Proposed changes to BEREC Consultation Document	OTE comments
Definition of “end-user” (Art. 2) The definition should be specifically clarified in order to note that the term “end user” under the Regulation does not include “CAPs” that provide “over-the-top” services.	BEREC’s interpretation of the term “end-user” is overly wide. “End-users” under the Regulation in our view do not include Content Access Providers (“CAPs”) that provide their services ‘over-the-top’. In particular, CAPs are not direct addressees of the right to an open Internet access under Art. 3 (1) of the Regulation. Article 2 of the TSM Regulation provides that the definitions set out in Article 2 of the Framework Directive (Directive 2002/21/EC) also apply under the Regulation. The Framework Directive defines an end-user as “a user not providing public communications networks or publicly available electronic communications services”. BEREC concludes from this that an “end-user” for the purposes of the TSM Regulation encompasses individuals, businesses, as well as CAPs. However, the TSM Regulation does not define an “end-user” to include a CAP. By this, it is important to note that the definition of ‘end-user’ in the Framework Directive serves the purpose of distinguishing ‘retail’ users of electronic communications services from wholesale customers using e-communications services offered by other e-communications providers.
38. A zero-rating offer where all applications are blocked (or slowed down) once the data cap is reached except for the zero-rated application(s) would infringe Article 3(3) first (and third) subparagraph (see paragraph 52). <u>However, the use of “customer care” zero rated applications which aim to inform and/or protect customers about their charges should not be considered that infringe Article 3(3).</u>	The use of “customer care” zero rated applications for informative reasons are outside the scope of the present paragraph and this should be accordingly specified.
40. When assessing such agreements or commercial practices like zero-rating in relation to Article 3(2), NRAs ~~and other competent authorities~~ should take into account the aim of the Regulation to *“safeguard equal and non-discriminatory treatment of traffic”* (Article 1) and to	The evaluation process as described needs further clarification in order to avoid any misinterpretation of the phrase “other competent authorities”. Since we refer to the analysis of actual effects on markets and consumers in the electronic communications area, it would be preferable to give clear

"*guarantee the continued functioning of the internet ecosystem as an engine of innovation*" (Recital 1) as well as Recital 7, which directs NRAs and other competent authorities to intervene against agreements or commercial practices which, "*by reason of their scale, lead to situations where end-users' choice is materially reduced in practice*", or which would result in *"the undermining of the essence of the end-users' rights".* 41. Recital 7 also indicates that NRAs ~~and other competent authorities~~ should take into account the *"respective market positions of those providers of internet access services, and of the providers of content, applications and services, that are involved"*.	guidance as to which Authorities deal with competition in the electronic communications area (paragraphs 40, 41). Especially since § 43 rightfully states that "market positions should be analysed in line with competition law principles". Other elements featured in the same paragraph lack a clear link to the EU Regulation. For example referring to "effect[s] on the range and diversity of content and applications which CAPs provide". While this traditionally is a goal of media regulation, it is not a necessary criterion when analysing the effects of commercial IAS agreements between ISPs and end users.
~~39. The ISP could either apply or offer zero-rating to an entire category of applications (e.g. all video or all music streaming applications) or only to certain applications thereof (e.g. its own services, one specific social media application, the most popular video or music applications). In the latter case, an end-user is not prevented from using other music applications. However, the zero price applied to the data traffic of the zero-rated music application (and the fact that the data traffic of the zero-rated music application does not count towards any data cap in place on the IAS) creates an economic incentive to use that music application instead of competing ones. The effects of such a practice applied to a specific application are more likely to *"undermine the essence of the end-users' rights"* or lead to circumstances where *"end-users' choice is materially reduced in practice"* (Recital 7) than when it is applied to an entire category of applications.~~	The provisions of that paragraph are not promoting a fair ex-post evaluation process; on the contrary, they seem to establish a restrictive "per se" ruling that prevents a case by case analysis in cooperation with National Regulatory Authorities.
~~45. In applying such a comprehensive assessment, NRAs and other competent authorities may also take into account the following considerations:~~ ~~• Any agreements or practices which have an~~	The provisions of that paragraph are not promoting a fair ex-post evaluation process; on the contrary, they seem to establish a restrictive "per se" ruling that prevents a case by case analysis in cooperation with

~~effect similar to technical blocking of access (see paragraph 52) are likely to infringe Articles 3(1) and 3(2), given their strong impact on end-user rights.~~ ~~•Commercial practices which apply a *higher* price to the data associated with a specific application or class of applications are likely to limit the exercise of end-users' rights because of the potentially strong disincentive created to the use of the application(s) affected, and consequent restriction of choice. Also, the possibility that higher prices may be applied to an application or category of application may discourage the development of new applications.~~ ~~• End-users of an IAS whose conditions include a lower (or zero) price for the data associated with a specific application or class of applications will be incentivised to use the zero-rated application or category of applications and not others. Furthermore, the lower the data cap, the stronger such influence is likely to be.~~ ~~•Price differentiation between *individual* applications within a category has an impact on competition between providers in that class. It may therefore be more likely to impact the "*continued functioning of the internet ecosystem as an engine of innovation"* and thereby undermine the goals of the Regulation than would price differentiation between *classes* of application.~~	National Regulatory Authorities.
48. In assessing <u>in an ex-post analysis</u> whether an ISP complies with this principle, NRAs should apply a two-step assessment: • In a first step, they should assess whether all traffic is treated equally. • In a second step, they should assess whether situations are comparable or different and whether there are objective grounds which could justify a different treatment of different situations (under Article 3(3) second subparagraph – see paragraphs 54-72 below).	We welcome the ex-post approach outlined for analysing traffic management practices; nevertheless the ex-post nature of that analysis should be more clearly stated.

50. NRAs should take into account that equal treatment does not necessarily imply that all end-users will experience the same network performance or quality of service (QoS). ~~Thus, even though packets can experience varying transmission performance (e.g. on parameters such as latency or jitter), packets can normally be considered to be treated equally as long as all packets are processed agnostic to sender and receiver, to the content accessed or distributed, and to the application or service used or provided~~.	This paragraph correctly states that equal treatment of traffic will not necessarily result in equal performance. But it goes far beyond the provisions of the regulation when it establishes that equal treatment is given when "all packets are processed agnostic to sender and receiver, to the content accessed or distributed and to the application or service provided.". If that would happen, it then wouldn't be possible to treat different categories of traffic differently. This, however, should be allowed because it is foreseen by the Regulation and described by BEREC in subsequent paragraphs. We therefore suggest deleting the second sentence of that paragraph.

57. When considering whether a traffic management measure is non-discriminatory, NRAs should consider the following: • The requirement for traffic management measures to be non-discriminatory does not preclude ISPs from implementing - in order to optimise the overall transmission quality and user experience - traffic management measures which differentiate between objectively different categories of traffic (ref. Recital 9 and paragraphs 59-64 below). • Similar situations in terms of similar technical QoS requirements should receive similar treatment. • Different situations in terms of objectively different technical QoS requirements can be treated in different ways if such treatment is objectively justified. • In particular, the mere fact that network traffic is encrypted should not be deemed by NRAs to be an objective justification for different treatment by ISPs. 58. When considering whether a traffic management measure is proportionate, NRAs should consider the following: ~~•~~There has to be a legitimate aim for this measure, as specified in the first sentence of Recital 9, namely contributing to an efficient use of network resources and to an optimisation of overall transmission quality. ~~•~~ The traffic management measure has to be suitable to achieve the aim (with a requirement of evidence to show it will have that effect and that it is not manifestly inappropriate). ~~•~~ The traffic management measure has to be necessary to achieve the aim. ~~• There is not a less interfering and equally effective alternative way of achieving this aim (e.g. equal treatment without categories of traffic) with the available network resources.~~ ~~•~~ The traffic management measure has to be appropriate, e.g. to balance the competing requirements of different traffic categories or competing interests of different groups.	Although these paragraphs contain helpful considerations as far as it confirms the lawfulness of traffic management measures which contribute to network efficiency in a non-discriminatory manner, however, NRAs should not decide about the "correct" or "sufficient" dimensioning of networks. Traffic management techniques can produce real benefit for end users, by keeping user costs low. Therefore NRAs should not substitute market mechanisms with restrictive provisions and finally omit an important differentiator between competing networks. This is clearly not in line with the general goals of telecoms regulation in the EU as well as the established best practice of economic regulation.

6~~5. In the event that traffic management measures are based on commercial grounds, the traffic management measure is not reasonable. An obvious example of this could be where an ISP charges for usage of different traffic categories. However, NRAs do not need to prove that a traffic management measure is based on commercial grounds; it is sufficient to establish that the traffic management measure is not based on objectively different technical QoS requirements.~~	The general statement that traffic management measures may not be based on commercial grounds is too simplistic, given the fact that BEREC acknowledges the interdependence of investments in network capacity ant traffic management measures (in cases of preventing network congestion). Private companies base their business choices on commercial considerations. By this, it not justified to state that "in the event that management measures are based on commercial grounds, the traffic management measure is not reasonable", especially given that there is an entire section dedicated to commercial practices which in principle allows for commercial differentiation of different categories of traffic when providing IAS.
97. These providers are free to offer services <u>other than internet access services</u> referred to in Article 3(5), ~~which BEREC refers to as specialised services~~, only when various requirements are met. Article 3(5) provides the safeguards for the provisioning of ~~specialised~~ services <u>other that internet access services</u> which are characterised by the following features in Article 3 (5) first subparagraph: • they are services other than IAS services; • they are optimised for specific content, applications or services, or a combination thereof; • the optimisation is ~~objectively~~ necessary in order to meet requirements for a specific level of quality.	The draft BEREC Guidelines use the term "specialized services" although during the debate during the legislative process no common understanding of the term "specialized services" was concluded. A definition of such services should be avoided because it risks being too narrow and not future proof. The Regulation takes into consideration Internet Access Services (IAS) only; other services are relevant in conjunction with their potentially limiting effects on the IAS. By this, we propose to use the term as this appears in the Regulation and not the term "specialized services". The word "objectively" clearly narrows the third requirement under which such services are deemed in line with the TSM Regulation although such restrictions are not required by the Regulation itself. Not being transparent regarding the reasoning behind the use of the word "objectively" and the far more obvious broader understanding of the third characteristic simply shows the overly critical stance BEREC has taken against SoIAS.
~~101. NRAs should *"verify"* whether the application could be provided over IAS at the~~	The described aversion to SoIAS discharges into **far reaching measures NRAs should**

~~agreed and committed level of quality, and whether the requirements are plausible in relation to the application, or whether they are instead set up in order to circumvent the provisions regarding traffic management measures applicable to IAS, which would not be allowed~~. 104. NRAs could request from the provider relevant information about their specialised services, using powers conferred by Article 5(2). In their responses, the provider should give information about their specialised services, including what the relevant QoS requirements are (e.g. latency, jitter and packet loss), and any contractual requirements. ~~Furthermore, the "*specific level of quality*" should be specified, and it should be demonstrated that this specific level of quality cannot be assured over the IAS.~~ ~~107. NRAs should verify whether, and to what extent, optimised delivery is objectively necessary to ensure one or more specific and key features of the applications, and to enable a corresponding quality assurance to be given to end-users. To do this, the NRA should assess whether an electronic communication service, other than IAS, requires a level of quality that cannot be assured over an IAS. If not, these electronic communication services are likely to circumvent the provisions of the Regulation and are therefore not allowed.~~	**conduct** evaluating such services. Firstly NRAs "…should verify whether the application could be provided over IAS at the agreed and committed level of quality…" (see § 101). And it "should be demonstrated that this specific level of quality cannot be assured over the IAS."(see § 104, 107). If this fails these electronic communication services should "not be allowed" (see § 107 sent 3). In addition upon request IAS providers "should give information about their specialized services, including what the relevant QoS requirements are, e.g. latency, jitter and packet loss, and any contractual requirements" (see § 104). These are further examples burdening IAS providers unilateral in addition to the already foreseen measures and requirements such providers have to fulfill. **The sum of IAS safeguards are at the brink of being disproportionate. With these additional requirements the guidelines burden IAS providers with disproportionate tasks.**
108. The internet and the nature of IAS will evolve over time. ~~A service that is deemed to be a specialised service today may not necessarily qualify as a specialised service in the future due to the fact that the optimisation of the service may not be required, as the general standard of IAS may have improved. On the other hand, additional services might emerge that need to be optimised, even as the standard of IAS improves.~~ Given that we do not know what	BEREC states that Guidelines contribute "to regulatory certainty for stakeholders" (see § 1). This is clearly an objective worth supporting. When it comes to SoIAS the opposite is the case however. If - against all odds - such a service has managed to be acknowledged as a legally provided SoIAS, its existence is permanently threatened by the improvements of IAS (see § 108). This demonstrates that BEREC has little to no faith in market powers. It is rather obvious

specialised services may emerge in the future, NRAs should assess whether a service qualifies as a specialised service on a case-by-case basis.	that a service being additionally charged would stand almost no chance against services being provided over the IAS at the same quality and e.g. based on data as currency basis.
121. NRAs should intervene if persistent decreases in performance are detected for IAS. This could be detected if the measured performance is consistently above (for metrics such as latency, jitter or packet loss) or below (for metrics such as speed) a previously detected average level for a relatively long period of time such as hours or days), ~~or if the difference between measurement results before and after the specialised service is introduced is statistically significant. In the case of short-term assessments, the difference between measurement results with and without the specialised service should be assessed similarly.~~	When assessing a potential detriment of the IAS NRAs need to asses this over a reasonable – sustained - time. Short term variations over hours and days are obviously not enough to assert a possible detriment (see § 121). In order to be proportionate not any "detriment" qualifies as an infringement of Article 3(5). A potential "detriment has at least two dimensions namely time and grade. Clearly not any negative variation qualifies as a detriment and therefore as an infringement of Article 3(5). When assessing the impact of SoIAS on IAS, BEREC should do this in a proportionate way by requiring i) a substantial and ii) a persistent detriment of the IAS by SoIAS. As already stated, the TSM Regulation addresses the IAS. Regulatory practice should therefore be characterized by consideration of the goods concerned. BEREC Guidelines should not add additional burden to SoIAS. Future developments like Connected Car and eHealth must under all circumstances get a realistic chance of actual implementation. Acting ex-ante by heavily structuring commercial offers strongly contradicts political objectives and regulations of the TSM Regulation.
127. NRAs should ensure that ISPs include in the contract and publish the information referred to in Article 4(1) letters (a) to (e), ~~preferably presented in two parts (levels of detail)~~ ~~The first part should provide high-level (general) information. The information about the IAS provided should include, for example, an explanation of speeds, examples of popular applications that can be used with a sufficient quality, and an explanation of how such applications are~~	The guidelines include the recommendation that ISPs include in the contract and publish the information referred to in Article 4(1) letters (a) to (e), preferably presented in two parts. There is no such requirement in the regulation that would justify a further restriction on how the detailed public and contractual information have to be presented and that beyond general information also more detailed explanations are required. It has to be noted that the general provision to publish information on contracts already goes beyond horizontal

~~influenced by the limitations of the provided IAS. This part should include reference to the second part where the information required by Article 4(1) of the Regulation is provided in more detail.~~ ~~- The second part would consist of more detailed technical parameters and their values and other relevant information defined in Article 4(1) of the Regulation and in these Guidelines.~~	rules, which only obliges service providers to indicate main characteristics of a contract before contract conclusion. This horizontal rule applies for ISPs additionally, as BEREC states in the footnotes. BEREC's draft proposal to publish also "more detailed technical parameters" would cause further effort for providers and needs to be skipped. Apart from this, the publication of information to facilitate informed end-user's choice conflicts with BEREC's interpretation of Art. 4 (1) letter (d). While published information are general and non-individual, BEREC recommends the provisioning of customised technical parameters in individual contracts (e.g. individual speed ranges). However, the publication of customised contractual information are of no value for end-users who want to compare different offerings and ISPs would be required to publish a huge variety of different information, reflecting each customised contract. BEREC should clarify that publication of information has to refer to general information. Also individually agreed contract cannot reasonable include customised technical parameters (see comment on § 142).
130. Articles 4(1), 4(2) and 4(3) ~~apply to all contracts regardless of the date the contract is concluded or renewed.~~ and Article 4(4) apply~~ies~~ only to contracts concluded or renewed from ~~29 November 2015~~ 30 August 2016.	The regulation has entered into force at 30 April 2016, as included in art. 10 (2). Considering that BEREC is only obliged to provide guidance until 30 August, providers have a high legal uncertainty if their adjustment measures will be considered as being compliant. This uncertainty is even more severe with regard to Art. 4 (1) (2) (3) which entered into force already in November 2015 (Art. 4 (4)), very shortly after the regulation was adopted. BEREC needs to acknowledge that such timeframes are challenging and do not reasonably allow providers to ensure adequate full compliance with all provisions. The guidelines need to explicitly grant NRAs flexibility about the point in time when to consider the guidelines as possible benchmark for providers' compliance with the regulatory provisions. The guidelines shall not serve for NRAs as benchmark to

	assess compliance of already concluded contracts but only for contracts that are concluded after BEREC has finalised its recommendations. Otherwise those providers who early adjusted their contracts to comply with the deadlines would be disadvantaged compared to providers who wait for legal clarification through BEREC.
131. NRAs should ensure that ISPs include in the contract and publish a ~~concise and comprehensive~~ high level explanation of traffic management techniques applied in accordance with the second and third subparagraphs of Article 3(3), including the following information: • how the measures might affect the end-user experience in general and with regard to specific applications (e.g. where specific categories of traffic are treated differently in accordance with Article 3). Practical examples should be used for this purpose; • the circumstances and manner under which traffic management measures possibly having an impact as foreseen in Article 4(1) letter (a) are applied; any measures applied when managing traffic which uses personal data, the types of personal data used, and how ISPs ensure the privacy of end-users and protect their personal data when managing traffic. 132. ~~The information should be concise and comprehensive. The information should not simply consist of a general condition stating possible impacts of traffic management techniques that could be applied in accordance with the Regulation. Information should also include, at least, a description of the possible impacts of traffic management practices which are in place on the IAS.~~	Based on Article 4(1) letter (a) *"information on how traffic management measures applied by that provider could impact on the quality of the internet access services, on the privacy of end-users and on the protection of their personal data;"* BEREC should refrain from relating all technical parameters and from fully customising offerings that address mass market. End-users would have less valid information on the available speed, ISPs less incentive to invest in high speed internet, and broadband targets would be threatened. Relative information on traffic management measures has to be general in order to allow some flexibility for business. Otherwise, any minor change in future traffic management may impact the contractual information and, thus, would appear as contractual modification. BEREC should avoid imposing such an excessive burden on providers, which would restrict capability to innovate.

133. Provisions resulting from the implementation of the TSM Regulation should not be considered as modifications to existing contracts, ~~are~~ subject to national legislation implementing Article 20(2) of the Universal Service Directive.	BEREC's reference to contractual modification and national legislation linked to Art. 4 (1) letter (a) should clarify that the provisioning of additional information to already existing customers shall not be considered as contractual modification. Accordingly, this must not trigger an exceptional right of termination as included in Art. 20 (2) Universal Service Directive.
134. ~~Besides speed, the most important QoS parameters are delay, delay variation (jitter) and packet loss. These other QoS parameters should be described if they might, in practice, have an impact on the IAS and use of applications.~~ NRAs should ensure that ISPs provide information which is effects-based. Users should be able to understand the implications of these parameters to the usage of applications and whether certain applications ~~(e.g. interactive speech/video or~~	While the regulation's text of Art. 4(1) letter (b) requires to provide clear and comprehensible explanations how IAS are impacted, BEREC recommends the provisioning of more detailed explanations and information more suited for experts. It is unlikely that average customers understand the degree of details that BEREC considers as useful. Contractual documents are further inflated with technical information on e.g. jitter, delay and packet loss, that are of no

~~4K video streaming)~~ cannot in fact be used due to the long delay or slow speed of the IAS. ~~Categories of applications or popular examples of these affected applications could be provided.~~	practical use for by far most customers. Also for experts, the indication of these parameters will not provide any information about the IAS' performance, since their values are highly dependent on other factors (e.g. the kind of downstream platform in higher network topologies, influence by third parties).
139. BEREC understands that the requirement on ISPs to include in the contract and publish information about *advertised speeds* does not entail a requirement to advertise speeds; rather, it is limited to including in the contract and publishing information about speeds which are advertised by the ISP. The requirement to specify the advertised speed requires an ISP to explain the advertised speed of the particular IAS offer included in the contract, if its speed has been advertised. An ISP may naturally also advertise other IAS offers of higher or lower speeds that are not included in the contract to which the subscriber is party (whether by choice or due to unavailability of the service at their location), in accordance with laws governing marketing. *Advertised speed* 147. Advertised speed is the speed an ISP uses in its commercial communications, including advertising and marketing, in connection with the promotion of IAS offers. In the event that speeds are included in an ISP's marketing of an offer (see also paragraph 139), the advertised speed should be specified in the published information and in the contract for each IAS offer. ~~148. NRAs could set requirements on defining advertised speeds under Article 5(1), for example that the advertised speed should not exceed the maximum speed defined in the contract.~~ *Advertised speed* 153. The advertised speed for a mobile IAS offer should reflect the speed which the ISP is realistically able to deliver to end-users. Although the transparency requirements regarding IAS speed are less detailed for mobile IAS than for fixed IAS, the advertised	The primary role of the advertisement is to address mass market and not individual customers. Therefore, advertisement is usually not individual and only includes general information. Often one single advertised tariff name includes various sub-categories with different speed ranges. Therefore, an advertised tariff name does not necessary link to the individual agreed speed range. BEREC should clarify this in the guidelines, anticipating the necessary adjustments on contractual information on maximum speed. Otherwise, providers would be forced to create an individual tariff name for every possible speed range, which leads to a huge variety of different tariff names. Alternatively, providers would have to advertise only the lowest possible speed. This would mean that providers could not differentiate any more through advertising the available maximum speeds and lose an incentive for investments in next generation networks. Horizontal law, particularly based on the Unfair Commercial Practices Directive, proves to be an effective tool to tackle misleading advertisement, such as advertisement of speed which cannot be realistically delivered to end-users. Advertised speed reflects the potential speed that a certain technology can deliver to the end-user and, thus, it should not be linked to the specific user profile / contract. Consumers already acknowledge this and changing their current perception of services might create more confusion. For example a consumer that receives an up to 24Mbps service and has an actual speed of 18Mbps, well informed that his actual speed is 18Mbps will be confused if he was told that his service is an 18Mbps service, considering

speed should enable end-users to make informed choices, for example, so they are able to evaluate the value of the advertised speed vis-à-vis the actual performance of the IAS. Significant factors that limit the speeds achieved by end-users should be specified. 154. NRAs could set requirements on defining estimated maximum speeds under Article 5(1), for example that the advertised speed for an IAS as specified in a contract should not exceed the estimated maximum speed as defined in the same contract. See also paragraph 139.	that his provider has downgraded the service. IAS providers advertise their services taking into account the above mentioned potential speeds that a certain technology can deliver and not for each specific customer. Any change in this well-established business practice will cause additional confusion to the end-users and increase complexity for the provider. In many cases actual speed might be very closely to the advertised speed depending on distance. It is clear that the advertised speed should be clearly defined in the contract and the relation between the advertised speed and the actual speed should be specified, but setting a relation between maximum and advertised speed is of no additional value for the end user.
Minimum speed 140. The minimum speed is the lowest speed that the ISP ~~undertakes~~ ***may experience*** ~~to deliver to the end-user~~, according to the contract which includes the IAS. In principle, the actual speed should not be lower than the minimum speed at any time, except in cases of interruption of the IAS~~. If the actual speed of an IAS is significantly, and continuously or regularly, lower than the minimum speed, it would indicate non-conformity of performance regarding the agreed minimum speed.~~ ~~141. NRAs29 could set requirements on defining minimum speed under Article 5(1), for example that the minimum speed could be in reasonable proportion to the maximum speed.~~	BEREC's far going recommendation on speed ranges with regard to Art. 4 (1) letter (d) are impractical, will not improve transparency on individual performance and will likely negatively impact national broadband targets. The performance of IAS fluctuates for technological reasons. This applies to fixed IAS and, even more, to mobile IAS. Depending on the end-users location and the used technology, the fluctuation can be broader or more narrow. In any case, providers have to offer speed ranges to customers and customers have the right to receive always a speed that is not lower than the minimum agreed speed range. Given that the agreement of speed ranges is necessary, a strict limitation of maximum speed such as recommended in the proportionality criteria in § 141 risks that providers will only indicate lower maximum speed in the contract, even if the available speed for customers is much higher. Customers would not be informed any more about the realistically available maximum speed. This will also directly impact advertised maximum speed, which must not be higher than the contractual maximum

	speed. Even if higher speed are available, ISPs could neither advertise nor conclude contracts based on the available maximum speeds. Since national broadband targets usually refer to the maximum available speed as offered in tariffs, a reduction of maximum speed in the contract would also impact the national broadband targets. Setting a predefined relation between minimum and maximum speed might result in end-users being excluded from the provision of services as the IAS provider will not be able to deliver the pre-defined speed range (i.e minimum speed as a percentage of maximum speed) due to technical constraints (e.g. for xDSL services due to distance from the Central Exchange). In order to cater for such users IAS providers will be forced to create additional packages for any possible combination of minimum/maximum speed and this will result in increased complexity. This will create confusion to the consumers while it will burden the IAS provider with additional costs (e.g. product development, provisioning, marketing, billing), thus, increasing the cost for the end-user. This goes against the established market trend which is the provision of a limited number of offers in order to simplify the product portfolio. Considering these negative impacts, little benefit for consumers and the lack of respective rules within the TSM regulation, § 141 shall be deleted.
Maximum speed ~~142. The maximum speed should be actually achievable by the end-user at least some of the time (e.g. at least once a day). An ISP is not required to technically limit the speed to the maximum speed defined in the contract~~. 143. NRAs could set requirements on	Beyond the TSM provisions, BEREC recommends that the maximum speed of fixed IAS indicated in the contract according to Art. 4 (1) letter (d) has to be achieved by the end-user at least some of the time. This recommendation does not reflect technological requirements and requirements for commercial offerings in

defining maximum speeds under Article 5(1), for example that they are achievable a specified number of times during a specified period.	mass markets. As a consequence of BEREC's interpretation of maximum speed, end-users would be less accurate informed and ISPs' would be forced to lower the offered maximum speed even if that speed is available in most cases. In mass markets, an offered tariff is usually not customised but may encompass various different speed ranges. Regarding maximum agreed speed ranges, usually customers regularly achieve the maximum speed. However, in some cases the maximum agreed speed is not available due to technical constraints or in cases of preliminary agreements (where network roll-outs are planned). Consequently, there are some customers who will only have available a maximum speed in the lower areas of the speed range. Apart from that, even though ISPs have sophisticated calculations models to estimate min and max speed before contract conclusion, there is always the risks that the performance of speed is found to be lower than expected after having established the physical connection (after contract conclusion). Safety discount ensure that customers always receive at least the agreed minimum speed. If ISPs are now becoming obliged that every customers also reaches at least sometimes the maximum speed, safety discounts for maximum speed have to be significantly increased. Since this refers to tariffs in mass markets, which have to cover all possible constellations, the offered maximum speeds would have to be dramatically reduced. This would be necessary even if the maximum speed is at least sometimes available for most customers. Besides this, the limitation of maximum speed provides the possibility to offer different tariffs for each network technology. If providers have to reduce the maximum speed, even if available, this important instrument for price differentiation is lost.
Normally available speed 144. The normally available speed is the speed that an end-user could expect to	BEREC recommends a very specific definition of "normally available speed" as included in Art. 4(1) letter (d) which is not justified based

receive most of the time when accessing the service. BEREC considers that the normally available speed has two dimensions: the numerical value of the speed and the availability (as a percentage) of the speed during a specified period, such as peak hours or the whole day. ~~145. The normally available speed should be available during the specified daily period. NRAs could set requirements on defining normally available speeds under Article 5(1). Examples include:~~ ~~- specifying that normally available speeds should be available at least during off-peak hours and 90% of time over peak-hours, or 95% over the whole day;~~ ~~- requiring that the normally available speed should be in reasonable proportion to the maximum speed.~~ 146. In order to be meaningful, it should be possible for the end-user to evaluate the value of the normally available speed vis-à-vis the actual performance of the IAS on the basis of the information provided.	on the TSM provision and does not provide a valuable information for end-users. There could be service performance fluctuation during the day, but these are difficult to define and moreover more difficult to follow and record on a daily basis. In this regard the definition of the normally available speed should be simplified in order to avoid disputes with customers. The definition of para 144 "The normally available speed is the speed that an end-user could expect to receive most of the time when accessing the service" can be considered sufficient. As already mentioned earlier there should be no correlation between speeds, therefore there should be no correlation between normally available and maximum speed. Normally available speed cannot be indicated in a customised way. The indication of this parameter in the contract can only reflect an estimated value that refers to the mass market and may significantly differ from individual circumstances. Accordingly, deviation of individual measurement from normally available speed cannot lead to contractual consequences.
160. The methodologies that could be used by certified monitoring mechanisms are further discussed in the next section on *Methodology for monitoring IAS performance*. The purpose of this guidance regarding methodologies is to contribute to the consistent application of the Regulation. However, NRAs should be able to use their existing measurement tools and these Guidelines do not require NRAs to change them.	BEREC needs to clarify that any measurement which can be used for assessing contractual conformity has to be certified based on criteria, which ensure reliable measurement results (see elaboration on § 170-172).
170. IAS performance assessment can be performed at the user or market level: • User-level assessment: end-user measurements of the performance of IAS offers can be performed to check whether the ISP is fulfilling its contract. Measurement	Monitoring and reporting requirements BEREC has to clarify that reliable measurement mechanisms have to be based on a set of clear technical criteria. § 170-172: Referring to Art. 5, ISPs can only ensure quality within own network. This

results are compared to the contracted performance of the IAS offer. • Market-level assessment: user-level measurement results are summarised into aggregated values for different categories such as IAS offers, ISPs, access technologies (DSL, cable, fibre etc.), geographical area etc. Aggregated measurement results can be used for market-level assessments. 171. NRAs can use market-level assessment for the regulatory supervision envisaged by Article 5(1) to: • cross-check that the published information is consistent with monitoring results (see paragraph 173); • check that specialised services are not provided at the expense of IAS; • check that the performance of IAS is developing sufficiently over time to reflect advances in technology. 172. Market-level assessment data can also be used for: • transparency purposes, by publishing statistics as well as interactive maps showing mobile network coverage or average performance in a geographic area for fixed access networks; • considering the availability of different IAS offers or offer ranges provided by ISPs, as well as their penetration among end-users; • assessing the quality for a specific type of IAS, e.g. based on an access technology (such as DSL, cable or fibre); • comparison of IAS offers in the market; • investigating possible degradation caused by specialised services.	requires that reliable measurement systems, which are supposed to indicate the actual performance, exclude interference from factors outside ISPs' networks. Factors to be excluded are in end-users' infrastructures (e.g. capacity bottlenecks in laptops, smartphones or routers; exclusion of WiFi or in-house cabling) as well as servers and networks beyond ISPs' backbone (that do not belong to the ISP). The latter requires the installation of measurement servers within or close to ISPs' backbone. BEREC should make a firm statement on the requirement for sound measurement mechanisms, in order to ensure that certified measurement mechanisms are indeed providing reliable results.