



Contribution to the European Commission public consultation on
Revision of the Guidelines on public funding to broadband networks

Contact person: [matthew.braovac\[at\]vodafone.com](mailto:matthew.braovac@vodafone.com)

Brussels, London 30 Aug. 2011

QUESTIONNAIRE for STAKEHOLDERS

1. GENERAL QUESTIONS

1.1. Have you been involved in projects of public funding for broadband deployment (for example, as aid recipient, access seeker, customer of the subsidised network, etc.)? If yes, please highlight what you consider to be the main achievements, challenges and issues which would be relevant in relation to the revision of the Guidelines. If you are familiar with more State aid Broadband projects, please highlight what you consider the main strengths and weaknesses of the different projects.

A record number of decisions and state aid funding for broadband were released in 2010. However, especially in the NGA context, given the EC's very ambitious plans in this area, there is still relatively limited roll out and specific NGA State Aid case law. Of the more than 30 cases decided in 2009 and 2010, it appears only 5 related to high-speed projects. We recognise that such projects are becoming more common with a number of NGA projects decided, notified or in the pipeline in 2011. Therefore, we welcome this review which is well timed and which, we believe, should take full account of the lessons learned since 2009.

Vodafone has been involved as a co-complainant in the case of the NGA network to be funded by the Autonomous Province of Trento. Vodafone has also been involved in various State Aid consultation processes and was the winning bidder to provide basic broadband services in the area of Asturias in Spain (Case N323/2009).

We consider the main challenges in relation to the revision of the Guidelines to be:

- (i) How to take proper account of the competitive outcomes that result from different fibre topology choices;
- (ii) How to take proper account of the pro-competitive impact of multi-party co-investment schemes to ensure these are not disadvantaged;
- (iii) How to take proper account of the emergence of Long Term Evolution (LTE) broadband services;
- (iv) How to rationalise and increase the transparency of State Aid decisions to ensure that they fit properly with other regulatory decisions including market reviews, USO designations and spectrum licence conditions.

In relation particularly to the first two challenges, we believe that greater emphasis should be placed in the Guidelines upon assessing the sustainability of effective competition after the aid is granted. Structurally separate co-investment projects which ensure effective access to multiple parties and maximum competitive differentiation in the future should be more explicitly favoured over projects which create less sustainable competition (eg. network controlled by the integrated incumbent with only basic bitstream access for other providers).

We take each of these points in turn, returning to them in answer to further questions below.

Firstly, when a network is going to be subsidized the competitive effect of choosing one kind of network architecture over another must be taken into account. When the architecture of the FTTH subsidised network is a closed G-PON network which cannot be unbundled by the

operator that manages it, this is clearly detrimental for competition. Unbundling permits greater control over the service by the provider which leads to better innovation and stronger competition to the clear benefit of consumers.¹ The State Aid Guidelines should take account of these findings by making cost oriented unbundling the default remedy for NGA state aid. Especially in state-aided areas of low population density, a flexible bitstream remedy should also be applied, complementing but not replacing the principal unbundling remedy. In such a case, this access should be a flexible ‘best in class’ bitstream such as VULA in the UK so as to maximise the possibilities for innovation and sustainable competition.

Second, structures which create access seekers on a network operated by a rival retail provider are not as good as those which provide a jointly managed or otherwise neutral wholesale only network provider as they give an unjustified advantage to the operator that owns the network notwithstanding the imposed requirement of ‘open access’. Therefore, we believe that structures (like effective structural separation with or without co-investment) which can deliver truly equivalent inputs to all competing players should be explicitly favoured in the Guidelines. Public tenders should be designed in order to maximise the number of participants and technological platforms that can be used to achieve the tender’s goals.

Third, it is clear that wireless 3G/HSPA and LTE networks are, at the very least, an effective means of delivering basic broadband services and their presence or planned deployment should be taken into account when assessing basic broadband white and grey areas. In some areas (depending upon the density of roll out, network contention and operators’ pricing / marketing decisions) LTE² could be an NGA alternative delivering speeds significantly in excess of those available over copper in those areas. We believe that rather than defining national speed standards for copper networks (eg. 8 to 10 MB/s) and NGA networks (above 30MB/s) the EC should define basic and NGA networks by considering:

- (i) the relative improvement in throughput and other characteristics of the proposed network as against the existing broadband services in the relevant local area; and
- (ii) whether that relative improvement is sufficiently great to enable ‘access services with enhanced characteristics’.

Vodafone understands that this approach would require a careful market analysis to determine both the existing and anticipated network performance of a relevant area. In areas where, for instance, LTE is proposed to be rolled out in a way to deliver considerably greater throughput than that currently available on copper, these would qualify as NGA grey or NGA black, even if overall speeds were lower than could be achieved with a full fixed fibre network. The second criteria relates to materiality and is necessary to ensure that the improvement is sufficiently great to deliver meaningful advantages to current consumers. These enhanced characteristics could include, but are not limited to, higher throughput. Other potential benefits such as mobility or nomadic use should also be assessed.

This differentiated approach would reduce the risk of ‘crowding out’ private investment in network upgrades including rural LTE deployments which could otherwise deliver improved broadband performance today. These investments will not be made if there is a significant

¹ See the work of WIK Consult for Vodafone on this issue. The full study “**Architecture and competitive models in fibre networks**” is available at:

http://www.vodafone.com/content/index/about/about_us/policy/policy_papers.html

² Including, of course, future technical improvements such as LTE Advanced which are already on technology roadmaps.

risk these upgrades will be classed solely as ‘basic broadband’ in an otherwise ‘NGA white area’ which can be easily overbuilt with state-subsidised FTTC or FTTH networks.³

Fourth, given the relatively few NGA state aid decisions taken as at the date of the original guidelines, it is not surprising that there is a need for greater codification of the case-law at this time. Important principles such as the need for unbundlability and the pro-competitive potential of backhaul / dark-fibre networks are emerging in more recent cases discussed below. These principles need to be rationalised into the Guidelines to allow parties greater certainty over how a potential state aided project will be received and regulated in the long term. It is also necessary to bring the State Aid Guidelines into line with the NGA Recommendation on issues such as co-investment, unbundling (at an economically feasible point) and infrastructure access.

1.2. What is your assessment of the Commission's policy in the field of State aid to broadband in general? In your view, were the Guidelines able to achieve the Commission's policy objectives as detailed in section Error! Reference source not found. above? In your view, did the Guidelines strike the right balance between promoting investment in basic broadband and NGA networks and limiting the distortion of competition arising from public intervention?

Overall, we believe that the policy objectives are the correct ones. However, we share the EC’s view that, at least until 2010, fewer projects came forward for funding than expected.⁴ We believe that this is a result of less regulatory certainty than could be expected and the fact that not enough emphasis has been placed upon the type of project. The current guidelines make no distinction between a fibre project built and operated by a single dominant incumbent with all other players seeking access to that network and the model favoured by Vodafone- a jointly developed and managed passive fibre network over which all players compete. This second model has clear benefits for minimising the necessary aid because demand is aggregated so the parties can build a wider footprint commercially. Second, there are clear competition benefits as this model puts operators on an equal footing rather than in the position of access provider and access seeker where the access provider (often the incumbent operator) has both the means and the incentive to discriminate against access seekers.

1.3. In your view, what are the main technological, market and regulatory developments in this field since 2009 that should be considered and should have an impact on the content of the revised Broadband Guidelines?

Vodafone commissioned WIK Consult to undertake a comprehensive study of not only the cost of different fibre topologies, but also the competitive structures expected to result from those topologies (see further details in the response to question 4.5 below). This work clearly demonstrates the benefits for sustainable competition of ‘unbundlable’ topologies whether P2P or by Wave Division Multiplexing (WDM) which is not yet available to market. Vodafone believes that these benefits should be fully reflected in the new Guidelines.

³ This would not exclude the possibility that in an area where ‘enhanced LTE’ is deployed today, as further services develop, the same criteria of ‘access services with enhanced characteristics’ could be applied to support state-aided FTTC or FTTH deployment provided a material improvement were anticipated against the services that were being delivered by the ‘enhanced LTE’ network.

⁴ See the Broadband Communication at page 10 which acknowledges ‘relatively slow’ absorption of funds. We understand that Analysys Mason are completing a Guide for DG REGIO to improve the quality of funding requests; a move which we support.

An operator requirement for the spectrum flexibility necessary to achieve WDM unbundling in the next version of GPON technology (known as NGPON 2) has been incorporated into a White Paper being prepared by FSAN for the commercial development of NGPON 2. However, even on the most optimistic assumptions, this technology will not be available until 2015. Therefore, we believe that P2P Ethernet which is the only proven technology / topology able to ensure the benefits of unbundling today should be the focus of the EC's State Aid decisions. We believe that the State Aid rules should continue to require full and effective unbundling of all state-aided NGA networks and support the approach taken in the Portugal High Speed Broadband case.⁵ Only if P2P is shown to be technically or economically impossible⁶ in a particular case (for instance, in an FTTC deployment) the Guidelines should replace this obligation with a 'best in class' bitstream service such as Ofcom's VULA (see further 4.2 below).

Given the inability today for GPON networks to allow unbundling, we believe that an area which is covered by only one closed GPON network, even in the presence of bitstream-based access seekers, should be assessed as a potentially problematic grey NGA area within the revised Guidelines.

The EC should reject any argument that favouring 'unbundlability' and sustainable competition de-facto requires a P2P topology today and is therefore somehow incompatible with the principle of technological neutrality. First, setting an unbundlability requirement does not exclude WDM or other technological solutions as and when they are available. Second, such a requirement goes no further than the NGA Recommendation which requires unbundlability or that distribution points in an SMP operator's network be placed where they will be commercially viable for access-seekers.⁷ Third, the strength and sustainability of competition post-aid is an entirely appropriate consideration for assessing the compatibility of any particular grant and forms part of the EC's 'balancing test.'

Therefore, even if an emphasis on 'unbundlability' does favour a point-to-point topology, this is completely in accordance with the principle of technological neutrality. In fact, it is the only policy which is. The 'technology' of a fibre network exists at the active layer where operators make different choices in terms of Ethernet vs PON which impacts the cost and speed available, upgrade schedule and technology roadmap. The dark fibres and ducts on the other hand contain little or no 'technology' - they are merely a topology. A point to point topology can accommodate either an Ethernet or a PON technology⁸ whereas the choice of a point-to-multipoint topology effectively limits the technology that can run over it to GPON.

2. SUBJECT OF THE AID

The current version of the Broadband Guidelines distinguishes between basic broadband and NGA networks as subjects of State aid measures.

⁵ See SA.30317- Portugal High-speed broadband in Portugal

⁶ In an FTTH deployment, a critical approach to this question should be applied as the work by WIK shows that P2P is likely to cost only in the region of 10% more than a point-to-multipoint deployment.

⁷ Recommend 18 and 23.

⁸ See the specific case of GPON over P2P (GPON technology over a P2P topology) modelled by WIK referred to in the work for Vodafone.

2.1. Do you consider that distinction is justified in light of current economic, technological and regulatory developments in this field?

Yes. While clearly there is some degree of substitution between basic and NGA broadband, we believe the product characteristics, particularly in terms of the ability to allow streamed high-definition video, are sufficiently different to mean that this distinction remains valid.

2.2. Would you consider it useful to devote specific sections of the Guidelines to the rules and conditions applying to the use of public funding to subsidize specific infrastructure elements (for instance, ducts, dark fibre, backhaul networks, etc.) or to other activities related to broadband network roll-out (such as civil engineering costs, upgrade of in-house cabling, etc.)?

It would be useful to devote specific sections of the Guidelines to the rules and conditions applying to the use of public funding to subsidize specific infrastructure elements. As a general rule of State Aid, the more targeted the aid at the particular bottleneck or market failure, the less distortive it is of competition. Therefore, we believe that the Guidelines should expressly state that projects aimed at providing only backhaul will be more likely to be compatible than projects substituting a complete local access network. Broadly, we support the differentiated approach taken in the EC's Xarxa Oberta⁹ decision. In that case, basic broadband providers were entitled to connect to the aided fibre backhaul network in traditional white / NGA white and traditional grey areas. However, as discussed in question 1.6 below, in cases where LTE is being used or proposed to deliver 'access services with enhanced characteristics', those operators should be entitled to connect to the backhaul network in NGA white and NGA grey areas even if those areas are 'black' in the case of traditional broadband.

In line with the NGA Recommendation¹⁰, the Broadband Guidelines define very high speed, Next Generation Access ("NGA") networks in paragraph 53 as follows: *"NGA networks are wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over existing copper networks."*

2.3. Do you think that this definition is still adequate? In other words, at this stage of technological and market development, besides fixed, mainly fibre based networks, would you consider any other broadband technologies as falling into the definition of NGA networks? Please provide detailed justification and examples of commercial utilization to motivate your answer.

We would suggest changing the proposed definition as follows:

"NGA networks are ~~wired~~ access networks which consist wholly or in part of optical elements and which ~~are capable of delivering~~ broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over the existing copper networks."

⁹ N 407/2009

¹⁰ 2010/572/EU: Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) - C(2010) 6223.

With the roll-out of LTE networks it is clear that under certain circumstances, wireless technologies could qualify as an NGA network by delivering enhanced access services. However, the extent of this effect will vary by area depending upon the density of deployment and commercial/competition drivers. A careful review of evidence will be required. Therefore, rather than examining what a network is capable of delivering, the authorities should consider the typical services provided over the current network in the locale where a state-aided network is proposed. Like copper networks, but with even greater variability, LTE will deliver very high speeds and related access services at times and in areas of low contention. These theoretical capabilities say little about whether or not, in practice, a particular LTE network is delivering NGA services to consumers. In cases where LTE is actually or proposed to deliver 'enhanced characteristics' beyond the actual copper-based services in that area¹¹, LTE should qualify as an NGA network. The reference to 'optical elements' should remain as this will be equally true of fixed (FTTH or FTTC) and LTE networks.

2.4. In your opinion, shall the Commission change the current qualitative definition of NGA (i.e. mainly fibre based solutions) to a more quantitative one (for instance by setting explicit thresholds for download/upload speeds or defining any other technology criteria)? Please motivate your answer.

No, the central defining characteristic of an NGA network is not a particular speed, but that it can support services or provide other end-user benefits which cannot be delivered over the existing copper networks in the relevant area to be aided.

3. AREAS OF PUBLIC INTERVENTION

The Broadband Guidelines identify so-called "white", "grey" and "black" areas depending on whether there are already adequate private infrastructures in place.

3.1. According to your experience with State aid broadband schemes, would you consider other criteria (for instance download/upload speeds or other technology, regulatory or market criteria) as relevant to identify areas with non-adequate broadband coverage? Do you consider an adequate criterion that if a minimum (download) speed of 2 Mbps is not available at affordable prices, the area shall be considered as "white area"?

The criterion of affordable 2 Mbps service acts as a shorthand for a good user experience for basic broadband usage- browsing, email low resolution video etc... It acts as a reasonable 'rebuttable presumption' for this, but should be modified in cases where other regulatory decisions (i.e. where a 1 Mbps USO obligation has been applied) affect that presumption.

The Guidelines distinguish between different types of "white NGA areas" - depending on the existing basic broadband infrastructures in place (white NGA/basic white in paragraph 79, white NGA/basic grey in paragraph 73 and white NGA/basic black in section 3.4.4. of the Guidelines) to ensure that distortions of competition are limited.

¹¹ In this analysis, actual copper performance (taking account of line lengths, copper quality etc...) must be compared with actual LTE performance rather than their theoretical possibilities.

3.2. In your experience, has this distinction – and the ensuing differences in the applicable compatibility conditions – helped preserving competition and private incentives to invest?

Yes, subject to the comments on LTE above, we believe that the current distinction should remain.

The Guidelines request that the investment plans of private operators in the next 3 years shall be taken into account when defining the target areas for public intervention (see footnote 31).

3.3. Do you consider that the defined 3 years period is still an adequate time horizon? In your view, what proofs private operators can put forward to demonstrate their investment plans in a certain area?

We believe that 3 years remains the correct time horizon. Extending the 3 year period to 5 years would, in our view, significantly slow down NGA deployment. For a number of years, incumbents have issued ‘blocking’ press statements of their intended deployments which have the effect of making it less attractive for alternative operators to deploy networks but without generally deploying much fibre themselves in the end. Extending the proposed period would make this tactic easier as it would freeze out areas that could otherwise get a state aided network. To prevent this gaming, the EC must continue to require ‘robust’ investment plans when assessing state aid applications. Investments over a 5 year horizon would, naturally, be less certain than those over 3 years, so we would be concerned that such an extension would allow parties to ‘freeze out’ areas with less well defined plans.

Vodafone’s is also concerned about how private operators can take account of proposed State Aid plans and vice versa. For instance, Vodafone has a privately funded “Mille Comuni” plan in Italy to bring wireless broadband to 1000 of the most isolated rural communities in Italy over a 3 year period. Vodafone cannot make detailed public announcements of the communities it plans to cover significantly in advance of rolling out services to those areas as to do so would signal its intentions to its competitors. Of course it can make such declarations in response to the national consultations on particular schemes but Vodafone would like to see greater encouragement of ‘framework’ State Aid notifications by Member States to allow greater visibility of where and in what general circumstances State aided networks are planned. This would combat the ‘piecemeal’ approach which is prevalent today. Vodafone hopes that the proposed DG REGIO report will encourage the more comprehensive declaration of national aid schemes.

4. GENERAL COMPATIBILITY CRITERIA

The Guidelines list the general compatibility criteria in paragraph 51 that all State aid broadband measures have to comply with.

In your experience, have these conditions reached their objective to foster investments, preserve private incentives to invest and to support effective competition on the subsidized networks?

It is important not to distort competition when encouraging the re-use of existing infrastructure. This is particularly true when the most widespread infrastructure is owned by the incumbent operator. In some cases (such as, for instance, the case of the Province of

Trento), the incumbent operator seems to have been unduly favoured due to its infrastructure assets.

In paragraph 51(e), the Guidelines encourage Member States to use existing infrastructure to avoid duplication of resources and to reduce the aid amount but without giving an undue advantage to the existing incumbents (who typically have significant existing infrastructure in place).

4.1. Do you have experience or examples on the implementation of such condition? In your opinion, how should such condition be implemented in practice to be effective in achieving its objective? Under what circumstances do you consider that access to the incumbent's infrastructure in line with the applicable regulatory framework is a sufficient safeguard?

Vodafone supports all of the criteria in paragraph 51 of the existing guidelines and believes that best practice from recent case law could usefully expand exactly what is required under each of these headings. We also believe that the current text of paragraph 51(e) could go further and make clearer that to 'make available' existing infrastructure does not necessarily imply ownership.¹² Where another party has regulated or other access to existing infrastructure which could be used for the project, this should be assessed as equivalent to the incumbent's ownership of those assets. In the Trento case, the Province did not value, in any clear or transparent way, the contribution of Telecom Italia's civil infrastructure but it attributed a value of double its cash contribution (€120m) notwithstanding the fact that as a regulated asset, access could equally be provided by other operators via regulated rental.

The current text stresses that access to infrastructure should not be used solely to favour the incumbent and we believe this principle should be maintained. In the case of Trento, Vodafone believes that Telecom Italia has been unduly favoured and effectively 'pre-selected' by the authority on the basis, inter alia, of its access to infrastructure.

5. AID TO NEXT GENERATION ACCESS NETWORKS

The Guidelines require that the subsidized NGA networks shall support effective and full unbundling and satisfy all different types of network access that operators may seek (see paragraph 79).

5.1. Do you have experience with the implementation of the "open access" (i.e. full and effective access) requirement of the Guidelines in case of subsidized NGA networks? Do you have examples for difficulties or disputes and for good practices?

When there is a public-private partnership between local administrations and the incumbent operator (such as in the Trento Case) a consideration of the "openness" of the subsidised network should be ensured by vertical separation or fibre LLU over P2P in order not to improve the incumbent's market position, which otherwise may result in a return to a monopolization of the NGN networks. We suggest that the Guidelines should specify an open and neutral network which would require effective unbundling by the other retail competitors. We believe that requiring a vertically separated network should

¹² This point was made explicitly within the Portugal High Speed Broadband case which Vodafone believes should be reflected more explicitly in the Guidelines.

be the default position for state aid as this is the most effective means of ensuring effective open access and preventing access-seeker discrimination.

5.2. Do you consider it adequate that all technologically possible access products are requested from the aid beneficiary to compensate for the advantage obtained by the public funds? Would you consider that certain access remedies could under certain circumstances be deemed to be redundant (e.g. duct access and dark fibre access) and therefore there is no need to request them in all circumstances to ensure a sufficient level of competition? Do you consider that a proportionality analysis shall also be carried out in analogy with the existing Telecoms Regulatory Framework¹³ and that only a minimum set of access remedies should be imposed to meet the objective of increasing competition and reducing distortion of competition arising from public intervention? If yes, please explain in detail.

We believe that there should be three principle remedies to be modified or expanded in particular circumstances. First, given its superior impact on subsequent competition, effective unbundling should be the primary focus of any minimum set of remedies. Given the low population density of some state aided areas and possibly smaller access seekers, it will be important that bitstream is also provided but this cannot replace the need for effective unbundling. This bitstream needs to be as flexible as possible to allow the maximum competitor differentiation¹⁴ so should adopt ‘best in class’ technical standards such as Ofcom’s VULA service.

The most important bitstream characteristics required to safeguard competition are:

- (i) ensuring that the Network Termination Units (NTU) supplied to customers’ homes do not give a branding or service bundling advantage to the network provider especially if that provider is the existing national incumbent. A ‘wires only’ or unbranded NTU should be required;
- (ii) providing sufficiently differentiated Quality of Service classes (minimum of 5) to allow access seekers to provide differentiated services such as broadcast, VoIP and online gaming;
- (iii) allowing differentiated interconnection points (national, regional and local) to allow access seekers to make use of their own infrastructure where advantageous to do so and to change these requirements over time; and
- (iv) ensuring the necessary technical capabilities so access seekers can viably deliver those services most likely to drive take-up and sustainable economies of scale. The multi-casting of IPTV is an example of this.

Finally, duct access is likely to improve competition not through replication based upon the same technology, but by lowering the cost of deploying an alternative technology with different characteristics (eg. wireless rather than fixed). This improves competition and customer choice by providing options for those customers who, for instance, value nomadic broadband access over purely the fastest possible connection speed. Therefore, it is important

¹³ See: http://europa.eu/legislation_summaries/internal_market/single_market_services/124216a_en.htm.

¹⁴ Vodafone has published a more detailed analysis of the key requirements of NGA bitstream within its policy pamphlet “New Thinking on Fibre Networks” available at www.vodafone.com/eu

that only the minimum technology restrictions necessary to prevent competitive distortion are applied to the uses for which the access may be put.

Pursuant to paragraph 79, the wholesale access obligations on the aid beneficiary should last for at least seven years - without prejudice to any other regulatory obligations.

5.3. Do you consider this 7 year period adequate to ensure competition in the areas concerned without discouraging private investments? Would it be justified to require a longer period, for instance in case of passive access products (e.g. ducts)? If yes, please explain in detail.

Generally, we would support the 7 year period. In cases where an access seeker needs to make considerable investments of their own in order to take advantage of the state aided network (for instance using ducts, backhaul capacity or in-house wiring) a longer and possibly indefinite period of access would be appropriate. The exact length of those obligations should be based upon an economic and logical analysis of the investments required and the tenure necessary to give sufficient security to the investee access seeker to make them.

The Guidelines expresses its preference for multiple fibre networks: *"In this respect it should be noted that "multiple fibre" architecture allows full independence between access seekers to provide high-speed broadband offers and is therefore conducive to long-term sustainable competition. In addition, the deployment of NGA networks based on multiple fibre lines supports both "point-to-point" and "point-to-multipoint" topologies and is therefore technology neutral."*

5.4. What is your experience with multiple fibre infrastructures? Do you share the view that it may not be economically justifiable to deploy multiple fibre networks in rural areas? Or would you see multiple fibre infrastructures as an essential investment to achieve competition in the concerned area in the long run?

Vodafone believes that 'unbundlable' networks can be empirically shown to foster better competitive outcomes than GPON networks at moderately increased roll-out costs (see below). However, we do not believe that there are any particular competitive advantages of a multi-fibre architecture compared with an unbundlable network. While the theoretical advantage of a multi-fibre deployment is that it allows different providers to independently serve the same household, given the tendency toward bundled offers and 'over the top' services, this does not appear to be particularly relevant. Therefore we believe unbundlability should form the focus of the EC's considerations.

Certain types of network architectures (e.g. FTTH/P2P networks) are argued to be better in promoting competition as they allow full and effective unbundling (as compared for instance to FTTH/GPON infrastructure), albeit being generally regarded as more costly technological choices.

5.5. Have you been involved in NGA projects? Do you have experience with requesting effective unbundling, perhaps on different technology architectures? Do you have examples of good practices using one or the other technology?

The Broadband State Aid Guidelines attempt to limit the amount of aid granted by ensuring that with equal quality solutions, the bidder who requests the minimum aid to meet the project criteria should win the tender. It also provides that a particular technology should not be

favoured absent objective criteria to meet a particular project requirement. Vodafone supports both of these principles. However, it believes that the ‘quality’ referred to in the guidelines at this point must not be understood narrowly in the sense of only technical parameters such as throughput or coverage. Even more important is the impact of the chosen technology on subsequent, sustainable competition.

Vodafone has completed a study with WIK Consult which models the competitive outcomes of various FttH fibre deployments. Our study clearly demonstrates that unbundlable deployments (point-to-point networks today with possibly WDM-PON only in the future) maximise both consumer surplus and total welfare. While P2P networks may cost around 10% more than closed GPON networks, this is money well spent as they lead to more beneficial and sustainable competitive outcomes. The form of competition that results from a single network deployment with regulated bitstream access provided to access seekers is unambiguously inferior. We also find that the scope for infrastructure duplication is extremely limited and does not, even theoretically, appear viable beyond the densest urban areas (which are very unlikely to be suitable for state aid). Therefore, duct access on its own does not address this problem. Thus, we believe that as an explicit part of the ‘balancing test’ the EC is required to undertake when considering State Aid applications, it should address not only the initial distortion of competition resulting from the injection of public funds, but also the longer-term strength and sustainability of the resulting competition over the state-aided network.

This does not appear to us to be a significant change in principle, as the guidelines already require full unbundling¹⁵- it would simply bring the state aid practice more in line with the NGA Recommendation which also favours unbundling for its beneficial effect on subsequent competition.

5.6. Besides the conditions specified in paragraphs 75 and 79, do you consider any other conditions that beneficiary companies constructing subsidized NGA networks shall comply with in order to increase competition and reduce the distortion to competition arising from the public intervention?

The Broadband State Aid Guidelines clearly envisage a situation in which one operator builds out the aided network and then offers open access to other operators. Having pre-dated the final Broadband Recommendation, it is not surprising that it does not deal directly with the co-investment scenarios described there. Assume that a commercial co-investment scheme has been agreed by a sufficient number of operator investors to ensure that there is no SMP held by any of them (as envisaged by the Broadband Recommendation)¹⁶. A state body may wish to provide funds to enable the expansion of that network into commercially unattractive areas. At the very least, any mandated wholesale obligations could only apply to that part of the network which was built with state resources. Second, while there would be an ‘economic advantage’ conferred upon those investors such that the measure would qualify as aid, a sufficient number of competitors would have equivalent access to ensure both cost-efficient roll-out (by piggy-backing on the commercial deployment) and effective competition. Thus, the measure is pro-competitive rather than distortive of competition and more limited access

¹⁵ See the Broadband State Aid Guidelines at paragraph 79. *“whatever the type of the NGA network architecture that will benefit from State aid, it should support **effective and full unbundling** and satisfy all different types of network access that operators may seek...”*

¹⁶ See paragraph 28.

obligations should be appropriate in a co-investment scenario than in a single operator build and operate case. The Guidelines should expressly address this point.

6. THE ROLE OF THE NATIONAL REGULATORY AUTHORITIES ("NRAS")

The Guidelines foresee an important role of the NRAs in helping granting authorities to set the wholesale access conditions. According to paragraph 79, "in setting the conditions for wholesale network access, Member States should consult the relevant NRA. NRAs are expected in the future to continue either to regulate ex ante or to monitor very closely the competitive conditions of the overall broadband market and impose where appropriate the necessary remedies provided by the applicable regulatory framework. Thus, by requiring that access conditions should be approved or set by the NRA under the applicable Community rules, Member States will ensure that, if not uniform, at least very similar access conditions will apply throughout all broadband markets identified by the NRA concerned."

6.1. In your opinion, how could NRAs help (national or local) authorities with their State aid broadband measures? Do you consider appropriate that access conditions should always be approved by the NRAs? Do you consider any limitations for the involvement of the NRAs in State aid broadband measures? If you have been directly involved in aid projects, did you experience any difference when the access conditions were imposed as a regulatory measure as opposed to an access obligation deriving from the State aid rules?

As noted above, Vodafone understands that state aid obligations on access may need to be imposed independently of the SMP regime to ensure there is no lacuna between their completion and the next relevant market review. While it may not be possible to achieve this in the Guidelines, we would like to see greater NGA involvement in setting access conditions consistent with the relevant regulatory obligations. We believe BEREC could be the appropriate forum for such work.

Second, if our proposal to define an NGA network based upon the relative improvement delivered over the existing copper network in that area is accepted, detailed economic analysis of the relevant product and geographic market will be required. Member States will need to rely upon the skills of NRAs to carry out this analysis effectively and ensure no inconsistency with the market review process. Such inconsistency would reduce the certainty of both processes. Therefore, we would support greater NRA involvement in the State Aid process. CMT, the Spanish regulator, publishes on its website all current tenders for State Aid at national and regional level, scrutinises aid schemes and publishes a report detailing any required conditions and modifications to the grant. These include a review of the wholesale and retail conditions imposed and their relationship with related regulatory obligations. We would encourage a similar process to be carried out as a matter of course by all NRAs in relation to aids in their territory.

Finally, we believe that where state aid is granted to an SMP operator which is obligated by regulation to provide wholesale access, it is important that NRAs act to ensure such aid is deducted from or otherwise 'carved out' from the price setting for that access. Otherwise, there is a danger of 'double counting' where the SMP operator receives regulated returns on an asset which was built with state aid. Similarly, any state aid should be excluded from a calculation of the net cost of USO provision to which other operators are required to contribute. For the purpose of regulatory confidence, these deduction should be demonstrated

publicly in the SMP / USO operator's published regulatory accounts (or in a separate publication if the USO operator is not SMP with an existing accounting transparency obligation). Again, involvement of the NRA with a detailed knowledge of the interaction of the various broadband policy tools will be required.

In several State aid cases, the NRAs undertook to solve disputes between the operator of the subsidized network and the access seekers, should any such dispute emerge.

6.2. Do you have experience with such procedure? How do you see the role of NRAs to solve disputes between the access seekers and the operator of the subsidized network?

On its own, a dispute resolution procedure is not sufficient but can be a useful addition to regulatory remedies. The primary obligation must remain on NRAs to carry out a relevant market analysis including the state-aided network as soon as possible, imposing appropriate access remedies.

7. TRANSPARENCY OF STATE AID MEASURES

According to the Commission's case practice in this field, granting authorities shall share all the important information of the schemes with stakeholders. Inter alia, they have to publish on a central webpage the mapping information on the target areas, the planned State aid measure, and all information shall remain public for minimum 1 month to allow all third parties to comment. The tender procedures for granting aid have to be conducted in line with the principles of EU Public Procurement Directives¹⁷, respecting all conditions for transparency and non-discrimination.

7.1. Do you consider that the information made available in the described ways is adequate to ensure transparency? Do you have suggestions on how the transparency of State aid broadband schemes could be further improved? Can you provide examples of good practice when it comes to information provided on the State aid broadband measures in different stages of the procedure?

As noted above, if state aid projects form part of an overall framework, greater visibility of potential roll out areas would help private planning. This would ensure that private funding such as the Mille Comuni project is not 'crowded out'.

8. OTHER POINTS

Several Member States requested vertical separation on the subsidised networks (the wholesale operator of the network shall not engage in retail service provision) to avoid risk of discrimination, support competition and push take-up rates as a result of public intervention¹⁸.

¹⁷ Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts.

¹⁸ See examples of Commission decisions in cases of N407/2009 Optical fibre Catalonia (Xarxa Oberta), Spain; N183/2009 RAIN project, Lithuania or N196/2010 EstWin project, Estonia.

8.1. In your view, what would be the costs and the benefits of requesting this condition? In what circumstances would you consider vertical separation to be an effective remedy?

Vodafone supports vertical separation of fixed networks as a means of encouraging greater investment in fibre and addressing perennial issues of vertical discrimination. In state aided cases, we believe that vertical separation should be the default position and should not be followed only if there are good reasons in a particular case.

Some public authorities argue for a need of "strategic role" of the State in the broadband sector to achieve their social and economic objectives. In most cases, that is translated in the choice of retaining public ownership of the subsidised broadband networks (mainly passive infrastructure elements, like ducts, manholes, dark fibre) while the wholesale and retail operation of the networks is tendered out to private operators.

8.2. In what circumstances would you consider that public ownership is justified? What are in your view the advantages/disadvantages of public ownership of the infrastructure?

Vodafone has no particular objection to public ownership of broadband networks in particular cases but believes that private investment is likely to remain the driving force in NGA deployment. Therefore maximising certainty for private investors should remain the EC's focus.

9. NON-AID MEASURES: MEIP AND SGEI

The Guidelines provide clarifications on broadband measures falling outside the scope of State aid rules, in particular when public funding for the roll-out of broadband is carried out at market terms ("MEIP" Section 2.2.1. of the Guidelines) and when Member States consider that the provision of a broadband network should be regarded as a service of a general economic interest ("SGEI" Section 2.2.2. of the Guidelines).

9.1. Do you have any experience with "MEIP" or SGEI" instruments used in European countries?

9.2. Do you consider that the current level of detail provided in the Guidelines on MEIP and SGEI is sufficient? Do you have any comment on the applicability of these provisions?

Given our experience, greater detail to deal with application of MEIP principle would be extremely useful as there have been cases of erroneous applications of MEIP principle where the local authorities pay for copper assets that have not been properly valued only to take part in the fibre roll out project which promptly devalues those assets to virtually zero (i.e. the case of Trento).

9.3. The Guidelines insist on a strict definition of what constitutes an SGEI in the liberalised telecom sector (universal and compulsory nature, open and neutral network, separation of wholesale and retail operations etc.). Have you experienced special difficulties with the implementation of this type of measures?

For what concerns the open and neutral network we suggest that guidelines should further specify this definition based upon the more recent case law. In our view, an open and neutral network would imply unbundlability and vertical separation of the network. This prevents discrimination and ensures effective downstream competition.

Apart from this we support the other provisions regarding SIEG in the current guidelines (e.g. separation on wholesale and retail operations universal and compulsory nature, rules regarding compensation etc...)

9.4. Do you consider it adequate that for SGEIs all technologically possible access products are requested or would you consider that certain access remedies could under certain circumstances be deemed to be redundant (e.g. duct access and dark fibre access) and therefore there is no need to request them to ensure a sufficient level of competition? If yes, please explain in detail.

We believe the EC should focus upon unbundlability with differentiated ‘best in class’ bitstream and duct access as additional, complementary remedies.

10. FINAL REMARKS

10.1. You are invited to highlight and explain any other relevant points related to the Broadband Guidelines.

--
Brussels, London 30 Aug. 2011