Draft Commission Recommendation on regulated access to Next Generation Access Networks
Comments by Vodafone

1. Vodafone welcomes the Commission's determination to establish clear principles about the regulation of Next Generation Access Networks (NGAN) as early as possible. We agree with much that is contained in the draft Recommendation.

2. Vodafone is one of the few fixed broadband providers with interests across the European Union (and the only such operator to serve consumers as well as businesses). We already provide broadband services using DSL in every European market – eight in all - in which we own mobile operations. We support the Commission's wish to ensure that consistent regulatory principles are applied throughout the European Union. The application of those principles will not necessarily produce the same outcomes given different local conditions.

3. This submission contains an executive summary. We then outline our approach to NGAN regulation in detail and also suggest the specific amendments to the draft Recommendation which we think follow from it.

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Executive summary

1. We welcome the Commission's draft Recommendation on NGANs. We agree that establishing clarity on these important issues is essential before investments are made and that a consistent approach to these matters is needed throughout Europe.

2. We should not be satisfied with the current level of broadband competition in Europe. Simply protecting existing levels of competition as we move to NGAN is the wrong goal. We believe that, with the right regulatory approach, NGANs provide an opportunity to extend competition.

3. The underlying NGAN architecture will have profound consequences for the prospects of competition. NRAs cannot and should not mandate particular technologies, but they should certainly encourage operators to build NGANs which will facilitate the greatest competition at the lowest cost.

4. NRAs cannot wait for the production of a reference offer by the SMP operator after the network has been built. They should instead adopt a proactive role by assessing the prospects for competition and regulation in light of the operators' NGAN plans and proposed technology choices but before anything is built.

5. Creating the right incentives for NGAN competition involves recognizing that Wholesale Broadband Access (WBA) is not (only) something that is needed to safeguard service competition. WBA is one of the main tools which NRAs can use to ensure that competition using passive elements has the best chance of succeeding. That means that more thought also needs to be given to the pricing of WBA.

6. NRAs also need to pay particular attention to the location of concentration points in FTTH, the provision of co-location space within cabinets in FTTN, and the availability of dark fibre. Getting these three issues right is fundamental if competition is to be extended in NGAN. We think the draft Recommendation should place more emphasis on the need for NRA action on the first two issues, and that it understates the potential for dark fibre to contribute to competition (by relegating it to a remedy of last resort.)

7. Competitive NGANs involve facilities that need to be shared between firms. Determining the costs of the facilities is important but NRAs will find it theoretically difficult and practically impossible to distinguish between 'existing' and 'new' investments, as the Commission propose. Determining how those costs are then to be allocated between firms is equally important. We believe that the Commission should consider further including guidance on cost allocation in the Recommendation.

8. An extension of competition through NGAN should not be to the detriment of existing DSL-based competition. It is therefore critical that clear rules about the migration from DSL to NGAN are established long before actual migration is contemplated. Getting the most competition at the lowest cost means that SMP operators need to be able to

avoid unnecessary duplication between NGAN and DSL facilities, whilst investors in ULL need a reasonable return if they are to continue to invest in the meantime. We propose a combination of a 5 year notice period and the availability of a ringfenced WBA migration product to ensure this.

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The overall ambition of the Recommendation should be to extend competition beyond current levels

1. NGANs present new challenges for regulators which the Commission rightly identifies in the draft Recommendation. But we also firmly believe that NGANs also present new *opportunities* for regulators. This is because traditional fixed network regulation had to overlay regulation onto networks that had already been built and investments that had already been sunk. Regulation has been concerned with controlling or constraining the exercise of market power that has arisen from these networks, originally built in monopolistic markets. Never before have regulators sought or been able to influence the design of the underlying network itself.

2. NGANs present an historic opportunity to do this. Regulators can and should encourage investment in networks which will enable a more competitive and more sustainable broadband market than we have seen emerge in most Member States to date. With the right regulatory approach, we can and should use NGANs to extend competition. In doing so, we can begin to enjoy the kind of innovation and benefits which we have taken for granted in Europe's mobile markets for the past 20 years. Too passive a regulatory approach risks losing even the gains from fixed broadband competition which Europe has seen in recent years.

3. All parties will benefit from a more competitive and more sustainable broadband policy framework. Consumers will be better served. Existing and new competitors can grow their businesses rather than simply trying to cling onto the 'ladder of investment'. Investors in NGAN infrastructure can have more certainty and the prospect of less regulation before they have to commit to invest. Options which are not available once the network has been built are still available today.

4. Overall, we think that the current Commission draft Recommendation does not go far enough in seizing the opportunity presented by the NGAN investments which are likely to be made over the next few years. We make some suggestions which are intended increase the opportunity to use NGANs to enhance competition[1].

Establishing the right framework from the outset

5. The current legislative framework presents two challenges for NGAN, both of which are to some extent evident in the Commission's approach in the draft Recommendation.

[1] The Recommendation does not address the important issue of functional separation, which is highly relevant to the outlook for NGAN. We understand why this is so but assume that the Commission may provide guidance on this issue in a subsequent Recommendation. We agree with (and do not comment further on) the contents of Annex II, which address the related issue of equivalence.

6. The first challenge is that the Recommendation is presented in the context of the existing Article 7 process in which markets are periodically reviewed and adjustments made as competitive conditions change. Article 7 was designed at a time when most markets were already well established, networks were already built and an existing regulatory architecture was already in place. Its main purpose was to determine when existing regulatory obligations – inherited from the previous framework – might be withdrawn as competition developed.

7. NGAN represents a potentially much more fundamental disruption of the technological and competitive landscape. To some extent, this is already recognised by the language employed in the draft Recommendation, particularly in the references to encouraging 'build and share' projects[2] and the promotion of fibre instead of copper at greenfield sites[3].

8. The Commission suggests:

> *NRAs can also seek where possible to reduce entry barriers or offset the potential impact on effective competition where barriers may increase.*[4]

9. We think this is the most critical objective and that should be explicitly established as such in the Recommendation. Article 10 currently suggests that SMP operators should be required to provide NRAs with details of the network they intend to build. We think that this should be only the beginning of a process in which the NRA should consult other stakeholders in order to determine the likely competitive consequences of a particular set of proposals (i.e. the economic viability of competition in view of the particular network architecture (FTTC, GPON, P2P etc) being proposed). The NRA should then define the regulatory remedies it considers appropriate in light of the proposed network architecture. This, depending on the case at hand, may or may not include regulated Wholesale Broadband Access pricing (see below). The SMP operator can then determine whether they wish to amend their proposals in light of the regulatory framework proposed by the NRA (and to which the NRA would then be committed for at least a significant period). The input of other stakeholders will be essential in both developing the framework and getting commitment to it from all parties[5].

10. Only after this initial process has concluded (but before any retail services are offered) would the SMP operator be required to make a reference offer in accordance with the framework that the NRA has developed. Article 9 currently envisages that the SMP operator is required to unilaterally issue a reference offer, without the NRA having first defined the appropriate framework. Yet this framework can only be devised in light of the prospects for competition associated with the particular network architecture

[2] Art 11
[3] Art 12
[4] Explanatory Note (hereafter 'EN') p.12
[5] A process similar to that we envisage here occurred in the development of BT's Openreach undertakings in the UK

which the SMP operator proposes to build. The SMP operator cannot and should not simply unilaterally propose remedies without prior consideration of these issues by the NRA.

11. This brings us directly to the second challenge: the concept of 'technological neutrality' which underpins the Framework and makes regulators reluctant to develop rules which might be seen to apply to particular technologies. In doing so, NRAs risk attempting to sustain a fiction that, when it comes to NGANs, technology choices do not have direct consequences for competition.

12. In practice regulators already have rules which are not technology neutral. The different treatment of coaxial cable networks and copper based access networks is the most obvious example – cable has remained largely unregulated because the underlying technology imposes limits on the remedies that might be available to regulators. There is no suggestion that this will change and cable remains notable by its absence from the current draft Recommendation. The draft Recommendation also makes a clear distinction between FTTH and FTTC networks - and treats them differently[6]. It also urges NRAs to promote fibre over copper in greenfield sites[7].

13. We think the Commission and NRAs must promote some technologies over others in cases such as these when technology choices have such important consequences for competition. This should be made more explicit in the Recommendation, not less. The Recommendation should establish a framework which provides clear and strong incentives from the outset in favour of NGAN investments which maximize the prospects of 'downstream competition'[8].

14. In saying this, we do not suggest that the Recommendation or NRAs should specify how private investors spend their capital. The ultimate choice of network technology should remain in the hands of the investors themselves. But the consequences of those choices – and therefore the incentives to make them - do need to be spelt out by the regulators and by the Recommendation to a much greater extent.

[6] There are at least two examples of technology bias in the draft. First, the Commission argues that FTTN does not require 'graduation of remedies' whilst FTTH does. The Commission justifies this on the basis that investment in FTTN has 'already largely been made' and therefore requires no risk premium. This is mistaken - both FTTN and FTTH may combine new and old investment. Second, the Commission makes clear reference to dark fibre as an alternative remedy in FTTH (Art 15), but no reference when discussing backhaul options for FTTN (Art 20). The first position makes FTTH investment potentially more attractive to SMP operators, whilst the second makes FTTN potentially more attractive instead.

[7] EN p.13

[8] Both in the sense of competition in the downstream retail market and in the sense of competition at a later point in time.

Regulators should encourage investments offering 'the most competition at the lowest cost'

15. There is a trade off between competition and investment, at least in the short term, which it would be helpful for the Recommendation to address more explicitly. Networks that can more readily accommodate competition can also be more costly to build. Spare space for extra ducts or larger cabinets are obvious examples. Monopolies are often cheaper to build in the short term[9].

16. The Recommendation should therefore require NRAs to encourage investments in NGANs which promise 'the most competition for the lowest cost' and should do more to explain what this might mean in practice. This involves answering questions such as:

    - How should NRAs view the relative cost/competition trade offs of different network architectures?

    - How should any additional costs incurred to accommodate competition be recovered?

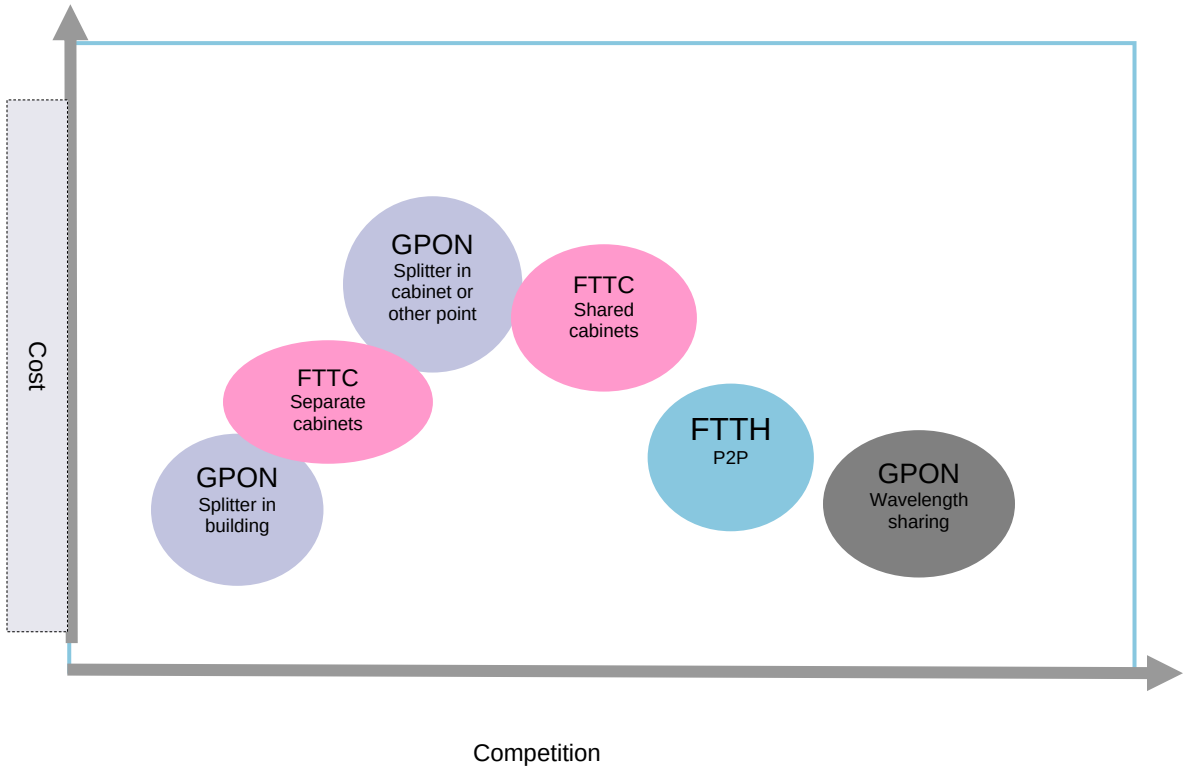
    - What are the consequences if investors choose less competitive options which make passive remedies less economically viable?

17. The Recommendation already attempts to address these questions in part. Nonetheless, Vodafone believes that NRAs will need to provide much clearer guidelines (and commitments) about the regulatory consequences of different technological choices. Network deployments which more readily facilitate competition would, for example, result in less regulation in Market 5 than those which do not. Wholesale Broadband Access (WBA) should therefore be viewed as a remedy which both safeguards service competition *and* which encourages the development of competitive infrastructure[10]. A good WBA remedy may be one which does not need to be used very often because the resulting competition in Market 4 is more effective. We explain this further in our discussion of WBA later in this submission.

18. The main technological options for NGAN deployment in the foreseeable future – and their likely costs and competitive consequences – are already reasonably well understood. We illustrate below the range of options which investors might consider, many of which are already explicitly referenced in the draft Recommendation:

[9] For example, the additional cost of ensuring sufficient cabinet space for competitors is estimated by Analysys Mason to be 10%-20% of the total FTTC deployment costs (between £500m and £1bn on a total £5.1 bn FTTC cost for the UK). Similarly, P2P networks (which may be easier to unbundle and therefore more 'pro- competitive') are equivalent in the UK to adding €3-€5.5bn to the GPON cost of €30bn. Views vary between analysts on the size of these differences, but not that they exist.

[10] As the Commission itself suggests at p.9, EN



This means regulators need to take a more pro-active stance on aggregation points for PON and cabinet sizes than implied by the draft Recommendation

19. NRAs should aim to incentivise the lowest cost investment in NGAN which facilitates the greatest prospects for competition (bottom right hand corner of chart) and to discourage high cost investment which restricts competition (top left hand corner) The Recommendation correctly recognizes that the main drivers in this are:

    - the location of concentration points in GPONs
    - the availability of co-location space in FTTN
    - the availability of passive backhaul capabilities in both FTTH and FTTN

20. The draft Recommendation addresses the first of these in Articles 14 and 15. Article 14 appears to assume that GPON aggregation points should be located in the vicinity of the building and that NRAs will be in a position to dictate the location of these points to network owners. We are not convinced either of these assumptions is robust[11].

[11] Art 14 seems to reflect the recent debate in a specific market (France) rather than assessing the broad principles that should be applied. Recital (8) rightly recognizes that access to concentration points is 'crucial for the viability

21. First, we think that the viability of competition should be the key determinant when seeking to optimize the location of these concentration points and that this may suggest that the concentration point is located much higher in the network (e.g. at existing exchanges). This requires an assessment of the trade offs between competition and additional investment costs as explained above. Article 15 moves in this direction by requiring:

> *Network access should be granted at the concentration point which allows access to unbundled fibres where it is economically viable*

22. However, this still falls short of establishing a clear framework which incentivises the installation of concentration points at locations which maximize the prospects of downstream competition. Extensive industry discussion will be required to develop a consensus as to exactly what this means in each market. The Explanatory Document is closer to our aim:

> *physical access to the fibre sub-loops should be mandated as a remedy in Market 4 at the SMP operators' concentration points identified and determined by the NRA*[12]

23. We suggest that this text replace Article 14 and that the Recommendation states clearly that NRA s should encourage the location of concentration points in PONs which will facilitate competition to the maximum extent possible and that network architectures which fail to do this (for example by locating concentration points at the building) will trigger stricter Market 5 remedies to safeguard competition.

24. Similarly, more emphasis is required on the need to incentivise operators to deploy FTTN cabinets which allow co-location within the cabinet[13] and to make it clear that a failure to provision such cabinets would also have consequences for the Market 5 remedy. The proposal that NRAs aim to 'facilitate agreements concerning the size of street cabinets'[14] suggests far too passive a role for the NRA in view of the criticality of this issue for future competition. A much clearer set of incentives needs to be established to incentivise the deployment of FTTN networks which will facilitate sub-loop unbundling to the maximum extent possible.

Dark fibre should be a co-equal remedy to duct access, not a last resort

25. Perhaps the most significant difference in approach to arise from our framework is that it leads us to question the Commission's preference for duct sharing over dark

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of network competition' but then suggests that 'negotiated agreements' will be reached between SMP and alternative operators. This may be the case in some circumstances, but cannot be assumed to succeed.

[12] EN p.14

[13] The draft simply says that 'NRAs should take, where necessary, measures pertaining to the adequate size of street cabinets' (art 18)

[14] EN P.16

fibre[15].The passive remedies of dark fibre[16] and duct sharing produce similar competitive consequences, yet the draft Recommendation reveals a clear preference for what is likely to prove the more costly and difficult option.

26. Duct sharing yields few if any obvious competitive benefits to consumers or competitors beyond those which would be secured if dark fibre were made available on appropriate terms from the outset[17]. In those cases where dark fibre has been available on either regulated or non-regulated terms (such as Stockholm[18] or Japan[19]), NGAN competition and investment appears to have prospered. Existing Unbundled Copper Loops are the copper equivalent of dark fibre - so it is hard to see why the same approach to remedies should not apply in the NGAN context. We are not aware of duct or pole sharing being advocated in preference to 'dark copper' in the current context.

27. We believe that, compared to dark fibre, duct sharing will be less extensive and more expensive, adding significant regulatory overheads (both in terms of delay and direct costs of duct audits etc) in return for few additional competitive benefits. We see no good reason for the Commission to favour duct access over the equally effective dark fibre alternative[20].

28. On their own, these arguments would justify reviewing the current preference in the draft Recommendation for duct sharing over dark fibre availability. But we are also concerned that the draft Recommendation does not and probably cannot provide workable guidance about the circumstances in which dark fibre might be adopted as a remedy of last resort. Article 15 of the draft refers to circumstances where '*access to [duct sharing] is technically or physically impossible or where it is not economically viable for a sufficient number of operators to ensure effective competition*'[21]. We do not see how NRAs (or more likely the courts) will be able determine such viability or sufficiency ex ante – nor do we think that these are the right tests, for the reasons outlined above. The thresholds are so vague and evidence likely to be so contentious that we do not think this approach can be applied by NRAs in practice.

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[15] EN p.14 'NRAs do not need to consider additional physical access obligations (such as dark fibre) when access to the passive infrastructure…is feasible'

[16] The Recommendation does not define dark fibre, In this context we mean both access to discrete fibres and access to individual wavelengths within a fibre.

[17] Dark fibre is likely to be available wherever duct sharing is feasible, but the converse is not true (which is why the Commission itself seems to accept that dark fibre may be a remedy of last resort when duct access is not available). It is true that, compared to duct sharing, dark fibre may limit the ability of competitors to develop a fundamentally different passive network architecture from the incumbent, but (a) the competitive benefits of this are in uncertain (mobile operators have competed effectively with substantially similar network architectures) (b) many fibre deployments already involve both tree and branch and ring deployments which would allow different configurations.

[18] Where 30+ competitors provide 100 MB/s connectivity using Stokab's dark fibre products.

[19] Where NTT has been required to offer dark fibre for several years. Another model is being proposed in Singapore, where the OpenNet consortium will be required to wholesale dark fibre to third parties.

[20] An effective dark fibre option in this context would be one with no restrictions upon the use to which it can be put and the same security of tenure implied by occupancy of a shared duct. These are conditions which should be specified in the Recommendation.

[21] See also p.14, EN

29. We conclude that the position on dark fibre in the draft Recommendation is neither desirable nor workable. We would advocate making dark fibre (with appropriate conditions) a co-equal remedy with duct sharing for *both* FTTH and FTTN deployments[22]. The present draft refers to dark fibre as a remedy of last resort in relation to FTTH in Article 15 and makes no reference at all to dark fibre in Article 20.

Wholesale Broadband Access requires significant NRA attention and a more sophisticated approach to pricing

30. The draft Recommendation rightly anticipates that SMP will continue to be found in Market 5 in the majority of cases and that this will require the development of active WBA remedies. Vodafone considers that, given the uncertainties surrounding the effectiveness of the Market 4 remedies and the time that it will take for them to be delivered[23] (even if the Commission were make the modifications that Vodafone suggests to improve their effectiveness), an effective WBA remedy will remain an essential safeguard for competition in all Member States for the foreseeable future[24]. Many concerns would be addressed if the Recommendation were to say this clearly.

31. We are concerned that the NGAN debates in many Member States today underestimate or neglect altogether the difficult task of specifying WBA services in an NGAN environment. We are also concerned that the Commission appear to see WBA as a remedy which can be considered later if other remedies prove inadequate[25]. We think that it is already clear from the various economic models of the likely scope of NGANs that a WBA remedy will be required in all Member States and that there is therefore no reason to delay work on this issue.

32. A key requirement which distinguishes NGAN WBA from existing bitstream will be the specification of wholesale (as opposed to resale) products which effectively support the integration of multicast video and TV services. At this stage we see a significant risk either that WBA products are not specified at all or that WBA products are specified but that they prevent effective competition in video services. This would effectively foreclose competition in much of the retail market. Given the uncertainties that currently surround the efficacy of remedies in Market 4, this is a real and serious concern.

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[22] We also think that a reference to 'pole sharing' should be included.

[23] Experience of passive remedies in the DSL environment suggests that, even if they are viable, it will take some time for the processes to stablise. In the case of DSL, early availability of bitstream products was essential to safeguard competition in most Member States

[24] We also agree that NGAN deployment does not generally break the chain of substitution for broadband products and that, in particular, the availability of higher bandwidth internet access (eg. above 30 MB/s) does not represent a distinct product market for the purposes of Market 5 (as the Spanish regulator CMT erroneously supposes in its current Market 5 proposals).

[25] 'Experience shows that ..where remedies on the market for wholesale physical access have worked well, remedies on the upstream market for wholesale broadband access were not required' ED, p.4. See fn 23 above – this may be the case today, but was not the case during the early stages of the development of the broadband market, when the reverse was more often true.

33. The draft Recommendation should therefore make it clear in Article 9 that the 'relevant inputs' that must included in a reference offer of the SMP operator should include a fully specified WBA product and that this must be available prior to the commercial launch of any NGAN-supported retail services. To achieve this, the Recommendation should require NRAs to establish appropriate processes, including consultation with stakeholders, to oversee the effective and timely development of such products.[26].

34. Whilst product specification is important, the pricing of Market 5 products is also critical not only for the prospects of downstream competition but also for the operation of passive remedies in Market 4. As noted above, we think the pricing of WBA should be used to incentivise network investments which facilitate competition using passive elements. This is a somewhat different approach from the traditional 'ladder of investment' approach. In our case the pricing of Market 5 products is being used to try to influence the investment incentives of the SMP operator. With the ladder of investment the attempt was being made to influence the investment incentives of the new entrants.

35. As already noted, this suggests that more thought needs to be given to WBA pricing principles than is offered by Article 24 of the current draft[27]. In fact, we think establishing prices for WBA products is likely to be one of the most challenging aspects of the entire regulatory framework for NGAN. No price regulation (beyond the application of effective price squeeze rules) may be required if the SMP operator builds a network architecture which facilitates effective competition via the use of passive remedies. On the other hand, some network architectures could mean that there is no prospect of any effective competition using passive remedies. In these circumstances NRAs will need to intervene to establish regulated WBA prices from the outset.

36. If WBA pricing is to be used to influence the type of NGANs that are built, as we propose, then this needs to be in place before they are built. NRAs will find it very difficult to alter WBA pricing principles ex post and that will serve little purpose if SMP operators have already committed to build particular networks. In our view WBA is about much more than 'safeguarding service competition' which is the task assigned to it in the draft Recommendation (although it does this as well). We believe that WBA pricing is the main lever which NRAs must use to encourage SMP operators to build the most competitive NGANs possible. Put another way, effective use of WBA regulation from the outset will ensure the success of Market 4 remedies and reduce the long term demand for regulated WBA. Neglect of WBA will ensure that Market 4 remedies do not work and will likely increase long term dependence on WBA as a consequence.

[26] There are limited exceptions. Ofcom in the UK has overseen the development of 'Active Line Access' WBA offer by BT. This work is ongoing and could provide the basis for an EU-specification. KPN has also developed WBA-type products in the Netherlands, although these combine resale and wholesale characteristics. Work on WBA in most other Member States is very limited. Vodafone welcomes the ERG's inclusion of a workstream on WBA in its current 2009 workplan and believes this should be a high priority for ERG.

[27] Or p.10 of the EN

How should costs be recovered?

37. There are at least two important issues concerning the pricing of remedies, one of which is partially addressed by the draft Recommendation and one of which is not.

38. The first, which the draft Recommendation addresses in considerable detail, concerns how costs (including the cost of capital) are assessed when deriving prices. The main details are to be found in Annex 1 of the draft.

39. Considerable attention is devoted to the pricing of the passive remedies in the draft, but very little guidance is provided in relation to the pricing of active products such as Wholesale Broadband Access. We have noted above that WBA pricing is likely to prove the greater challenge. Article 24 states only WBA that pricing should be 'consistent with' the prices charged for physical access products.

40. The proposals that are made in Annex 1 seem somewhat muddled. It is obvious that the Commission's intent is to drive prices for certain passive inputs as low as possible and that this has led to the adoption of an approach which treats existing investments as if they are sunk[28]. This represents a significant change to the general approach to regulatory pricing, without any real attempt on the part of the Commission to justify such a radical departure[29]. To see this we need do no more than note that it would put the treatment of sunk NGAN elements at odds with the current treatment of unbundled copper loops.

41. We also see obvious difficulties with the proposed distinction in the pricing treatment of existing and new network elements. It clearly creates incentives for investors to unnecessarily and inefficiently upgrade plant in order to convert 'existing' assets into 'new' assets and benefit from different pricing rules. More significantly, we think that it will in practice be almost impossible for NRAs to distinguish between assets that are 'existing' and those which are 'new' for the purposes of applying the pricing principles which the draft Recommendation proposes. We therefore believe that the current proposal is unjustified and would be very difficult to apply in practice.

42. The second aspect of pricing, which we consider at least as - and perhaps more - important but which is not addressed at all in the draft, concerns how the costs are then shared amongst firms. Since many NGAN assets and facilities are likely to be shared between firms, the question of how the costs will be shared is of fundamental importance.

43. There are several possible approaches to cost allocation. Our strong preference is to apply an allocation method which takes the total costs of the asset and allocates them

[28] In other words, a fully depreciated historic cost basis, which ignores the replacement costs or costs faced by competitors.
[29] The last paragraph on p.11 of the EN is the only place we find an attempt to do so.

across users in proportion to their utilization[30]. A heavily utilized asset (eg a duct which is fully used) will have lower unit costs than an under-used asset (a duct which carries spare capacity for future entrants), but in both cases the total costs will be fully recovered across the available demand at all times. This approach obviates the need for more complex 'risk sharing' arrangements, such as have been proposed by some stakeholders.

44. We consider this approach better than all the alternatives. Alternatives include arrangements, such as we have seen in some early co-location arrangements in some Member States, under which early users of assets paid the full incremental costs of provisioning facilities for competitors but were subsequently compensated by later entrants if these facilitates were then shared amongst more firms[31].

45. It may be argued that, if assets are underutilized, our proposals would unfairly allocate costs which are incurred for the benefit of competitors (e.g. the additional costs of larger cabinets which are then not fully utilized) to the users of the SMP operator. We do not accept that this is unfair or unreasonable. On the contrary, it is well established and generally accepted regulatory principle that the since all end users – of both the SMP operator and the competitors - stand to benefit from competition, it is entirely appropriate that the costs of competition should be allocated amongst all users and not simply those of the new entrants[32].

46. A stronger argument is that this approach increases risk for the network owner to the extent that investment to facilitate competition increases the risk to overall returns from the investment. We would agree with this point and believe that this risk should be properly captured in the risk premium.

Migration arrangements will affect investment long before migration happens

47. The Commission rightly recognizes that the deployment of NGANs remains uncertain. In the meantime, it is essential that investment in current generation broadband competition continues. This means that the migration options available to existing ULL-based competitors in the transition to NGAN need to be clear from the outset and

[30] We therefore agree with the Commission that prices should be 'based on a volume measure for physical capacity used' (Annex 1), although we think this is insufficiently precise. This could mean that competitors are required to pay for all of the incremental capacity reserved for competitors including that which is underutilised, that they pay for only that which is used but in large increments such as the entire duct cost, or that they pay only for the exact increment that is used, such as a specific sub-duct cost. We propose that total costs of the physical capacity – irrespective of whether it is utilized - should be allocated across all usage to derive a standard usage increment which should be the minimum that can feasibly be traded. The network owner would be assured of recovering total costs across the total demand. This approach obviates the need for more complex 'risk sharing' cost recovery mechanisms, such as have been proposed by some stakeholders (although it would not of course exclude these if they proved to be commercially attractive between individual parties).

[31] These arrangements proved unnecessary once 'comingling' allowed a move to allocation approach we are proposing here.

[32] This is, for example, how regulators have treated tohe set up costs for number portability, see eg, paras 2.130 et seq, http://www.competition-commission.org.uk/rep_pub/reports/1995/fulltext/374c2.pdf

should be one of the first issues addressed. The draft Recommendation recognizes this at Article 16, but provides limited guidance to NRAs about the principles that should be applied.

48. We believe that the aim of establishing an incentive structure to deliver 'maxmium competition at minimum overall cost' can also be applied by NRAs to this challenge. 'Maximum competition' means that existing ULL-based investment must have a reasonable prospect of returns. 'Minimum overall cost' requires that the NGAN must allow investors to reduce unnecessary duplication[33]. This is likely to involve the decommissioning of exchanges and other facilities which currently support ULL-based competition, at least in the long term.

49. We believe an appropriate migration framework needs to be established as early as possible by NRAs, since it will affect the current investment climate irrespective of when and whether NGANs are then actually built. The framework should have several features:

- an appropriate Wholesale Broadband Access product should be available to allow existing ULL-based customers to be migrated to an equivalent service without disruption in the event that ULL facilities are withdrawn

- SMP operators should be required to provide a minimum of 5 years notice of their intention to withdraw ULL facilities

- SMP operators could be allowed to withdraw ULL facilities prior to the expiration of the 5 year notice period in some circumstances, but would in this case be required to make available a 'ringfenced' WBA product at a price which would allow existing ULL users to face the same economics as had been available to them under existing facilities based arrangements. These prices (which would likely be lower than general WBA prices) would only be available in respect of lines migrating from existing ULL facilities that were being decommissioned

- SMP operators would then be free to determine whether they wished to adhere to the 5 year notice period and maintain facilities for competitors, or whether they wished to provide a ringfenced WBA product which would allow them to accelerate decommissioning. In either case, the investment case of today's ULL investors would be the same

[33] This is recognised, but not resolved, at p.15, EN

Specific changes proposed to the draft Recommendation

Art 1 –the text from the Explanatory Note that '*NRAs … seek where possible to reduce entry barriers or offset the potential impact on effective competition where barriers may increase.*[34]' should be included as a clear objective with the addition of the phrase 'as early as possible in the investment cycle'

Art 5 and 6 – these pricing principles (and Annex 1) should be substantially revisited. Specific guidance should be provided as to how costs are to be allocated between users, and the units of charging to be applied

Art 9 – the reference offer should include the WBA product and ex ante pricing rules (if any) for that product in light of the network architecture proposed by the SMP operator (and the consequent prospects for competition in Market 4)

Art 10 – NRAs should do much more than simply require publication and disclosure of network modification plans. This should form the basis of a full consultation with stakeholders with a view to informing NRA guidance on key issues such as the competitive implications of the chosen network architecture and in particular the plans for concentration point location and cabinet specifications. The outcome of this consultation should inform the NRA's approach to the development a reference offer and the pricing of WBA.

Art 14 – the text should make explicit that location of the concentration point should be assessed by reference to the prospects for economically viable competition (see Art 10 above). The Recommendation should not presuppose that this will mean that it resides at or close to the building. It should also be made clear that the decisions subsequently made by the SMP operator as regards the location of the concentration point must be taken into account when determining the appropriate regulatory approach (in particular pricing) to Market 5.

Art 15 – the current proposal that dark fibre is required in certain conditions only should be replaced by a clear obligation upon the SMP operator to provide dark fibre wherever this is technically and physically possible, irrespective of the availability of otherwise of access to ducts or other facilities. Dark fibre pricing should be regulated by the reference offer and the non-price terms should ensure sustainable competition and differentiation. Reference should also be made to pole sharing.

Art 16 – this should make clear that migration arrangements must be established at least 5 years prior to the decommissioning of the network, as we propose above, and that any accelerated migration first requires the availability of a ringfenced WBA product which safeguards existing economic assumptions of investors

Art 17 (and 20) – again, reference is needed to dark fibre being available from the outset

[34] EN p.12

Art 24 (and the Explanatory Note) – much more detail is required with regard to the pricing principles of WBA and the interplay between Market 4 and Market 5. This is explained at length in our submission

Annex 1 – this needs to be substantially revised along the lines outlined in our submission