

**Comments to ERG consultation document
on regulatory principles of NGA ERG (07)16****INTRODUCTION**

Telefónica welcomes this consultation and hopes that this exercise will result in an improved understanding of the profound and lasting implications that regulatory policy has on the development of next generation access networks in Europe.

Based on a broad experience with the current regulatory framework across EU and in view of the policy challenges posed by the evolution towards next generation networks, Telefónica considers that a clear policy framework is fundamental if the sector is to proceed successfully with the upgrade and roll-out of advanced access infrastructures.

This framework must be developed on the basis of the competitive realities of today's European electronic communications markets and the prospects for their evolution over the coming years, as well as a comprehensive understanding of the extent to which next generation access networks represent an unprecedented watershed for the industry in technological and business terms.

The growing interest of European regulators with regards to the regulatory consequences of the development of next generation access networks is understandable. However, in view of the ERG's conclusions on its "current thinking" on next generation access networks roll-out and "the implications stemming from it", this exercise is found seriously wanting, particularly in terms of the necessary discussion on the direction and role of sectoral regulatory policy over the coming years.

Indeed, due to the fact that this consultation takes place in an already regulated market environment - and precisely because these rules are currently under review - Telefónica considers that no analysis of the regulatory implications of next generation access networks can be complete without a corresponding evaluation of the impact of ex ante regulation on the dynamics of innovation and investment in electronic communications markets in Europe.

This is why Telefonica considers a deeper reflection and public debate on the future role of regulation in a next generation network and services environment is essential. This process should not assume that investments in NGANs are going to be made "in any case". Investments will not happen overnight, and are driven by several factors, such as expected demand, profits and the possibilities to achieve differentiation. Regulation has a clear impact on this.

Telefónica's response is based on the model it is advocating for: a model that favours infrastructure competition but with a relevant complementary role of service competition, and that takes also duly into consideration the investments of current market players both incumbent and new entrants

The comments provided in the following document are broadly structured around the key questions raised by the ERG in the cover note of the consultation document. These answers have been complemented with a series of specific points on key concerns that Telefónica wishes to raise in the scope of this consultation (geographical variations in competition, fibre unbundling, etc.) which have been added where relevant in the answers to the different questions.

<ul style="list-style-type: none">• Do you agree/disagree with the general approach?

According to the cover note, the consultation document *"develops some proposals, as to how the Recommendation on relevant markets and the ECNS framework may be adjusted"*.

Telefónica sees this document as **a general overview of all the possible regulatory measures that NRAs are working on in the different Member States**. Together with them, the document tries to reflect on the necessary changes to the framework that will allow NRAs to apply all those possible measures.

By following this approach, and without further discussing when some remedies or the other will be appropriate, or what is the best policy for maximising investment incentives, **the document sends a wrong message to all kind of market players: all obligations are going to be applied, regardless of any other consideration**.

However, in Telefónica's view, the regulation to be applied to NGAN should be evaluated with a wider perspective, and not just by analyzing how to adapt the present regulatory set of remedies to the new networks (or to develop new)¹, so we would suggest to make a more in depth analysis of some areas.

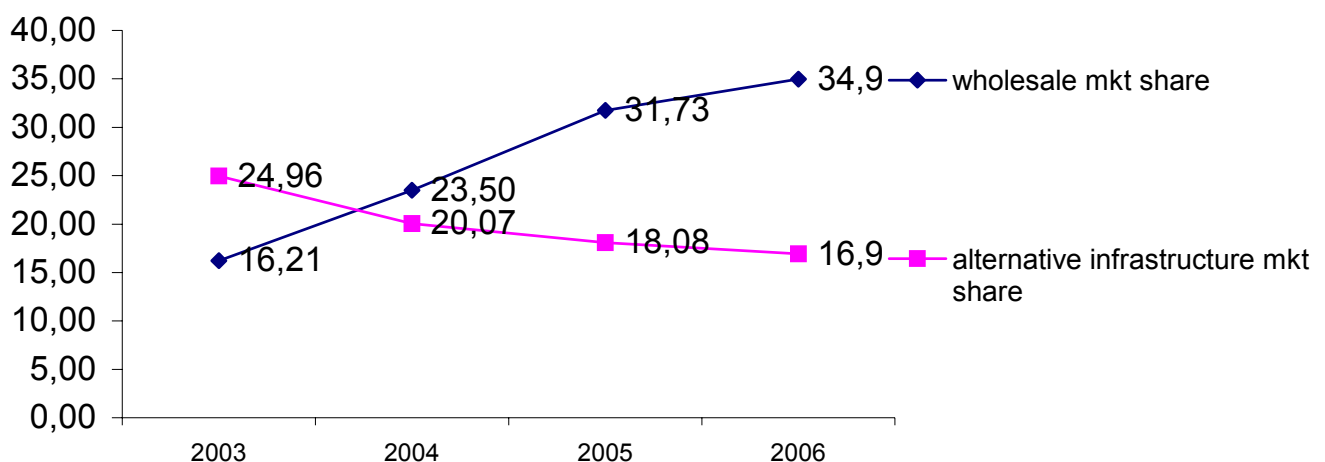
- **A broader analysis.** As pointed above, the introduction of NGNs in Europe must not be considered as a mere evolution of current networks that operators will undertake in any case. The modernisation of access networks is probably one of the most drastic changes faced by the sector in recent years, and will take place within a competitive and technological context totally different from the one which gave birth to the current regulatory model. Competitiveness in Europe will, beyond doubt, be conditioned by the success in the introduction of new services, highlighting the need to analyse the current situation and define a strategy for this evolution, in which regulation plays a key role for business decisions. Europe is already lagging well behind other regions when fibre is at stake; deployment of new networks will take many years and the pace of its deployment and the areas covered by the deployment will very much depend on how regulation deals with incentives.

¹ As is stated in page VI: however, to foster effective competition, additional or other remedies may have to be identified and applied in order to adapt regulation to further challenges.

- **Investment and innovation are key.** New networks will require important investments by the private sector. It must not be forgotten that NGNs may, in many cases, require completely new investments, particularly if we consider network development scenarios towards all-fibre networks, **which is the scenario that will prevail in the long term and under which operators can only make a limited use of their investments in previously existing access networks.** Indeed, regulation is one of the key factors that will determine the investment panorama, and it would be necessary to analyse how the regulatory measures proposed contribute to this objective. Although it is more than likely that operators will invest in NGNs, it is equally obvious that the level of investments can vary drastically depending on regulatory conditions.
- **Evaluation of the application of the regulatory framework.** The ERG puts forward a set of regulatory remedies that enshrine a continuity with the regulatory model of the past. It could be convenient to analyse in greater detail how regulation has contributed to the development of a sustainable sector with a high degree of innovation and investment, and whether changes are required.

For instance, regarding the balance between infrastructure / service competition, the current framework has put a lot of emphasis on fostering competition using the networks of incumbent operators. This has resulted in the existence of a range of wholesale services in the different countries. Alternative operators business models have revolved around those wholesale services. Out of the two main business models for deployment of competitive access networks (alternative networks and wholesale services), the market developments demonstrate that the second one has surpassed the alternative networks, as the following graph shows:

BB market share evolution of: operators using wholesale services (LLU, bitstream, resale) and alternative infrastructures



Source: data (number of lines in the EU) from CoCom 03-40 and 10, 11, 12 Implementation Reports

Both business models have grown, and have added lines in an expanding BB market. But it is clear that the business model of operators that use wholesale services has grown more, and has increased much more its market share than the business models of operators that use own infrastructure.

It is necessary to point out the role that all players have had in the market dynamics and the **positive effects on competition of both types of business models**. But at this point, Telefónica thinks that a further reflection is necessary on the future strategy for NGANs. This surely poses a challenge as to how regulation of wholesale services affects the viability and business case of infrastructure operators, and the different degree of risk assumed by both types of agents.

In a NGAN context, further recognition and emphasis should be given to the need to find a way to evolve towards self-sustained, infrastructure-based competition, with the aim of gradually phasing out regulation. Encouraging infrastructure competition does not mean that there is no room for market players using wholesale services, since under some circumstances that creates additional value to the whole market. However the aim is favouring value creation and self-sustainable competition.

Cost/benefit relation between the proposed measures. The implementation of some of the proposed remedies could in practice be extraordinarily difficult. For example, it is easy to foresee that the associated costs could increase in an important way in the new scenarios that are proposed in terms of access to sub-loops and street cabinets, implying that it might be convenient to carry out a cost/benefit analysis for new measures. NRAs have to ensure that remedies imposed to SMP operators are strictly needed, and avoid to define and impose a whole battery of obligations, most of them with high costs associated, but useless to operators or with very little demand.

Consideration of the broadband market as a whole. The ERG document appears to ignore other alternatives for the roll-out of broadband that exist - or that could arise in the market in the future - which could alter the competitive scenarios, such as cable or wireless networks (specially in areas with low density of users). These could provide a competitive alternative.

In a scenario in which new investments are envisaged by all market players, regulatory measures should focus on ensuring that all players can invest in equal conditions, by reducing entry barriers and adopting a technologically neutral view of market development. All regulatory analysis should start with a full "hands off" approach, in order to avoid a mechanical transition of all regulatory measures to the new NGN environment.

Geographic variations

The document recognises that there are several factors that influence in the economics of NGANs, on this basis, the document says:

"As a result, the economics of NGA networks are likely to vary across different technologies and different geographies. Conditions are likely to differ largely among Member States and within different regions of Member States. It may be the case that, to some degree and in certain locations, these scale economics mean that there is a natural monopoly in certain areas of the electronic communications value chain."

Telefónica agrees with the principle that conditions are likely to differ among Member States and within different geographical areas of Member States. **However, the way it is presented in the paragraph seems to suggest as the only conclusion that in certain locations there is a natural monopoly in certain areas of the value chain**

From Telefónica viewpoint, the logical conclusion of these types of geographic variations is that all geographical areas cannot be treated the same from the regulatory point of view. The document should provide a higher recognition of the need to vary regulation as the competitive conditions vary from area to area. A homogeneous regulatory treatment, as opposed to geographical segmentation, will not give incentives to market players to enlarge the areas where competition already exist. The objective of regulators should be to enlarge those areas where infrastructure competition exists, minimising the extension of areas where regulatory intervention is deemed necessary.

The concept of natural monopolies no longer provides a relevant model for considering regulation of the markets. The current figures of market share of alternative operators demonstrate that the issue of natural monopolies is no longer applicable in the electronic communications sector, there are large portions of population in the EU where cable networks are available.

While it is possible that in some geographical areas there will probably be only one infrastructure due to the large costs involved in the development of networks, for most of the population in many Member States, there will be interplatform competition.

Fibre unbundling

The investment in fibre to the home is a future-proof solution that could be of great interest in order to ensure the availability of modern broadband access infrastructures in Europe. The regulation applied to fibre roll-outs must consider the following factors:

- Large investments are required, implying long payback periods and risk associated with a higher uncertainty in the demand side, making it necessary to establish clear regulatory conditions that provide certainty for market players. Otherwise, these investments will be hindered.
- The structure that is being considered by the majority of investing operators is GPON, which can group up to 64 users on one fibre ending at the MDF. This could bring about considerable problems in terms of unbundling, as is recognised by the ERG. Solutions

based on WDM cannot currently be considered a viable technical solution and it is not yet known when this will cease to be the case. Lower level unbundling – fibre sub-loops, splitters and fibre connection between splitter and switch – introduces an added layer of difficulty and implies a substantial distortion for the operator rolling out the network, and could have an important impact on costs.

- As opposed to legacy copper-based broadband networks, fibre networks can be rolled-out by any operator interested in undertaking this kind of investment (which is already occurring in France). Regulation must focus on ensuring equal opportunities for all market players in the roll-out of these networks. It appears that, as admitted by ERG, problems lie more in the access to ducts and civil engineering works than in the fibre itself, suggesting that it would be more appropriate to analyse this market more broadly without restricting the analysis to the ducts belonging to the operators. The analysis should include all the existing ducts that can be used to deploy NGAs, like those from utility providers (water, gas, electricity) and those of public authorities (underground transportation, sewers, etc). There is an increasing number of cases where these companies, from outside the telecommunications sector, are becoming providers of ducts, suggesting that this market could be commercially viable without the need of ex ante regulation and could effectively contribute to increasing the possibilities for laying-down networks and improving economic efficiency.
- Regarding the legal basis, the ERG document proposes an expansion of market 11 to include fibre, without assessing the three criteria test that requires the relevant markets Recommendation. There is no study of the possible entry barriers for this market (see above comment on ducts). It does not follow the logic embedded in the Recommendation:

The starting point for the definition and identification of markets is a characterisation of retail markets over a given time horizon, taking into account demand-side and supply-side substitutability. Having characterised and defined retail markets which are markets involving the supply and demand of end users, it is then appropriate to identify relevant wholesale markets which are markets involving the demand and supply of products to a third party wishing to supply end users.

In the time horizon that will cover the next edition of the relevant markets Recommendation, it seems really difficult to make an assessment of the retail services that will run over fibre local loops, and highly disputable to apply the three criteria test, so it seems premature to propose any modification of the Recommendation at this stage.

Furthermore, market 11 has been the means by which regulators have been able to open the traditional fixed telephone network for other alternative operators to provide retail services to end users. One of the reasons for this was the existence of a legacy network prior to the liberalisation process of services and infrastructures. The situation is not the same for fibre deployment.

These new fibre deployments compete with other alternative infrastructures which have been deployed during these years and which are also being enhanced. The mixture of all of them constitutes a new competitive and technological scenario that should, at least, lead to a more in-depth analysis of the real necessity/rationale for modifying the definition of market 11 to include fibre.

Stranded investments

Regarding stranded investments, the document quotes a couple of times stranded investments of unbundlers. At this point, it would be necessary to point out that the need to upgrade and optimise the networks has implications on all parties: on current unbundlers, that have invested in infrastructure up to the local switch, and on incumbent operators, that need to optimise and reconfigure their entire network. The ERG document should give further recognition to the implications on **ALL** parties.

The issue of NGNs (considered in a wide sense: access, core) has a recurrent problem for SMP operators that are providing wholesale services (interconnection, LLU, collocation, etc.): if they want to evolve and optimise the network, the operators that use wholesale services are “locked in” to certain points and technologies of the network. This should not be an impediment for the evolution and optimisation. **An adequate notice and appropriate transition path should be provided** to the customers of current services, allowing them to take up new technologies in a non-disruptive and smooth way, without undermining or delaying the necessary flexibility for the provider. Ultimately, customers should not bear the cost of maintaining obsolete technologies/market players.

• Do the scenarios describe the relevant roll-out alternatives for NGA?
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They basically describe the roll-out alternatives of the network of a typical incumbent operator with a local network made up of copper pairs.

However, the scenarios should be completed by a description of other alternative technologies or platforms that can be qualified as NGANs (e.g.: DOCSIS of Catv networks, Wi-Max that can be used in less dense areas, etc.). Also the current development of “IMT-Advanced” within the ITU “SG 8” should be referenced / summarised (e.g. ITU-R M.1645 and M.2072), when highlighting alternative technologies.

Telefónica agrees with the fact that technologies will vary from country to country and from geographical area to geographical area, looking for the most efficient and cost effective solutions. Also, building reconfiguration (reduction of the number of switches) will vary from area to area.

As an additional comment, the first graph presented on page 6, should point out that sometimes (in some networks or areas) street cabinets do not exist. The current graph seems to imply that there are always street cabinets.

• Do you agree/disagree with regard to the conclusions on economics and business case studies?

The studies in annex 3 are most of them focused on FTTCab/ VDSL deployments. In this question, a general remark about cost drivers is necessary: The consultation document mentions the following categories of cost drivers:

- horizontal trenching/ducting cost (civil engineering), constituting the most significant cost factor;
- (horizontal) fibre cabling deployments;
- (vertical) costs of in-house wiring; and
- equipment cost per node.

Apart from these cost drivers mentioned in the document, there are other cost drivers that imply significant amounts:

- switch (CO) equipment
- end user equipment.

Especially costs of optic end-user equipment for FTTH solutions are considerable. With FTTH solutions, the cost of home “passed” is considerable lower than the cost of a home “connected”. These costs should be reflected in the document.

• What is your opinion on the regulatory implications and on the evolution of the ladder of investment? Additionally please provide more specific comments regarding the issue of multicast capabilities and their regulatory treatment.

As reflected in previous positions, Telefónica considers the ladder of investment to be mainly a theoretical concept. On the one hand, it is true that one of the factors that influences the investment decisions of alternative operators is the progress in their customers base.

However, the ladder of investment cannot be presented as a regulatory tool, according to which regulators can “design” a ladder with several wholesale products corresponding to the several steps that operators are going to climb, and in this way justify the existence of all types of wholesale products at all possible levels.

If multiple access products are provided by regulation, this approach is very likely to end up in a situation of very limited investment in own infrastructure, and much greater reliance on

wholesale services. It will always be possible to find a wholesale product suited to the specific business case of a given company.

In practice, there is a serious risk that the Lol approach will provoke a market development against the desired goal of reaching interplatform competition where possible.

In any case, Telefónica agrees with the paragraph in page 41:

therefore we may expect the deepest level of efficient infrastructure investment to vary across Member States and within regions of Member States.

Which should be supplemented by a recognition of the fact that in many areas NGANs infrastructure will be replicable and there will be no need to lay down a complete set of access products.

Regarding multicast capabilities, the document quotes several times this issue together with a mention to the possibility of providing capability for TV services. There is also a reference in the stakeholders answers to the consultation (restricted to the Italian network, page 55).

This issue of providing multicast capabilities should be analysed in the wider context of competition in the delivery of TV services, where there are many national specificities. This fact is illustrated by the variations in market definitions and peculiarities of market 18 national analyses.

Telefónica does not see a need to treat this issue in detail, as there are many uncertainties about the demand for these types of services. The provision of a wholesale service with multicast capabilities, that allows the provision of IPTV retail services is not straightforward: it will require significant investment and development time, and has to be justified by a clear demand and a demonstrated competition problem in the TV distribution market.

• Do you agree/disagree with the conclusions?
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Telefónica sees an urgent need for clarifying the policy framework to be applied to NGANs. This task is not easy and should take duly into account deep differences amongst countries or areas in terms of network topologies, competitive conditions and willingness to invest by market players. A general approach consisting in "having all remedies available just in case" is not the best way to provide certainty and clarity. Much more discussion and qualification is necessary as to when some remedies / regulatory approach is adequate in a given situation. A clear regulatory framework will help to achieve highly dynamic competitive markets on both infrastructure and service level in long run.

Telefónica favours a regulatory model that lays down conditions for platform competition as the preferred option. In order to achieve that Telefónica proposes to **geographically differentiate**

between areas where platform competition exists or is about to exist (where economic regulation should refrain from intervening) and areas where there are no reasonable prospects of platform competition and there is a single network to reach customers (where regulation has a role to play as long as other competitive technologies do not emerge).

Telefónica at the same time, supports the need for services competition. However, for services competition to create value and be sustainable in the medium and long term, it cannot be based on cost-based wholesale products. We advocate **commercial products** mainly based on indirect access.

Finally, Telefónica understands the need to take into consideration current market structures, while allowing technological evolution. A **migration path** to let the market evolve in a smooth way may be reasonable, provided that the end objective is not forgotten.

Telefonica looks forward to working together with NRAs and other stakeholders in analysing in practice how to better apply the model EU-wide.