questionnaires excluded fixed wireless access suggesting that these were not covered by the 'reference networks' stipulated by art. 2(2) EECC. Inconsistently with that very argument, BEREC nevertheless chose to include an FTTLA questionnaire. **ecta** considers that this would also have left room for a dedicated FWA questionnaire.
51. **ecta** observes that the notion of 'reference networks', which lacks legal grounding and whose interpretation was not compliant with the Code, has appropriately been removed from the consultation draft. However, substantially identical considerations appear to underpin the networks considered in section 4.1, now complemented by a notion of typicality in the sense of typical access technologies (on which, see **ecta**'s request at paragraph 46 above). Moreover, **ecta** is surprised to note that the results of the FTTLA questionnaire have been wholly discarded.²⁵
52. As far as fixed wireless access networks are concerned, the consultation draft now treats these as an instance of wireless VHCN, despite equating the latter to mobile access

²² BoR (20) 47, para. 29, at 12.

²³ On the need to recognise fixed wireless access technology as a self-standing contributor to establishing wireless performance thresholds already today, see subsection 3.1.3. below.

²⁴ **ecta** Response, 10.4.2019, para. 25.

²⁵ BoR (20) 47, note 26, at 24. **ecta** would notably have thought it appropriate to indicate how many such questionnaires were actually received.

technologies (on which, see paragraphs 42 to 45 above). Specifically, BEREC here suggests that a 'network that meets criteria 2 or 4, or both' may also qualify as delivering performance similar to that of a network with fibre to the serving location by meeting the performance thresholds of criterion 3.²⁶

53. **ecta** considers this suggestion problematic for the logical and practical inconsistencies it entails and the unnecessary contention and administrative burdens it may cause.
54. As a network consisting of optical fibre elements up to the relevant distribution point is a very high capacity network by definition under the Code, it cannot be submitted to further consideration in respect of the performance thresholds. For this reason, **ecta** considers that a wireless network fulfilling criterion 2 must neither be evaluated with regard to criterion 4, nor with regard to criterion 3. Accordingly, it also cannot fulfil both of the criteria 2 and 4 in a legally relevant sense.
55. As regards the concomitant fulfilment of criteria 3 and 4, **ecta** is concerned about the largely arbitrary permeability that this introduces between what BEREC presents as categorically different network types.
56. At its most fundamental, it is unclear what purpose this option serves. If a wireless network that is not fibred up to the base station does meet the performance thresholds 2, it also qualifies as a network of very high capacity by that token alone. No added value therefore derives from demonstrating its capability of meeting performance thresholds 1. BEREC acknowledges this, by analogical reasoning, in paragraphs 15 and 155 of the draft.
57. Furthermore, the possibility to invoke qualification as a VHCN according to criterion 3 once criterion 4 has been met also involves the possibility of failing this test. Under the currently proposed performance thresholds, it is plain to see that meeting performance thresholds 2 in no way guarantees also meeting performance thresholds 1. Yet making the concrete determination will require administrative resources. In **ecta**'s view, these resources should be more appropriately directed to other ends, considering that a prior determination relative to performance thresholds 2 will already have been made, and that such additional determination serves no discernible purpose.
58. Also, an optional approach to demonstrating the capability to meet performance thresholds 1 would raise questions about who may decide on whether to request classification as a fixed network equivalent. To the extent that a distinction between network types is maintained, **ecta** is of the opinion that the guidelines should explicitly take a stance against such added uncertainty and possible additional source of inconsistent application.
59. The possibility of achieving double qualification as VHCN under two performance thresholds also implies the possibility for cascading requests where operators upon being denied VHCN status according to performance thresholds 1, would seek to demonstrate compliance with performance thresholds 2. **ecta** believes that such unnecessary

²⁶ BoR (20) 47, para. 20, at 24.

proceedings must be explicitly avoided and also for that reason urges the option of twin qualification to be eliminated.

60. Finally, a further danger linked to the proposed approach is that it would incentivise operators unable to demonstrate capability of meeting performance thresholds 1 to seek recognition as VHCN under performance thresholds 2. Thus, wireline operators capable of meeting the latter performance thresholds could invoke a right to qualify as VHCN, arguing that such cross-category qualification must not be denied in view of the reverse possibility existing for wireless operators.
61. The points set out in the preceding paragraphs lead [ecta](#) to conclude that in view of the significant associated issues and disadvantages, BEREC should delete the guidance contained in paragraph 20 of the draft. If BEREC's aim in drafting that paragraph had been to explicitly address fixed wireless access, a more appropriate approach would have been to base its overall reasoning and derivation of the performance thresholds around the distinction between fixed and mobile networks, as [ecta](#) had suggested in its initial comments on the data collection questionnaires.²⁷
62. In the present circumstances, [ecta](#) considers that the final guidelines should rather clarify that although they have been exclusively derived from data relating to mobile access technologies, the performance thresholds 2 permit any wireless network to demonstrate VHCN capabilities, irrespective of its precise features.

3.2. Methodological & analytical concerns

63. In deriving thresholds for similar network performance, BEREC relies on 'typically achievable' downlink and uplink data rates to designate both scenarios based on the best possible service currently provided and on the best possible configuration.²⁸
64. This choice of wording appears misleading to [ecta](#) for the following reasons. Operators were asked to provide *estimated* and *typical* values for achievable quality of service. This suggests that typical achievable values are only those included under the second of these two headings, or, in other words, relative to the second scenario operators were asked to consider (as specified in paragraph 93 of the draft). This is further corroborated by the fact that paragraph 103 actually fails to articulate a coherent statement.²⁹
65. In addition to these conceptual shortcomings, [ecta](#) also finds several methodological errors in the derivation of the proposed QoS parameter thresholds.
66. As regards the threshold download rate for similar network performance, BEREC fails to specify the precise method for determining the 90% percentile.

²⁷ ecta Response, 10.4.2019, para. 18.

²⁸ BoR (20) 47, para. 103, at 26.

²⁹ '103. Altogether, the main question asked for the typically achievable data rate (and other QoS parameters) under the conditions mentioned above (paragraph 93) i.e. for the data rate (and other QoS parameters) which an end-user of the service with the highest data rate currently provided (scenario 1) or possible (scenario 2) will typically experience in peak-time,²⁹ if the CPE/ME fully supports the technology in the network (no limitations by CPE/ME).'

67. Also in this context, [ecta](#) notes that the sequence of considerations set out by BEREC is unconvincing in that it considers all mobile operators except those whose value are classed as implausible, although the final threshold value is held to apply only to outdoor locations. While BEREC's approach yields thirteen data points, appropriate delimitation of the dataset to outdoor locations yields only eight data points, when excluding implausible values. The corresponding 90% percentile yields a threshold value of 200 Mbps downstream (rather than 150 Mbps). [ecta](#) considers this a more appropriate and future-proof determination, which also relativizes the need for an early update of the threshold values (on this, see extensively chapter 4 below).
68. As regards the derivation of the threshold value for the uplink data rate, [ecta](#) observes that this appears to be affected by the same methodological problem. Accordingly, the 90% percentile threshold should indeed be set at 51 Mbps (rather than 50 Mbps).³⁰
69. However, more important is the fact that the derivation proceeds in a mechanical manner without appropriately considering the relation between the downlink and uplink data rates.³¹ Accordingly, the guidelines assume that any operator would be able to achieve a combination of downlink and uplink data rates that has no grounding in data rates submitted by operators.
70. [ecta](#) considers that this assumption cannot be justified solely on the grounds of expected 5G performance gains, as this would set an unrealistic reference for the near term (meaning that no operator using LTE-A technology that responded to the questionnaire would actually be capable of qualifying as providing a VHC network), promote methodologically inconsistent administration and set a precedent for future updates that could make it substantially impossible for mobile operators, as well as for MVNOs using their networks, to ever qualify as VHC network providers.
71. Furthermore, [ecta](#) also has reservations towards the plausibility assessment conducted by BEREC in its current form.
72. In the context of the download data rate, this assessment refers to Internet speed test data sourced from a number of NRAs, as presented in Annex 6.
73. First, [ecta](#) notes in this regard that the nine countries listed in that annex present problems of representativeness both as regards general market characteristics and as regards their match to operator responses which they are supposed to help evaluate. Specifically with regard to the latter dimension, [ecta](#) observes that the nine countries not only include three Member States from which no operator responses were considered, but also one non-EU country that is not considered anywhere else in the report.
74. Secondly, the consultation document fails to explain to what extent the measurement methods implemented by NRAs in the countries concerned are identical, comparable or

³⁰ [ecta](#) here further remarks that the indication in footnote 44 is of no use when the precise derivation remains unspecified.

³¹ This is also evident from the fact that the same three operators are deemed to report implausible data rates, although the value for the fourth operator shown in Figure 9 is equal to that of the third.

categorically disparate. Without this information, the mere focus on the same range of observations does not, in [ecta](#)'s view, allow to correctly assess their relevance and persuasiveness.

75. Thirdly, it is unclear why BEREC has examined three metrics further to the 90% percentile, despite this having been set to constitute the reference metric for threshold determination. Moreover, [ecta](#) notes that the consultation draft offers no accompanying interpretation of the values reported,³² making it difficult to discern their utility for purposes of the report.
76. Fourthly, the data are incomplete (cf. paragraph 267), without it having been made clear how widespread this incompleteness is, what impact it had had on the dataset and how it has been accounted for in the analysis.
77. Fifthly, according to paragraph 193, the data include measurements taken on both LTE and LTE-Advanced mobile technologies. Without it being clear what the relative share of the measurements each of these specifications represents, the appropriateness of relying on these data to evaluate operator-reported values cannot be assessed, nor can their suitability to providing a future-oriented reference threshold. Consequentially, the value of NRA data might not only be limited for understanding reported operator data,³³ but could also distort the interpretation of criterion 4. This is particularly relevant insofar as it are these data that lead to the exclusion of operator data as being implausible (at paragraph 193).
78. These difficulties are further compounded by the lack of information regarding the precise underlying operational setting(s) from which the observations are drawn (release and configuration). Again, this would have been required both to allow evaluation of the similarity between NRA and operator data and to understand in how far they approximate scenario 2.
79. Sixthly, the figures actually invoked in paragraph 193 to disqualify certain reported data points as implausible are not supported by the figures in Annex 6. While BEREC asserts in its draft that the highest values are '70 to 100 Mbps' in the 95% percentile, Figure 16 illustrates that the top measurement from NRA sources effectively is above 120 Mbps, implying no less than a 20% variation.
80. Moreover, in view of BEREC's scepticism as to operators on average achieving the threefold downlink data rate of what is confirmed by NRA measurements, [ecta](#) would underline that releases 12 and 13 were not only developed with the objective of at least a 30-fold increase in capacity, but also a twelve-fold increase in cell edge throughput.³⁴ This goes to underline that in addition to the difference between LTE- and LTE-A-based measurements, also release-related information is needed to assess the relevance of NRA data.

³² At para. 268, the draft provides but a sample readout out of the upper and lower bound values corresponding to 50% of observations in the 95% percentile and the maximum and minimum whisker values for the same percentile.

³³ BoR (20) 47, Table 10, at 48.

³⁴ E.g. Huawei, *The Second Phase of LTE-A* (Shenzhen, 2013).

81. Thus, if it were to turn out that NRA data were more based on LTE than LTE-A technology, it would conceivably be possible for reported operator data to be legitimate, which, in turn, could lead to an upward revision of both the uplink and downlink data rates. If no data were excluded for implausibility, the downlink data rate would be 300 Mbps for the 90% percentile and even 450 Mbps for the 95% percentile, on which BEREC relies.

82. In view of the arguments set out in the preceding subsections, **ecta** believes that the implausibility assessment should be revisited, as should the downlink and uplink performance thresholds.

3.3. Extension of concerns over determination of downlink and uplink data rates to wireline networks

83. A review of the derivation of the performance thresholds #1 leads **ecta** to conclude that the underlying derivations of aggregate data thresholds are incorrect and that, accordingly, the overall value has to be revised, creating an attendant need to also revise, at least in part, the underlying individual data rates.

84. The following paragraphs are limited to the derivation itself; methodological concerns already treated above, but equally applicable in this context, are not flagged again.

85. On the basis of data reported in Figure 1,³⁵ **ecta** determines the median value for the typically achievable aggregate data rate based on G.fast 212 MHz to be 1,204.5 Mbps.

86. As BEREC does not disclose how it has derived the value of 1,200 Mbps,³⁶ **ecta** considers that that value facially requires to be amended.

87. For the corresponding derivation for DOCSIS 3.1, **ecta** cannot follow BEREC's derivation of the median of the typically achievable uplink data rate to yield 160 Mbps.³⁷

88. Indeed, to the extent that BEREC apparently considers value ranges reported by two operators, **ecta** notes that this is inconsistent with the determination of the performance thresholds #2, where the reporting of value ranges led to the exclusion of the reported data.

89. Applying the same logic, **ecta** determines the median of the typically achievable uplink data rate to be 342.5 Mbps.

90. In consequence, the typically achievable aggregate data rate for DOCSIS 3.1 yields a value of 1,342.5 Mbps, exceeding the corresponding value of 1,200 Mbps for G.fast 212 MHz.

91. Therefore, the performance thresholds #1 should be defined on the basis of DOCSIS 3.1. A possible revision could, in **ecta's** view, retain the downlink data rate threshold of 1,000 Mbps and augment the corresponding uplink threshold to 342.5 Mbps. Due to the representativeness concerns outlined earlier, **ecta** would encourage BEREC to envisage separate exchange with industry to confirm this value beyond the range of reported respondents.

³⁵ BoR (20) 47, at 33.

³⁶ BoR (20) 47, para. 135, at 34.

³⁷ BoR (20) 47, para. 147, at 38.

4. The proposed update to the Guidelines

92. As BEREC acknowledges,³⁸ art. 82 EEC requires it to update the guidelines by 31 December 2025.
93. In that context, BEREC announces its plan to update the performance thresholds of criterion 4 ‘as soon as possible and not later than 2023.’³⁹ This update is to address the fact that 5G could not yet be fully considered in preparing the current draft due to a lack of ‘mature deployment and significant penetration’.
94. **ecta** is concerned by BEREC’s proposed approach for several reasons.
95. First, the suggested justification set forth by BEREC to support an early update introduces additional criteria that have no legal basis and therefore are both unsound and prejudicial to consistent application.
96. The expression ‘mature deployment and significant penetration’ implies two distinct, extra-legal criteria that according to BEREC would have to be fulfilled in order for a technology to be considered when identifying similarly performant networks in the sense of art. 2(2) EEC. As neither of these criteria derive from the Code, non-inclusion of technologies for failure to fulfil these criteria would both exclude potentially relevant technologies and open application of the guidance to legal challenge.
97. Moreover, neither criterion appears compatible with the principle of technology neutrality that the Code explicitly refers to in outlining the reach of the concept of very high capacity networks in recital 13, on which BEREC extensively relies in its analysis.
98. Thirdly, the double standard of mature deployment and significant penetration artificially delays consideration of a technology delivering similar network performance until such time when it has already become widely established. This means that parties investing early on in new, promising technological solutions will be withheld recognition as delivering very high capacity network performance on the basis of criteria unrelated to the capability of those technologies of doing so.
99. Such additional barriers are hostile to innovation, limit the potential for competitive differentiation and contradict the objective of promoting access to and take-up of very high capacity networks.
100. Moreover, **ecta** also notes that this double standard appears to contradict the reasoning employed by BEREC in respect of G.fast technology. G.fast has been included as a relevant technology for defining the performance thresholds of criterion 3⁴⁰ despite its overall limited deployment that is also echoed by the limited number of response covering this technology⁴¹.

³⁸ BoR (20) 47, para. 23, at 12.

³⁹ *Ibid.*

⁴⁰ BoR (20) 47,

⁴¹ BoR (20) 47, Table 1, at 28.

101. For these combined reasons, **ecta** believes that BEREC should remove these additional criteria from the guidelines and focus on defining a reliable framework for consideration of relevant technological developments as these occur. Such a framework should help increase regulatory predictability, including setting appropriate incentives for market participants looking to future-proof their investments.
102. The legislature has given BEREC five years to update the guidelines, in parallel with the general review to be carried out by the Commission within the same timeframe.
103. **ecta** welcomes that the evaluation is to be given adequate time to ensure that the implications of the various changes to be introduced by the new legislative framework for electronic communications in the EU.
104. The definition of very high capacity networks will be central in this respect due to its orienting role at both a general and a specific level. **ecta** believes that its interpretation should therefore carefully avoid any changes that may upset delicate competitive dynamics, especially where these that have only recently evolved. This is critical notably during the initial period of application of the Code, where a number of new regulatory mechanisms will be introduced for the first time with potentially important consequences for market development.
105. In this context, **ecta** is concerned that BEREC's consultation draft sketches a timeline implying that mobile technologies selected today to define the performance thresholds of criterion 4 will no longer qualify as VHCNs in three years' time when the guidelines will be updated.
106. This approach risks creating adverse effects both by dampening planned investments in LTE-A upgrades and new deployments in the short term and leading to a potentially overshooting assessment of VHCN presence prior to as compared to after the update. This will notably become apparent as 5G deployments will occur much more selectively, whilst upgrades otherwise could reasonably be expected to continue.
107. These effects are likely to be further reinforced by the imprecise timeframe ('as soon as possible') and thus to also impact on the first geographical survey to be conducted by 21 December 2023, notably if this is to include a VHCN deployment forecast. While the precise impact remains unforeseeable, **ecta** cautions that to change the relevant thresholds could not only lead to inaccurate reporting, but—depending on its timing—also limit undertakings' reporting capacity.
108. In **ecta**'s view, there is furthermore a real risk that different technologies yield diverging interpretations among NRAs, notably where technological novelties are introduced between two update cycles. Such divergences will likely lead to inconsistent application of the Code and create regulatory uncertainty for operators, notably where they are operating in multiple jurisdictions.
109. This uncertainty, and its associated negative effects on pro-investment and innovation choices, should lead BEREC to focus on ensuring that forthcoming revisions of the guidelines occur in a predictable manner.

110. In this respect, to preserve a coherent frame of reference, consider all relevant technological developments and account for possible interactions between the performance thresholds applicable to wireline and wireless networks, [ecta](#) urges BEREC to ensure that any update generally remain open to all classes of network technologies whether fixed, mobile or wireless.
111. Moreover, BEREC should include in the guidelines a list of candidate technologies that at the time of publication are being considered for inclusion in a future update. This list should be subject to public consultation and electronic communications providers should be enabled to make suggestions for technologies to be included in that list.
112. Considering that innovation in network technology choices may often be local and occur at times other than the BEREC consultation, [ecta](#) calls on BEREC to institute a process by which NRAs share relevant developments so that these can be discussed and assessed in a joined-up manner with a view to maintaining consistent regulatory practice. This should not lead to any administrative delays or other types of hindrances to operator-led technology deployment. [ecta](#) suggests that relevant developments be reviewed at least once per year and reported upon by BEREC as part of its obligation to report on technical market developments.
113. In view of the need to establish the similarity of performance of various technology options on the basis of operational measurements, [ecta](#) recommends that NRAs establish a common framework allowing for continuous monitoring of performance developments. This framework should enable domestic operators launching new technologies to be immediately capable to qualify as VHCN and at the same time feed into a shared evidence base among BEREC members on which further development of the guidelines could rely.

5. Concluding remarks

114. The definition of what constitutes very high capacity networks is a key element of the new legislative framework for electronic communications.
115. Guidance on its interpretation therefore demands particular attention to ensure that the administrative practice evolving around very high capacity networks will be consistent and that market development across all of the EU will be guided by a common understanding of what networks are covered by the Code's objective of promoting access to and take-up of very high capacity networks.
116. As argued throughout this submission, [ecta](#) believes that possibilities for technological innovation and differentiation must remain possible in this context. The move towards very high capacity networks in this sense is also a migration away from legacy infrastructure.
117. The notion of very high capacity networks is therefore also linked to future competitive realities in electronic communications markets. Indeed, the goal to promote access to these networks, which [ecta](#) has continuously emphasised, underlines this dimension.
118. The Guidelines and their application therefore need to ensure that the concept does not distort or hinder competitive developments.

119. In this respect, **ecta** wishes to underline that the qualification as a very high capacity network according to the performance thresholds must not be used, and cannot be accepted, as justification to refuse access to symmetrical wholesale access capability that is, for example, indispensable for the B2B market. This is particularly relevant where the provision of access to such networks qualifies an operator for regulatory exemptions, such as is the case for wholesale-only operators with significant market power (and potentially other operators) in respect of symmetrical obligations under art. 61(3) EEC.
120. **ecta** also considers that qualification according to the performance thresholds does not determine the competitive positioning and relevance of a given network. In particular, a fixed wireless access network meeting the second set of performance thresholds is not therefore excluded from effectively competing in broadband access markets that thus far have overwhelmingly been defined in wireline terms. The same evidently applies for such networks that have fibre roll-out to the transmitter site.
121. Accordingly, competitive analysis and market power assessment have to continue on the basis of careful appreciation of market realities. The definition of a network, in **ecta**'s view, does not determine the market dynamics surrounding it.
122. Finally, **ecta** considers that the real impact of the concept of very high capacity networks and the Guidelines will to a significant extent be shaped by how national regulatory authorities will administer it, including how compliance in respect of the performance thresholds will be determined. **ecta** and its members stand ready to engage in dialogue about this.

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In case of questions or requests for clarification regarding this contribution, BEREC and its members are welcome to contact Mr Oliver Füg, Director of Competition & Regulation at **ecta** at ofueg@ectaportal.com.