Position paper

ETNO contribution to the BEREC consultation on the Broadband Promotion Report

January 2012

Executive Summary

- Broadband promotion policies are an important tool to contribute to the achievement of the Digital Agenda. The targets of the Digital Agenda can be achieved if the right regulatory conditions are in place to allow the private sector to continue to invest in the deployment of networks. ETNO calls for the development of regulatory policies that take into account the high costs needed to develop high speed broadband both on the copper network (e.g. VDSL) and on fibre infrastructures.
- Access remedies should be proportionate to the actual demand and to the technology which seems most suitable to serve a given area with a reasonable return on investment. For this purpose, NRAs should analyse the concrete wholesale demand for a product and consider the impact of a potential measure not only on competition but also on investment in order to find a balanced solution.
- NRAs should implement the principle of geographic segmentation, in order to allow for varying regulatory obligations in both highly competitive and less competitive national markets. In addition, operators should be allowed the ability to apply regional pricing for NGA.
- ETNO supports the ambitious European goals regarding broadband coverage, speed and take-up, but considers universal service obligations to be an inappropriate tool for achieving these targets.
- National regulators should underline the need for local governments to fulfill their obligations concerning rights of use. A virtuous administration of rights of use will help decrease barriers to achieving the ambitious broadband objectives for 2020.
- ETNO believes that demand side policies should at least go hand in hand with supply side policies in order to optimize the impact of broadband promotion policies. Some demand side policies appear to be relevant to improving the business case of network roll-out to encourage broadband availability, while other demand side policies are relevant to increasing user take-up, in cases where network availability exists.

- Governments should work to 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. Direct subsidies to citizens and tax discounts could prove helpful.
- Increased support for e-services such as e-government, e-call, e-energy, e-learning and e-health would stimulate demand for high speed broadband services. Such support can be granted by several means, including State aid and a healthy regulatory environment.
- BB and NGA prices in Europe should evolve to become more in line with standards of other developed regions of the world, where fixed access revenues allow the business case of NGA to be profitable.
- 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.
- Public-private partnerships should be encouraged and promoted because of their likely success in combining the need to help private sector operators develop infrastructure with the need to improve consumer welfare through the access to and use of broadband services.

I. Introduction

ETNO would like to thank BEREC for the opportunity to outline its views on the very relevant issue of policies to drive broadband promotion in the EU.

ETNO has more than 40 member companies from 35 European countries, representing a significant proportion of total information and communication technology (ICT) activity in Europe. The members account for an aggregate annual turnover of more than €250 billion and employ over one million people across Europe. ETNO companies are the main drivers of broadband growth, having accounted for two thirds of total high-speed broadband deployment to date. Through public-private partnerships, ETNO members also actively contribute to bringing high speed connectivity to populations in rural areas, thereby helping to bridge the 'digital divide.'

The achievement of the Digital Agenda for Europe, and in particular the broadband targets of the Digital Agenda, underpins ETNO members' current and future development and investment plans. Over the course of time, ETNO has developed its views on the most appropriate European policies needed to drive growth of the digital economy for the benefit of all EU citizens. The main belief held by ETNO members is that the targets of the Digital Agenda can be achieved if the right regulatory conditions are in place to allow the private sector to

continue to invest in the deployment of networks to provide EU citizens with very high speed broadband connections.

ETNO shares BEREC's view that broadband development brings many benefits both to EU citizens and to the European economy, as broadband is both a driver of productivity growth and new business opportunities. Against this background, ETNO believes that broadband promotion policies are an important tool to contribute to the achievement of the Digital Agenda.

The new regulatory framework has provided BEREC with a formal advisory role in the European legislative process. Despite this, the main role of NRAs and BEREC remains addressing issues of a regulatory nature rather than actively engaging in a policy debate. This is an extremely relevant role, as there is a lot to be done in order to promote broadband from a regulatory perspective.

While many issues raised by the report appear not to be fully within the scope of the core regulatory competences of BEREC and NRAs, ETNO welcomes the opportunity to participate in the debate regarding the promotion of broadband. A successful promotion of broadband demand amongst citizens, as well as the rollout of networks on the supply side, can only be achieved through a flexible regulatory framework that provides for legal certainty and symmetric regulation and is targeted at tackling concrete distortions of competition. In particular, the findings of the study commissioned by the Florence School of Regulation (FSR), according to which supply side policies should come first and demand-side policies should follow only at a subsequent stage, should be thoroughly analysed regarding their accuracy and applicability to different scenarios. ETNO believes that this study does not take into account the positive impact of demand side policies on the business plan of NGA roll-out and therefore on broadband availability. Therefore, ETNO believes that demand side policies should at least go hand in hand with supply side policies in order to optimize the impact of broadband promotion policy.

Along with an appropriate regulatory framework that fosters investments in network deployment, demand and supply side policies aimed at bringing about the largest possible penetration of broadband will help the EU close the existing gap with other more advanced regions of the world. Specifically, some demand side policies appear to be relevant to improving the business case of network roll-out to encourage broadband availability, while other demand side policies are relevant to increasing take-up in those cases where network availability exists. To this extent, given the high degree of competition in the broadband market within the EU and corresponding decreasing prices, ETNO believes that further attention should be focused on the reasons behind the lack of broadband adoption.

Finally, ETNO would like to recall that universal service obligations, as also recognized by the Commission in its recent Communication, are not the right instrument to reach the "broadband for all" objective of the Digital Agenda, but are a safety net intended to prevent social exclusion.

II. Consultation questions

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

NRAs have an important role as regards broadband promotion strategies, particularly given their task of regulating markets through SMP analysis. Incentivizing private sector investments and applying a forward looking regulatory policy that does not hinder operators' capacity to invest is fundamental. High speed broadband needs huge investments in infrastructures (fixed and mobile) and so NRAs need to implement rules that encourage the operators to sustain their costs and bear the investment risk. NRAs should also take into account the goals set by the EU and national governments, as cooperation between all stakeholders with mutually reinforcing goals is key for a successful strategy.

Concerning the current debate on universal service obligations, it seems clear that the mere imposition of such obligations will not suffice to meet the current challenges. ETNO supports the ambitious European goals regarding broadband coverage, speed and take-up, but considers universal service obligations to be an inappropriate tool for achieving these targets. As correctly pointed out by the European Commission in its recent Universal Service Communication (COM(2011) 795 final) "to prematurely mandate broadband at EU or at national level risks distorting markets and holding up private investment in broadband".

Since universal service obligations should mainly be used as a safety net to prevent social exclusion, alternative means of financing broadband roll out in unprofitable areas should be made available. As stated by the Commission in the aforementioned Communication, where costs exceed expected returns of a regular business case based decision, the remaining funds should be provided by Member States (as stated by the Community Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks) or EU institutions (as planned by the Connecting Europe Facility).

In order to make further funds available, general taxation (outside of the e-communications sector) seems to be the appropriate solution, as broadband rollout in remote areas would benefit society as a whole. Indeed, neither

individual operators nor the telecommunications sector as a whole can be expected to finance an unprofitable investment in order to create economic and social benefits for all market players.

a) *Overall at the national level? What role, if any, could NRAs play to enhance the effectiveness of those strategies?*

NRAs have a key role to play in enhancing EU and national strategies to promote broadband. Operators need regulatory frameworks which allow them to experiment with new business models and act swiftly in rapidly evolving markets. Regulation needs be consistent, clear and predictable and allow for the long term planning that investments in infrastructure require. The policy and regulatory direction should remain valid throughout longer periods of time and several market analysis procedures. Only with these guarantees can operators make reliable calculations of an investment business case.

NRAs have to take due account of technological and market developments, such as the fact that alternative providers are now offering fibre to the home (FTTH) access or DOCSIS 3.0 high speed broadband via cable. Under these circumstances, it is necessary to consider national and sub-national specificities as well as the debate surrounding institutional harmonization at European level versus subsidiarity. NRAs need the flexibility to act according to unique national or even regional circumstances.

Another key development to consider is the current hesitation in Europe to roll out very high speed broadband on a large scale. Very expensive roll-outs are only feasible in certain areas and cannot be considered as the only tool to fulfill political goals. The relative cost –effectiveness of different NGAN roll-outs may vary depending on local circumstances and therefore market players must be granted full freedom to choose the best solutions for specific area roll-out. This calls for a change of the European Commission's focus on FTTH technology and it is important that policy makers recognize the value of having a technology mix in providing high speed broadband to all Europeans, while ensuring that the business case for deployment can be upheld. Furthermore, certain access products currently available might not be technically possible in the future: for example VDSL unbundling may no longer be possible in the case of "VDSL Vectoring", as, in order to obtain satisfactory results, the latter is only possible when all relevant access lines are fully controlled by the VDSL vectoring operator.

NRAs should also make sure that synergies are used and that all infrastructures which can contribute to the deployment of broadband networks are made available to investors. When these measures do not suffice to make an area profitable, public funds should be provided, in particular to finance passive physical infrastructure such as poles, ducts and manholes. If the area is still

unprofitable, further aid may need to be envisaged. Furthermore, 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. Direct subsidies to citizens and tax discounts could help solve the current situation, in which citizens often consider DSL broadband as essential, but are not willing to pay for the additional speed offered by VDSL or FTTH, which will become essential over time.

More support for e-services such as e-government, e-call, e-energy and e-health would stimulate demand for high speed broadband services. Such support can be granted by several means, including State aid and a healthy regulatory environment. NRAs should ensure that the provision of such services is not subject to stringent regulation and that flexible rules are in place to foster innovation and allow for changes in a rapidly evolving market. NRAs and BEREC could also play a key role in fostering standardization of services such as smart grids and interoperability.

Lastly, in their role of guaranteeing consumer protection in the context of electronic communications, NRAs could also play a role in educating potential broadband consumers. By raising consumers' awareness on broadband subscription practicalities, NRAs can take away many uncertainties relating to broadband subscriptions.

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

NRAs should implement the principle of geographic segmentation, in order to allow for varying regulatory obligations in both highly competitive and less competitive national markets. Furthermore, the European telecommunications market has evolved rapidly over the past years and has led to the creation of several alternative providers who by now even provide FTTH access or DOCSIS 3.0 high speed broadband via cable. Under these circumstances it is no longer justifiable to apply asymmetric regulation solely to the previous incumbent, but instead similar, symmetric conditions need to be applied to all network operators.

Another important element to consider is that of allowing operators the ability to apply regional pricing for NGA, which would improve the business case for certain areas. It also has to be recognized that particularly from a demand side point of view, there is a special discrepancy between rural and urban areas. Particularly in rural areas, day to day infrastructure may be less developed and yet online services such as e-government, e-health and e-learning tools can help improve citizens' quality of life. These particular needs of citizens in rural areas need to be considered when promoting broadband on the demand side.

Finally, in cases where government strategies are specifically targeted at rural or peripheral areas, e.g. by granting public funding to promote infrastructure development in underserved or non-profitable areas, NRAs should help verify that funding is granted in a manner that does not crowd out private investments but in fact encourages and incentivizes such investments and also does not exclude any operator from accessing the infrastructure.

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. What of the above mentioned factors, if any, would you not consider as obstacles? And what other factors, if any, would you add to the list of main obstacles to broadband promotion? Please reply with specific regard to:

a) Supply-side obstacles;

As regards the supply side, the low return on investment might certainly be considered as an obstacle to next generation broadband development and stringent regulatory policies (price and access obligations) could limit operators' investments because of the low expectation on returns from the capital invested. In turn, the limited return on investment due to overly stringent regulatory policies as well as difficult general economic conditions has a strong influence on funding conditions. Therefore, ETNO calls for development of regulatory policies which take into account the high costs needed to develop high speed broadband both on the copper network (e.g. VDSL) and on fibre infrastructures. Since all operators are affected by the economic climate and all need to invest in their networks (as substantial investments in the legacy network are needed for maintenance and upgrade purposes), regulation should be balanced for all market players. Moreover, aadequate risk sharing measures have to be implemented. In particular, a reasonable risk premium for taking the initial roll-out and utilization risk is necessary.

In general terms, the lack of access to financial resources is not an obstacle as long as the project is profitable. In this case, the telecom operators have the necessary levies to secure funds without any need for further structural modification.

As regards access to spectrum, the adoption of the Decision on the Radio Spectrum Policy Programme in 2011 has to be considered as a positive step, paving the way for the allocation of more frequency bands for mobile broadband (800 MHz). However, in some EU countries where auctions have taken place for the frequencies dedicated to mobile broadband, operators have experienced a huge financial burden in securing the right of use of such frequencies. NRAs should take into account the burden undertaken by operators when considering regulatory policies to develop broadband, by defining policies for next generation networks that allow for higher returns on investment. These considerations should be applied in the near future, as further spectrum will indeed become necessary, including a "Digital Dividend II".

Finally, ETNO would like to underline that throughout Europe, local and regional governments play an important role in paving the way for the deployment of broadband, in particular through their capacity to secure rights of way for fixed and mobile network facilities. Nevertheless, in many circumstances the enforcement of the Authorization Directive falls short when measures are introduced which make broadband rollout virtually impossible, ranging from moratoria against new installations in certain time periods, lengthy and costly planning processes, high rental fees, and excessive duct requirements. Under these circumstances, European citizens' access to digital services varies from place to place, which may result in geographical digital divides in addition to the already existing urban-rural divide. Local governments should meet their obligations as impartial administrators, while property owners should provide access on a non-discriminatory basis to ducts and cables, public grounds and buildings. A virtuous administration of rights of use will help decrease barriers to achieving the ambitious broadband objectives for 2020.

b) Demand-side obstacles.

Actual broadband prices in other non-EU countries prices are often substantially higher (see OECD Broadband Portal). Actual prices cannot be considered as a demand-side obstacle as consumers were in fact used to spending more on broadband services in the past and still pay more in non-EU countries. The obstacle is the perceived price, as consumers have become used to spending the "saving" of price decreases on other services after years of price-cutting regulation. Instead, a real obstacle might be rather a lack of willingness to pay and a lack of perceived need, which can be bridged by regulatory action and aid measures. Within this context, many consumers are not yet willing to pay for higher speed broadband services. Others are, but the current regulatory framework does not allow for the necessary pricing differentiation, thereby limiting revenues that could rather easily be created.

With regard to the early product life cycle of NGA, it is true that some consumers consider NGA based services as in a "too early stage" to adopt. However, ETNO operators have been offering services over certain technologies for years, so these cannot be considered as being in an early product cycle. Furthermore, Internet

access is predominantly offered in a technology neutral way in which consumers are hardly aware of the underlying technologies. Similar to the pricing issue, the real demand side obstacle may be the consumers' perception of the products rather than the actual development cycles.

The report states that a lack of choice of operator (mainly in rural areas) is a demand side obstacle. ETNO would like to point out that there is no general lack of choice of operators for consumers in rural areas. Where only one broadband access network exists, this is in principle subject to open network access in the form of access obligations imposed on an operator holding SMP. Where the network present does not belong to the operator holding SMP on a national basis, regulatory obligations can and should be imposed via geographical segmentation of markets or via symmetric regulation. Moreover, mobile broadband networks are rolled out in rural areas in many Member States.

As regards parallel, especially fixed, access infrastructure investment, remote areas are very challenging. If profitable, the business case can often be upheld only for one infrastructure provider. Due to economies of scale, the presence of a second network is generally economically unviable in these areas. Therefore, the presence of a second network (and the negative impact of such presence in the business case of the infrastructure provider which was present first) would have to be financed via State aid measures. Such intervention through the use of public funds to artificially increase the number of infrastructure providers in a given area does not seem efficient or proportionate as long as one open network exists; especially as such funds are scarce and necessary to meet the targets of the Digital Agenda. Only when the network in place is not open to telecommunications service providers can a lack of consumer choice be established and State aid be justified.

An additional possible obstacle might be the current lack of services that create a high demand for bandwidth, with the exception of IPTV. As stated above, policies that facilitate the provision of e-services (e.g. e-government, e-health, e-learning) to citizens may help to improve citizens' perception of the real advantages of being connected to on-line services. Again, these advantages can be more profoundly felt by citizens living in rural areas and can lead to significant improvements in quality of life by providing services and (online) infrastructure that would otherwise not be feasible. This is crucial for broadband promotion, as only the willingness to pay for additional broadband capacity can justify investments to create such capacities. Therefore, ETNO strongly recommends that the findings of the study commissioned by the FSR, according to which supply side policies should come first and demand side policies should follow only at a subsequent stage, be thoroughly revised regarding their accuracy and applicability to different scenarios.

Rather than high prices of broadband, the difficulty, mainly due to regulatory choices, is in having price segmentation in order to target different populations. - NRAs should set up a framework that provides flexibility in term of prices and

business models for addressing demand segmentation. Price flexibility should be allowed by NRAs in order to foster the deployment of services through proper price/service segmentation. The example of high segmentation and penetration of mobile illustrates that efficiency and can be used as a reference. Flexibility notably implies measures on wholesale prices such as risk sharing mechanisms.

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.

Taking into account the above mentioned obstacles to broadband promotion, NRAs need to actively work towards achieving symmetric access in order to re-establish a level playing field for different investors in NGA.

Access remedies should be proportionate to the actual demand and to the technology which seems more suitable to serve a given area with a reasonable return on investment. For this purpose, NRAs should analyse the concrete wholesale demand for a product and consider the impact of a potential measure not only on competition but also on investment in order to find a balanced solution.

Concerning broadband deployment in remote areas, ETNO acknowledges that the level of competition is generally lower than in very dense areas. That being said, governments and NRAs are not in a position to artificially try to create competition by funding a second operator with public funds, when these funds are needed elsewhere.

Question 3 *(section 7): What elements do you consider essential for the successful definition and implementation of operators' strategies, in particular from a demand-side viewpoint, 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.

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 a wide range of new and innovative services and applications is already evident and has contributed to the success of devices such as smartphones and tablets. Operators generally have to work towards an increase in the availability of services that create large amounts of valuable traffic, thereby also creating an explicit further need for both fixed and mobile high speed networks. NRAs may have a role in setting the necessary regulatory conditions to allow for NGN networks in the fixed market to develop as quickly as possible. Networks, whether traditional fixed broadband, mobile broadband or NGA, have to be financed through revenues and include a reasonable return on investment. This can only be achieved if NRAs concentrate on fixing the imbalances in the market rather than steering market developments in one direction or another. Regarding access products, NRAs play a crucial role in reducing the amount of resources regulated operators have to spend to comply with access regulation. While ETNO recognizes the importance of adequate wholesale access at several levels, the access portfolio often includes products that are not sufficiently needed, thereby tying up resources that operators could otherwise use for high speed networks and innovative services. NRAs should thus carefully analyse the actual demand for specific wholesale access products in order to target only the necessary market and product segments. 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. In rural areas, it is not always possible to have several competitive networks engaging in the same market due to a lack of demand and high per household costs. NRAs and governments should thus recognize this fact and not try to artificially establish a second competitor network with the aid of public funds but instead ensure that the conditions for often rather difficult rural roll-outs are increased so that even one network operator is at least able to profitably provide service. In such rural areas, LTE can also often act as a substitute for fixed broadband and NGA.

Question 4 *(section 8): What elements do you consider essential for the successful definition and implementation of public-private partnerships strategies, in particular from a demand-*

side viewpoint, to promote broadband? What role, if any, could NRAs play to enhance the effectiveness of those strategies?

The role of public-private partnerships has increased a lot and will continue to increase, specifically in those cases where regional authorities have seriously committed to engage in infrastructure development projects. Given that State aid rules should be always respected, public-private partnerships should be encouraged and promoted because of their likely success in combining the need to help private sector operators develop infrastructure with the need to improve consumer welfare through the access to and use of broadband services. It is also important that the conditions, including administrative procedures, etc. are kept simple and efficient to avoid lengthy processes that can often overburden regional municipalities. At the same time, as is the case with public funding, public-private partnerships should not crowd out private investments, but rather should complement private investment plans and close gaps where private funding is not adequately available or positive business cases cannot be made.

A large degree of freedom should be given in public-private projects (PPPs) as to the choice of the technology used to develop those broadband infrastructures that better suit local/regional circumstances (including vectoring VDSL). It also needs to be ensured that a national SMP player does not automatically "transfer" its market power to a regional partnership in which it does not hold a majority of the shares. When engaged as a "junior partner" in a regional cooperation, an operator considered as having SMP at national level does not influence the network as such and thus does not have the full control and ownership thereof. With such a transfer of market power, PPPs at regional level would be a lot more difficult and clearly hinder positive and efficient engagement of an SMP operator.

Besides projects regarding infrastructure development, public-private partnership development plans might also be put in place to include demand side promotion measures (e.g. the provision of e-government, e-health, direct financial or tax incentives, vouchers, etc.)NRAs must ensure that PPPs comply with the State aid guidelines and must promote actions reinforcing the coherence of the parallel existence of private and public projects, protecting the market value and private investments in profitable areas. There is a clear need for a fast-track process to prevent irreversible public intervention not compliant with State aid rules, and irreversible damage to private investment incentives. The ex-post remedies are not efficient since a network has already been deployed. If possible, a European Commission out-of-court intervention during a national process in the case of concerns (statement, letter etc.) would for example be helpful.

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?*

BEREC has an important role to play in giving guidance to both the Commission and to NRAs on the measures that should / should not be taken in order to drive broadband promotion in the EU. In particular, as stated above, ETNO believes that forward looking regulatory policies, both regarding wholesale regulation and guidance to national NRAs, should be implemented in order to unlock the investments that are needed to deploy new infrastructures. To this extent, and considering the current decrease in the overall revenues of the sector in the EU, ETNO trusts that BEREC will play a role in contributing to the shaping of policies that will not put at risk the value of existing infrastructures (e.g. by artificially lowering access prices) but that will create the right conditions for the industry to keep investing in the deployment of new generation fixed and mobile infrastructures. Furthermore, as indicated, BEREC is best placed to guide NRAs' correct understanding of local / regional circumstances: this implies implementing geographic analyses of markets, differentiating obligations on the basis of actual competitive conditions, allowing for differentiating pricing of offers, promoting public-private partnerships where they can serve as a catalyst for network deployment and broadband take-up.

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?

All the demand side measures listed in the report appear to be potentially useful in stimulating the demand for broadband. Demand side measures should be carefully assessed and implemented by Member States' governments and regional/local authorities. Demand side policies should aim primarily at increasing the value of broadband for citizens, thus enhancing broadband take up in those portions of the population that do not have a broadband subscription yet. Moreover, relevant demand side measures may consist in making broadband connections available to all public administrations and public bodies in general, as an instrument to allow the provision of services on-line and help connect administrations with citizens. Also, public authorities' interests and capabilities are much broader and also include social, cultural and economic areas. Operators may at the same time be incentivized by authorities to leverage consumers' potential demand.

ETNO agrees with the concept that "*when choosing the appropriate mix of demand-side factors, it is important to take into consideration the specific conditions of the targeted consumers, namely with regard to a broad range of factors that may influence broadband adoption, such as, for instance, disposable income per capita, level of education, age or occupation…*". Specifically funding in the form of vouchers or rebates to citizens through tax credits may prove to be an effective tool to help some segments of the population adopt broadband connections. While some

operators already provide voluntary reduced rates, new obligations that negatively affect operators' pricing would clearly go in the wrong direction. The main focus should thus be work by public authorities to further stimulate broadband. Regarding the "lack of choice between broadband providers" ETNO welcomes that BEREC focuses on transparency measures for services offered rather than artificially trying to establish competition through a subsidized second player. In rural areas, there is often no business case for several network competitors and it would greatly impact the return on investment for one operator. Any measure targeting the (perceived) lack of choice should thus target the service characteristics that consumers consider when choosing an attractive offer while at the same time ensuring that operators are not overly burdened by additional transparency measures which require more resources and will ultimately affect prices.

As far as consumers' confidence in the contractual relationship with broadband service providers, ETNO believes that a high level of consumer protection is already granted in so far as contract conditions for broadband subscriptions, including transparency of the service offered. To this extent, ETNO would like to underline that the Citizens' Rights Directive adopted in 2009 and which entered into force last May provides a wide and comprehensive set of rules to guarantee the protection of EU citizens in the field of electronic communications. The Citizens' Rights Directive enhances consumers' position both in terms of protection of their rights when concluding contracts with operators (e.g. duration of contracts) and the transparency of information related to the services and applications that they want to use and access (e.g. any limitation on the use of the service) or their ability to switch operator (e.g. number portability). As it is clearly in the operators' fundamental interests to engage in trustworthy relationships with their customers, regulators must not overburden operators by increasing transparency and monitoring systems that go beyond what is currently in place. Consumers are already adequately and well protected, both by regulatory and voluntary measures and also by competitive market forces.

ETNO supports BEREC's aim to increase both digital literacy as well as access to broadband by disabled people. As for the former, it is clear that governments are in charge of educational systems in Europe and should thus take up a key role in improving general levels of media literacy. The industry is of course happy to support such efforts but the main responsibility lies with governments. Measures such as vouchers for low income consumers funded through public sources to promote broadband seem adequate in the short term, while this needs to be complemented by measures such as eLearning and increases in media literacy in the medium and long term. In fact, several operators already support educational training, schools, etc. As for access to broadband by disabled people, this is likely not a main obstacle to broadband promotion but nevertheless is an important aspect in social inclusion. ETNO members already offer a variety of services targeted at the specific customer needs. Further obligations have however to be carefully assessed in terms of their necessity and effectiveness.

b) What other demand side measures, if any, would you consider particularly important to promote broadband?

On page 63 of the report, chapter 10, it is mentioned that as per the FSR study, supply side policies should come first in order to optimize the impact of public policies on broadband promotion, and that the " larger the diffusion of broadband in a given European country, the larger the impact arising from the adoption of an additional demand side policy will be ".

Obviously, demand side policies (focused on investment) are aimed at increasing the adoption rate. The penetration rate is based on the diffusion rate (availability of networks) and the adoption rate and the penetration rate increases in proportion to the diffusion rate. Consequently, the study concludes that the most efficient sequencing is 1) supply side subsidies for deploying the network and 2) demand side subsidies to increase the penetration rate.

We would like to comment on the sequencing issue because there are two types of demand side policies with different effects: one type is efficient only when the network is in place (policies such as education, transparency of offers, encouraging PC usage at home etc.) and the other type (e.g. subsidies, bundling of offers) is efficient once the network is deployed but is also is a good incentive for the operators to deploy because it improves the initial business plan. Therefore, the sequencing must take into account these elements because the second type of policy is more efficient and less costly and so should be deployed first in areas which will prove to be more profitable.

Demand side measures do not produce the same effects. In relation to measures aimed at user take-up (education, transparency of offers, PC usage at home etc.), these are evidently more efficient when the service is available. It is different with financial or fiscal measures or measures related to the bundling of subscriptions that ensure a certain level of demand for the operator, thus making the business more attractive in certain areas. This can enable a service provider to deploy in an area that would not have been attractive otherwise, from a business perspective. In these cases, the demand creates the offer incentive.

Furthermore, from a cost-benefit viewpoint, these measures are often more efficient than supply side policies. In an article from François Jeanjean1, it is demonstrated that at the start of deployment – more precisely in areas that will prove to be an attractive business case within a reasonable timeframe - demand side subsidies are cheaper than supply side subsidies.

[1]Jeanjean, François (2010). « Subsidising the next generation infrastructures. Consumer-side or supply-side? », Info, Volume 12, Issue 6, pp 95-120

The aggregated indicator used in the empirical study of FSR does not allow for a differentiation between the different types of demand-side measures and the metric penetration rate does not indicate anything about the cost benefit ratio.

Consequently one could rather propose the following sequencing:

1) demand side policies such as subsidies, tax aids or aggregated demand

2) supply side policies when no result is produced through demand side measures

3) demand side policies such as education and initiatives to promote usage and public procurement once the network has been deployed.

The BEREC report seems to consider that supply side policies help network deployment and demand side policies help to increase the penetration once the network has been deployed, but demand side policies of the first type (subsidies, tax aids or aggregated demand) may also help network deployment and should be implemented first when the cost/benefit ratio is favourable.

It is necessary to also mention that demand side policies of type 1 need real cooperation between the parties involved (public authorities, NRAs, operators and consumer associations) in order to be efficient.

Consumers increasingly expect to be able to watch / listen to anything, anywhere, anytime and using any device. Unfortunately, there are still insufficient attractive and easily accessible, legal digital content offers due to many barriers in the European online audiovisual market, such as difficulties with the current copyright regime. ETNO looks forward to the European Commission's continued work in this area as it is our firm belief that a wider availability of legal content offers, including in national languages, would help stimulate demand for higher speed and network capacity, which creates the business case for investments in NGA networks. Indeed, all stakeholders should focus their cooperative efforts in this area. This also holds true for public services being made accessible for all citizens through the Internet. With this, governments could incentivize citizens to use such services and thereby also further support rural areas by offering infrastructure that would physically not be feasible or affordable. In order to further support the NGA roll-out, new ways of financing might be necessary which could include citizens contributions or various kinds of other methods to increase the business cases. ETNO thus asks NRAs and governments to actively support the finding, development and implementation of new financing models for high speed networks rather than to restrict them.

All players have a role to play in building consumer trust in the Internet. Online payment methods need to improve and the right conditions need to be in place to

allow for innovation in this area. Once consumer trust is in place, the demand for e-commerce and e-banking services will increase. At the same time, vouchers for trial subscriptions provided by governments could educate consumers on the use of such Internet services and their benefits. As regards the facilitation of ePayments, ETNO particularly welcomes the European Commission's recently issued Green paper on card/Internet/mobile payments as a means of exploring the possibilities and breaking down barriers.

Cloud computing is expected to bring significant benefits to many sectors of the economy, driving growth, productivity and trade. It will also be a widely used platform for the delivery of digital content and Internet services, thus driving demand. While the growth in cloud computing should be actively encouraged , ETNO believes that there is no additional need for specific regulatory or legislative action on cloud computing and that instead, the current regulatory regime can accommodate this relatively new way of doing business. Instead, industry-driven solutions should be encouraged regarding fundamental issues such as interoperability. That said, the harmonisation of data protection legislation is necessary in order to avoid large divergences in implementation which is a challenge for cloud computing as a cross-border service. To this end, ETNO welcomes the Commission's work on improving the data protection legislative framework to achieve harmonisation and allow for a more consistent user experience and a level playing field for all operators, service providers and users of various services in Europe. The general rules of data protection and consumer protection should be applied to all actors and they adequately protect consumers while still leaving service providers room to develop new innovative services.

Operators are well placed to bring innovation to the Internet in terms of attractive online services for users. However, in order to do so, the right regulatory environment must be in place to allow operators to compete on a par with Over the Top (OTT) players, who currently have more freedom to innovate. This imbalance is not only damaging Europe's competitive position on the global stage but is holding back a possible surge in innovation that could result in many more users pushing for broadband services and in particular high speed broadband services.

Finally, users need to be educated at a young age on the benefits of broadband, with Internet-learning being an integral part of the national school curriculum. In doing so, the demand for broadband is future-proofed. Public-private partnerships can be particularly useful in delivering broadband to schools at competitive rates and with national coverage.