

**BEREC Report of the Consultation  
on the draft BEREC Broadband Promotion Report**

**23 February 2012**

|    |   |           |
|----|---|-----------|
| 1. | <b>Introduction .....</b>   | <b>2</b>  |
| 2. | <b>Stakeholder responses – general comments and comments on issues outside of the questions.....</b>                            | <b>4</b>  |
| 3. | <b>Stakeholders responses – key factors of success in the governments' strategies to promote broadband.....</b>                 | <b>6</b>  |
| 4. | <b>Stakeholders responses – obstacles to broadband promotion.....</b>   | <b>9</b>  |
| 5. | <b>Stakeholders responses – key factors of success in the NRAs' strategies to promote broadband.....</b>                        | <b>13</b> |
| 6. | <b>Stakeholders responses – key factors of success in the operators' strategies to promote broadband.....</b>                   | <b>19</b> |
| 7. | <b>Stakeholders responses – key factors of success in the public-private partnerships' strategies to promote broadband.....</b> | <b>23</b> |
| 8. | <b>Stakeholders responses – BEREC initiatives to promote broadband... </b>  | <b>25</b> |
| 9. | <b>Stakeholders responses – potential demand side measures to promote broadband .....</b>                                       | <b>28</b> |

## 1. Introduction

The BEREC published for consultation, on the 16<sup>th</sup> December 2011, a draft report<sup>1</sup> on broadband promotion. The report aimed to draw on the experiences of the BEREC Member National Regulatory Authorities (NRAs) in order to offer a contribution to the ongoing policy debate at EU level on broadband promotion public and regulatory policies and to provide advice to public policy makers and NRAs regarding broadband promotion measures.

This was done by looking at identified supply-side and demand-side obstacles and by analyzing governments', operators', NRAs' and public-private partnerships' strategies to promote broadband. Publicly available information and relevant academic literature findings on broadband were also taken into account, in particular the study on "broadband diffusion: drivers and policies"<sup>2</sup> that the Independent Regulators Group (IRG) commissioned in 2011 to the Florence School of Regulation, Communications and Media (FSR).

The outcome translates mostly into a set of demand-side broadband measures addressing issues such as broadband adoption high costs, perceived low level of consumer safeguards in contractual relationships, consumer confidence, choice between service providers, attractiveness of broadband to end-users, low digital literacy rates and disability.

Sixteen contributions were received by BEREC in response to the public consultation, which ended on the 23<sup>rd</sup> of January 2012, from the following organizations:

Consumer organizations:

- BEUC, the European Consumers' Organization;
- The Communications Consumer Panel (henceforth "CCP").<sup>3</sup>

Industry organisations:

- Bundesverband Breitbandkommunikation e.v.(henceforth "BREKO")<sup>4</sup>;

---

<sup>1</sup> [http://erg.ec.europa.eu/doc/berec/bor11\\_70\\_broadbandpromo.pdf](http://erg.ec.europa.eu/doc/berec/bor11_70_broadbandpromo.pdf).

<sup>2</sup>

[http://www.irg.eu/streaming/CN%20\(11\)%2081\\_FSR\\_Study\\_on\\_BB\\_Promotion\\_FINAL.pdf?contentId=547201&fileId=ATTACHED\\_FILE](http://www.irg.eu/streaming/CN%20(11)%2081_FSR_Study_on_BB_Promotion_FINAL.pdf?contentId=547201&fileId=ATTACHED_FILE).

<sup>3</sup> The CCP is an independent group of experts established under the Communications Act 2003. Its role is to provide advice to the UK's National Regulatory Authority (Ofcom) to ensure that the interests of consumers, including small businesses, are central to regulatory decisions. The Communications Consumer Panel did not reply directly to any specific question of the public consultation, offering only generic considerations.

- Cable Europe<sup>5</sup>;
- Colegio Oficial Ingenieros de Telecomunicación - from Spain (henceforth “COIT”)<sup>6</sup>;
- ECTA, the European Competitive Telecommunications Association;
- ETNO, the European Telecommunications Network Operators’ Association;
- FTTH Council Europe<sup>7</sup>;
- The Voice on Net Coalition Europe (henceforth “VON Europe”)<sup>8</sup>.

Electronic communications operators:

- Deutsche Telekom AG (henceforth “DTAG”);
- Telecom Italia;
- Telefónica;
- Telekom Austria Group (henceforth “TAG”);
- Virgin Media<sup>9</sup>;
- Vodafone<sup>10</sup>;
- WIND Telecomunicazioni SpA (henceforth “WIND”).

Stakeholders were invited to respond to six questions, which covered different aspects of the draft BEREC broadband promotion report, essentially related to the supply-side and demand-side obstacles to broadband promotion and with the strategies to promote broadband pursued by the governments, NRAs, operators and public-private partnerships.

This document summarizes the responses received and presents the BEREC’s position with regard to suggestions and proposals mentioned in those responses, whenever relevant. The full texts of the responses are published separately.

<sup>4</sup> BREKO is an association which represents the interests of the majority of Deutsche Telekom AG landline competitors in Germany.

<sup>5</sup> Cable Europe is a trade association that groups broadband cable TV operators and their national trade associations throughout Europe. It did not reply directly to any specific question of the public consultation, offering only concise general comments, strongly supporting the draft broadband promotion report and BEREC’s measured approach.

<sup>6</sup> The COIT is a public corporation which represents the professional interests of telecommunications engineers in Spain.

<sup>7</sup> The FTTH Council Europe is an industry organisation whose mission is to accelerate the availability of fibre-based, ultra-high-speed access networks for the benefit of consumers and businesses.

<sup>8</sup> VON Europe represents the interests of leading Internet communications and technology companies. It replied only to questions 2, 5 and 6 of the public consultation.

<sup>9</sup> Virgin Media did not reply directly to any specific question of the public consultation, offering only general comments. Without prejudice, in this report BEREC addresses some of Virgin Media’s input with regard to specific questions that could be considered to relate closely to the issues envisaged in the concrete questions of the public consultation.

<sup>10</sup> Idem.

In general, the respondents welcomed the draft BEREC broadband promotion report, understood that it highlighted very important issues and strongly supported the demand-side broadband measures identified by the BEREC and the progress of its activities regarding the supply-side.

## **2. General comments and comments on issues outside of the questions**

### **2.1 The stakeholders' responses**

It was suggested, by Telefónica, Virgin Media and DTAG that: (a) demand-side policies should be prioritised over supply-side policies; (b) governments should focus on full e-inclusion and help people understand how the Internet can improve their lives; (c) regulatory certainty should be promoted; and (d) broadband adoption is critically dependent on its perceived need, willingness to pay and affordability. ECTA, considered that the focus should be put on the supply-side policies, while ETNO considered that both should go hand in hand in order to optimize their impact.

The sequencing of public policies was not consensual in the received responses, with some stakeholders arguing that it was not clear that the focus in supply-side policies in a first stage followed by a focus in demand-side policies in a second stage would be fully effective and that this issue should deserve further analysis.

It was further mentioned, by Telefónica, WIND and DTAG, that Universal Service should not be considered the right tool to achieve broadband targets, whereas BEUC was the only respondent to have explicitly supported the inclusion of broadband in the Universal Service obligations.

In addition, it was also stressed, by a number of respondents, that innovation should continue to be at the core of the European Union (EU) electronic communications operators' strategies and of the EU and national public policies.

VON Europe mentioned that BEREC should follow a proactive and *ex-ante* approach to prevent the degradation of service and the hindering or slowing down of traffic over networks, ensuring a transparent and fair deal to consumers, in line with the established in the article 22 of the Citizens' Rights Directive (2009/136/EC) amending the Universal Service Directive.

## 2.2. The BEREC's positions

The BEREC considers that supply-side and demand-side policies need careful articulation in view of different stages of broadband development and of concrete national conditions. As suggested in the previously mentioned FSR Study, the available empirical evidence seems to suggest that supply-side measures are more effective at an initial stage of broadband development and that demand-side measures are more effective at a second stage. Without prejudice, this conclusion arises from past broadband diffusion patterns and it is not entirely possible to foresee to what extent those patterns remain valid in the future. In this context, the BEREC highlights the importance of keeping track of the developments arising from independent scientific studies and from empirical evidence.

With regard to the appropriateness of Universal Service to achieve broadband targets, the BEREC understands that - in the light of the current European regulatory framework and of the recent Communication from the Commission of 23.11.2011<sup>11</sup> – this is an issue to be decided by the Member-States in view of specific national circumstances. Notwithstanding, the BEREC will continue to cooperate with the EC in order to establish appropriate guidelines related with the minimisation of eventual market distortions arising from the implementation of Universal Service measures.

Regarding innovation, the BEREC shares the view that it should continue at the core of EU electronic communications operators' strategies and public policies and strongly encourages all the measures that lead to making available innovative electronic communications services in the European markets.

Finally, the BEREC understands that NRAs should, in the light of their specific competencies, adopt all necessary actions to promote a fair and transparent deal to consumers, preventing quality of service degradation and the undue hindering or slowing down of traffic over networks. In this context, the BEREC is working closely with the EC in order to deliver proper advice on the issue of net neutrality regarding important decisions to be taken by the EC in the current year.

---

<sup>11</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Universal Service in e-communications: report on the outcome of the public consultation and the third periodic review of the scope in accordance with Article 15 of Directive 2002/22/EC (COM(2011) 795 final).

### 3. Key factors of success in the governments' strategies to promote broadband

**Question 1** (section 5): What elements do you consider essential for the successful definition and implementation of governments' strategies to promote broadband:

- a) Overall at the national level? What role, if any, could NRAs play to enhance the effectiveness of those strategies?
- b) Specifically at rural and peripheral areas? What role, if any, could NRAs play to enhance the effectiveness of those strategies?

#### 3.1 The stakeholders' responses

When considering strategies at a national level, the FTTH Council Europe and ECTA confirmed that a successful programme would contain many of the measures described in the BEREC' broadband promotion report.

BEUC believes that NRAs and governments should put more emphasis on the Next Generation Access (NGA) networks roll-out at the national level as its success would be expected to significantly enhance consumer choice.

The CCP underscored that governments should proactively define a broadband universalisation commitment in a way that ensures quality, choice of service providers, reliability of service and that is consistent with the consumers' prospective needs. In addition, the government should help consumers to optimize their broadband connections (in this respect, ETNO added that governments should close the gap between what citizens are currently willing to pay for broadband and what is necessary to provide high speed broadband to a large portion of the population, recurring for instance to direct subsidies to low income citizens - this is also sustained by ECTA - and tax discounts). Finally, according to the CCP governments should deliver the universalisation commitment using NGA broadband where practicable.

COIT and DTAG expressed that governments and municipalities should share the investments with the private sector (namely in joint-ventures). On the other hand, from TAG's point of view, private investment should come first, public funds should only be used if there will be no private investment and, in order to facilitate and promote private investments, regulatory intervention should be as light as possible.

Telefónica and ETNO observed that the NRA's task of analysing significant market power (SMP) is an important tool for achieving broadband promotion strategies. In addition, Telefonica and ECTA added that the NRA's role of applying obligations in markets 4 and 5 is key for a successful implementation of the Digital Broadband targets. Those entities also underscored that the effects of applying measures from both subsidising and regulatory frameworks should be clarified.

BREKO mentioned that, at the national level, decreasing the rate for access to the local loop could incentivise the development of NGA networks.

In addition, the CCP, DTAG, the FTTH Council, Vodafone and Telecom Italia referred that it would be important to recognize the value of a technology mix approach in providing high-speed broadband to all Europeans. The CCP, ECTA, Telecom Italia and Vodafone emphasized the role of mobile broadband (namely LTE) in rural areas. Moreover, ECTA considered that an early and pro-competitive allocation of digital dividend spectrum could help to ensure in the short term universal availability of low speed broadband, especially in rural areas.

All respondents seem to agree that, as mentioned in the BEREC broadband promotion report, disseminating services related with e-government, e-learning and e-health, would increase broadband take-up. Telefónica mentioned that this would be particularly visible in rural areas.

When considering specifically rural and peripheral areas, Telefónica understood that wherever Universal Service obligations are imposed, special care should be taken by NRAs to guarantee resource optimisation. Furthermore, DTAG, ETNO, Telecom Italia and Telefónica said NRAs should take into account geographic segmentation in relation to regulatory obligations, to foster investments in rural areas. The FTTH Council Europe argued that when rural communities become aware of the benefits of broadband and demand is stimulated, difficulties such as density and cost profiles would be quickly overcome.

In low density population rural areas, COIT was of the view that reverse taxation policies could incentivise operators to invest. Moreover, according to COIT and DTAG, taking into account that Universal Service obligations are a safety net to prevent social exclusion, alternative means of financing broadband roll out in unprofitable areas could be obtained by Member States via general taxation.

### 3.2 The BEREC's positions

With regard to the governments' role concerning broadband universalisation commitments, the BEREC broadband promotion report emphasizes that a wide number of Member States already adopted national strategies to promote broadband and to close the gap between different categories of consumers, most of the objectives of these strategies being related to connection and coverage targets. The BEREC understands that it is also important, without prejudice to the important role that NGA performs in those strategies, that the principle of technological neutrality is given due consideration, in order to prevent market distortions and promote fair competition.

The BEREC also understands that there is a clear role for both private and public investments to incentivise broadband promotion. In order to promote an efficient use of public money, to avoid a "crowding out" effect of private investments and to prevent market distortions, public funds are expected to focus in geographic areas where investment in normal market conditions is not feasible and or in demand-side activities that could enhance broadband adoption and usage.

The view that the market analysis process (including a careful assessment of the geographic segmentation appropriateness in the light of concrete market conditions) is key for a successful implementation of broadband services, regardless of their supporting technology and is important to keep an articulated and holistic approach between the European regulatory framework and the rules governing subsidies applicable to broadband networks and services, is shared by the BEREC.

In addition, the BEREC is in favour of resource optimisation by all entities involved in broadband promotion and of adequately informing consumers on the benefits of broadband, as already highlighted in the broadband promotion report.

The BEREC agrees that various methods of financing could be considered for the advance of broadband, such as European structural funds, national public funds and contributions from market players or combinations of these. The option of alternative financing solutions, for instance public-private partnerships, should also be considered. It is deemed important that the financed projects are compatible with the frame of state aid rules (when appropriate) and also with the national broadband strategies.

#### 4. Obstacles to broadband promotion

**Question 2** (sections 6 and 9):

Among the main supply-side obstacles to broadband promotion, NRAs have perceived the low expected return on investment, the lack of access to financial resources and the access to spectrum. In addition, NRAs have considered, among the main demand side obstacles to broadband promotion, aspects such as the citizens' lack of perceived need to adopt broadband, the high price of broadband, the fact that NGA is still in an initial stage of the product life cycle and, mostly in rural areas, the lack of choice between operators.

2.1. Do you agree with this perception? If not, what of the above mentioned factors would you not consider as obstacles? And what other factors would you add to the list of main obstacles to broadband promotion? Please reply with specific regard to:

- a) Supply side obstacles;
- b) Demand side obstacles.

##### 4.1 The stakeholders' responses

In general, the respondents agreed with the identification of supply-side and demand-side obstacles to broadband promotion included in the BEREC broadband promotion report, without prejudice to punctual differences in the perception of those obstacles.

###### 4.1.1 The stakeholders' responses with regard to supply-side obstacles

BEUC, ECTA, Cable Europe and Virgin Media signalled the importance of an adequate level of competition and of proportionate and cost-oriented access to the network. In particular, Virgin Media stressed that promotion of market-driven competition should prevail as NRAs' main objective. In this regard, BEUC and ECTA mentioned that the application of different cost methodologies across Europe has implied non-cost-oriented wholesale access charges and consequently high retail prices, acting as a demand-side obstacle for broadband promotion. Furthermore, ECTA underlined that an effective enforcement of the European regulatory framework pro-competitive provisions, particularly in markets for fixed broadband, would strongly contribute to remove also the other demand-side obstacles identified by the BEREC.

With regard to the supply-side obstacles, BREKO, DTAG, ETNO, the FTTH Council Europe, TAG, Telecom Italia and Telefónica stressed that regulatory policies should take into account investment profitability (namely due to the importance of the low return on investment as an obstacle to NGN investment). In this framework, the FTTH Council Europe and Vodafone expressed that deployment costs could be lowered by: (a) sharing and mapping existing infrastructures; (b) continuing the work on in-building wiring solutions leading to a consistent EU approach and (c) ensuring that access is granted between the network connector and the building itself (the drop cable). ECTA, ETNO, TAG and WIND did not consider access to financial resources a major obstacle in itself, given the profitability of the investment. In particular, ECTA distinguished between the access to financial resources by alternative fixed network operators and by the historic operators.

ECTA pointed out that the supply-side obstacles indicated by the BEREC have been often overstated, stressing that NRAs could lower the risk of NGA roll-out by: (a) minimising the risk of inefficient duplication of access networks (i.e. giving support to open networks and co-investment in shared networks) and (b) fostering a rapid migration from copper to fibre once open fibre networks are installed.

Finally, ETNO, ECTA, Telefónica, TAG and Telecom Italia agreed on the relevance of access to spectrum for (mobile) broadband promotion. In particular, Telefónica mentioned that the financial burden of operators in securing spectrum should be alleviated (albeit the adoption of the Spectrum Decision on the Radio Spectrum Policy Programme in 2011 has to be considered a positive step).

Besides economic and technological elements, some respondents perceived that in a few cases public actions could result as an obstacle to broadband promotion. In this framework, DTAG, TAG and Telefónica argued that the divergent time-horizon between the long-term planning required by infrastructure investment and an alleged short-term regulatory approach would create regulatory inconsistencies and uncertainty, which could result in a major obstacle for broadband promotion. DTAG, ETNO, TAG and Telefónica also expressed their opinion against an alleged stringent price reducing regulatory approach, which – according to those stakeholders – would not allow price flexibility and differentiation, hence reducing revenue streams and the possibility to profitably match the evolution of business models. Finally, ETNO, COIT and TAG alleged that the national and local administrative environment could constrain broadband network roll-outs. Specifically, COIT called for a homogenisation and reduction of administrative procedures and an explicit consideration of public electronic communications networks roll-out in the urban planning instruments.

#### 4.1.2 The stakeholders' responses with regard to demand-side obstacles

As for the demand-side measures, most of respondents explicitly agreed on the importance of improving the consumers' perceived value of broadband adoption. DTAG and Telecom Italia indicated the lack of experience of added value NGA-based service (such as public and private cloud, e-learning, e-government and e-health) as a possible reason. Moreover, Telecom Italia underlined the necessity to improve network security and liberalise on-line transactions, in order to create a more favourable environment to the development of e-commerce. In this regard, both ETNO and TAG stated not to have completely perceived the position of NGA early in its product life cycle as an obstacle. ECTA stressed instead the relevance of a NGA competition enhancing regulation, allowing the development of new services.

Most of the respondents saw the necessity of a public intervention in order to tackle the consumers' Internet illiteracy and lack of confidence, as well as the small perceived value of broadband services. In particular, Vodafone underscored that the results of a study commissioned by that company and the Digital Scoreboard statistics corroborate that, as mentioned in the BEREC broadband promotion report, the lack of perceived need of broadband (which could be addressed by the value added by accessing broadband from smartphones and tablets) could be considered a major obstacle. In addition, BEUC, COIT, TAG, Telecom Italia, Telefónica and Vodafone strongly focused on the necessity to develop digital and media literacy skills and competences. Telecom Italia further stressed an aged society as a major demand-side obstacle.

In general, Telefonica and TAG agreed with the general approach to public intervention issues presented in the BEREC broadband promotion report. For both these entities, the cost of access for end-users should be reduced by a combination of public policy measures (such as state aids, tax incentives and direct end-users subsidies). Telefonica called, specifically, for mechanisms which could directly subsidise low-income users and users living in remote areas (i.e. "telecommunication vouchers", which could be used by end-users to partially pay their chosen operator bills in urban areas or to pay the Universal Service provider in rural and high-cost areas). In this regard, ECTA highlighted that direct demand-side public intervention would be justified only when all competition-enhancing measures have been taken and still affordability remains a relevant issue. In this case, according to ECTA, the least distortive approach would be to give direct subsidies to low-income consumers.

Regarding the broadband price - in opposition to BEUC and partially to ECTA - DTAG, ETNO, TAG, Telecom Italia, Telefónica and Vodafone<sup>12</sup> did not consider the broadband price to be too high and consequently an obstacle. According to DTAG, ETNO, TAG and Telefónica, the lack of consumers' willingness to pay would not be based on high prices but on their incomplete perception of broadband adoption value. Moreover, TAG and Telefónica highlighted the relevance of the equipment and hardware price and penetration level.

DTAG, ETNO and Telecom Italia considered that there is no lack of choice between operators for consumers in rural areas because, when only a broadband network exists, access obligations are imposed. Moreover, DTAG, Telefonica and ETNO stressed the roll-out of mobile broadband networks in many EU Member States' rural areas and that effective competition between fixed and mobile standard broadband products should be recognized. Finally, BREKO underlined local/regional broadband service providers and their ability to match local consumers' preferences.

On the other hand, ECTA agreed with the finding of BEREC broadband promotion report according to which the lack of choice between service providers could represent a significant demand-side barrier. In this regard, ECTA indicated the need to apply remedies that aim at ensuring the availability of: (a) cost-based wholesale broadband access which could allow full capability for triple play services and (b) of cost-based dark fibre backhaul to reach more remote exchanges.

#### 4.2 The BEREC's positions

The BEREC is satisfied to see that, in general, the respondents recognized that the broadband promotion report offers an accurate identification of both supply-side and demand-side obstacles to broadband promotion.

Regarding the supply-side obstacles, the BEREC is also of the view that regulatory policies should consider the investment profitability and the costs of securing spectrum. These concerns are already evident in a number of the BEREC documents which address supply-side issues, including namely the advantages of sharing and mapping infrastructures.

---

<sup>12</sup> Vodafone mentioned the results of a study (covering Finland, Poland, Portugal, Romania and the UK) commissioned by that operator to an external consultant, which suggested that mobile broadband prices should not be considered an obstacle.

In the light of the available evidence, the BEREC remains of the view that there is still a room to expect further progress in terms of delivering value and ensuring affordable prices to the EU broadband end-users, and in particular to low-income consumers.

With regard to specific affordability measures that could be implemented within the framework of Universal Service obligations, the BEREC expects to analyse this issue in the deliverables of its 2012 work programme.

Concerning the lack of choice between operators in rural areas, the BEREC is of the view that markets and remedies definitions should aim to place competitors in the same level-playing field, fostering competition and consumers' choice possibility. The NGA recommendation and its implementation by NRAs are pursuing those objectives and the one of providing adequate investment incentives.

The BEREC considers extremely important the development of mobile broadband networks and their contribution to competition, innovation and consumers' choice. In this regard, the BEREC is fully cooperating with the RSPG in order to implement a common European approach to spectrum policy leading to a higher availability and the consideration of the economic and social value of spectrum in its assignment process.

## **5. Key factors of success in the NRAs' strategies to promote broadband**

### **Question 2 (sections 6 and 9):**

2.2 Taking into account namely your assessment of the existing and potential obstacles to broadband adoption, what elements do you consider essential for the successful definition and implementation of NRAs' strategies, in particular from a demand-side viewpoint, to promote broadband.

When replying to question 2.2 above, please mention also what core strategic differences, if any, should be weighted regarding the consideration of those elements in rural/peripheral areas and in urban areas.

### **5.1 The stakeholders' responses**

BEUC, BREKO, ECTA and the FTTH Council Europe, defended that NRAs play a critical role in stimulating competition and ensuring access for service providers by regulating

bottlenecks at appropriate prices. BEUC specifically encouraged NRAs to implement the NGA recommendation. ECTA specifically stressed the need for NRAs to look at solutions like open networks and co-investment that at the same time stimulate rapid migration to these NGA networks. For Telecom Italia, NRAs and governments should work towards reducing uncertainty concerning NGA investments and decreasing the costs of capital for the operator.

Cable Europe and Virgin Media assume that governments, NRAs and other authorities could and should have a role in demand-side measures. Yet, both these entities understood that NRAs have a comprehensive and effective set of regulatory tools that should first have the opportunity to take effect. Lastly, Cable Europe highlighted that regulatory certainty is an incentive for investments.

ETNO stated that NRAs should work towards achieving symmetric access regulation in order to re-establish a level playing field and that NRAs should examine if access remedies are proportionate looking at the concrete wholesale demand for products.

TAG noted that regulatory policies should not be too stringent and therefore fibre networks should not be regulated from the beginning. It also considered that simplification and acceleration of procedures is needed with regard to the construction and roll-out of networks and (in this area with the explicit agreement of Telecom Italia) with respect to spectrum allocation.

DTAG was of the opinion that the current EC proposal on costing methodologies for copper and NGA access would negatively impact supply and demand for NGA. Lower wholesale prices for copper would result in lower revenues and therefore lead to lower investment. On the demand-side, the lower wholesale copper prices lead to lower retail copper prices which in turn make retail copper services more attractive to consumers in comparison to the more expensive NGA services, delaying the migration of copper to NGA.

According to WIND, NRAs could apply a strategy to increase demand by introducing one average price for copper and fibre access on a nationwide basis. This can be done by: (a) assessing the cost of access to both infrastructures, (b) evaluating the development of the infrastructures in terms of number of lines and (c) keeping count of the real penetration of the fibre infrastructure. The higher the penetration of fibre becomes, the higher the single national average access price becomes. This would be an incentive for SMP operators to speed up the roll out of fibre networks.

The FTTH Council furthermore believed that NRAs need to be the “co-ordinator in chief” in the area of broadband, taking in consideration their breadth of experience and responsibilities and without prejudice to resource constraints. Furthermore, in the opinion of the FTTH Council, the most important demand-side measures should be related with the awareness of the benefits of access, the affordability and the ability to make use of the products.

BEUC was also of the opinion that it is important to take measures on the affordability of the broadband services as well as the equipment. In addition BEUC stated that specific measures are needed to promote digital literacy. Lastly, BEUC was of the opinion that demand-side measures should reflect the specific needs of the specific groups of consumers.

With regard to the application of state aid measures, Telefónica proposed to: (a) reinforce already existing programs that use structural funds and state aid and (b) to design and implement new forms of public-private collaboration applying state aid in those zones which the market does not spontaneously cover. Cable Europe and Virgin Media said that state aid measures should be a last resort, since if mis-targeted could distort the sector and discourage private investment. ETNO acknowledged that generally there is less competition in rural areas. This does not mean that governments and NRAs are in the position to fund a second operator in these remote areas as these resources may be needed elsewhere. ECTA, on the other hand, assumes that NRAs should support national and regional authorities in the allocation of state aid, specifically in rural areas, besides promoting the availability of wholesale broadband access and dark fibre backhaul at cost-based prices in those rural areas.

DTAG stated that, in addition to access regulation, some demand-side measures should be taken into consideration, namely: (a) efforts raising consumer awareness of benefits and costs, (b) aiding consumers and (c) supporting e-service and innovation.

Telecom Italia is of the view that government intervention with regard to demand-side measures could focus on fostering demand take-up. To achieve this, the government could offer more services online and create more content for these services. This could be complemented by digital literacy initiatives targeting specific groups like senior citizens. Telecom Italia does not share the report's view that the price of broadband or the lack of competition in rural areas are obstacles, because (regulated) access and competition in rural areas would push down retail prices.

VON Europe stated that NRAs should set *ex-ante* a minimum quality of service requirements on operators in order to ensure that consumers get a good and fair service. In addition, NRAs should proactively make sure operators offer total access to the internet without compromising the use of specific applications.

BREKO noted that allowing the deduction of the costs of broadband access from the income tax seems a reasonable measure to promote broadband in a country.

ECTA pointed out the various supply-side measures that NRAs can take to promote broadband, but also advocates some demand-side measures: (a) supporting transparency measures or making the switching process easier and (b) advising national authorities on the use of demand-side measures like direct subsidies to consumers.

Telefónica further suggested that “telecommunications vouchers” are adopted transparently, so that the user can utilise those to partially pay their chosen operator bills in urban areas or to pay the single universal provider in rural and high-cost areas. In this context, Telefónica proposed the BEREC to analyse and evaluate best practices in this regard.

## 5.2 The BEREC’s positions

The BEREC agrees that one of the NRAs’ most important role is to increase competition by making access possible for entrants and that this access should be appropriately priced, reflecting its costs. Access regulation will lead to more competition and therefore eventually further stimulates investments in (NGA) networks. In addition specific regulation of access on NGA networks eventually leads to competitive pricing of services on these networks which stimulate the take-up of these services and the overall migration to fibre. Usually asymmetric access regulation is applied for access regulation because in most cases there is only one SMP operator present in the market.

For this purpose also, the BEREC encourages implementation of the NGA recommendation, while noting that these implementations could in practice greatly vary across different countries given the great differences between those countries. Implementing this recommendation in a national context should increase regulatory certainty.

In contrast to TAG position, the BEREC does not see an automatic necessity to withhold from regulating fibre networks in their early years of deployment, namely with regard to operators with SMP.

With regard to the regulatory policies on spectrum the BEREC is also of the view that regulatory policies should consider the investment profitability and the costs of securing spectrum. These concerns are already evident in a number of the BEREC documents which address supply-side issues, including namely the advantages of sharing and mapping infrastructures.

The BEREC notes also that there are disadvantages to the strategy that WIND proposes to increase demand. A single average access price for copper and fibre alike would mean that the average access price would rise when fibre is rolled out and is successfully adopted by consumers. This in turn leads to the fact that in copper areas the access to copper becomes overpriced while the access to fibre becomes under-priced. This could lead to margin squeeze for entrants in areas with solely a copper network.

Artificially changing the price differential between the copper and fibre access prices, like DTAG and WIND seem to propose, could furthermore have various unpredictable effects on the market. The price differential should therefore not be ‘manipulated’ downwards or upwards as risks distorting market developments rather than setting the efficient incentives to invest. Above this, the BEREC believes that the Digital Agenda target of 100 Mbps broadband in 2020 could be reached in different ways using fibre, cable, copper<sup>13</sup> or even mobile networks. Therefore the migration from copper to fibre may not be necessary at all for reaching this target.

The BEREC is satisfied to see that a number of the demand-side obstacles and measures that are brought forward by the different parties are in line with those identified in the BEREC broadband promotion report. Notwithstanding, a lot of these measures are more likely to be carried out by governments because NRAs do not have the role or instruments to carry out such projects.

In particular, as for the FTT Council Europe suggestion regarding the leading role of NRAs, notes that it is not the primary role of NRAs to co-ordinate NGN investment plans on a national level. It is up to each individual NRA to decide, according to their legally established competencies, whether to use its unique knowledge of the sector to provide advice on such plans.

---

<sup>13</sup> For example KPN is hoping to achieve an average of 150 Mbps with those technologies. With bonding alone, it expects to achieve an average of 40 Mbps. VDSL2 technology today offers speeds of 30 Mbps over copper loops of around 800 m – 900 m. VDSL2 vectoring is said to deliver 100 Mbps over a copper loop of 400 m.

With regard to state aids and public funds, the BEREC agrees that reinforcing or starting up public funding may be appropriate in a select number of specific cases. In general and whenever possible, NGA investment should be carried out primarily by private entities and public policies should primarily incentivise private investments in the provision broadband networks and services. Direct public funding, should only be applied after careful consideration of the costs and benefits for society as a whole with regard to the specific cases. The BEREC agrees that it is important to be aware that the market is not unnecessarily distorted. An important tool for stimulating investment and broadband take-up is access regulation.

The BEREC is of the opinion that, without prejudice to NRAs' regulatory intervention (and to their eventual role advising public entities on demand-side and supply-side measures), national governments and public entities have an important role to play in implementing measures to promote broadband, depending on the specific variables in that country. This also applies to the minimum quality of service and the openness of internet, as VON Europe suggested or the income tax deduction BREKO suggests. Some Member States have already taken legislative actions to guarantee open internet without restrictions for certain applications. Further potential government measures have already been discussed in section 3 of this consultation report.

The BEREC further notes that, while Telecom Italia states that competition decreases retail prices, even cost based retail prices can be perceived to high for certain groups of consumers for example because of the consumers lack of perceived need to adopt broadband or because of affordability issues.

As for Telefónica's suggestion to analyse best practices for broadband vouchers, the BEREC already recognized in the broadband promotion report that vouchers may in some cases be appropriate when broadband adoption costs are high. This is something that could be assessed in more detail in BEREC's further activities.

## 6. Key factors of success in the operators' strategies to promote broadband

**Question 3** (section 7): What elements do you consider essential for the successful definition and implementation of operators' strategies to promote broadband with regard to:

- a) Fixed broadband?
- b) Mobile Broadband?
- c) NGA Broadband?

When replying, please mention what role, if any, could NRAs play to enhance the effectiveness of those strategies.

### 6.1 The stakeholders' responses

The replies to the public consultation from the stakeholders under this section mainly focused on the importance of creating a competitive climate for operators, regulatory certainty, assuring consumers value for their money by assuring both quality of service and valuable content and making spectrum available for 3G/4G deployment.

Wind argued that broadband services can be improved if wholesale regulated offers pertaining to the provision of broadband services will be ameliorated in their effectiveness through improved performance and pricing. It further pointed out NRAs role in pursuing such target is essential as well as a timely and accurate monitoring of non-discrimination on wholesale services provision. Recent EC consultation on non-discrimination should provide NRA with relevant directions and BEREC definition of implementation guidelines would empower NRA with appropriate tools.

Cable Europe stated that market forces should prevail as they have delivered the best outcomes in terms of broadband diffusion, as it is the case of cable operators. Since sustained competition in broadband markets contributes to broadband diffusion and to lower prices, it should be considered as a major broadband promotion factor.

DTAG pointed out that a key issue is the call for an adjustment of regulation to quickly evolving market conditions and technological developments. In particular, a more flexible and investment friendly regulatory practice is needed.

ETNO said that NRAs may have a role in setting the necessary regulatory conditions to allow for NGN networks in the fixed broadband market to develop as quickly as possible. Networks have to be financed through revenues and include a reasonable return on investment and

this can according to ETNO only be achieved if NRAs concentrate on fixing the imbalances in the market rather than steering market developments. Regarding access products, NRAs play a crucial role in reducing the amount of resources regulated operators have to spend to comply with access regulation. ECTA is of the view that NRAs should thus carefully analyse the actual demand for specific wholesale access products in order to target only the necessary market and product segments and points out that all market segments have shown strong competitive forces in the past and consumers and operators should thus be allowed to interact and engage in various contractual relationships under the supervision, not active intervention, of regulatory authorities.

ECTA expressed that it is essential that the inputs that competitors' rely on to access customers allow full flexibility over the capabilities of the network and do not restrict the ability to innovate. For standard broadband, cost-based unbundled elements such as copper LLU are preferred in this respect.

Virgin Media and Telecom Italia elaborated on the importance of regulatory certainty for broadband promotion, investors need to have certainty around, and long term confidence in, the prevailing policy and regulatory framework.

TAG brought forward the view that operators are interested in increasing the usage of existing services and developing new and innovative services. This, however, also necessitates continuing investments and therefore an adoption of existing and/or the development of new business models in order to provide the necessary quality of service. Furthermore, TAG stressed that operators must have the highest degree of freedom possible to develop their offers and should be as little constricted as possible which will enable operators to meet the expectations of potential customers and therefore promote broadband to the highest degree possible.

BEUC pointed out that quality of service, as well as consumer experience and trust are important in order to motivate existing users to motivate future users. Therefore, consumers should be provided in all cases (fixed, mobile and NGA broadband) with high quality services. Furthermore, equipment, services and products should be designed in such way so that they are user friendly and easy to use.

Telecom Italia stressed the importance of transparency and ability for users to measure network availability and accessibility for voice services as well as measurement of transmission speed and packet loss for data services.

ETNO pointed out that the strategies to promote broadband should acknowledge and allow for operators' ability to provide advanced and managed services that may increase the customers' perception of the real added value that a broadband connection can bring. This is specifically the case for fixed broadband, whereas for mobile broadband ETNO is of the view that a wide range of new and innovative services and applications are already evident and has contributed to the success of devices such as smartphones and tablets. Telecom Italia provided some examples of activities aimed at stimulating demand for broadband services such as "internet literacy" actions towards new user categories and increased flexibility and tailored offers for the business market.

Concerning "traditional" broadband, the FTTH Council Europe drew attention to the importance of enabling spectrum, particularly in the lower frequencies, for the development of mobile broadband services. Also Vodafone stressed the importance of enabling spectrum for LTE network deployment. Telefónica considered that the price, quality and bundling of services are key selling features on the expansion of its fixed and mobile broadband strategy. Along the same lines VON argued that to preserve and promote competition, national authorities should act swiftly to make additional spectrum available for Internet use. ECTA stressed that mobile broadband is a still nascent market and that take-up of mobile broadband is likely to be accelerated in the short term through increased competition in mobile services. It is important in this context that providers have the technological capability to compete on quality of service. Measures to address historic spectrum imbalances and ensure that the allocation of the digital dividend strengthens competition rather than concentrates the market will be important in providing this competitive dynamic.

As for NGA broadband, Telefónica argued that the need for content and applications that demand high bandwidth is critical for the take-up by consumers and the FTTH Council Europe drew attention to the importance of sharing non-replicable infrastructures to the deployment of NGA. ETNO stressed that operators generally have to work towards an increase in the availability of services that create large amounts of traffic, thereby also creating an explicit further need for both fixed and mobile high speed networks. Vodafone proposed that a relevant demand-side measure would be to move content from traditional broadcasting to on-line services. Also VON Europe presented the viewpoint that the deciding factor in securing widespread adoption of NGN/NGA will come from the availability of Internet content, applications and services that are attractive to users. Content-driven demand from consumers provides the return on investment for telecom operators, hence the basis for further investment in Internet-supporting infrastructure.

Also ECTA is of the view that content may play a key role for ensuring competition by stating that the development of content offers may also become a key differentiator. In principle such “managed services”, which are likely to be offered alongside and not instead of traditional Internet services, should not be prevented through overly restrictive “net neutrality” requirements. However, deals with content providers, including premium sports rights holders or key website owners, could also give rise to competitive problems in the provision of broadband offers, which should be addressed.

Vodafone further made the point that thanks to prepaid services not only voice but also mobile broadband may become accessible for households with low income, the pricing plan allows such households to control its expenditure on telecommunications. As Vodafone also described Figure 9 in the BEREC Broadband Promotion report shows that the opinion of the NRAs is that the most important demand-side obstacle to broadband take up is that citizens do not perceive the need to adopt broadband. This obstacle is more important than the cost for the services.

ECTA acknowledged that discounts can be used to boost broadband take-up. ECTA finds it however important to ensure that when discounts are offered by an SMP operator, that they do not have anti-competitive effect. Margin squeeze tests should be carried out for discounted offers.

BREKO was supportive of the opinion that attractive bundled offers seem to be a promising approach to keep old and gain new customers. Triple-play products containing telephony, internet and TV, but also the bundling of fixed and mobile network services could lead to desired results.

VON Europe considered that the fast-moving vertical and horizontal integrations and the commercial dynamics exemplified within the converging telecommunication and the Internet ecosystem by trends such as ‘bundling’ and the purchase of exclusive content rights, could result in harmful and discriminatory practices, with negative impacts on innovation, consumer choice, trade, etc. The concerns with bundling are also shared by ECTA.

BEUC agreed with the BEREC's assessment that special offers and promotional prices indeed may support broadband take-up. However, it stressed that it should be ensured and monitored by NRAs that consumers accepting these offers do receive accurate information and are not locked in the lengthy contract.

## 6.2 The BEREC's positions

As mentioned earlier, the BEREC understands the importance of an adequate spectrum policy and has developed a number of initiatives in that framework, namely in cooperation with the Radio Spectrum Policy Group.

The BEREC, recognises the importance of price, quality and bundling of services (without prejudice to concerns related with eventual anticompetitive impacts of bundling) as key factors for success in broadband markets and the relevance of making available content and applications in native languages. In particular, the latter is presented as a major recommendation for policy makers in the BEREC broadband promotion report.

## **7. Key factors of success in the public-private partnerships' strategies to promote broadband**

**Question 4** (section 8): What elements do you consider essential for the successful definition and implementation of public-private partnerships strategies to promote broadband? What role, if any, could NRAs play to enhance the effectiveness of those strategies?

### 7.1 The stakeholders' responses

In general terms public-private partnerships (PPPs) are seen as effective means of intervention to engage in infrastructure development and ultimately contribute to consumer welfare. Some contributors (ETNO, Telecom Italia) also included demand-side objectives within the scope of PPPs, such as the provision of e-services, financial incentives or vouchers.

Several contributors (Cable Europe, DTAG, ECTA, ETNO, Telecom Italia, TAG, Telefónica and Virgin Media,) conveyed that any form of public intervention foreseen regarding NGAs should be primarily carried out by private capital and must not hamper private investments in a specific area or region, considering that a perceived slow deployment or take up of NGA does not of itself constitute market failure and thus prescriptive intervention (Cable Europe and Virgin Media,) and that the application of state aid must be accompanied by comprehensive and transparent assessment of market conditions in the relevant areas.

BEUC stressed the importance of PPPs in rural and remote areas, targeting specific groups of people.

BREKO, ECTA, Telecom Italia, VON Europe and Wind stressed the importance of open access of infrastructures totally or partly publicly funded as well as the importance of proper diffusion of such projects at an early stage and the decision after carrying out a competitive process (TAG). As a complement to commercial roll-out, ECTA and Vodafone stressed the importance of avoiding network duplication and maximising demand and proposed co-investment strategies to limit risks.

The role of the NRAs in encouraging the creation of PPPs and ensure convenient regulatory environment (BEUC) and the importance of national framework schemes were also pointed out. DTAG, ETNO and TAG stressed the degree of freedom that should be left to develop the technology that best suits concurrent circumstances, while avoiding transferring SMPs operators at the national level similar market power at the regional level (ETNO).

More generally, the FTTH Council Europe defended that NRAs could act as a major co-ordinator of activities not only between operators but also by governmental agencies. In addition, PPPs need to: (a) properly identify economic and social targets; (b) effectively match the resources and competences of the different partners and (c) design a network in line with the area's geographical constraints and (d) define the expected demand and services required. Wind even proposed to consider the NRA as a certifier of the appropriate tender exploitation.

In the context of state aid procedures, ETNO included the possibility to carry out a fast-track process to prevent irreversible public intervention non-compliant with state aid rules.

Wind proposed to set a minimum percentage of the financing by 25% to measures and/or projects aimed at the development of certain electronic services (learning, health).

## 7.2 The BEREC's positions

The BEREC agrees that, in general and whenever possible, NGA investment should be carried out primarily by private entities and that public policies should incentivise private investments in the provision broadband networks and services.

The BEREC further agrees that for the successful definition of public-private partnerships strategies to promote broadband, it is important to consider factors such as those highlighted by the FTTH Council Europe.

## **8. Stakeholders responses – BEREC initiatives to promote broadband**

**Question 5** (section 10): In addition to the initiatives already taken by BEREC with regard to the promotion of broadband from a supply-side perspective, what other initiatives do you perceive it is important that BEREC develops in the future from that perspective?

### 8.1 The stakeholders' responses

On the general role of the BEREC and NRAs, most of the respondents stressed the importance of a clear coordination of the broadband promotion actions, both on the supply-side and on the demand-side. In particular, Cable Europe, Telefonica and Virgin Media considered the management of the interaction of demand-side and supply-side policies to be very important. FTTH and WIND stressed the relevance of an EU consistent and harmonised approach and the prominent role which each NRA should assume at national level as broadband policies coordinator. On the same line, ETNO and COIT supported an active role of NRAs towards local governments in order to enhance the compliance with obligations concerning rights of use under the Authorization Directive. Cable Europe, Virgin media, DTAG and ETNO focused on the needs of a forward-looking and time-consistent regulatory approach and the relevant role that the BEREC should assume in that context.

DTAG, ETNO TAG, Telecom Italia and Telefónica, argued that the BEREC needed to adopt an “investment friendly” approach in the enforcement of the existing regulatory framework: taking into account investment profitability; supporting of risk sharing agreements and the implementation of risk premia; applying a geographic and product differentiated approach to markets and remedies definitions; defining symmetric access obligations to all network operators and to new “vertical access monopolies” (vertical cabling of buildings and in the horizontal drop).

Moreover, Telecom Italia asked for a BEREC intervention aiming at clearly defining specific price squeeze methodologies for the NGAN newly emerging markets (including the implementation of the provisions concerning long-term access pricing and volume discount).

Telefónica argued that ULL and NGN regulation has not been very effective to promote broadband. In this context, it suggests a number of supply-side measures, related namely with allocating public funds via public-private partnerships, focusing state aid initiatives on underserved geographical areas, ensuring the effectiveness of public initiatives for NGN deployment, applying the technological neutrality principle, recognizing effective competition between “traditional” fixed broadband and mobile broadband products and allowing price flexibility.

In opposition, Virgin Media, underlined that regulatory framework provides NRAs with a comprehensive tool-kit and sufficient means to advance the promotion of broadband. Only when it is proven that there is no prospect of privately funded investments meeting a demonstrable market demand, the relevant authorities may consider the use of public funds. In this regard, Virgin Media expressed its concerns about possible deviations from established best practice – based on technological neutrality - in the interests of achieving politically motivated objectives of broadband adoption,

In this regard, also ECTA and WIND stressed the importance of NRAs’ regulatory actions for promoting broadband. In particular - following Commission’s efforts - BEREC should assess how copper and fibre pricing affect investment incentives, retail prices and affordability. Furthermore, ECTA and WIND called for a further focus of BEREC on (a) NGA network elements’ replicability; (b) standardised definition and technical specification of wholesale products; (c) development of benchmarks and database concerning NGA deployments experiences and architectures.

Both Telefónica and VON Europe were supportive of the appropriate release of spectrum resulting from the “digital dividend”, with VON Europe mentioning the harmonised utilisation at the national level and across Europe of radio spectrum and the introduction of more licence-exempt spectrum and spectrum trading, as the best approach to increase efficiencies in the management of spectrum. Moreover, Telefonica and ETNO underlined that NRAs should take into account the financial burden sustained by operators in order to secure right of use of frequencies allocated to mobile broadband.

The FTTH Council Europe underscored the importance of conceding greater emphasis, in order to decrease deployment costs, to mandating and specifying access to ducts and poles and to the drop cable. In addition, it considers important to make available long term cheap finance to support broadband deployment.

VON Europe subscribed BEREC's position regarding the need for establishing transparent and effective migration processes between the legacy networks and the NGA networks, namely encouraging NRAs to conduct period reviews of market developments.

VON Europe is also supporting the view that where state aid is considered, the conditions for the beneficiaries of state aid should explicitly provide for wholesale access obligations at all levels and a retail-level non-discrimination principle should apply. In this regard, Virgin Media highlighted that state aid practices must be approached very cautiously and in case accompanied by comprehensive, transparent assessment of market conditions in relevant areas.

## 8.2 The BEREC's positions

The BEREC is of the view that effective ULL and NGN regulation is an important contributor to the investment in broadband networks and to promote healthy competition in the broadband markets.

In general, the concrete above mentioned supply-side measures suggested by ETNO, by the FTTH Council Europe, by Telefonica, and by VON Europe are considered to have positive effects on the promotion of broadband and are already considered in the BEREC documents which address supply-side issues. Specifically with regard to spectrum policy, the BEREC would like to stress the fruitful results of its cooperation with the Radio Spectrum Policy Group.

The BEREC is satisfied to see the stakeholders' agreement with the need for establishing transparent and effective migration processes between the legacy networks and the NGA networks, reminding also that periodic reviews of market developments have been and will continue to be developed by NRAs, namely within the scope of market analysis procedures.

Where state aid is considered, the BEREC is also supportive of the view that, as mentioned in previous BEREC documents, the conditions for the beneficiaries of state aid should explicitly provide for wholesale access obligations at all levels and a retail-level non-discrimination principle should, whenever necessary, apply.

The BEREC is also open to a proactive role of NRAs with regard to broadband promotion. This role, naturally, has to be fulfilled with the scope of each NRAs legal status and framework, that may differ from country to country, and that is not conducive to put NRAs

working as broadband public policy coordinators in all Member-States. Furthermore, that role is already being assumed by other public entities, in a number of Member-States with visible results.

## 9. Stakeholders responses – potential demand side measures to promote broadband

**Question 6** (section 10): A list of potential measures was identified, in the present document that could be adopted or reinforced in order to promote broadband from a demand-side perspective.

- a) Are there any identified demand-side measures that you consider inappropriate?
- b) What other demand-side measures, if any, would you consider particularly important to promote broadband?

### 9.1 The stakeholders' responses

In general, the respondents strongly encouraged the adoption of the demand-side measures identified in the BEREC broadband promotion report.

DTAG identified a number of demand-side measures that could be considered inappropriate. To begin with, DTAG alleged that the absolute price of NGA should not be considered a relevant obstacle, since a higher price in less populated areas may be justified in order to enable the deployment of those networks and also because living in rural areas often provides for several benefits - such as lower real estate prices, and a greener, often cleaner and quieter environment - which could compensate for a higher price of broadband. It also defended, contrary for instance to BEUC's position, that there is no general lack of consumer choice in rural and peripheral areas (because one single network can support multiple service providers and because of the dissemination of mobile broadband). Finally, it also argued that measures to address correct billing and effective complaint management mechanisms would not be needed (since, operators have an "inherent interest to have a trustful relationship with their customers").

A number of respondents, while supporting in general the demand-side measures identified in the broadband promotion report, offered suggestions regarding additional or complementary demand-side measures that could be considered to promote broadband.

Telefónica defended that the right regulatory environment must be in place to allow operators to compete with entities providing “over the top” services.

BEUC, the CCP, the COIT, DTAG, the FTTH Council Europe, Telecom Italia, Telefónica and Vodafone mentioned that end-users need to be educated on the benefits of broadband. The FTTH Council Europe stressed that this should take place already at a very young age, Telefónica added that training should be articulated with subsidies to end-user devices, DTAG called attention to the role of decentralized broadband competence centres and the COIT mentioned that, in Spain, it would be relevant to provide also training to small and medium enterprises.

BEUC, the FTTH Council Europe and VON Europe considered of great importance measures that address the issue of network transparency. The FTTH Council Europe speeds (recognizing that this issue is already effectively addressed by a number of NRAs) and BEUC (drawing attention also to the role of consumer protection authorities with regard to ensuring fair commercial practices) focused on the differences between real speeds and advertised. Additionally, BEUC drew attention to the benefits of tariff comparison tools, promoted namely by a considerable number of NRAs, when incentivising tariff transparency. VON Europe mentioned, with regard to traffic management, the interest of ensuring a short and simple fact sheet to end users and a more detailed analysis to operators.

VON Europe encouraged BEREC to assess under the terms of article 8 (4) of the Framework Directive, the objective for NRAs to “promote the ability of end-users to access and distribute information or run applications and services of their choice”, at a network level (i.e. does each access operator allow the end-user its freedom of choice) rather than at a market level (i.e. can end-users switch operators if they do not get choice with their current one).

Vodafone expressed that it is important to see governments target incentives in a systematic and rigorous way and that ex -post evaluations of effectiveness should be a condition for funding programmes of demand-side measures

DTAG signalled that standardization and interoperability initiatives (namely those engaged by the EC) should be incentivised and WIND referred as an additional demand-side measure to promote superfast broadband adoption the proper ruling of online digital rights for audiovisual contents (since, this is expected to contribute to the diffusion of audio and video contents with positive externalities also on the environmental impact that the production, distribution , handling of physical media involves).

Telecom Italia highlighted the need to promote bureaucratic simplification in the relations between end-users and the public administration and the need to improve the “user interface” to facilitate the access to on line services (e.g. for senior citizens, accessing broadband from a common TV set could be easier when compared to accessing broadband from a personal computer).

BREKO strongly supported the demand-side measures identified in the broadband promotion report, having considered that the measure related with tax incentives, in view of the German experience, should be designed at European level.

While supporting the demand-side measures suggested in the broadband promotion report, ECTA mentioned that a number of those measures fall outside the scope of the NRAs mandates. Hence, ECTA would prefer NRAs to focus on the promotion of: (a) competition and efficient investment; (b) affordability; (c) consumer’s choice (including in the rural areas and with the introduction of NGA).

## 9.2 The BEREC’s positions

The BEREC understands that even if higher prices for broadband in rural and peripheral areas could be, in theory, supported by the evidence of higher deployment costs, this does not mean that the affordability of those prices should not be considered a problem, namely in the light of *per capita* incomes which tend to be lower in those areas. Furthermore, the BEREC fails to understand why rural broadband users should be penalised with higher broadband prices only because they enjoy lower real estate prices, and a greener, cleaner and quieter environment.

Considering the available empirical evidence regarding certain rural and peripheral areas where traditional and or NGA broadband is not available or where it is only provided by a single operator, the BEREC is not of the view that lack of choice should not be addressed as an issue to be considered when promoting broadband.

The BEREC understands that without prejudice to the operators’ “inherent interest to have a trustful relationship with their customers” the available evidence, namely in terms of received consumer complaints, end-user suggestions and results of consumer surveys, suggests that measures to address correct billing and effective complaint management mechanisms should not be discarded. This is reinforced by the appreciation that BEUC’s response to the

present public consultation makes of the available evidence, concluding that it is very important that effective complaint management mechanisms are in place.

The BEREC agrees that the right regulatory environment must be in place to allow effective competition on the provision of electronic communications networks and services and to incentivise the development of “over the top” services.

It further recognises the potential advantages of educating end-users of all ages on the benefits of broadband and of providing training to small and medium enterprises.

Furthermore, the BEREC is also seeing the potential advantages of non-distorting end-user subsidies, as already illustrated in the BEREC broadband promotion report.

Measures that contribute to the transparency of all the conditions associated to the provision of broadband services, including namely broadband speeds, traffic management practices and tariff comparison tools, help to build consumer and market confidence and are also welcomed by the BEREC. Notwithstanding, the proportionality and adequacy of specific measures should be considered by regulators and public policy makers at the light of the concrete national circumstances.

The BEREC is of the view that healthy competition is a major contributor to safeguard the best options for end-users, but that, where competition fails to offer real choices to end-users, the possibility of ensuring real choice between relevant service items within the offers of each operator should be carefully considered.

It is also acknowledged by the BEREC that it is important to see public policy makers target incentives in a systematic and rigorous way and that evaluations (both *ex-ante* and *ex-post*) of effectiveness should be a condition for funding any programme support by public money.

The BEREC recognizes the contributions that the standardization and interoperability initiatives, that e-accessibility, that streamlined procedures between end-users and the public administration and that the proper ruling of online digital rights for audiovisual contents could bring to broadband adoption and development. Hence, it strongly encourages all stakeholders to have an active stance in the national, European and international *fora* that are championing related initiatives.

While continuing to consider that tax incentives may have a role to play in promoting broadband adoption and usage, the BEREC understands that, in the light of the European legal and institutional framework, it could be extremely complex to ensure the adoption, in the short to medium run, of harmonized tax incentives.

Finally, with regard to the priorities suggested by ECTA concerning the NRAs activities, the BEREC would like to stress what is already clear in the broadband promotion report. Namely due to the high level of interdependency between different broadband promotion measures, it is also important to identify and analyze, besides measures that typically fall within the NRAs range of activities, also measures that are developed by governments, local authorities, operators, consumer associations, public-private partnerships, etc. This does not hinder, naturally, that each one of these entities pursues the priorities that are aligned with their own mandates.