Body of European Regulators for Electronic Communications

BEREC

BoR (10) 35

BEREC Report on Universal Service – reflections for the future

June 2010

Table of contents

Executive Summary

PART I

A report on the current status of the Universal Service implementation is foreseen as an important step in analysing the possible changes to the scope of the Universal Service. For that reason, it was agreed that the first part of the deliverable would represent an overview of **the current status of the universal service system in BEREC countries**. Also, the project team analysed the **national plans for stimulating broadband within BEREC countries** and their relation to universal service, as broadband is the center point of the debates around whether to change or not the scope of the Universal Service.

Introduction - Framework Provisions and Fundamental Principles

The first part of the draft report follows the implementation of Universal Service Directive with a centreline on the services included in the scope of the Universal Service, the legal framework, the designation of the universal service providers (USPs) and the funding mechanisms.

It gives an overview of the general principles governing the implementation of Universal Service, laid down in the Universal Service Directive and lists the services included in the scope of the Universal Service as per the Universal Service Directive

There were identified the specific principles applying to the designation mechanism of the universal service providers (USPs) and their possible conflict. For example, in some cases (e.g. DS/DES) having separate designation procedures (in particularly competitive procedures) for different USO elements, which might result in different USPs being designated, is an application of the *no a priori exclusion* principle which inherently limits the application of the cost-effectiveness principle. For instance, if different undertakings are designated as USPs for the provision of the comprehensive directory of subscribers and respectively for the directory enquiry service, they might need to duplicate the effort of setting up the subscriber database, absent a framework provision requiring shared access to this resource.

Current Status of the Universal Service System

In the vast majority of BEREC countries there is an Universal Service Obligation (USO). However, there is a very limited number of countries where there is no USO or where, despite there being an USO, it has not been imposed on any undertaking (4 countries).

The vast majority of responses indicated that all of the services included in the scope of the Universal Service as per the Universal Service Directive were included in the USO at national level. However, in some countries there are services which are not *or* no longer included in the USO, particularly the comprehensive Directory Enquiry Service, the Directory of Subscribers, the Public Pay Telephones. Four responding countries have extended the scope of the USO to e.g. Internet access for schools, public libraries and hospitals at an affordable price, distress and safety communications etc.

Current legal framework of the Universal Service Obligations

In all the 27 BEREC countries that responded to the questionnaire, the USO is provided by law. Specific USO elements and the rules concerning quality and affordability of the Universal Service are laid down in decrees or NRA decisions. This is explainable because the rules and parameters concerning quality and affordability can change, so it has to be possible to adjust them with relative ease. However, in some cases they are established by law.

Most of the BEREC countries have set out performance targets regarding the universal services. In many cases performance targets as mentioned in Annex III of the Directive are set out by NRA decisions or decrees. In some cases the NRAs introduced extra performance targets for the universal service providers whether by tender documentation or by designation decisions. In the majority of the countries there is an obligation for the USP to report to the NRA about the quality of the Universal Service. Most NRAs publish these reports, or require that these reports are published by the USPs on their website or in a newspaper.

There is a great variety of measures taken to ensure the affordability of the US. Some countries did not implement specific measures because they do not have any USO regulation at all or because, although having the authority, there has been no reason to set tariffs yet. Other countries have implemented one or a mix of different measures.

In general the NRA is the entity entrusted with the enforcement of the USOs. In most cases, the NRA is empowered to apply fines when an undertaking does not comply with its USO.

Designation of the universal service provider(s) in practice

This section provides an overview of the USP(s) designation practice in the BEREC countries, covering:

- the actual use of the possibility to designate multiple USP(s)
- types of designation procedures employed in practice
- designation criteria applied
- duration and termination of designations
- anticipated changes at the level of some Member States under the current Directive provisions

Provision of different elements of the universal service

In 20 BEREC countries all the USO elements which have been imposed are provided by a single undertaking, the incumbent being designated in all cases as the universal service provider (USP). 8 countries organised separate procedures for the different elements of the USO, giving the

opportunity of designating multiple USPs. In one country, all providers are designated by law to provide one of the elements of the USO (social tariffs) while in 4 countries there is no USO imposed on any undertaking.

Provision of universal service in different areas of the national territory

25 BEREC countries designated USPs for the whole national territory in respect of all USO elements. Only 4 countries designated USPs for different geographical areas. However, 2 of them designated USPs for the entire national territory in respect of the Directory Enquiry Services. No uniform criteria for defining different areas were identified.

Designation procedures

The designation procedures followed so far may be divided into 3 categories. The 29 BEREC countries with designated USPs are distributed among these categories in a fairly balanced way:

1. **Nomination without public consultation (10 countries) – mostly done by law**
2. **Nomination with public consultation (8 countries)**
    - An intermediate form between the first two **(3 countries)** is nomination after a public consultation which included a call for expressions of interest from the (other) market players, following which only one or no such expression of interest were submitted
3. **Public tender (8 countries) –** either directly or following a public consultation with call for interest where more than one expression of interest were received

Less than 25% of the countries actually designated the USPs by tender. This may change in the future, since in some countries new procedures have been recently introduced in the law. 20 countries (nearly 2/3 of the BEREC countries) have now public tender procedures stipulated in the law. The relatively low number of countries who have eventually designated their USPs via public tender may be explained legally (national law excludes the public tender), but also pragmatically:

- Number of competitors with technical and financial standing needed for USP designation is very limited
- There is an inherent reluctance of market players to compete for being assigned obligations additional to those normally incumbent on any e-communications provider under the framework

Designation criteria

Designation criteria vary largely from country to country and from an USO element to another. The majority of BEREC countries employ a combination of technical and economic-financial criteria, applied at the different stages of the designation process.

The role of the various criteria is also different across jurisdictions, depending on the type of designation procedure. Where public tender is used, there are normally 2 layers of criteria:

- **qualification criteria** which apply in order to ensure that the participants to the selection procedure have the necessary qualifications to stand as a candidate for designation
- **selection or evaluation criteria** which are meant to ensure that the candidate who best meets the USO requirements is selected for designation as USP

Technical criteria include economic and financial standing of the undertaking, end-user tariffs and net cost/amount of financial compensation required to fulfil the USO.
Economic-financial criteria include availability requirements (e.g. possibility to be reached by subscribers of largest service providers), quality requirements (exceeding the minimum levels imposed by the NRA), experience in the provision of the service concerned or of similar services and absolute and/or relative size of provider's business, including the extent, density and resilience of its communications network in the provision of PATS in the particular area under consideration

Funding of the current universal service obligations
Costing of the USOs
Methods used for the calculation of the USO net cost are identified in Article 12(1) USD:

- **Method (a)** which calculates the difference between the net cost for the USP of operating with the USO and operating without the USO, taking into account any market benefit which accrues to the USP – is used by the **vast majority of the responding countries**
- **Method (b)** which makes use of the costs identified by a designation mechanism – is only used in **2 responding countries**, in alternation with method (a)

Net cost calculations are available in only 8 BEREC countries. 8 countries mentioned that no calculation took place mostly because the USP claimed no net cost, while in 2 countries a review of the calculation rules and, respectively, an evaluation of a request for compensation are ongoing.

The **intangible benefits** are hardly quantifiable. Certain benefits were mentioned by the majority of respondents (ubiquity, life-cycle effect, brand enhancement and corporate reputation, advertising on public telephone booths, customer database). Certain respondents have indicated specific methodologies they use to assess these market benefits.

Where an USP is designated as a result of a tender which also identifies the net cost, a controversial issue is whether the NRA can verify *ex post* if the net cost claimed was the real net cost incurred and whether the NRA can make adjustments in case the two are different.

Financing of the USOs
Article 13(1) USD identifies two types of financing mechanisms that may be introduced:

- (a) **Compensation from public funds**
- (b) **Sharing mechanism** among providers of e-communications

Three conditions have to be met for setting a financing mechanism:

- A finding of an unfair burden by the NRA, based on a net cost calculation as per Art. 12 USD
- A request from a designated USP
- A decision of the NRA to launch the financing mechanism

There is no common understanding as to what is deemed to constitute an **unfair burden**. In most cases, the NRA has discretion to decide. Elements considered in the analysis relate to **market conditions** and **degree of competition in the market**.

An overwhelming number of answers revealed a preference for the **sharing mechanisms**, based on contribution by e-communications providers in proportion to turnover (exemptions possible under certain threshold). In 27 countries this is the exclusive option, in 2 countries it may be used in alternation with public funds and only 3 countries use exclusively public funding.

National plans for stimulating broadband within BEREC countries

Second part of the document deals with different interventions or strategies at national level aimed at encouraging the roll-out of the broadband technology and the increase of the broadband usage

Strategies to bring broadband to all - availability

Public interventions or strategies being considered to bring broadband to all

Several countries have an official goal of bringing broadband to all while others envisage an extension of broadband services, though not necessarily with the goal of 100% coverage. However, only a minority says this goal is to be achieved with an extension of USO and there are only 2 countries that actually included broadband in the scope of the Universal Service.

Attempts to stimulate the availability of broadband to underserved areas

A majority of BEREC countries have strategies to improve the availability of broadband in underserved areas, although they vary in the funding mechanisms used. Funding for initiatives to make broadband available to underserved areas often comes from the **State**, through a combination of central and regional funding, but may include as well a **mix of public and private funding**. There are also cases where a **single operator** is enlisted to make broadband available in such regions.

Extending broadband infrastructure through industry

The extent to which industry is encouraged or mandated to develop broadband networks varies across Europe. Where industry is mandated to extend broadband infrastructure, it is with the support of **state funding**. In other countries, industry is encouraged to extend broadband infrastructure, **without any state funding**, instead relying on market based mechanisms.

Minimum acceptable quality of service

Only a minority of BEREC countries have defined a minimum acceptable quality of service for public interventions to develop broadband availability. However, local authorities' initiatives, when implying a private operator (designated to provide broadband access), can set out in the individual contracts the expected quality of service and speed, each with individual specifications.

Strategies to bring broadband to all – take-up (cont'd)

A number of BEREC countries have also put in place a number of **ICT/Computer literacy training schemes** to educate their citizens on how to use computers and also how to use Internet services. Increasingly governments are making their services available on-line in so-called **e-government websites** and are providing **e-services** to their citizens while some other countries

have or are considering putting into place public **Internet access points** in particular in schools, public libraries and health-centres/hospitals and **free WIFI access** in some municipalities.

PART II

The new framework

In the context of the revised regulatory framework, the new recital 5 of the Citizens' Rights Directive offers more flexibility to Member States seeking to define the minimum data rates of the connection. Limitation of the universal service requirement to a single narrowband network connection has been removed along with the references to a data rate of 56 Kbit/s. Data rates which are sufficient to permit functional internet access are to be defined by the Member States, "taking due account of specific circumstances in national markets, for instance the prevailing bandwidth used by the majority of subscribers in that Member State or technological feasibility". Flexibility is required to allow Member States to take measures where necessary to ensure that a data connection can offer functional internet access, "provided that these measures seek to minimize market distortion" – therefore, care should be taken as to their impact on competition. Reference to alternative financing of infrastructure rollout has been introduced: "Alternative financing of underlying network infrastructure, involving Community funding or national measures in accordance with Community law, may also be implemented."

Most BEREC countries are satisfied with the flexibility provided by the amended directive. The changes in the directive create a need in most countries to adapt the legal framework in one way or another. However in most BEREC countries it is not yet clear in what way the legal framework is going to be adjusted. The concept of functional internet access is strongly connected with the question of whether to include broadband in the scope of the universal service. Some countries have already extended the scope of the universal service to include broadband but most countries haven't.

Apart from the changes made to recital 5 of the directive there are other changes made in chapter II of the directive. For instance, the obligations in the directive with regard to disabled end-users are tightened up and more onerous.

Whether these changes in chapter II of the directive have any significant consequences for the legal framework in their country, 42 % of the BEREC countries that responded positively and 29% of the respondents do not yet know what the consequences will be or think that these changes will not have any significant consequences for the legal framework in their country

Fixed versus mobile

Looking at the European market, one can conclude that, in general, it is not yet possible to provide the universal service at any location. Only in the densely populated countries with a high coverage level of mobile network such a possibility exists. However, in a considerable part of the BEREC countries it is not yet possible to provide the universal service at any location. Although there is a

clear trend towards the usage of mobile voice telephony, it can be concluded that mobile voice telephony is still largely regarded as complementary to fixed mobile telephony in most BEREC countries.

Funding

Various funding systems/models are in place throughout the 25 BEREC countries that responded to this questionnaire. Over half of the respondents have indicated that a funding mechanism has been established for the USO. However, it is not clear from many of these responses whether the funding mechanism has been activated to date. Other responses indicate that either national or European legislation provides for a funding mechanism to be established but it is not clear whether a funding mechanism is actually in place at present in those countries.

Reevaluating the scope of the Universal Service

The majority of respondents to this question agreed that an evaluation of the scope of the USO within two (or three) years is enough in light of technological, economic and social developments with some countries pointing to the need to give sufficient time for thorough analysis and evaluation of the data.

Discussions should not be only on extending the USO but also on eliminating some of the services. The main elements discussed by respondents to this question were the obligations relating to the provision of public pay phones and the provision of telephone directory enquiry services and the printed telephone directory. However it is clear that the decision of excluding any element within the scope of the Universal Service should be left to each Member State to decide, taking national circumstances into account.

Vulnerable users

There continues to be a need to ensure that those users, who have disabilities, or low incomes, or are located in remote or geographically isolated regions, have access to affordable telecommunication services. The strategies needed to ensure this level of access and affordability for these users are best addressed at national level. Different approaches are currently taken by different Member States to ensure that such access to, and usability of, electronic communication services for these users is comparable to the levels enjoyed by the majority of users.

The majority of BEREC countries currently use obligations based on the 2002 Universal Service Directive as the current mechanism to achieve this objective. The obligations are likely to be reviewed at national level in the light of the application of the revised provisions in May 2011.

Universal Service – Harmonisation vs Flexibility

For most BEREC countries the aim of universal service should be to allow flexibility taking into account a common minimum set of standards. In other words, flexibility should be afforded to Member States to adapt the minimum standards on the basis of national circumstances. For instance, the disparities between countries are such that it does not appear to be possible to define a common procedure to achieve the target or a common schedule. There are economic and

geographic differences between the member states as well as between citizens' demands of the respective member states. Also, at this moment, a harmonized approach might result in failure of implementation or in the artificial limitation to market development because targets might be set too high or too low compared to the financial resources available.

Universal Service and Broadband

In its documents the European Commission establishes as a basis for defining broadband a downstream capacity equal to or higher than 144 Kbit/s. Based on the increasing number of the internet connections and the development of the access technologies which allow for high rates of data transfer, the available content diversified and required a considerable level of bandwidth.

Of the 25 answers received to the questionnaire, 14 NRAs consider that flexibility should be left to the member states in establishing the speed that would define a broadband connection and no amendment should be made to the directive in order to indicate a particular speed or range of speeds that would be taken to represent "broadband" or an updated notion of functional internet access. The main arguments in favour of this opinion were the different degrees of market development and the general economic and geographic differences between the member states as well as between the demands of citizens of the respective member states.

There seems to be a wide consensus among NRAs in relation to the use of alternative measures in order to ensure the development of broadband. These measures are favored both by the most NRAs which support the inclusion of broadband in the scope of the Universal Service and the ones which are against such a measure. Among these measures are: the use of structural funds, regional open access network scheme, stimulation measures and public private partnerships.

No common opinion though, was given by the responding BEREC countries on what is the impact of introducing broadband in the scope of universal service on competition, the single market, competitiveness, investment, innovation, employment and the environment.

On one hand, the Universal Service would have a positive impact on competition especially because the increased number of broadband users who can generate more demand for products and services. Also, connecting everybody would create ubiquitous on-line communities. Consumers increased welfare involves improving access public services, entertainments mediums, political, democratic, educational and cultural resources.

There are also opinions which estimate that such a measure would not have a significant impact on either competition or end users welfare, mostly because in the respective countries there is almost 100% coverage with such services.

On the negative side, introducing broadband in the Universal Service will affect competition because the designated undertaking might artificially strengthen its position in the electronic communication market or companies that are today participating voluntarily in the infrastructure development would want to abandon it in the context of a universal service extension.

5 NRAs indicated that impact would have to be evaluated depending on various factors:

- **market dynamics** – only if markets fail to deliver universal broadband access, and in the absence or failure of other policy tools or levers such as state investment in broadband roll-out, introduction of a universal service obligation concerning broadband would generate a positive impact on competition and consumers welfare;
- **criteria for determining the relevant geographic areas and groups of people** – if the areas where to deploy broadband services as part of USO are correctly targeted and only those who need help are subject to special tariffs and conditions, the introduction of broadband in the scope of the universal service would have a minimum impact on competition;
- **funding method** – depending on the details the funding mechanism it could have serious effects on competition;
- **enforcement principles** – public procurement could be a less market distorting option than an obligation generated by the designation of the universal service provider.

Four scenarios are envisaged for the implementation of a "broadband for all" policy that are balancing the need to have a harmonised European approach in respect of universal service and the flexibility needed to take into account different levels of development in the national markets:

a. Include broadband in the scope of universal service by indicating in the relevant EU Directive a particular speed/range of speeds that should become common definition at EU level;
b. Trigger the inclusion of broadband in the scope of universal service by a "sunrise clause" included in the relevant EU Directive, by which broadband (again defined as a particular speed/range of speeds common at EU level) should be included only when its level of development in the national market has become such as no more than a minority of citizens are excluded and the net cost is not a disproportionate burden;
c. Let each Member State decide whether broadband (and which particular speed/range of speeds) should be included in the scope of universal service by allowing them full flexibility on the data speeds guaranteed to their citizens (this is the arrangement under the current Citizens' Rights Directive);
d. Do not include broadband in the scope of the universal service.

According to the responses the NRAs gave to the questionnaire, 15 BEREC countries chose the option c, based on the fact that it allows for the highest degree of flexibility in setting the scene for the rollout of broadband as part of the Universal Service.

4 NRAs expressed their preference for a more harmonized approach in implementing the broadband through Universal Service choosing option a (2 NRAs) and option b scenario (2 NRAs).

Only 2 NRAs were in favor of option d which excludes entirely the concept of broadband from the Universal Service, while 1 other NRA had no preference between options c and d, nominating both as possible solutions.

CURRENT STATUS OF THE UNIVERSAL SERVICE SYSTEM IN BEREC COUNTRIES

A) INTRODUCTION - Framework provisions and fundamental principles

The framework provisions for the designation of the universal service providers (USPs) are contained in Article 3 and Article 8 of the Universal Service Directive (USD).

Article 3 requires Member States to ensure that the services included in the scope of the universal service are made available at the quality specified to all end-users in their territory, independently of geographical location, and, in the light of specific national conditions, at an affordable price (Article 3(1) USD).

To that end, Member States must define an approach for implementing the universal service at national level. In this endeavour, they are bound to observe a series of rules and principles prescribed by Article 3(2) USD:

First, they have to determine *"**the most efficient and appropriate approach** for ensuring the implementation of universal service"*. This is a broad reference which may be taken to encompass all possible conceptual activities, processes and procedures involved in the implementation of the USD provisions at the national level. It could include the following: definition of a national universal service policy and strategy; procedures, terms and conditions for the designation of universal service providers; terms and conditions for the fulfilment of the universal service obligations; costing and financing mechanisms, etc.

Second, Member States have to respect *„the principles of **objectivity**, **transparency**, **non-discrimination** and **proportionality***". This means that the implementation approach must be defined in fair and transparent terms towards both end-users (as beneficiaries of universal service) and providers (as actual or potential providers of universal service, but also as actual or virtual contributors to the financing of universal service).

Third, Member States have to try to *"**minimise market distortions**, in particular the provision of services at prices or subject to other terms and conditions which depart from normal commercial conditions, **whilst safeguarding the public interest***". In other words, the provision of universal service must not unduly impede competition in the market, i.e. beyond what is necessary to ensure its availability and affordability to end-users. This interpretation is in line with the commitments undertaken by the Community and its Member States on the regulatory framework of telecommunications networks and services in the context of the World Trade Organisation (WTO) agreement on basic telecommunications. In this regard, Recital (3) USD recalls that universal service obligations defined by the WTO members *"will not be regarded as anti-competitive per se, provided they are administered in a transparent, non-discriminatory and competitively neutral manner and are not more burdensome than necessary for the kind of universal service defined by the member"*. In particular, the compensation of the undertakings designated to provide such services *"need not result in any distortion of competition, provided that designated undertakings are compensated for the specific net cost involved and provided that the net cost burden is recovered in a competitively neutral way"* (Recital (4) USD).

According to the Article 8(1) USD, Member States may designate one or more undertakings to guarantee the provision of universal service as identified in Articles 4, 5, 6 and 7 and, where applicable, Article 9(2) so that the whole of the national territory can be covered.

On the basis of the articles referred in the preceding paragraph, the services which are included in the scope of the universal service (or the elements of the USO) can be identified as follows:

(a) provision of access at a fixed location (connection[1] at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location) (Article 4 USD);
(b) directory enquiry services (DES) and directories of subscribers (DS) (Article 5 USD);
(c) public pay telephones (Article 6 USD); and
(d) special measures for disabled end-users – which Member States shall take, as appropriate, to ensure access to and affordability of publicly available telephone services, including access to emergency services, DES and DS above equivalent to that enjoyed by other end-users (Article 7(1) USD).

In addition to the services listed above, Member States *may* take the following measures, which could also be considered as falling within the scope of the universal service:

- specific measures to ensure that disabled end-users can also take advantage of the choice of undertakings and service providers available to the majority of end-users (Article 7(2) USD);
- provision of tariff options or packages to consumers which depart from those provided under normal commercial conditions (Article 9(2) USD)[2]; and
- provision of specific facilities and services set out in Annex I, Part A USD allowing subscribers to monitor and control expenditure and avoid unwarranted disconnection of service – which must be offered by USPs entrusted with USOs under Articles 4, 5, 6, 7 and 9(2) USD.

Article 8(1) USD allows Member States to split the provision of USO among different USPs, both geographically and functionally. To that extent, different undertakings or sets of undertakings may be designated:

- to provide different elements of universal service and/or
- to cover different parts of the national territory.

[1] The connection provided shall be capable of allowing end-users to make and receive local, national and international telephone calls, facsimile communications and data communications, at data rates that are sufficient to permit functional Internet access, taking into account prevailing technologies used by the majority of subscribers and technological feasibility (Article 4(2) USD).

[2] In addition, but outside the scope of the universal service, i.e. besides any provision for designated undertakings to provide special tariff options or to comply with price caps or geographical averaging or other similar schemes, the USD offers the possibility to the Member States to ensure that support is provided to consumers identified as having low incomes or special social needs (Article 9(3) USD). Measures that could be taken on such a basis could include granting direct financial support to end-users belonging to the abovementioned categories (e.g. subsidised vouchers).

In addition to the framework rules and principles applicable to the general approach for implementing the universal service that Member States must define at the national level, Article 8(2) USD lays down more specific principles that apply to the designation mechanism.

Thus, this mechanism must be *"**efficient**, **objective**, **transparent** and **non-discriminatory**, whereby **no undertaking is a priori excluded** from being designated"*[3]. Recital (14) USD recognises, in line with the subsidiarity principle, the discretion that Member States have to decide which undertakings shall be assigned universal service obligations, but it requires that this is done *"on the basis of **objective criteria**"* and *"where appropriate taking into account the ability and the willingness of undertakings to accept all or part of the universal service obligations"*.

Moreover, the designation mechanism should *"ensure that universal service is provided in a **cost-effective manner***" and may be used *"as a means of determining the net cost of the universal service obligation*" in accordance with Article 12 USD. Recital (14) USD explains the importance of the cost-effectiveness principle, which is meant to ensure that users generally pay prices that correspond to efficient cost provision. The development of greater competition and choice provide more possibilities for all or part of the universal service obligations to be provided by undertakings other than those with significant market power. Therefore, universal service obligations could in some cases be allocated to operators demonstrating the most cost-effective means of delivering access and services, including by competitive or comparative selection procedures.

[3] The meaning of these terms has been explained in the report *"Universal Service Designation - A report on designation mechanisms for universal service providers in different ERG countries and evaluation of the impact of divergences on the internal market"*, compiled by ERG members and approved in November 2003 by ERG, as follows:

- "**Efficient** – This may be interpreted as meaning that the mechanism must offer appropriate methods to assign USOs to an operator(s) who is best able to fulfil those tasks at the least cost for the designation period and at the quality specified in the designation instrument (be it by law/ordinance, tender or other means).
- **Objective** – An objective evaluation of the criteria used for choosing the USP should ensure that – where a choice among several candidates is possible – the candidate best able to meet the obligations is selected. In addition, the integrity of the selection process is paramount given its relationship with how obligations are to be fulfilled and the question of funding a net cost of provision (and unfair burden), if any.
- **Transparent –** A designation mechanism which is transparent for all market participants (competing operators as well as customers) should ensure that perspective USPs can evaluate whether they wish to enter any designation process and, after its completion, provide adequate reasoning behind the decision to award the USO to a particular operator(s). A transparent designation process may contribute to a higher acceptance by operators of any USO funding obligations that may arise (subject to evaluation of net cost/unfair burden).
- **Non-Discriminatory** – It is clear from the USD that only a non-discriminatory designation process is qualified for complying with the criteria set out in Art. 8(2). Therefore, the designation mechanism must ensure that – based on the rules setting the requirements of assigning USOs to a certain provider(s) – no provider which is entitled to participate in a designation process is excluded by virtue of the chosen designation mechanism (this does not mean that a prospective operator can not be ruled out by virtue of not meeting criteria necessary for the fulfilment of the USO). The importance of this criterion is underlined by the explicit reference in the USD to the fact that no undertaking may a priori be excluded from being designated." (see p. 2-3)

It is interesting to note that in some cases having separate designation procedures for certain elements of the USO, which might result in designating different USPs for those elements (particularly in the case of competitive selection procedures), is an application of the principle of no *a priori* exclusion which inherently limits the application of the principle of cost-effectiveness. For instance, if different undertakings are designated as USPs for the provision of the comprehensive directory of subscribers and respectively for the directory enquiry service, they might need to duplicate the effort of setting up the subscriber database, absent a framework provision requiring shared access to this resource.

B) CURRENT STATUS OF THE UNIVERSAL SERVICE SYSTEM

1. The universal service obligation

27 NRAs responded to whether is there a Universal Service Obligation (USO) in their country, with the majority stating that there is a universal service obligation. Germany was the only country that responded stating that there is no universal service obligation. However Deutsche Telekom provides a service to all geographical areas of Germany without any special obligation. In Sweden there is a universal service obligation but there is no designated universal service provider.

2. Services provided as part of the universal service

BEREC countries	**Services**
Austria	Access to a publicly available telephone service at a fixed location where also a facsimile equipment and a modem can be operated, including the transmission in terms of telecommunications of data at data rates that are sufficient to obtain functional Internet access
	Provision of an inter-operation directory inquiry service
	The preparation of an inter-operator subscriber directory of subscribers of publicly available telephone services as well as access to this directory
	Public pay telephones on a nationwide basis
Belgium	Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location;
	A comprehensive directory which is available to end-users on paper and electronically;
	A comprehensive telephone directory enquiry service which is available to all end-users, including users of public pay telephones;
	Public pay telephones
Bulgaria	Provision of public pay telephones, of specified quality, which ensure, inter alia, the possibility to make emergency calls, free of charge, to national numbers and to the single European emergency call number “112”
	Provision of a telephone directory of the numbers of all subscribers to public telephone services
	Provision of a telephone inquiry services available to all end-users, including users of public pay telephones
	Provision of emergency calls, free of charge, to national numbers and to the single European emergency call number “112”
	Provision of access to public telephone services, including the emergency call

	services, telephone directory and inquiry services for disabled people, similar to those enjoyed by other end-users
Cyprus	Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location, provided that the relevant request is considered to be reasonable.
	Directory enquiry services, and directories in a printed or/and an electronic form.
	Public pay telephones.
	Special measures for disabled or socially disabled end users.
	Operator assistance services.
	Free access to emergency services, using the call number "112" or other emergency numbers
Czech Republic	Connection at a fixed point to the public telephone network
	Access at a fixed point to the publicly available telephone service
	Regular issuance of telephone directories containing the numbers of the subscribers to the publicly available telephone service, and end-users' access to those directories
	Telephone directory enquiry service, available to end-users, to provide information about the telephone numbers of the subscribers to the publicly available telephone service
	Public pay telephone services – currently imposed
	Access for disabled persons to the publicly available telephone service at the same level of quality as the access enjoyed by all other end-users, based on, in particular, specially provided terminal equipment – currently imposed
	Additional services to those referred to above (ie Connection at a fixed point to the PTN and Access at a fixed point to the publicly available telephone service); such additional services being: 1. phased payment of the price for the establishment of connection to the public telephone network for consumers; 2. free selective barring of outgoing calls for the subscribers; and 3. free itemised billing of the price for consumers - Imposition of obligation expired on July 29, 2009
Denmark	Basic phone services, ISDN-services or electronic communication services with minimum the same functions as well as a text phone service to a certain group of disabled end-users.
	Leased lines or electronic communication services with minimum the same functions.
	A directory enquiry service for a certain group of disables end-users, a national enquiry service and a full directory.
	Radio-based maritime safety- and distress services.
Finland	Access to public communications network, which is capable of allowing end-users to make emergency calls, make and receive national and international calls and use other usual telephone services. The US obligation is technologically neutral. The services may be fixed, mobile or based on VoIP.
	The US Provider must also offer end-users an appropriate internet access. A recent amendment in the national legislation provides a 1 Mbit/s broadband access.
France	Provision of a quality telephone service to everyone at an affordable price.
	Free routing of emergency calls,
	Provision of a directory enquiries service and a subscriber directory in printed and electronic form
	Provision of public payphones throughout the country.
	Specific technical and tariff conditions for people who have difficulty accessing the telephone service as a result of physical handicap or a low income.
Germany	Connection at a fixed location to a public telephone network and access to publicly available telephone services at a fixed location including – subject to technical feasibility – the features call waiting, call forwarding and call hold/broker's call;
	The availability of at least one printed public directory of subscribers approved by the Regulatory Authority, which satisfies general requirements and is updated on a

	regular basis, once a year at least;
	Provision of public pay telephones in general locations accessible to everyone at all times; in accordance with general demand;
	Te possibility to make emergency calls from all public pay telephones free of charge.
	The availability, to users of public pay telephones as well, of at least one comprehensive public telephone directory enquiry service;
Greece	Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location, provided that the relevant request is considered to be reasonable.
	Directory enquiry services, and directories in a printed or/and an electronic form.
	Public pay telephones.
	Free access to emergency services, using the call number "112" (obligation to all operators not only to US provider)
Hungary	Connection to a telephone network at a place designated according to the residence, registered office or business location of the user at a fixed subscriber access point which permits the originating and receiving of national and international calls, fax messages and data, access to emergency services, as well as internet access, at a rate of at least 9600 bit/s and maximum 10-4 bit error rate;
	Operation of one public pay telephone per one thousand inhabitants or in settlements with a population of less than one thousand, as well as at least 3 per cent of all compulsory public telephone stations must be fit to accommodate the hearing-impaired and physically impaired in movement persons;
	Comprehensive directory inquiry services;
	Access to directory printed and/or electronicaly
Iceland	Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location.
	Functional internet access with a capacity of 128 Kb/s is defined by law and shall be available to all citizens.
	A comprehensive directory shall be available to end-users, both in a printed or electronic version. The printed version is updated once a year and the electronic version is updated on a regular basis.
	A comprehensive telephone directory enquiry service is available to all end-users, including users of public pay telephones.
	Public pay telephones must be provided that meet the reasonable needs of end-users in terms of the geographical coverage, the number of telephones, the accessibility of such telephones to disabled users and the quality of services.
	Access to emergency telephone numbers “112” is possible free of charge without the need for any form of payment. Operation of Emergency call center is considered to be a part of USO (access to emergency service 112).
Ireland	Provision of access at a fixed location,
	Provision of printed phone directories,
	Provision of public payphones,
	Provision of services to disabled users
	Measures to help consumers control spending and keep costs affordable
Italy	Provision of a quality telephone service to everyone at an affordable price.
	Free routing of emergency calls
	Provision of directories of all subscribers.
	Provision of public payphones throughout the country.
	The universal service sets out specific technical and tariff conditions for people who have difficulty accessing the telephone service as a result of physical handicap or a low income
Lithuania	Public telephone communications services at a fixed location;
	Public telephone communications services by payphones
	Provision of information on subscribers of public telephone communications services;

	Provision of possibility to use universal services to disabled users.
Malta	Provision of access at a fixed Location;
	Emergency Services;
	Directory Enquiry services and directories;
	Public Pay Telephones;
	Special Measures for Disabled Users and those with Special Needs
Netherlands	Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location (including functional internet access). The end-user has, under the USO, the choice between two telephone service subscriptions at a fixed location; a service with reasonable tariffs and a service with a tariff that not accedes the tariffs laid down by ministerial regulation;
	The availability of telephone directories listing all subscribers to a voice telephone (both electronic and a paper version);
	The availability of a subscriber information service.
Norway	Access to nationwide public telephone service and digital electronic communication network
	Public pay phones;
	Directory enquiry service;
	Telephone directory;
	Special services to disabled and other end users with special needs;
	Overview over and control of end users' expenditure
Poland	Connection of a single network termination point at a subscriber's main location, excluding an integrated services digital network, hereinafter called an "ISDN
	Maintaining the subscriber line with a network termination point referred to above ready for providing telecommunications services;
	National and international telephone calls, including calls to mobile networks, encompassing also fax transmission and data transmission, including calls to the Internet;
	The provision of directory enquiry services and directories;
	The provision of facilities for disabled persons;
	The provision of telephone services using public pay phones.
Portugal	Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location; Universal Service lines should enable end-users to make and receive local, national and international telephone calls, facsimile communications and data communications, at data rates that are sufficient to permit functional Internet access, taking into account prevailing technologies used by the majority of subscribers and technological feasibility
	Provision of a comprehensive directory and of a comprehensive telephone directory enquiry service;
	Adequate provision of public pay telephones.
	Make available specific provisions in order to ensure that end-users with disabilities enjoy access that is equivalent to that enjoyed by other end-users, to publicly available telephone services, including access to emergency services, directory enquiry services and directories. The specific provisions may, in particular, consist of: a) The provision of telephones and/or public text telephones or equivalent measures for people who are deaf or who have speech-impairment; b) The provision of services such as directory enquiry services or equivalent measures free of charge for blind or visually impaired people; c) The provision of itemised bills in alternative formats upon the request of a blind or visually impaired person.
Romania	Provision of access to the public telephone network, at a fixed location;
	Directory enquiry services and making available of directories of subscribers;
	Access to public pay telephones.
Slovakia	Provision of public telephone services at a fixed location of access to the network, including facsimile transmission of information and transmission of data at transmission rates allowing functional Internet access taking into account prevailing

	technologies used by the majority of users and technological feasibility,
	Provision of at least one comprehensive telephone directory, whether printed or in electronic form, or in both forms according to the selection of subscriber, and its regular update at least once a year; the comprehensive telephone directory contains data on all published subscribers of public telephone services,
	Provision of reasonable availability of public pay telephones,
	Provision of free of charge and uninterrupted access to emergency call numbers, including the single European emergency call number "112", including access from public pay telephones without using any means of payment,
	Provision and operation of at least one comprehensive telephone directory inquiry service,
	Ensuring of access to publicly available telephone services for disabled users and appropriate availability of public pay telephones with barrier-free access and special equipment.
Slovenia	Connection to the public telephone network and access to publicly available telephone services at a fixed location upon a reasonable request of the user, enabling users to make and receive local, national and international calls, facsimile communications and data communications at data rates that are sufficient to permit functional Internet access;
	Ensuring and providing access to a comprehensive directory and comprehensive services for providing information on subscribers (hereinafter: comprehensive directory enquiry service) in accordance with Article 12 hereof;
	Ensuring public pay telephones from which it is possible free of charge and without having to use any means of payment to make emergency calls, so as to meet all reasonable needs of end users in terms of geographic coverage, number of public pay telephones, accessibility for disabled users and quality of services;
	Ensuring measures for disabled end users defined by the Government in agreement with the minister responsible for social affairs (hereinafter: minister responsible for social affairs) that enable disabled end users the same access to and use of publicly available telephone services, including access to emergency services, directories and directory enquiry services, as other end users.
Spain	The provision of connection to the public telephone network from a fixed location, as well as the access to Public switched telephone network (PSTN). The connection should offer to the end user the possibility to make and receive telephone calls, fax and data communications at sufficient velocity to access in a functional way to Internet. Nevertheless, the connection should allow broadband communications, in the terms defined by the regulation.
	To provide PSTN subscribers with a comprehensive directory which is available to end-users, whether printed or electronic, or both, which is updated on a regular basis, and at least once a year.
	To put at the disposal to the PSTN end users, including public payphones users, of a telephone enquiry service on the numbers of users gathered in the telephone guides.
	To guarantee a sufficient offer of public pay phones throughout the country, that satisfies reasonably the needs of the end users, regarding geographical cover, numbers of devices, accessibility of these telephones by users with disability and quality of the services, as well as the possibility to make free emergency calls from the public pay phones, though the unique number of emergency 112 and other Spanish numbers of emergency.
	Likewise, in the terms to be defined in the regulation for the universal service, a sufficient offer of broadband Internet access terminals should be also guarantee.
	To guarantee the access to the PSTN from a fixed location, as well as the rest of US elements to end users with disability, in the same conditions offered to the rest of end users.
	To offer options or bundled tariffs, different from the applied in normal commercial conditions, to people with special social needs, in order to allow them the access to the PSTN from a fixed location or to make use of this service.

	The application of special pricing options or limitations of prices, common tariffs, the application of the same conditions no matter the geographical situation on the user or other similar system, according to clear public and not discriminatory conditions,
Sweden	Access to public telecommunication networks
	Access to public telecommunication services (phone, fax and basic Internet access);
	Creation of a subscriber's directory;
	Public pay phones;
	Access to a customer information service (i.e. provide info about subscribers);
	Provide access for people with disability to services according to the same extent and on equivalent terms as for other end-users and satisfy the needs of people with disability for such special services
Switzerland	Connection at a fixed location to one telephone line including one number and one entry in the directory (for example PSTN);
	Connection at a fixed location to two telephone lines including two numbers and 2 entries in the directory (for example ISDN);
	Internet broadband access at a speed of minimum 600 Kbits/s (download) and 100 Kbits/s (upload), 1 telephone line, and 1 entry in the directory included. Broadband speed can be reduced for economical and technical reasons;
	Access to publicly available telephone services and fax; Data communication;
	Sufficient number of public pay telephones;
	Special services for disabled users
UK	Facilitate calls to the emergency services.
	Uniform pricing – services within the scope of USO must be charged at the same price throughout the UK.
	Meet reasonable requests for connection – USPs must provide a connection upon request unless the costs of doing so would be excessive.
	Facilitate functional internet access – a line must be capable of supporting a dial up modem (based on a benchmark connection figure of 28.8 kbit/s).
	Provide a social tariff that departs from normal commercial conditions.
	Reasonable access to public payphones –USPs face restrictions on the removal of loss making payphones where local communities demonstrate local need[4].
	Provide directory information & a directory enquiries service – the information should be updated every year and a service should be available to those using public payphones.
	Allow consumers to monitor and control expenditure – e.g. itemised billing.
	Ensure equivalent access for those with a disability – special measures must be taken e.g. the provision of a text relay service.The UK also has a general condition to enforce this, which ensures that disabled users are able to access free DQ services, including access to emergency numbers and operator assistance, provide special billing arrangements for users dependent on telephone service, offer contracts and billing in large print, Braille or other format useable by vision-impaired users.

3. Services listed not included in the USO

The following services were listed and respondents were asked whether any of these services were not included in the USO and, if so, why.

[4] In addition to Universal Service Obligations, the UK also has a number of licence conditions (also known as "General Conditions of Entitlement"), which apply to all providers of communications services & networks (not just USPs)

- **Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location (including functional internet access). (Art 4)**
- **A comprehensive directory which is available to end-users, whether printed or electronic, or both, which is updated on a regular basis, and at least once a year. (Art 5)**
- **A comprehensive telephone directory enquiry service which is available to all end-users, including users of public pay telephones. (Art 5)**
- **Public pay telephones that meet the reasonable needs of end-users in terms of the geographical coverage, the number of telephones, the accessibility of such telephones to disabled users and the quality of services. (Art 6)**

The vast majority of responses to this question stated that all of the services listed above were included in the USO. However, the following BEREC countries outlined the services which are not included in the USO:

Austria:

- A comprehensive telephone directory enquiry service which is available to all end-users, including users of public pay telephones. (Art 5)

Czech Republic:

- Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location (including functional internet access) (Art. 4) - not imposed currently. Reason: There is 98 % of geographical coverage and 99 % of population coverage by signal of public mobile telephone networks.
- A comprehensive directory which is available to end-users, whether printed or electronic, or both, which is updated on a regular basis, and at least once a year (Art 5) and a comprehensive telephone directory enquiry service which is available to all end-users, including users of public pay telephones (Art 5) are included in the US obligations. However, they are not imposed currently. Reason: Currently it is available in an alternative of printed version of directory issued by Mediatel company. For end users there are also available alternatives of electronic directories. There are commercially based alternatives to telephone directory enquiry service provided in the mode of US obligation.

Finland:

- A comprehensive directory which is available to end-users, whether printed or electronic, or both, which is updated on a regular basis, and at least once a year. (Art 5) is not included - Reason: All telecommunications operators have an obligation to ensure that users' contact information is collected and published in a generally available, comprehensive and reasonably priced telephone directory that is updated at least once a year. The telephone directory may be in printed or electronic form.
- Public pay telephones that meet the reasonable needs of end-users in terms of the geographical coverage, the number of telephones, the accessibility of such telephones to disabled users and the quality of services. (Art 6) is not included.

Ireland:

- A comprehensive telephone directory enquiry service which is available to all end-users, including users of public pay telephones. (Art 5) The directory enquiry service *is not included* in the scope of the USO in Ireland. It was decided that there was sufficient competition in this market, and the existence of the printed phone directory, to negate the need to include a directory enquiry service as part of the USO;
- Public pay telephones that meet the reasonable needs of end-users in terms of the geographical coverage, the number of telephones, the accessibility of such telephones to disabled users and the quality of services. (Art 6). In relation to the requirement of the accessibility of such payphones to disabled users it was considered amongst other things that the case for the replacement of payphone kiosks in order to make them accessible to all disabled persons was not coupled with evidence of demand for the service. It was noted at the time that acoustic coupling, different coloured keypads, user volume control were being provided at the time. In addition it appeared that such a programme would likely be prohibitively expensive in the absence of sufficient demand. Local authority approval would also be necessary.

Netherlands:

- According to article 6 paragraph 2 of the Directive, there is no longer an obligation to guarantee the availability of sufficient public telephone booths. The reason for this is the fact that mobile phones have taken over the function of public telephone booths.

Switzerland:

- A comprehensive directory;
- A comprehensive telephone directory enquiry service. These services are no longer included in the USO because the market provides them appropriately. However, an entry in a public phone directory is included in the USO.

4. Extensions to the scope of the USO as provided for by Article 32 of Directive 2002/22

Extensions to the scope of the USO are outlined below:

Belgium - Specific Internet access for schools, public libraries and hospitals at an affordable price

Denmark - Distress and safety communications via public radio-based maritime distress and safety services covering Denmark and Greenland, ISDN-services and leased lines.

France - A number of compulsory services have to be provided by the provider of the first component of universal services (telephone services), they are listed hereafter: - Access to the ISDN; - Leased lines; - Packet data switching (X25); - Advanced vocal telephony services

Spain - The obligation of the operators of public networks of electronic communications to comply with the conditions of broadcasting determined channels and radio programs services and television to the public, or of coverage and quality. - The obligation to offer the service to prove properly the content of the message or of its remission or reception, different from the system entrusted to the Sociedad Estatal de Correos y Telégrafos, S.A.

5. Withdrawal of elements from the USO

A number of BEREC countries have already withdrawn some of the elements of the USO. The obligation to provide pay telephones and the directory enquiry services have been withdrawn as follows:

Provision of public pay telephones is no longer part of the USO in the following countries:-

Austria
Netherlands
Denmark

Provision of a telephone directory enquiry service is no longer part of the USO in the following countries:-

Ireland
Italy
Switzerland

Provision of a printed telephone directory is no longer part of the USO in the following countries:-

Norway – from 2010
Spain – under consideration
Denmark

Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location, Provision of a printed telephone directory and the Provision of a telephone directory enquiry service. In the Czech Republic the above elements are not currently imposed. However, the NRA is monitoring the effect of the situation on the market and is free to impose any of these obligations if considered necessary in the future**.**

C) CURRENT LEGAL FRAMEWORK OF THE UNIVERSAL SERVICE OBLIGATIONS

1. Regulation of the Universal Services

In all the 27 BEREC countries that responded on the questionnaire, the Universal Service obligation is provided by law. Specific elements of the Universal Service(s) and the rules concerning quality and affordability of the Universal Service(s) are mostly laid down in decrees or NRA decisions. This is explicable because the rules and parameters concerning quality and affordability can change, so it has to be possible to adjust them with relative ease. However, in some cases they are established by law.

Between countries there is a divide with respect to the way the undertaking, that has to provide the Universal Service(s) is appointed. In some countries (e.g. Bulgaria, Iceland, Sweden and Switzerland) the undertaking is appointed by NRA decision, in other countries (e.g. Spain, Portugal and The Netherlands) the undertaking is appointed by government decree. In Ireland the undertaking which has to provide the Universal Services is appointed by the NRA, after prior consent with the Minister of communication (Minster for Communications Energy and Natural Resources).

In Germany and in Sweden there is no undertaking designated to provide the Universal Service(s). In Germany no Universal Service regulation exists at the moment. In Sweden this has not always been the case. Until 2004 Telia Sonera was required to provide phone service and other US obligations to the whole country. As the Telia Sonera universal service obligations expired, in 2005 the Swedish NRA (PTS) decided to put Telia Sonera under a new USO-scheme, and ordered the company to meet the need for phone service in Sweden, at a reasonable price. Telia Sonera appealed against the decision and won. Therefore, since 2007, there is no operator designated for USO.

2. Performance targets

Most of the countries have set out performance targets regarding the universal services. In many cases performance targets as mentioned in annex III of Directive 2022/22 are set out by NRA decisions or decrees. In some cases the NRAs introduce extra performance targets for the universal service providers whether by tender documentation or by designation decisions.

In other countries (e.g. Bulgaria, Germany, Malta, The Netherlands, Norway and the UK[5]), there are no specific performance targets regarding the universal services, however most of these countries do have rules about the publication of certain quality targets.

There are variations in the time in which undertakings are obliged to provide an initial phone

[5] In the UK there is the exception of Public Call Boxes, for which there are targets to ensure at least 70% have cash payment facilities

connection at a fixed location (see below). Some have a fixed term, and in others a reasonable term is applied (e.g. The Netherlands and Finland).

BEREC **country**	**Max. Initial connection time**
Belgium	At least 95% of the connection agreements for which another deadline was not agreed on with the subscriber must be fulfilled within 5 working days In 95% of the cases the subscriber must obtain a date for the connection delivery at the latest on the first day following the registration of his request
Cyprus	95% within 15 days or order receipt 99% within 18 days or order receipt 98% within the period agreed with the subscriber.
Denmark	For basic phone lines: 95 % within 13 days 99 % within 16 days 99 % within the period agreed with the subscriber
France	Maximum 8 days
Greece	1 week for the 80% of the applications 4 weeks for the 95% of the applications 12 weeks for the 99% of the applications
Hungary	Maximum 30 days
Ireland	**In situ-connections:-** 80% within 24 hours of request, 99.8% within 2 weeks of request; 100% within 2 months of request. **All other connections:-** 80% within 2 weeks of request, 85% within 4 weeks of request, 90% within 8 weeks of request, 95% within 13 weeks of request, 100% within 26 weeks of request. **Agreed Date connections:-** 95% by agreed date
Iceland	18-34 days
Slovenia	Time for initial connection cannot exceed 7 days (when the deadline for the realization of the initial connection is not set in advance; must apply to 95% of initial connections in the course of one year) or cannot exceed the deadline set (when the deadline for the realization of the initial connection is set in advance; must apply to 97% of initial connections in the course of one year). In exceptional circumstances the time for initial connection cannot exceed 30 days.
Spain	The deadline to satisfy the reasonable requests of initial connection to the network telephone fixed public is of 60 calendar days for 99 percent of the requests received. It can be authorized a greater deadline due to needs to obtain permissions, rights of occupation, etc
Sweden	3 months
Portugal	21 days in 95%, and 43 days in 99%

3. The quality of the Universal Service(s)

In the majority of the countries there is an obligation for the undertaking that has to provide the Universal Service(s) to report to the NRA about the quality of the universal Service(s) (article 11

of Directive 2022/22). Most NRAs publish these reports, or require that these reports are published by the undertaking on their website or in a newspaper. In Malta and Bulgaria the NRA may arrange, or require an undertaking to which this regulation refers to arrange, an independent audit or review at the expense of the undertaking concerned, of the performance data supplied by that undertaking to ensure the accuracy and compatibility of that data with universal service obligations.

4. Affordability of tariffs

There is a great variety in measures taken to ensure the affordability of the US. Some countries did not implement specific measures because they do not have any USO regulation at all (e.g. Germany) or because, although having the authority, there has been no reason to set tariffs yet. (e.g. Iceland and Norway). Other countries have implemented (a mix of) one or more of the following measures:

• Regulated retail tariffs: price cap (e.g. Belgium, Switzerland, Portugal, Cyprus, Greece, Hungary, Bulgaria, France);

• Uniform pricing: possible tariff differences only based on objective, transparent and non-discriminatory criteria including geographical averaged tariffs (e.g. Ireland, Malta, Slovakia, Slovenia, Greece);

• Social tariffs for special groups (low income, special social needs, disabled or retired): general discount or reduction consisting of a certain amount or percentage on the standard tariffs (e.g. France, Belgium, Denmark, Italy, Portugal, Czech Republic, Cyprus, Greece, Slovenia, Bulgaria);

• Reasonable cost-based tariffs or "accessibility-only subscription" tariffs for non frequent callers (e.g. The Netherlands);

Sometimes tariffs are laid down in a law or decree by the government or Ministry (e.g. Czech Republic), in other cases it is the NRA that may determine tariffs in her decisions (e.g. Romania, Poland, Portugal).

• Itemized billing in accordance with Article 91 of this Act; free-of-charge selective call barring for outgoing calls, to prevent certain types of calls or calls to certain types of numbers; pre-payment system to pay for access to the public telephone network and the use of publicly available telephone services for consumers; phased payment of connection fees to the public telephone network. (e.g. Slovenia)

5. Enforcement of Universal Service Obligations

In general the NRA is the organization which has to enforce the Universal Service obligations. Mostly the NRA is also the one who can impose fines when an undertaking does not comply with Universal Services Obligations.

In Austria, the NRA can impose specific behavior to an US Provider. The Telecommunications Offices (subordinate to the National Telecommunications Authority) can impose fines.

In Finland the NRA may impose conditional fines and penalty fees, if an operator violates the regulatory obligations and fails to rectify its action within a reasonable time. The penalty fee however is determined by the Market Court upon the NRA's request. In Ireland the NRA may apply to the High Court for an order as may be appropriate by way of compliance with the obligation, requirement or direction. An application to the High Court may include an application

for an order to pay to the Regulator such amount, by way of financial penalty, as the Regulator may propose as appropriate in the light of non-compliance. In certain circumstances the Regulator may apply in summary manner to the High Court for an order compelling compliance.

In Poland the NRA may even impose a financial penalty on a manager of a telecommunications undertaking of up to 300 % of his/her monthly remuneration.

In Germany the NRA, may order such measures as are necessary to secure fulfillment of the obligations. As a measure a penalty not exceeding 500,000 euros may be set in accordance with the Administrative Enforcement Act. A reasonable time limit is to be set to allow the undertaking to comply with the measures.

The Swedish government has "subcontracted" the right to enforce the USO to the monitoring agency PTS. PTS has the option to impose fine and penal sum on an actor that is not willing to cope with USO decisions.

In Spain the appointed authorities to guarantee the compliance of the obligations of US are the Ministry of Industry, Tourism and Commerce as well as the NRA. The instruments applied to guarantee the compliance of the obligations are the imposition of sanctions and of corrective fines.

6. Other comments on the implementation of USO

In Belgium, all operators (incl. mobile operators) have to apply the social tariffs to their clients which meet the conditions legally laid down.

Denmark has the distress and safety communications via public radio-based maritime distress and safety services covering Denmark and Greenland, which is different from the US Directive. The rules on funding of losses are also thereby influenced by this.

D) DESIGNATION OF THE UNIVERSAL SERVICE PROVIDER(S)

Designation of universal service providers in practice

This section provides an overview of the USP(s) designation practice in the BEREC countries, covering the actual use of the possibility to designate multiple USP(s), the types of designation procedures employed in practice, the designation criteria applied, the duration and termination of designations, as well as the anticipated changes at the level of some member countries under the current USD provisions.

1. Single vs. multiple universal service provider(s)

1.1. Provision of different elements of the universal service

In 20 countries (representing 60% of the BEREC countries) all the elements of the universal service which have been imposed are provided by a single undertaking, the incumbent being designated in all cases as the universal service provider (USP). 8 countries organised separate procedures for the different elements of the USO, giving the opportunity of designating multiple USPs for the different services. In one country, all providers are designated by law to provide one of the elements of the USO (social tariffs). In 4 countries there is no universal service obligation imposed on any undertaking.

1.2. Provision of universal service in different areas of the national territory

25 BEREC countries decided to designate USPs for the whole national territory in respect of all USO elements and only 4 countries designated USPs for different geographical areas. Out of these 4 countries, however, 2 have designated USPs for the entire national territory in respect of the directory enquiry services.

No specific criteria for defining the different geographical areas could be identified. 2 of the BEREC countries were historically using several providers of publicly available telephone services for the different regions while the other 2 are freely defining the regions based on the universal service implementation needs, assessed at the level of each of the areas concerned, and the administrative-territorial system.

2. Designation procedures

The procedures followed so far for the designation of USPs in the BEREC countries may be divided into 3 broad categories:

1. Nomination without public consultation;
2. Nomination with public consultation;
3. Public tender.

According to the designation procedure which they have used, the 29 BEREC countries with designated USPs are distributed among these three categories in a fairly balanced manner.

Thus, 10 BEREC countries have used the **nomination without public consultation** as designation procedure for their USPs. In 8 of these countries, the nomination is done by law, most commonly by directly indicating the identity of the designated USP under a transitory provision, which ensures continuity of the designation from the previous regime until such time as a new designation is to be made following the procedure laid down in the law which is now in force. It should be noted, however, that in a number of cases there is no time limit for applying the new designation procedure, which leads in practice to the indefinite continuation of the current designations.

A particular case of designation by law, present in 2 BEREC countries, is where the law specifies that the provider with significant market power on the market for connection to public telephone network at a fixed location or the provider with the largest market share is designated as USP. Finally, in 2 countries the designation is made by conclusion of an agreement between the State (represented by the relevant Ministry) and the provider entrusted with the universal service mission, which in one case takes the particular form of a concession contract.

8 other BEREC countries have designated their USPs by **nomination with public consultation**. The typical case is where the entity in charge with the designation of the USP submits to public consultation its intention to appoint a given provider as USP together with its reasons for such a decision. An intermediate form between the two above processes, (3 countries), is the nomination of the USP after a public consultation procedure which included a call for expressions of interest from the (other) market players, but who ended up with only one or no such expression of interest being submitted. A public tender was organised where more than one expression of interest was received by the entity handling the procedure.

A form of **public tender** was used for the designation of USPs in a number of 8 BEREC countries. This procedure was organised either directly or following a public consultation with call for interest where more than one expression of interest was received.

The situation may change in respect of the future designations, since in a number of countries there are procedures which have been recently introduced in the law and which have not been applied in the past. The number of countries having public tender procedures stipulated in the law now rises to almost 20, which represents nearly 2/3 of the BEREC countries, while the countries that made actual use of such procedures for the designation of the current USPs count for less than 25% of the BEREC countries.

The relatively low number of BEREC countries who have eventually designated their USPs via public tender procedures may be explained not only by legal arguments (the national framework excludes the public tender), but also by pragmatic ones. Indeed, it appears that the number of competitors having the technical and financial standing required for an USP designation is very

limited, which adds to what can be described as an inherent reluctance of market players to compete for being designated as bearers of obligations additional to those which are normally incumbent on any undertaking providing electronic communications networks and/or services under the regulatory framework.

3. Designation criteria

The criteria used for the designation of the USPs vary largely from country to country and from an USO element to another. The majority of BEREC countries employ a combination of technical and economic-financial criteria, which are applied at the different stages of the designation process. The role of the various criteria identified based on the answers to the questionnaire is also different across jurisdictions, depending on the type of designation procedure. Where public tender procedures are used, there is normally a first layer of criteria (*qualification criteria*) which apply in order to ensure that the participants to the selection procedure have the necessary qualifications to stand as a candidate for designation, followed by a second layer of criteria (*selection* or *evaluation criteria*) which are meant to ensure that the candidate who best meets the USO requirements is selected for designation as USP.

The technical criteria include, among others:

- availability requirements e.g. possibility to be reached by subscribers of largest service providers;
- quality requirements (exceeding the minimum levels imposed by the NRA);
- experience in the provision of the service concerned or of similar services;
- absolute and/or relative size of the provider's business, including the extent, density and resilience of its communications network in the provision of publicly available telephone services in the particular area under consideration.

The economic-financial criteria include, among others:

- economic and financial standing of the undertaking;
- end-user tariffs;
- net cost/amount of financial compensation required to fulfil the USO.

4. Duration and termination of designations

The durations of the existing designations vary significantly, from 2 years (the shortest designation period) to 10 or even 30 years. In 11 BEREC countries, the USPs have been designated for an indefinite period.

The termination of the existing designations may occur for lapse of period (most frequently), but also in cases where the relevant authority issues a new decision whereby it revokes the existing designation and/or designates a new USP. Normally, the initiative to terminate the designation belongs to the authority that has made the designation (NRA or Ministry). In such cases, the termination may occur:

- for infringement of obligations by the designated USP;
- if the USP becomes objectively unable to provide the services for which it was designated, for reasons not attributable to it;
- if another undertaking wishes to provide the universal service and/or can provide it at a

lower cost;
- if the NRA establishes that provision of universal service or parts thereof is satisfactorily ensured by the market, no designation being therefore necessary.

In some cases, the national law provides for the possibility to terminate the designation upon request of the USP – for instance, for significant change in market conditions, in which case the NRA may, upon request from the USP, change the designation or its terms.

5. Anticipated changes or future designations under the current provisions of the Universal Service Directive

Five BEREC countries – Greece, France, Macedonia, Malta and Slovenia – have recently launched new designation procedures. Also, in Finland, designation of USPs for broadband service (a minimum of 1 Mbit/s) is anticipated in 2009. In addition, in Portugal the Government is preparing new rules for the designation of USP(s), based on a public tender procedure, the publication of those rules being foreseen during 2009.

E) FUNDING OF THE CURRENT UNIVERSAL SERVICE OBLIGATIONS

1. Costing of the universal service obligations

1.1. Framework provisions

The framework rules for the costing of USO are provided by Article 12(1) USD:

"Where national regulatory authorities consider that the provision of universal service as set out in Articles 3 to 10 may represent an ***unfair burden*** *on undertakings designated to provide universal service, they shall calculate the net costs of its provision.*

For that purpose, national regulatory authorities shall:

(a) ***calculate the net cost of the universal service obligation****, taking into account any market benefit which accrues to an undertaking designated to provide universal service, in accordance with Annex IV, Part A; or*

(b) ***make use of the net costs*** *of providing universal service* ***identified by a designation mechanism*** *in accordance with Article 8(2)."*

According to Annex IV, Part A USD, the net cost is to be calculated as the difference between the net cost for a designated undertaking of operating *with* the USO(s) and operating *without* the USO(s). Also, due attention should be given to correctly assessing the costs that any designated undertaking would have avoided had there been no USO. The net cost calculation should assess the benefits, including intangible benefits, to the universal service operator.

Annex IV of the USD provides further technical details on the calculation method, which should be based upon the costs attributable to:

- **service elements** which can only be provided at a loss or under cost conditions falling outside normal commercial standards, e.g. access to emergency services, provision of public pay telephones, provision of certain services or equipment for disabled people, etc;
- **specific end-users/groups of end-users** who can only be served at a loss or under cost conditions falling outside normal commercial standards, e.g. those which would not be served by an undertaking operating without the USO.

Also, the calculation of the net cost of specific USO elements should be made separately and should avoid the double counting of any direct or indirect benefits and costs. The overall net cost must be calculated as the sum of the net costs arising from the specific USO elements, taking account of any intangible benefits. Finally, the NRA bears the responsibility for verifying the net cost.

According to Article 12(2) USD, when the method provided under paragraph 1(a) of Article 12 is used, the accounts and/or other information serving as the basis for the calculation of the net cost shall be audited or verified by the NRA or a body independent of the relevant parties and approved by the NRA. The results of the cost calculation and the conclusions of the audit shall be publicly available.

Detailed rules for the calculation of the net cost are laid down in the Communication from the Commission on Assessment Criteria for National Schemes for the Costing and Financing of Universal Service in telecommunications and Guidelines for the Member States on Operation of such Schemes ("the 1996 Communication")[6]. Although released under the previous Framework, this instrument continues to provide important guidance to NRAs on key aspects of the net cost calculation, the mechanisms for financing USO(s), as well as determination of contributors and of how costs are shared between contributors.

1.2. Costing of the universal service obligations in practice

1.2.1. Use of the net cost calculation methods

The vast majority of the BEREC countries responding to the questionnaire use method (a) identified in Article 12(1) USD for the calculation of the USO net cost.

Method (b) which makes use of the costs of providing universal service identified by a designation mechanism is only used in 2 of the countries having responded to the questionnaire, in alternation with method (a).

Also, 8 BEREC countries mentioned that no calculation took place mostly because the USP claimed no net cost, while in 2 countries a review of the calculation rules and, respectively, an evaluation of a request for compensation are ongoing.

1.2.2. Market benefits resulting from the universal service provision

While there is no debate on the commercial revenues that an undertaking could obtain as a result of fulfilling its USO, numerous opinions were counted in the answers to the BEREC questionnaire with reference to what might or might not constitute an intangible benefit.

Nevertheless, certain types of intangible benefits were mentioned in the majority of answers:

Ubiquity benefit – This benefit arises when a customer moves from an uneconomic area into an economic area in which there are competing suppliers and chooses the USP to provide service because of lack of awareness that competing providers exist. Over time, as these customers become informed about competing suppliers, they will tend to switch away from the USP. The benefit to the USP is the profit obtained from those customers in the period prior to the switch.

Life-cycle effect benefit – This relates to the idea that a customer whom it is currently unprofitable for an operator to serve might become profitable in the future. For commercial reasons, an operator might choose to retain a proportion of currently unprofitable customers in the expectation of future profit.

[6] Communication from the Commission on Assessment Criteria for National Schemes for the Costing and Financing of Universal Service in telecommunications and Guidelines for the Member States on Operation of such Schemes, Brussels, 27.11.1996, COM 96 (608) final

Brand enhancement and corporate reputation benefit – The USP's brand is enhanced through fulfilling its USO and this affects the customer's perception (of its own and other operators' brands), thereby impacting on the provider's overall current and future profitability.

Advertising on public telephone booths – A further benefit of public pay telephone booths is the value of advertising the company's logo on these and the consequent enhancement to corporate reputation.

Customer database – This benefit refers to the fact that the USP has access to personal data and usage data from unprofitable subscribers. It may use these data to sell them to direct marketing or to DS/DES companies or to propose adapted products to its customers.

Additional sources of benefits here that have been identified include:

- advertising on other support (such as bills, phone cards etc);
- volume discounts;
- non-USO services:
- benefit from a wider area coverage, etc.

1.2.3. Methodologies used to assess the value of the market benefits

Estimating the market benefits which result as a consequence of the universal service designation might prove extremely difficult, especially because of the intangible benefits which are hardly quantifiable. It is arguably difficult to arrive at a robust quantification of these benefits and a degree of judgment is inevitably involved in assessing the scale of benefits. However, a number of respondents have indicated specific methodologies they use in order to assess the market benefits (see table below).

Benefit	BEREC country	How to calculate
Life cycle	**France**	Some subscribers, who are not profitable in year *y*, will be profitable on a longer period [*y* to *y*+4]. So, operators may have a commercial interest to connect them in year *y*. Costs and revenues are estimated on a 5-year period because of macroeconomic parameters (annual growth rates of costs, revenues and traffics). The benefit is equal to the year *y* deficit of subscribers (/areas /public payphones) which are unprofitable year *y* and profitable on the 5-year period. (Note: No individual data is used, so this is not, strictly speaking, a "life cycle effect".)
	Spain	Step 1: Eliminate the lines of social guarantee - The social guarantee lines number susceptible of being profitable is insignificant Step 2: Eliminate the lines that pass to be profitable by a change of location - Considered in the intangible benefit by ubiquity Step 3: Estimation of the intangible benefit - Product of the lines that become unprofitable for the differential of margin by line between one year and another If differential <0, negative profit value. There is no intangible benefit. If differential >0, positive profit value, for a change in the consumers trends.
	UK	In order to calculate life cycle effects for uneconomic customers, it would be

		necessary to estimate: • the number of "lossmaking" customers and their net costs • the proportion of those likely to become profitable subsequently • the net present value of such profits (this should take account of the implications of changes in the structure of telecoms prices) • the proportion of such subscribers whom the USP would keep. Source: http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/consumer/univ_1.htm#chap9
Ubiquity	**Spain**	Step 1: Identification of the not profitable lines that become profitable - Migratory flows and composition of the household in Spain published by the INE (National Statistics Institute) Step 2: Identification of the households that decide to contract Telefónica services in the profitable zone for gratitude and fidelity reasons - Not profitable lines that become profitable multiplied by the market share of Telefónica in new subscriptions Step 3: Estimation of the intangible benefit - Product lines that become unprofitable for the margin average by line and year that Telefónica is obtaining.
	UK	Estimating the benefits of ubiquity, would involve establishing the difference between the proportion of newcomers to an area which subscribe to the USP and the (possibly long run) proportion of the USP's subscribers among long-term residents. The differential is then evaluated on a net present value basis, and counted as a benefit. The information required for this approach is: • a measure of the proportion of subscribers with access to an alternative service • the number of people moving to such areas • the percentage of newcomers connecting to the USP • the (current or long-term) percentage of existing subscribers using the alternative service provider • the average net present value to the USP of a customer. Source: http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/consumer/univ_1.htm#chap9
Brand enhancement and corporate reputation benefit	**France**	People may be grateful towards France Telecom (FT) for offering universal service. This gratefulness is measured by an "over-price" that subscribers are ready to pay. For the assessment, a survey is necessary. Subscribers are asked about: • their knowledge of FT's universal service obligations; • FT's corporate reputation; • the "over-price" they are ready to pay to stay FT's customers. Statistical methods allow to calculate an "over-profit" and to split this "over-profit" between: • USO related corporate reputation; • Non USO related corporate reputation; and • inertia of customers.
	Spain	Step 1: Appraisal of the image of mark of the Telefónica Group - Annual Reports of Corporate Responsibility, mark registrations evolution and controls Step 2: Identify the incomes of the Group and the incomes of Telefónica by the services included in the US - Calculate the percentage of gross earnings of Telefónica allocated to the US on the gross earnings of the Group - Apply this percentage and the WACC on the value of the mark Step 3: Attribution to the lines of Telefónica which are generators of net cost

Payphone advertising	**UK**	The benefits of payphone advertising consist of two potential elements. • Firstly, where payphones bear a corporate branding or logo, they may be considered to represent a form of advertising to the benefit of the USP. Where this value is not considered to be captured in any broader "brand benefit" estimate, then it may be necessary to estimate the value of this brand exposure. • Secondly, some payphones now carry actual billboard advertisements on the sides or front of the kiosk. The value of the income stream that this provides should be included in any assessment of the profitability of a payphone that is provided as a result of the USO.
	Czech Republic	The benefits of payphone advertising consist of two potential elements. • Firstly, where payphones bear a corporate branding or logo, they may be considered to represent a form of advertising to the benefit of the USP. • Secondly, some payphones now carry actual billboard advertisements on the sides or front of the kiosk (takingsrevenues from rent the advertisments place or using the place for own benefit from unpaid advertisment)..
Customer database	**France**	The methodology for evaluating these benefits is based on the following assessments: • Assess the benefit from sending non-valuable subscribers' data to direct marketing companies (for DS/DES companies, the French regulations specify that operators should make no profit) • Assess the benefit from selling other products even if parameters are roughly estimated

1.2.4. Inclusion of a reasonable rate of return in the calculation of the net cost

The answers to the questionnaire indicate that 10 BEREC countries have included a reasonable rate of return to the designated undertaking in the calculation of the net cost. In the majority of these cases, this is made on the basis of the Weighted Average Cost of Capital (WACC) methodology, the Capital Asset Pricing Model (CAPM) being used to estimate the cost of equity. The cost of capital is a weighted average of two components, i.e. the cost of equity (*re*) and the cost of debt (*rd*), where the weightings are determined by the relative proportions of debt and equity held by the firm. Defined on a pre-tax basis, a firm's cost of capital is calculated according to the following formula:

$$\mathbf{WACC = (rd \times g) + [re \times (1 - g)]/(1 - t)\ e}$$

where:

g = gearing;
t = tax rate;
rf = nominal Risk-Free Rate (RFR);
dp = debt premium;
rd = cost of debt = (rf + dp);
re = cost of equity = (rf + β * Equity Risk Premium); and
β = systematic risk of an asset relative to the market.

Only 4 BEREC countries have indicated that their net cost calculation does not include a reasonable rate of return to the designated USP. In 2 other countries, the matter is yet to be

decided, while for the 10 countries that have not calculated the net cost the information on the inclusion of a reasonable rate of return is in general not available.

1.2.5. Inclusion of economies of scope in the calculation of the total net cost

Where an undertaking provides multiple universal service elements and there are cost savings in joint production i.e. economies of scope, then these should be considered when evaluating the total net cost of the USO. This is the position of the majority of BEREC countries having responded to the questionnaire.

If economies of scope were not considered, the efficiency requirement that must be observed under all aspects by the universal service implementation approach would not be fulfilled. Indeed, if a universal service fund was set up using this cost basis (i.e. not considering economies of scope) it would lead to operators paying contributions to the fund that were more than would be necessary if the compensation were determined in a competitive process. In other words, application of such a standard would allow the USO provider to earn a profit without having to cope with competition and in fact imply that other competitors in part subsidise it. This would clearly be discriminatory in that it would advantage the USO provider and disadvantage the contributors.

This conclusion is supported by the EC 1996 Communication which specifies that USO costs should only cover those unavoidable net losses that are incurred by an efficient operator[7].

1.2.6. Verification by NRA of net cost identified via public tender

An undertaking may be designated as a result of a tender whereby the net cost is also identified. The question which arises is whether the NRA can verify *ex post* if the net cost claimed was the real net cost incurred and whether the NRA can make adjustments in case the two are different.

The answers to the questionnaire do not allow drawing a definite conclusion on this aspect. It appears that practices differ, in that in some countries NRAs carry out a verification of the net cost claimed in the bid, based on either a provision of the law and/or a clause inserted in the tender documentation, while in other countries this is not possible, the NRA being bound to compensate the USP for the amount that was requested in the bid. In one country, only a maximum amount of the net cost is asked to the candidates in the call for tenders and the NRA calculates the actual net cost on an *ex post* basis, with a two yeas time lag. Many BEREC countries do not have an opinion on the subject, as no tenders have been organised so far for the designation of the USP(s).

The issue is highly debatable, as it appears that the USD imposes verification requirements (i.e. concerning the accounts and/or other information serving as the basis for the calculation of the net cost) only in connection with the use of the net cost calculation method provided under Article 12(1) (a) and not in relation to the use of the method under Article 12(1) (b). Indeed, the second method, when it is based on a public tender procedure, inherently contains important guarantees of cost-effectiveness and objectivity by its competitive character. An *ex post* verification mechanism would introduce a degree of uncertainty for the candidates that risks undermining the attractiveness of the public tender with the effect of reduced participation of market players in such procedures.

[7] COM 96 (608) final, p. 10.

Also, it would completely eliminate the benefit of reduced administrative costs, which is an important advantage of the method under Article 12(1) (b) over the method under Article 12(1) (a).

The downside of no *ex post* verification could be that when for other reasons there is limited competition in a public tender procedure, the net cost resulted from the tender entails a certain amount of risk of being inefficient. A definite solution to this dilemma would require a clarification of the USD provisions which should strike a balance between the identified risks, in an attempt to maximise the cost-effectiveness of the USO.

1.2.7. Annual net cost figures and trends

Net cost calculations are available in only 8 BEREC countries (Belgium, Czech Republic, France, Iceland[8], Italy, Romania, Spain, UK). 3 BEREC countries have reported a decreasing trend in the net cost figures mainly due to non profitable areas becoming profitable because of revenue increases and cost decreases. In 2 BEREC countries the figures have remained relatively stable over time, while in the remaining countries no trend could be identified.

2. Financing of the universal service obligations

2.1. Framework provisions

Article 13(1) USD sets out the conditions under which a financing mechanism for the USO comes into play and identifies two types of financing mechanisms that may be introduced by Member States:

"Where, on the basis of the net cost calculation referred to in Article 12, national regulatory authorities find that an undertaking is subject to an unfair burden, Member States shall, upon request from a designated undertaking, decide:

(a) to introduce a mechanism to compensate that undertaking for the determined net costs under transparent conditions from ***public funds****; and/or*

(b) to ***share the net cost*** *of universal service obligations between providers of electronic communications networks and services".*

It is important to note that there are three conditions that have to be met for the setting up of a financing mechanism under Article 13(1) USD:

- A finding of an unfair burden by the NRA, based on a net cost calculation carried out in accordance with Article 12 USD;
- A request for a designated USP;
- A decision of the NRA to launch the financing mechanism.

In case of the option presented under Article 13(1) (b) USD, a sharing mechanism (typically a Universal Service Fund) has to be set up. This mechanism must observe the principles listed below:

[8] We assume that net cost figure is available, but it has not been provided.

Independent administration – The sharing mechanism must be administered by the NRA or by a body independent from the beneficiaries under the supervision of the NRA. The independent body administering the fund is to be responsible for collecting contributions and oversee the transfer of sums due and/or administrative payments to the undertakings entitled to receive payments from the fund. One must seek to minimise the administrative burden and the resulting costs involved by the administration of such mechanism; therefore, the NRA/independent body may act as an "auditor" and "clearing house" for payments or may simply oversee payments directly between the organisations concerned[9].

Transparency – NRAs must ensure that the principles for cost sharing, and details of the mechanism used, are publicly available. Subject to Community and national rules on business confidentiality, NRAs have to ensure that an annual report is published giving the calculated cost of USO, identifying the contributions made by all the undertakings involved and identifying any market benefits that may have accrued to the USP(s), where a fund is actually in place and working.

Least market distortion – The imposition and collection of contributions must not hinder competition or market entry beyond what is required to ensure that the undertaking(s) delivering universal service get(s) reimbursed for the net cost. This principle can also be seen as an expression of the proportionality principle. In line with it, Member States may choose not to require contributions from undertakings whose national turnover is less than a set limit.

Proportionality – The imposition and collection of contributions must be proportional to the objectives of the financing mechanism, but also to the situation of undertakings subject to contribution. In accordance with Article 13(3), a sharing mechanism based on a fund should use a transparent and neutral means for collecting contributions that avoids the danger of a double imposition of contributions falling on both outputs and inputs of undertakings.

Non-discrimination – Without prejudice to the possibility to exempt undertakings of smaller size from participating in the sharing mechanism, the imposition and collection of contributions must not unduly discriminate among undertakings. The principle of non-discrimination and the proportionality principle find a common reflection in the practice to impose contributions in proportion to undertakings' turnover.

Unbundling of contributions – Any charges related to the sharing of the cost of universal service obligations shall be unbundled and identified separately for each undertaking.

Territoriality – Contributions shall not be imposed on or collected from undertakings that are not providing services in the territory of the Member State that has established the sharing mechanism.

Only the net cost (as per Article 12) of the obligations laid down in Articles 3 to 10 USD may be financed using a sharing mechanism. The option under Article 13(1) (a) USD – compensation from public funds – could be used to finance other obligations (e.g. provision of communication services outside the scope of universal service to schools, hospitals or libraries etc.).

[9] COM 96 (608) final, p. 15.

Guidelines for the design and operation of the mechanisms for USO financing, as well as for the determination of who contributes and the calculation of the level of contributions are established in the EC 1996 Communication.

2.2. Financing of the universal service obligations in practice

2.2.1. Active compensation mechanisms in place

At present, USO financing mechanisms have been activated in 8 BEREC countries (Austria, Czech Republic, France, Iceland, Italy, Romania, Spain and Turkey).

The answers to the questionnaire show that the national practices largely reflect the USD rule that a financing mechanism for the USO comes into play upon NRA's finding that an undertaking is subject to an unfair burden, based on the net cost calculation. In one country, notably, such a mechanism is also activated in case an USP which has been designated by public tender asks for financial compensation.

2.2.2. Assessment of the unfair burden

While the finding of an unfair burden is generally recognised as one of the essential requirements which trigger the setting up of a financing mechanism, there is no common understanding as to what is deemed to constitute an unfair burden.

Out of the 27 BEREC countries having responded to the questionnaire, 15 countries have no guidelines to follow so as to establish what constitutes an unfair burden, while in further 2 countries no final decision on this matter has been taken yet. Several NRAs have indicated that they follow such guidelines which are established by a secondary legislation instrument.

In the majority of cases, the NRA has discretion to decide whether an undertaking is subject to an unfair burden. NRAs have indicated a number of factors – that broadly relate to **market conditions** and **degree of competition in the market** – which they analyse in order to make the assessment of the unfair burden, namely:

- costs and revenues, as well as ratio between net cost and revenues;
- traffic volumes;
- number of subscribers;
- financial position of operators;
- market shares – in a number of countries, if the USP has over 80% market share, according to revenues, in the market for access provided at a fixed location, the provision of USO is not deemed to entail an unfair burden;
- analysis of the retail and wholesale (interconnection) market, with reference to both fixed and mobile services, including the degree of fixed-to-mobile substitution in the universal service context, etc.

2.2.3. Consideration of the least market distortion and impact on the other operators

Most of the BEREC countries have indicated that the least market distortion principle is

safeguarded by exempting from contribution the small operators, identified by a variety of criteria such as threshold of turnover, time since market entry, market share etc. Also, in recognition of the fact that this principle could also be regarded as an expression of the proportionality principle, some respondents consider that the market distortion is minimised by the imposition of contributions in proportion to undertaking's position in the market, generally reflected by turnover.

2.2.4. Submitting a request for compensation

In the large majority of BEREC countries having answered the questionnaire, there are guidelines which to designated undertaking(s) need to be followed when submitting a request for compensation of the USO net cost, as well as time-limits that they must adhere to when submitting such a request. In some cases, these guidelines are set out by the NRA, while in other cases they are established by legislation (mostly secondary).

2.2.5. Types of financing mechanisms used

The questionnaire exercise has revealed an overwhelming preference of the BEREC countries for the sharing mechanisms. In 27 out of a total of 33 countries (nearly 82%), this type of mechanism is provided as the exclusive option (irrespective of whether it is actually in use or not). Also, in 3 BEREC countries (Malta and Portugal and Bulgaria) the NRA may choose between this type of mechanism and the compensation from public funds. Only 3 BEREC countries use public funding mechanisms on an exclusive basis (Finland, Sweden[10], and Turkey).

2.2.6. Sharing mechanisms in practice

Most of the BEREC countries responding to the questionnaire indicated the NRA's as administering the Universal Service Fund. There are only two cases where the USF is administered by another organisation.

The categories of the contributors vary from one country to another, with the providers of publicly available telephone services being mentioned in almost al the answers. The contributors to the fund are not exempted based on the year on entrance in the business (with 2 exceptions) but rather based on certain thresholds they have to meet regarding their turnover. Although this method is not an explicit exclusion for the different categories on undertakings, it may be assumed that new entrants are protected at the start up because it is difficult for them to meet the thresholds from their first year of activity.

The base for the calculation of the contribution is the turnover from the previous years. Most of the respondents mentioned that are taken into account turnovers realised from the electronic communications activities and some BEREC countries are allowing undertaking to deduct the interconnection revenues.

Although the legal provisions regulating the sharing mechanism seem to be implemented in each of the BEREC countries that responded to the questionnaire, very few BEREC countries actually collected the contributions and made payments from such a fund.

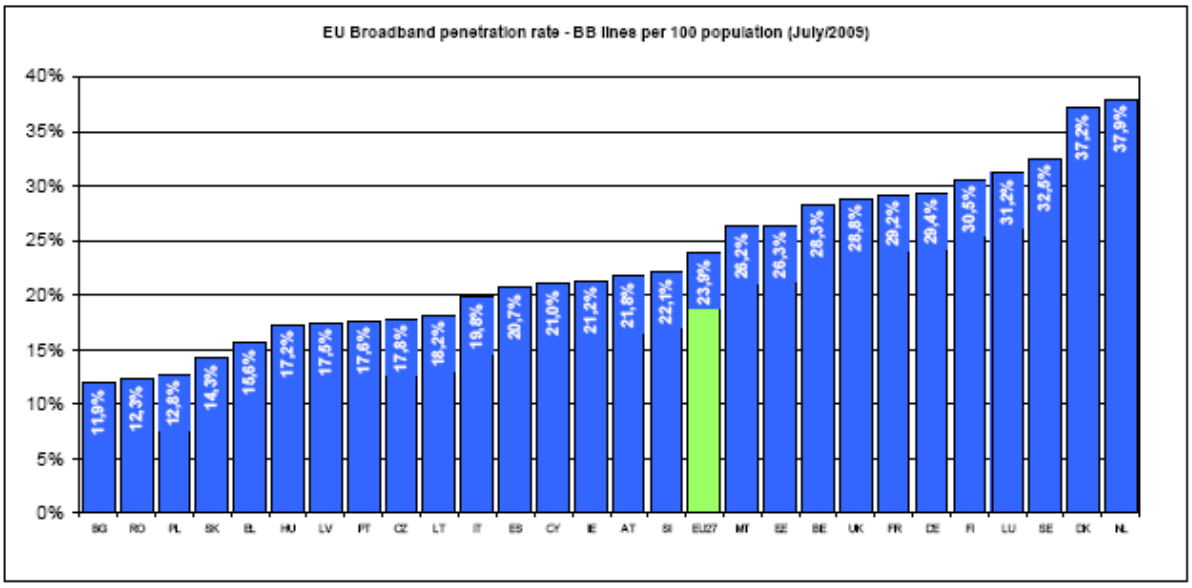
[10] A state procurement mechanism is used in Sweden.

NATIONAL PLANS FOR STIMULATING BROADBAND WITHIN BEREC COUNTRIES AND THEIR RELATION TO UNIVERSAL SERVICE

A) THE BROADBAND GAP

1. The European Commission data[11]

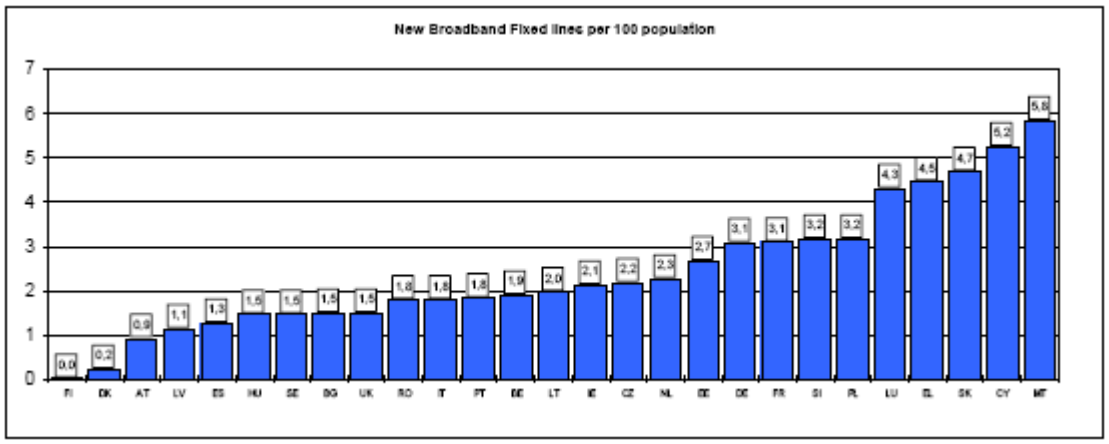
Broadband take-up continues but at a slowing rate, also affected by the economic slowdown: The EU average fixed broadband **penetration rate reaches 23.9%,** up 2.3 percentage points over one year.



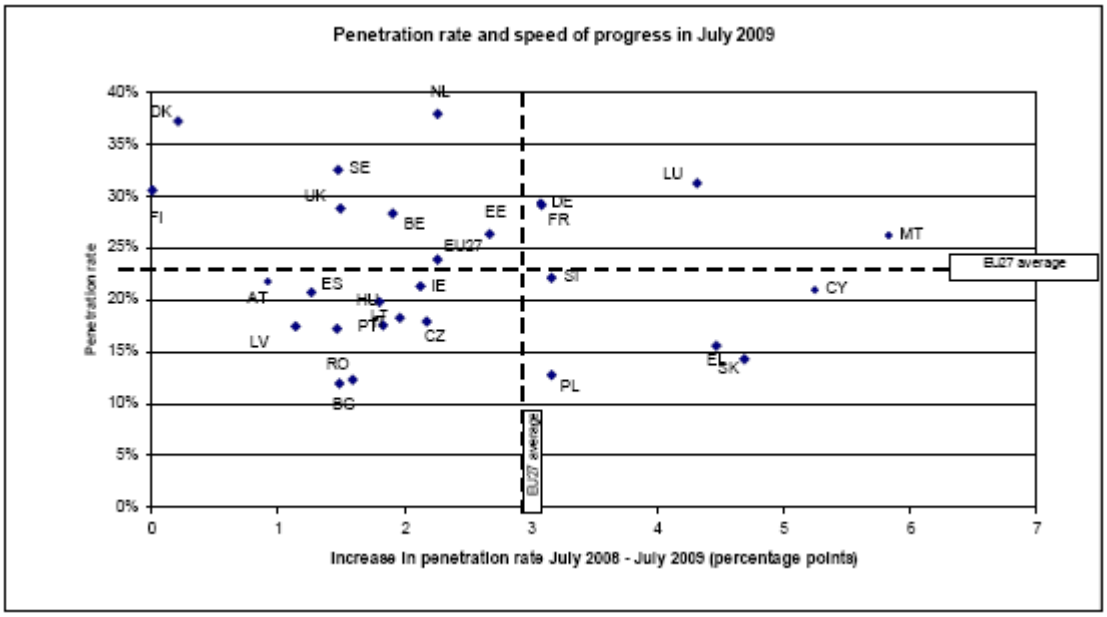
Two countries, the Netherlands (37.9%) and Denmark (37.2%) remain the top performers, with Sweden, Luxembourg and Finland exceeding the 30% mark. Germany, France, United Kingdom, Belgium, Estonia and Malta exceed the 25% mark. All Member States exceed now the 10% penetration rate.

[11] COMMUNICATIONS COMMITTEE, Working Document - Broadband access in the EU: situation at 1 July 2009

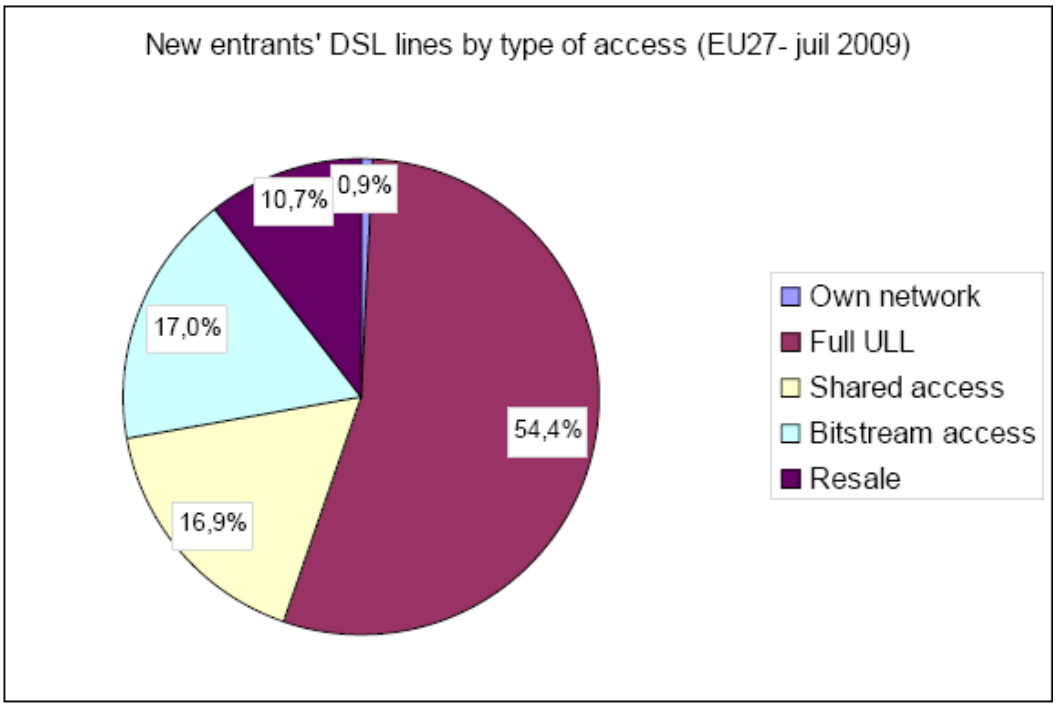
The number of broadband lines added per day in the period between July 2008 and July 2009 was 32,401 for the EU27, representing about 15,000 connections per day less than the previous year. Malta leads with 5.8% new broadband lines added per population.



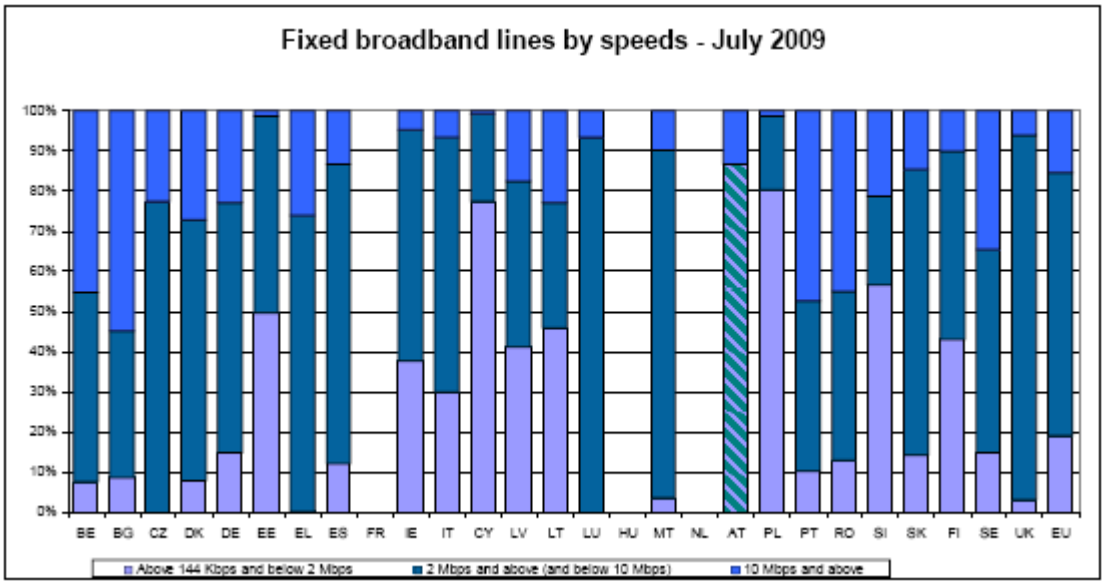
The plot of countries' penetration rates against their yearly growth rates reveals that (i) an increasing number of countries are reaching saturation levels; (ii) fastest growth is experienced by countries lagging behind, and (iii) an increasing number of countries are failing to catch up and fall further behind the leaders.



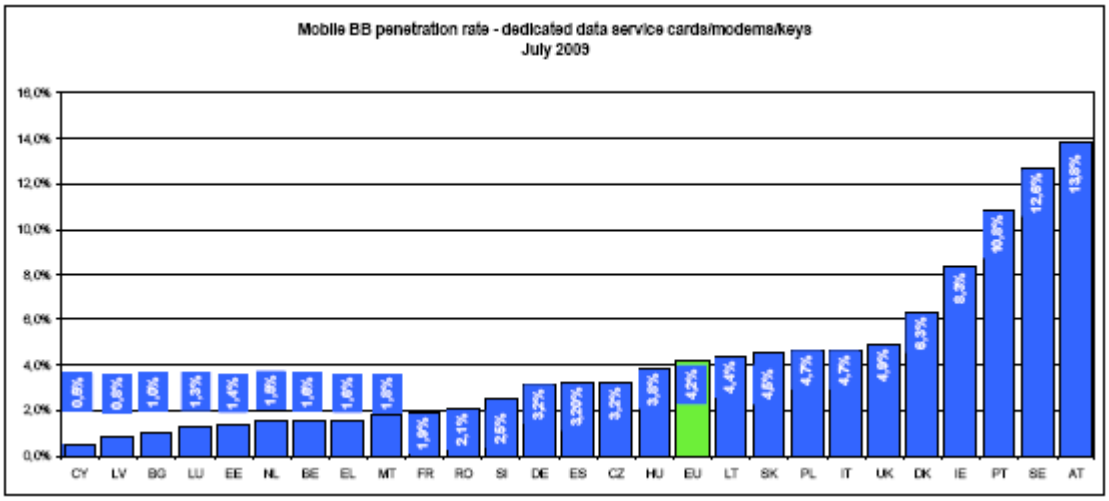
Local loop unbundling (fully unbundled lines and shared access) is the main wholesale access for new entrants with **71.4% of DSL lines**, up from 65.2% in July 2008. New entrants' use of bitstream access for local loop unbundling in the provision of broadband services remained stable (its share went up by 1 percentage point since July 2008). **Share of resale**, which represents a type of access for low-investment intensive new entrants, **has shrunk by 7.6 percentage points** during the last year.



About **80% of fixed broadband lines in the EU are above 2Mbps** (up from 75% in January 2008), although data are not available for all Member States. 19% of reported fixed broadband lines are in the range of 144 Kbps and below 2 Mbps (24% less than 6 months ago), 65% are in the range 2 -10 Mbps (7% more than 6 months ago), whereas 15% of the lines are above 10 Mbps (10% up).



The **penetration of mobile broadband as measured by dedicated data service cards/modems/keys was 4.2%** (up from 2.8% in January 2009). Data are not available for all Member States.



2. Data from the questionnaire

During the survey related to this part of the BEREC Opinion it was difficult to determine data which gives a reliable overview concerning the scope of the "broadband gap". The main reason was that the available data was not comparable in detail. On the other hand the NRAs had no resources to initiate own surveys exclusively for the preparation of this part of the I/BEREC Opinion. The comparability problems were related inter alia to the following aspects:

- Different reference groups (penetration per households, penetration per population or penetration per "subscribers")
- Comparable definition of "broadband". Not all asked Member States seem to have taken as a basis the COCOM broadband definition of 144 kbit/s.

In this respect it is currently not possible to publish an analysis which describes the scope of the "broadband gap" on a solid basis.

B) STRATEGIES TO BRING BROADBAND TO ALL - AVAILABILITY

1. Public interventions or strategies being considered to bring broadband to all

Several countries have an official goal of bringing broadband to all. For example, the UK aims to develop a broadband Universal Service Commitment (USC) to be effective by 2012, covering options up to 2 MBs. In France, following the launch in October 2008 of the 'France Numérique 2012' strategy to make affordable broadband services available to all by 2012 (with a minimum connection of 512 Kbps), two satellite operators applied for and obtained the label 'universal internet access' providers.

However, at present only a minority state that this is to be achieved with **an extension of USO**. Switzerland and Finland are the only countries which have already extended the USO to cover broadband. In Switzerland, as of January 2008, the USP must provide a broadband connection to the whole population, via DSL or satellite or other technologies. In Finland, recent national legislation extended USO to cover broadband with the objective of a basic 1Mbit/s broadband connection available to all by 2011.

There are other countries also committed to bringing broadband to all, but they **do not have any current plans to include it in an extension of USO**. The following countries aim for 100% population coverage: Denmark (by 2010), Germany (2010), Iceland (2010), Ireland (2010), Bulgaria (by 2013), Slovenia (2013) and Romania (2015). Denmark aims to achieve their objective of 512 kbit/s broadband to all by 2010 through a market based approach focusing on the deployment of broadband infrastructure and technology, and the roll-out of wireless broadband to cover hard to reach areas. In Germany, the government's approach is to stimulate the building of infrastructure with a supportive frequency policy and regulatory intervention as well as provide financial assistance. Whereas the Icelandic government contracted its incumbent to guarantee broadband access to 1800 remaining consumers, Ireland placed a contract with mobile operator 3 to provide the outstanding 10% of the population with wireless broadband access. Norway, which had a 2005 strategy of broadband for all by 2007, did not include broadband in USO. Their approach was based on making public funds available in the state budget to develop broadband in areas where the market was not working. Norway has now achieved 99% broadband coverage.

Other countries envisage an **extension of broadband services, though not necessarily with the goal of 100% coverage**. Many have projects that focus on developing broadband infrastructure. This applies to Lithuania (which hopes to achieve 98% coverage by 2010) and Hungary as well as Austria, Greece and Poland, who all use European Commission funds to support infrastructure investments. Similarly, in Portugal, there is a Protocol between the government and the USO provider to find technical solutions to provide broadband access to previously underserved/ remote areas. The Portuguese government has also published 5 public tenders concerning the development of NGA networks in rural areas. Sweden has a support measure to promote broadband involving co-funding of ducts for broadband infrastructure to address availability in underserved areas, and while it has no strategy to bring broadband to all at present, this may change as two governmental inquiries relating to this are being processed.

Many of the BEREC countries noted that while their schemes to promote broadband availability

are established by the government, and may use EU funding, they often **use regional or local implementation plans**. For example, in France, local authorities are charged with planning to ensure broadband access in rural areas; in Austria regional and local initiatives are in operation to push broadband infrastructure, and in Poland 'Regional Operational Programmes' for local governments assign finance for the construction of telecommunication networks.

2. Attempts to stimulate the availability of broadband to underserved areas

A majority of countries have strategies to improve the availability of broadband in underserved areas, although they vary in the funding mechanisms used.

Funding for initiatives to make broadband available to areas where the market has not provided often **comes from the state, through a combination of central and regional funding**. In Austria an initiative with such a funding structure and focusing on underserved areas has had reasonable success. In Sweden, central state funding in the past (2001-07) has been made available to support the development of broadband infrastructure, while from 2008-11 funding has been made available from regional state authorities for specific 'co-funding of ducts for broadband infrastructure' projects. In the UK, regional and local bodies have been funding specific projects to expand availability to underserved areas, and (as in Poland and Slovenia) there are measures that focus on closing the digital divide, by improving connectivity to socially challenged and disadvantaged areas (using public and EU funds respectively). The establishment of public companies in both Italy and Lithuania has served to extend broadband access to residents, businesses and public institutions in rural areas.

Other countries use **a mix of public and private funding**, such as France, where locally based initiatives have reduced the broadband gap, with similar projects being rolled-out further. In Germany regional companies and public providers have been encouraged to come together to establish telecoms infrastructure in underserved areas.

Several countries have adopted **a market-based approach**, with Denmark auctioning off wireless broadband spectrum to a provider with the conditions of providing broadband services to some by postcode specified underserved areas. In Germany and the UK, competitors to the incumbent operator have been granted, through regulatory action, access to the local loop at non-discriminatory prices, allowing these companies to more easily develop faster connections to rural/ underserved areas. Local authorities in both countries have also funded specific projects to expand service availability and provide capable broadband access, where the market-based approach does not deliver. Similarly in Norway, in areas where the market has failed to develop broadband networks, there are state funds to support this. In the Netherlands, there is a primary focus on (commercially viable) 'bottom-up' initiatives to stimulate demand for broadband in rural areas, with varying success – generally those areas where over 40% of households are keen on fibre, its roll-out becomes a commercial possibility.

A **single operator is often enlisted** to make broadband available; in Iceland and Ireland, the government has entered into contracts with commercial providers to ensure 100% population coverage by the end of 2010, while in Switzerland the USP is obliged to provide 100% coverage. In Portugal, five public tenders were lauched by the Government for the construction and delivery of high speed electronic communications networks in five different underserved rural areas

Only Denmark and Switzerland explicitly state there are no subsidies available for the roll-out of broadband to previously underserved areas, while Malta and Belgium report such strategies are not applicable, due to their existing 99% coverage.

3. Extending broadband infrastructure through industry

The extent to which industry is encouraged or mandated to develop broadband networks varies across Europe.

Where industry is **mandated to extend broadband infrastructure, it is with the support of state funding.** In Austria, the government requires industry to contribute to the roll-out of broadband infrastructure, although market players can apply for state funding to help with this. In contrast with several other countries however, there is no obligation for open access to networks, as this is considered to jeopardise operators' returns on their investments. In Portugal, the government and several operators have signed a voluntary protocol, whereby the latter have committed themselves to connect 1.5 million users to fibre networks. The Portuguese government has published specific legislation regarding duct access, mainly regarding utilities ducts, and the access to the public domain to install network infrastructure.

In a majority of BEREC countries, **industry is encouraged to extend broadband infrastructure, again with the support and/or funding of the state.** For example, In the UK, the devolved administrations have several projects that work with industry players to extend broadband availability in underserved areas. Telcos such as Avanti communications have been awarded contracts to provide subsidized broadband to registered users in 'not-spots', often via satellite. In Scotland, such a project has recently completed its 1000th installation. Furthermore, a £120k grant was awarded to this company to research the potential for high speed mobile broadband in rural Northern Ireland. Similarly in Norway, while the market has the primary role in the development of broadband networks, state funds are available to support broadband deployment in underserved areas.

The state has also played a supportive role in Belgium, with the government recently consulting industry players on various strategies to stimulate broadband availability, including infrastructure sharing and alternative ways to cover the 'last mile' e.g. by air, micro/minitrenching. In Lithuania, industry is encouraged to establish a fibre-based broadband network, using both government and EU funding; the outcome being that networks have been established for all local administrations in rural areas. In France, local authority projects to reduce the broadband gap are funded by a mix of public and private funds. Thus far, the gap has been reduced, with more local authorities in the future seeking to create these same conditions to reduce the gap further. A similar locally-based approach exists in Poland, where a bill is being prepared that aims to facilitate local government investment in telecommunications networks especially in areas where undertakings do not invest due to high costs.

In other BEREC countries, **industry is encouraged to extend broadband infrastructure, without any state funding, instead relying on market based mechanisms**. In Denmark the roll-out of broadband networks is market driven, with the establishment of alternative infrastructure (ensuring competition), being supported by price adjustments of the 'raw-copper' network owned

by the incumbent. The Netherlands have taken a similar approach, relying on open networks, access regulation and the promotion of competition.

For several BEREC countries, although industry has been a vital partner in the extension of broadband networks, **no direct or indirect measures exist to encourage this**. This is the case in Sweden, Czech Republic, Slovakia, Romania and Malta (although here a 2005 spectrum auction led to the deployment of broadband wireless access networks, with limited uptake).

4. Technologies used to stimulate broadband development

A range of complementary technologies are used in each country for the deployment of broadband networks. The type of technologies adopted varies depending on the characteristic of the area (e.g. topography, density) or the communication needs of different user groups.

With regard to **technologies currently used for broadband,** Greece relies almost exclusively to xDSL,Cyprus, France and Italy mainly use xDSL, while Austria, Belgium, Malta, Netherlands, Portugal and Slovenia use primarily DSL and cable. Wimax is in operation in Austria, France, Germany and Lithuania, while mobile technologies such as UTMS are also popular in Sweden, Austria, Lithuania, Germany and Portugal. While fibre is frequently mentioned as a technology expected to be used going forward, only Italy, Lithuania, Germany and Sweden mention it being broadly available now, and being used to expand the broadband network. In Portugal, whilst fibre access is still not mainstream, the major operators have already started to invest in its deployment and have offers in place, mostly in urban areas.

Denmark, Finland, Lithuania, Norway, Romania and Switzerland state their regulations and initiatives to stimulate broadband are **technologically neutral**; operators are free to provide services using fixed or wireless technology, so long as it meets required standards. Romania notes this strategy ensures a diversity of solutions to satisfy the communications needs of different user groups and it allows for the most efficient methods of communication in a specific situation.

In terms of **technologies expected to be used going forward**, Docsis 2 is to be implemented by operators in Austria and Lithuania, with Docsis 3 being rolled out in the Netherlands, Belgium, Portugal and the UK. Fibre will be used in Malta, Belgium, Netherlands, Poland, Portugal and Slovenia. Greece is planning an extensive project based on public-private partnership for the deployment of an FTTH network, covering most urban areas of the country. Sweden are also to use this, explaining that a focus on future-proof technologies led to fibre being favoured, as well as it being a cheap way to transform old fixed line network to a national broadband infrastructure. In terms of wireless broadband technology, Sweden also believes the future will favour LTE, due to the continuous demand for capacity and nomadisation of user habits. Lithuania, Austria and the Netherlands also expect this technology to be used going forward. BWA/FWA are likely to be used in Portugal and Cyprus.

Mobile broadband plays a variety of roles. While in the UK, Denmark, France, Lithuania, Malta and Slovenia it is complementary to fixed-line broadband, in Poland it is playing an increasingly substitutional role, as MNOs continue to make their mark on the broadband access market (with over 20% of subscribers). This share is expected to grow due to significantly higher increases in

the number of modems than fixed lines. Conversely, in Sweden, mobile broadband is playing an ever more complementary role, as while it was introduced and marketed as a substitute for a wired connection, the boom in demand meant all operators have changed the terms of conditions for mobile broadband usage, increased the price and introduced caps on data capacity – thereby limiting users' substitution options. In other countries, the role of mobile broadband varies according to user group or location; in Norway, for example, it is considered substitutional in rural areas, but complementary in more urban areas, whereas in Austria and Lithuania private users tend to see it as a substitute to a fixed connection and business users more as a complementary service. Portugal, Belgium and Germany were unable to determine its role.

5. **The percentage of subscribers who enjoy connection to the internet at data rates of at least (28 kbps, 500 kbps, 1,2,4,8 Mbps)**

In most European countries, a majority of subscribers (usually around 60-70%) achieve between 2-10mbps broadband internet speeds. Some countries listed proportions of subscribers with over 10mbps connection, with Bulgaria, Greece, Lithuania, Malta, Slovenia and Sweden having over 10% of broadband subscribers achieving these speeds.

However, difficult to draw out key themes/ comparisons between countries due to:

- Some figures (e.g. Cyprus) are only based on incumbent data
- Using the specified categories, some countries list speeds as 'up to', whereas the others list speeds as 'at least' X mbps
- Many do not use the speed categories offered (28 kbps, 500 kbps, 1,2,4,8 Mbps).
- Some include only residential connections (but note business connections are generally much faster)
- There are variations on which technologies are included in the data e.g. some based only on DSL technologies, others include/exclude broadband via mobile network
- There was no data available for Austria, Portugal, Poland, Romania, Switzerland, Germany

6. **Speeds that are proposed in public interventions/strategies**

Responses to this question mostly concentrated on current broadband strategies rather than NGA. Where schemes to develop broadband availability have specific speed targets, they varied between 512 Kbps and 2 Mbps (excluding NGA).

Denmark and France, in their strategies to bring broadband to all (by 2010 and 2012 respectively), have specified a 512kbps connection, although in the latter, current local authority initiatives tend to offer connections of over 1Mbps. Under Switzerland's existing Universal Service Obligation, the broadband service must have a speed of at least 600 kbps download/ 100kbps upload, while the Romanian Government's strategy to develop broadband electronic communications (2009-2015) aims to ensure connections of a minimum 1 Mbps. Also, Slovenia has a three steps approach with the goals to ensure by the end of 2010 a minimum speed of 2 Mbit/s, by 2015 at least 20 Mbit/s and finally by 2020 access to FTTH, to at least 90% of its population.

2Mbps is the target speed of existing broadband development schemes in Iceland and Malta, with

this also being the standard proposed for the UK's Universal Service Commitment to be effective by 2012. The German Government has set the most ambitious targets, with its broadband strategy aiming for 75% of households to have internet access with speeds of at least **50Mbps** by 2014.

In Portugal, in the context of the tenders for the construction and delivery of high speed electronic communications networks in underserved rural areas the minimum speed to be delivered is 40 Mbps.

Other countries including Sweden and the Netherlands have no specific speed targets or definitions for broadband. Austria's NRA consider the threshold of 2 Mbps to define broadband although there is no common agreement on this,. Meanwhile in Norway the Government has defined broadband as "everyone being able to connect to the internet at a speed that allows transfer of text, audio and live pictures to concurrent users".

7. Minimum acceptable quality of service

Only a minority of BEREC countries have **defined a minimum acceptable quality of service** for public interventions to develop broadband availability. In France, quality of service obligations are imposed on SMP operators in wholesale markets, although not in retail markets (except for the universal service operator). However local authorities' initiatives, when implying a private operator (designated to provide broadband access), can set out in the individual contracts the expected quality of service and speed, each with individual specifications (there is no standard contract). Similarly in Iceland, under the strategy to bring broadband to all, households receive upon request 2Mbps – 12Mbps speeds with extensive quality assurances. The Lithuanian broadband strategy ensures connections of no less than 512 kbps, and according to the Rules for Provision of Electronic Communications Services, the service provider shall additionally specify in the contract other aspects of the service, including the time period of technical maintenance of the services and the minimum requirements for hardware and software of the service user. Users also have the opportunity to verify the minimum ensured speed rate of transmission and receipt of data. In Portugal, the quality of the broadband service is taken into account when considering who to award the contract for the development of high-speed communication networks in rural areas - the criteria used to choose the project will be the technical quality of the proposal (15%) and quality of wholesale access offer (15%) which will include the quality of broadband service envisaged.

Other BEREC countries, such as the UK and Sweden have not yet specified quality of service targets, whereas Germany and Malta have not made provisions for this.

C) STRATEGIES TO BRING BROADBAND TO ALL – TAKE-UP

1. Past, current or currently planned strategies by public authorities and third parties to promote usage and take-up of broadband

The responses show that a majority of BEREC countries (Austria, Belgium, Denmark, Lithuania, Malta, Poland, Portugal, Romania and Sweden) have a number of initiatives **to promote the acquisition of PCs** and usage of ICT and broadband-enabled services through subsidy and financial assistance or tax rebate schemes.

- Some of these initiatives are led by government. For example, in Lithuania, PCs for residents have been subsidized by income tax rebate, and in Poland local governments assign EU funds to help those families unable to purchase a PC. In Malta, the SmartStart initiative has enabled disabled people and those on low income to acquire a PC at an affordable price and there is also the 0.99 euro PC initiative which enables the general public to buy PCs on that daily rate. In Sweden, the tax reduction scheme implemented by the government between 1998 and 2007, was available to all gainfully employed citizens and not based on income. It noticeably led to a reduction of non-PC owners from 50% in 1998 to 15% in 2007 and provided for a big improvement in ICT skills among the Swedish population.
- Other countries have seen industry led initiatives, such as in Denmark where some mobile broadband providers are subsidizing notebooks with built-in mobile broadband access if the buyer contracts with the provider for a minimum of 6 months.
- Other countries have had a mixture of government and industry funded initiatives. For example, in Austria, Fujitsu Siemens and the Federal Chancellery have promoted the so-called Citizen Laptop. Such schemes are aimed at bridging the digital divide, thereby enabling certain categories of citizens like those on low-income or those particularly vulnerable or disadvantaged, including disabled persons, to access the digital economy. With regard to Portugal, it is worthwhile mentioning the government programme e.iniciativas (that counted with the support of the financial resources of the mobile operators arising from the UMTS "beauty contest") covering actions encompassing secondary school pupils, professors and adult trainees. The objective of this programme is to disseminate mobile broadband and the use of the computer trough the selling of a laptop bundled with mobile broadband access under conditions that are more favourable when compared with the standard offers. According to the results of a study developed buy ICP-ANACOM, this programme can be considered successful, namely since it accelerated the adoption rate of both computers and mobile broadband, it contributed to more intensive use of ICT.

A number of BEREC countries have also put in place a number of **ICT/Computer literacy training schemes** to educate their citizens on how to use computers and also how to use Internet services safely. Some countries like the Czech Republic, Malta, Romania, the UK and the Netherlands have implemented government initiatives to address computer illiteracy issues, some targeting particular categories of citizens like the elderly and the disabled. In Malta, the government has established Community Training and Learning Centres (CTLCs) to improve

access to ICT in the community and increase digital literacy, describing it as a way to enable the use of ICT as an equalizing instrument of integration. Lithuania saw the creation in May 2002 of the "Window to the Future" Alliance. This was set up by leading businesses, banks and IT companies and started a project aimed at businesses supporting the development of the information society. The aim of the Alliance is to increase the number of Internet users in Lithuania and achieve Internet penetration ratio of the EU over a three year period. Activities have, amongst others, included computer literacy and Internet use training schemes for citizens. In Romania, the Knowledge Based Economy project initiated by the government and part-funded by the World Bank, aims at improving access to ICT and computer literacy.

Responses from Austria, Belgium, Denmark, Lithuania, Malta, the Netherlands, Romania and Poland show that increasingly governments are making their **services available on-line** in so-called e-government websites and are providing e-services to their citizens. Some countries have or are considering putting into place **public Internet access points** in particular in schools, public libraries and health-centres/hospitals. Denmark has developed a shared digital signature for secure communications between citizens and public authorities/administrations to promote confidence in the use of online services and a government website to enable access to all public services. Belgium is looking at ways to address the lack of interest in the Internet amongst some categories of its citizens by making the Internet available more widely via increased public Internet access points.

Amongst those who responded, only Austria mentioned and France wishes the **extension of so called social tariffs** granted to low-income households to cover broadband services, though in Malta the government launched Project Blueskies at the beginning of 2008 to provide a broadband connection at subsidized rates to those households with either no Internet or only dial-up connection. Around 5,700 households benefitted from this scheme.

Universal Service - Reflections for the future
- part II -

Universal Service - Reflections for the future

DISCLAIMER

The document should be considered as a collection of reflections on the future of Universal Service and regarded as an exercise, based on the regulatory experiences of NRAs. As such it expresses the views of all NRAs unless an explicit official position of a Member State is being mentioned.

It should be understood that some of the regulators only presented preliminary views because of limited legal competences or limited available evidence. Moreover, the responding NRAs could not be held accountable if in some cases the official position of the respective Member States would prove to be different.

A. ANALYSIS OF A (POSSIBLE) NEW LEGAL SITUATION

1. Preliminary views on the consequences of the proposed changes in Recital 8 (Recital 3a in the amended Universal Service Directive) for the legal framework

Introduction

On the 25th of November 2009 the Universal Service Directive[12] was amended[13]. One of the most important changes for the future of the scope of the universal service obligation is the new recital 5.

Recital 5 of the amended Universal Service Directive states that data connections to the public communications network at a fixed location should be capable of supporting data communications at rates sufficient for access to online services such as those provided via the public internet. However recital 5 states that it is not appropriate to mandate a specific data or bit rate at Community level. Flexibility is required to allow Member States to take measures, where necessary, to ensure that a data connection is capable of supporting satisfactory data rates which are sufficient to permit functional internet access, as defined by the Member States, taking due account of specific circumstances in national markets, for instance the prevailing bandwidth used by the majority of subscribers in that Member State, and technological feasibility, provided that these measures seek to minimize market distortion.

A clear change in the new recital 5 in comparison to the former recital 8 of directive 2002/22, is that there is no reference included to what data rates are sufficient for access to online services

[12] Directive 2002/22 of 7 March 2002

[13] Directive 2009/136 of 25 November 2009

such as those provided via the public internet. The former recital 8 mentions a data rate of 56 Kbit/s to be sufficient, the new recital 5 states that the data connection should be capable of supporting satisfactory data rates which are sufficient to permit functional internet access, as defined by the member states. The removal of the reference to narrowband data rates (56 Kbit/s) gives member states the flexibility to determine what, at that moment of time, is a sufficient data rate for functional internet access. This change allows member states to determine that in their country broadband is regarded as being functional internet access.

The consequences of the changes for the different BEREC countries.

In order to determine whether the changes in recital 5 of the Directive have any consequences for the legal framework in the countries of the different BEREC countries a questionnaire was sent out, to which 26 NRAs responded.

A part of the BEREC countries[14] could not give their preliminary view on the changes because it was not (yet) clear what the consequences would be. Either this subject was still under study or the NRA was not competent to give a preliminary view on this issue. Of course the non EU members stated that they are not subject to the EU legal framework.

It is clear for all BEREC countries that the question how to implement the changes in recital 5 is very much linked with the question whether or not broadband should be part of the universal service obligation. The concept of functional internet access, which is not anymore linked to narrowband, not only forces some countries to adapt their legal framework, it also forces countries to think about the meaning of the concept of functional internet access in their national situation. When a country actually decides to include broadband in the scope of the universal service, the funding question becomes a crucial one.

In general BEREC countries are satisfied with the flexibility allowed by the amended Directive with determining what bandwidth should be available for providing functional internet access.

Two BEREC countries[15] state that the changes in recital 5 have no significant consequences for the legal framework in their country, because they have already included broadband as part of the universal service obligation. Other countries mention that just recently new regulation entered in to force or a new universal service provider was appointed, so any changes will not be made at this point in time.[16]

Other BEREC countries mention that the legal framework in their country has to be changed in order to incorporate the concept of functional internet access. However the discussion about how functional internet access should be defined is often not yet determined. In some cases it is up to

[14] 6 members: Croatia, Cyprus, Germany, Latvia Lithuania, The Slovak Republic and Slovenia

[15] Finland and Switzerland

[16] Denmark

the government to define the concept of functional internet access in other cases this is left to the NRA.

Aside from the changes in recital 5, some BEREC countries mention the change made in article 4 of the directive with regard to the definition of connection at a fixed location. In the amended article 4 of the directive the obligation to provide connection to a public communications network at a fixed location is separated from the obligation to provide a publicly available telephone service over the network connection. For some countries this change urges them to revise their legal framework.[17]

Conclusion

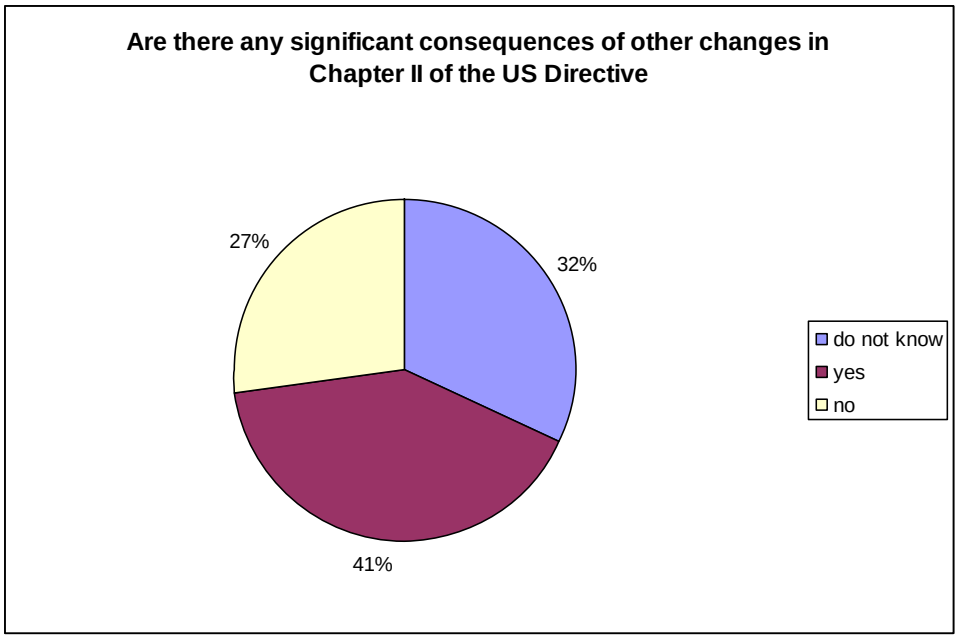
Most BEREC countries are satisfied with the flexibility provided by the amended directive. The changes in the directive create a need in most countries to change the legal framework in one way or another. However in most countries it is not yet clear in what way the legal framework is going to be adjusted. The concept of functional internet access is strongly connected with the question whether or not to include broadband in the scope of the universal service. Some countries have already extended the scope of the universal service to include broadband but most countries haven't. If extending the scope of the universal service to include broadband the funding question becomes crucial.

2. Consequences of other changes in Chapter II of the US Directive

Apart from the changes made to article 4 of the directive there are other changes made in chapter II of the directive. For instance, the obligations in the directive with regard to disabled end-users are tightened up and more onerous.

Whether these changes in chapter II of the directive have any significant consequences for the legal framework in their country, 41 % of the BEREC countries responded positively, 32% of the respondents do not yet know what the consequences will be while 27% think that these changes will not have any significant consequences for the legal framework in their country.

[17] The Netherlands, Spain, Belgium



The ten BEREC countries that have indicated that the other changes in chapter II of the directive have significant consequences for their legal framework, mention that changes should be made with regards to:

- **Disabled users.** According to article 7 of the amended directive Member States shall take specific measures to ensure that access to, and affordability of, the universal services is equivalent to the level enjoyed by other end-users.

- **Low income users.** According to article 9 of the amended directive, National regulatory authorities shall monitor the evolution and level of retail tariffs of the universal service obligations in particular in relation to national consumer prices and income. Further more Member States may require that designated undertakings provide to consumers tariff options or packages which depart from those provided under normal commercial conditions, in particular to ensure that those on low incomes or with special social needs are not prevented from accessing universal services

- **Other public voice telephony access points.** Technological developments have led to substantial reductions in the number of public pay telephones. In order to ensure technological neutrality and continued access by the public to voice telephony, according to article 6 (1) of the amended directive, national regulatory authorities should be able to impose obligations on undertakings to ensure not only that public pay telephones are provided to meet the reasonable needs of end-users, but also that alternative public voice telephony access points are provided for that purpose, if appropriate.

B. GENERAL QUESTIONS

1. Access from any location

1.1. Assessment of whether the communication market in BEREC countries allows providing the universal service at any location or, on the contrary, it only allows providing universal service at a fixed location

The coverage level of mobile telephony in BEREC countries has increased over the last few years. Mainly in densely populated countries, the coverage level of mobile telephony is close to 100 %. The penetration level of mobile telephony in most BEREC countries is above 100 %. This increase in mobile coverage and penetration is mainly created through market forces.

In countries that have a coverage level of mobile telephony that is close to 100 % it is possible to provide access to a public communications network and a publicly available telephone service at any location. However doubts are raised if a mobile solution is able to provide functional internet access and fax services at any location and at an affordable price.

Furthermore it is not certain if a mobile solution that provides the universal service at any location is able to meet the quality of service parameters that are set out in different countries. For instance, domestic mobile reception can be poor, especially in buildings with thick concrete walls.

The directive ensures technological neutrality for providing the universal service. Some BEREC members[18] mention that the regulation in their country already allows the universal service provider to provide the universal service via a mobile solution.

Looking at the European market, one can conclude that it is not yet possible to provide the universal service at any location. In some countries it is already possible to provide the universal service at any location. As mentioned above this is mostly the case of densely populated countries with a high coverage level of mobile networks. However, in a considerable part of the BEREC countries it is not yet possible to provide the universal service at any location.

1.2. Assessment of whether the universal service obligation should be defined in terms of fixed location or should it include access from any location

All BERECcountries, except for Latvia and Lithuania, think that at the moment the universal service obligation should be defined in terms of fixed location.

Access from a fixed location is regarded to be a safety net that must be provided, whereas access

[18] Denmark, Norway, Poland, Romania and Slovenia (for Slovenia the fixed-mobile connections is allowed when the connection on the fixed location is not possible The end user must also agree with such a solution)

from any location is desirable but not yet possible. Mainly there are doubts about:

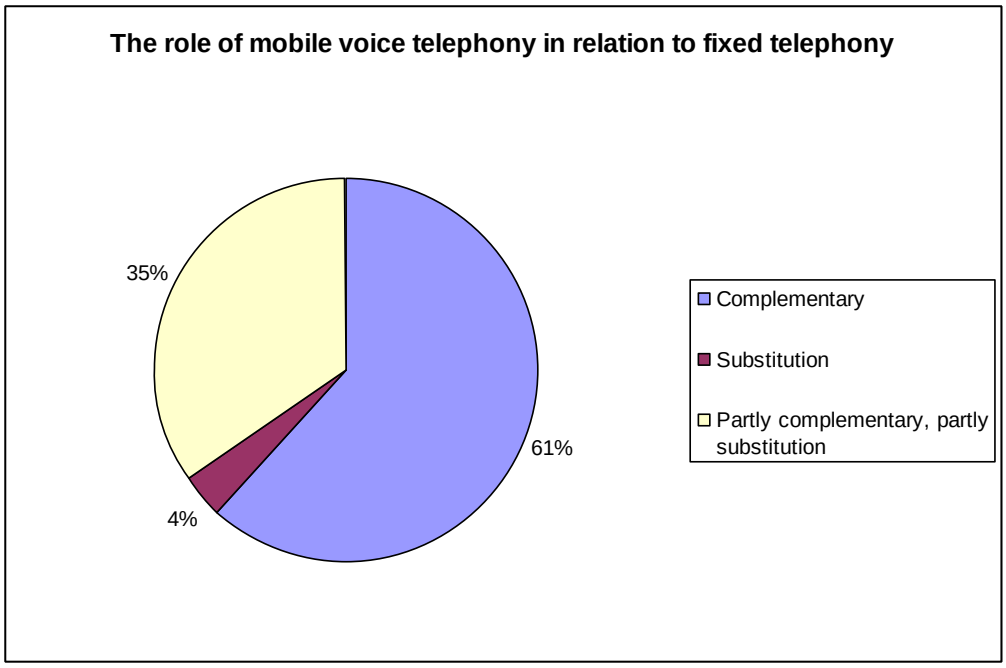
- **The costs in relation to the benefits.** The Swedish NRA (PTS) points out that in a sparsely populated country with large unpopulated areas of land, and with poor condition for wireless solutions, the costs of granting access from any location exceeds the benefits.
- **The possibility to provide functional internet access and fax services from any location.** The Finnish (FICORA) and Hungarian (NHH) NRAs point out that wireless solutions to provide functional internet access and deliver fax services are not yet available nationwide. Therefore, at the moment, the universal service obligation can not be defined in terms of access from any location.
- **The impact on competition.** The German(BNetzA), Maltese (MCA) and Dutch (OPTA) NRAs stress that defining the universal service obligation in terms of access from any location will have an impact on competition in the (mobile telephony) market. It is likely that the market in these countries will provide access from (almost) any location by itself.
- **The quality of the service.** The Danish (NITA) and the Polish (UKE) NRAs mention that the quality of mobile services do not yet meet the quality parameters set out for the universal service obligation in their country.
- **The affordability of the service.** NITA thinks that it needs to be considered that mobile or radio based services may not be available at the same price level as fixed services, therefore these services may not yet be suitable to provide the universal service.
- **Availability of access to emergency services and caller location information.** ComReg stated that the availability of access to emergency services was one of a number of factors that it would need to consider if the universal service was to be delivered from any location. The Czech NRA (CTU) mentions problems with sending correct caller location information for emergency calls in case of nomadic access with VoiP technology.
- **Social tariffs**

ComReg stated that when considering access from any location, it would need to consider a number of factors when evaluating if a sustainable universal service could be achieved in this manner.

Latvia thinks that the universal service obligation should not be defined in terms of fixed location because it is of high importance that the service is accessible for the public. In the point of view of Lithuania the universal service obligation can include access from any location.

1.3. The role of mobile voice telephony in relation to fixed telephony

Only in Italy mobile voice telephony can be fully regarded as a substitute to fixed telephony. In sixteen BEREC countries mobile voice telephony can be regarded as being complementary to fixed telephony. In 9 BEREC countries mobile voice telephony is getting more and more or is already partly a substitute of fixed telephony.



In all BEREC countries the usage of mobile telephony has increased, mainly because of a downward trend in mobile prices. There is also a decline in the number of fixed telephone lines. However in most countries people are reluctant to give up their fixed line completely. For instance, in the Netherlands the number of mobile only households is quite stable at 20%. In the UK the number of mobile only households is growing slowly (it was 14 % in the 3rd quarter of 2009, compared to 13 % on the 3rd quarter of 2009).

Conclusion

Although there is a clear trend towards the usage of mobile voice telephony, it can be concluded that mobile voice telephony is still largely regarded as complementary to fixed mobile telephony in most BEREC countries.

2. Introducing funding mechanisms for USO

Various funding systems/models are in place throughout the 26 BEREC countries that responded to this Question. Over half of the respondents have indicated that a funding mechanism has been established for the USO. However, it is not clear from many of these responses whether the funding mechanism has been activated to date. Other responses indicate that either national or European legislation provides for a funding mechanism to be established but it is not clear whether a funding mechanism is actually in place at present in those countries. In the case of Germany, there is no designated USP and therefore no financing model has been used to date and moreover, there are no plans to change from this model. Cyprus, Netherlands and Norway clearly stated that there is no funding mechanism in place and there are no plans to introduce one. In Portugal there is not yet any funding mechanism implemented, although it is foreseen in the law. Ireland is currently evaluating an application from the USP but no decision has been taken to date whether a funding

mechanism is to be established. The UK is reviewing the implementation of the USO and a funding mechanism may be considered as a possibility. In France USO funding mechanism exists since 1997.

With regard to plans to change the existing system the Czech Republic stated that legislative changes will be needed to effect its' plans to change the existing system so that net costs are recovered from the State. Hungary stated that its funding mechanism has recently changed whereby the NRA may make reimbursement from its own budget and Romania is also planning to make changes to adapt to the new electronic communications market. Of interest however, is the system in Slovenia whereby the funding mechanism is raised on an ad hoc basis from operators.

BEREC country	**Funding mechanism for USO**	**Any plans to change existing mechanism**
Belgium	There are two separate funds for the financing of the universal service: - A specific fund for the "social component" of the USO; - A fund for all other components of universal service. The fund for the "social component" was implemented in 2005 but had to be stopped because the Belgian legislation was found not to be compliant with the European law by the European Commission. The final decision of the European Court of Justice is still pending. The second one has not been activated as an application for funding has not yet been received.	No plans as long as the Court of Justice has not made a decision
Bulgaria	Universal Service Compensation Fund provided by legislation – response is not clear as to whether a Fund has been activated by Bulgaria	Changes are not currently envisaged
Croatia	NRA shall establish whether net costs of USO represent an unfair burden for USP and then the Agency shall decide on mechanism for recovery of net costs - response is not clear as to whether a Fund has been activated by Croatia	
Cyprus	Do not foresee introducing a funding mechanism at the moment	
Czech Republic	Yes there is a funding mechanism.	Yes. Net costs of USO to be recovered from the State. The Electronic Communications Act will need to be amended to effect this change.
Denmark	A funding mechanism is in place but it has not been activated as an application for funding has not yet been received by USP	No plans to change the current mechanism
Finland	USO funding mechanism in place	No plans to change the current mechanism
France	USO funding mechanism exists since 1997	No plans to change the existing mechanism
Germany	Currently no designated USP. Financing model of	No plans to change existing model

	universal service fund has not been used to date	
Hungary	According to a recent change in the law NRA may make reimbursement, where justified, from its own budget.	
Ireland	Legislation provides for funding mechanism. NRA is currently evaluating a request from USP so decision yet to be made re activation of compensation mechanism.	
Italy	USD provides for mechanism	No changes in the current funding mechanism foreseen.
Latvia	Law on Electronic communication provides that Cabinet of Ministers sets up a universal service fund or other form of financing/compensation mechanism. No such mechanism developed to date.	
Lithuania	NRA has introduced a funding mechanism	No plans to change in the near future
Malta	Currently the law caters for a USO funding mechanism in line with the provisions of the universal service directive. However this has never been invoked by the Designated US provider.	
Netherlands	No plans	
Norway	No funding mechanism and no plans to introduce one	
Poland	Provision is made to introduce a funding mechanism for USO but system is not working at present – detailed information provided in Part 1 Questionnaire	
Portugal	There is not any funding mechanism implemented for USO yet. The Law foresees two possible mechanisms to provide appropriate compensation for US net costs: a) Public funds; b) Funding by undertakings providing publicly available electronic communications networks and services on national territory.	
Romania	USO funding mechanism in place since 2004	NRA is planning to adapt the funding mechanism to the new configuration of the electronic communication market
Slovak Republic	Legislation provides for funding mechanism. NRA is currently in the process of evaluation a request from USP so the funding mechanism is not activated at the moment.	
Slovenia	Funding mechanism in place which is raised ad hoc from operators. According to Article 17 of *Electronic Communications Act* – ECA "compensation for net costs of universal service provision [is] financed from the contributions of operators operating on the territory of the Republic of Slovenia generating their revenue from the provision of public communications networks or services, or carrying out public communications services exceeding 500 million Slovenian tolars (approximately 2 million EUR)". The amount of individual operators' contributions shall be determined by the Agency on the basis of their revenues from the provision of public	

	communications networks or services with regard to the total revenues from the provision of public communications networks or public communications services of all operators referred to in the preceding paragraph on the territory of the Republic of Slovenia. Operators shall be obliged to pay their contributions directly to the universal service provider within the time and in the amount laid down by the decision of the Agency.	
Spain	Funding mechanism for USO in place since september 2008 consisting of a National Fund for Financing USO whereby NRA determines annually which operators should contribute to that Fund	No plans to change the system
Sweden	While the Swedish Govt has announced that are reasons to increase the level of functional access to internet to 1 Mbit/s, there are no certain plans to change the current funding scheme	
Switzerland	Funding mechanism in place which has not been activated as of yet and there are no plans to activate in the near future	Currently no discussion regarding modifying the existing funding mechanism
United Kingdom	Legislation provides for a funding mechanism, but this has not yet been implemented	

3. Complaints about (the burden of) certain universal service obligations

12 of the respondents to this question have no complaints in relation to the burden of the universal service obligation. However, it should be noted that of these 12 respondents, the Czech Republic pointed to the fact that USPs are chosen by tender so the obligation is taken voluntarily, Finland cautions that this may change in July 2010 when the USP will be required to provide 1 Mbit/s broadband as part of the USO, Germany does not have a designated USP as the incumbent provides the services voluntarily, Sweden has to date not found it necessary to oblige an undertaking to provide universal services as the market has been able to provide universal services to a subscribers primary location, and Romania states that the designation process is by means of public auction so providers assume obligations willingly.

Bulgaria has proposed the elimination of public payphones from the scope of the USO due to mobile penetration rates but no formal complaint was filed. The USP in Hungary have complained about the loss incurred in operating and maintaining public booths as they are rarely used. The USPs are willing to reduce the number of public booths based on the recent amendment of the law which enables such reduction. Also in Lithuania the USP sought to reduce the number of public payphones and succeeded. On request by the USP the Ministry responsible in the Netherlands no longer upholds the obligation regarding phone booths and the obligation to provide access at a fixed location is also being discussed in tandem with new generation networks. In the Slovak Republic undertakings have sought to reduce the number of public payphones and to avoid the obligation to issue printed telephone directories.

The remaining countries received complaints about the Funding mechanism in one way or another.

In Spain those undertakings that annually contribute to the Fund complain that all operators should contribute, so that the burden could be shared. The USP complains about specific concepts which should be included on the net cost. In Portugal the USP has submitted requests for compensation. The methodology for determining the US net costs is being developed by ANACOM, and will be subject to public consultation. In the UK, Ofcom is undertaking a review of USO implementation and as part of the review Ofcom will set out the relevant factors for consideration of whether the USO constitutes an unfair burden. In France appeals regarding NRA decisions about the financing of the universal service have been subject to court proceedings. In Ireland a request for funding has been submitted by the USP and a decision has yet to be taken by the NRA as to whether the net costs represent an unfair burden for the USP. In Latvia the USP net costs have been established and approved by the NRA but compensation has not been granted as there is no funding mechanism developed to date. Informal complaints have been received by NRA, Malta, regarding the burden of the universal service. A case is pending before the ECCJ regarding the funding of the "social component" in Belgium.

BEREC country	**Complaints about burden of USO and, if so, the nature of these complaints**
Belgium	- A case is pending before the ECCJ regarding the funding of the "social component". Alternative operators challenge the compliance of the Belgian regulatory framework with Articles 12 and 13 of the Directive 2002/22/EC ("Universal Service" Directive). - A database including the beneficiaries of the social telephone tariffs was developed. Is has to be partly funded by the operators. A case is pending before national courts (introduced by the incumbent) regarding the method used to allocate the costs related to this database.
Bulgaria	USP has proposed the elimination of public payphones from scope of USO due to the mobile penetration rate. So far no formal complaint has been filed. Trade-offs to be considered.
Croatia	No complaints to date regarding the burden of the USO
Cyprus	No
Czech Republic	No complaints about the burden of USO as USPs are chosen by tender which they enter voluntarily
Denmark	Denmark has extended the universal service obligation to cover other aspects than mentioned in the directive and the NRA has received a complaint regarding these extended matters. TDC A/S was appointed as USP for maritime safety and distress services based on qualifications. The USP complained about the appointment and the funding mechanism but complaint was not upheld by appeal authority
Finland	So far no complaints received regarding unfair burden or requests for compensation. This may change in July 2010 when the USP is required to provide 1Mbit/s broadband as part of the USO
France	There have been complaints regarding the financing of the USO as a result of Arcep Decision and many of these complaints were subject to court proceedings in France. However, there has been no appeal against Arcep decisions relating to the financing mechanism of the universal service since the 2007 decree.
Germany	There is no designated USP in Germany - Deutsche Telekom performs these services voluntarily – accordingly no complaints
Hungary	The USPs have complained about the loss incurred in operating and maintaining public booths as these booths were rarely used. They are willing to reduce the number of public booths based on the recent amendment of the law which enables such reduction.
Ireland	The USP has submitted a request for compensation which ComReg is currently evaluating. ComReg has therefore not yet taken a decision on whether or not the net costs represent an unfair burden for the USP.
Italy	Only one USP in Italy and no complaints received
Latvia	The USP has repeatedly submitted net costs of universal services and has indicated that an unfair burden has been placed on it. The net cost of universal service has been approved by

	the NRA but the USP has not received any compensation as so far no funding mechanism has been developed
Lithuania	The USP sought to reduce the number of public payphones to be maintained and succeeded to reduce the number of public payphones.
Malta	In the past the MCA has received informal complaints about the burden of the universal service, however funding requests were never made to the MCA.
Netherlands	The Ministry of Economic Affairs is no longer upholding the phone booth obligation on request of the USP. Also there is discussion regarding obligation of access at a fixed location in cohesion with new generation networks.
Norway	No complaints regarding universal service obligations.
Poland	The USP has requested changes to the public payphones' obligation (reduction of the number of public payphones) as well as to the telephone directory service (i.e. lack of possibility to provide for uniform fee). Other market players complained about the financing scheme of USO.
Portugal	The USP has submitted requests for compensation. The methodology for determining the US net costs is being developed by ANACOM, and will be subject to public consultation.
Romania	The designation procedure was by means of public auction so designated provider assumed obligations willingly.
Slovak Republic	Yes – to reduce the number of public payphones and to avoid issuing telephone directories in print format.
Slovenia	No. Only in the year 2009 the Slovenian Universal Service Provider forwarded for the first time to the Slovenian NRA a net cost calculation of the cost of Universal service provision for the year 2008, on the basis of which it wishes to receive compensation. The NRA examined the matter and called on the USO provider to provide certain explanations in connection with the material. These were not yet received by the NRA.
Spain	Undertakings that contribute to the Fund complain that all operators should contribute to the Fund. Since the implementation of the Fund the USP complains about specific concepts and the NRA calculation to be included in the net cost, definitions of profitable and unprofitable areas depending on local exchanges. Undertakings don't agree about the definition of net cost of users with special tariffs.
Sweden	Sweden has to date not found it necessary to oblige one or more undertakings to provide universal services – the market has been able to provide universal services to a subscribers primary location.
Switzerland	No
United Kingdom	USO funding issues have been considered in the past and the outcome was that the USO did not appear to impose an unfair burden on the USP

4. Services that should be included or excluded from the USO *(Apart from broadband which is dealt with in chapter C.)*

Of the responses received to this question 10 respondents were in favour of at least debating the subject of excluding certain elements of the universal service. A number of respondents had no official view or had not debated the matter while other respondents maintained that it should be left to each MS to decide the scope of the universal service taking national circumstances into account. In the case of the UK, Belgium, France and the Netherlands the scope of the USO is determined and set by Government.

The main elements discussed by respondents to this question were the obligations relating to the provision of public pay phones and the provision of telephone directory enquiry services and the

printed telephone directory. Bulgaria, Italy and Latvia were in favour of excluding public payphones from the scope of the universal service while the Netherlands stated that it has already removed this obligation from the USP. While the provision of the public payphone is not included as part of the universal service in Denmark, a municipality can request a public pay telephone provider to establish and run a public pay phone service to be funded by the requesting municipality. NITA therefore supports the debate as to whether the public pay phone service should remain within the universal service, considering the development and widespread coverage of mobile telephony. Romania states that access to public payphones should be reconsidered in terms of its inclusion in the universal service. The criteria to be used should include the usage and ubiquity of other substitutes.

While France is of the view that the scope of the universal service is a matter to be determined at MS level it raises the question as to how long some services should remain within the scope of the universal service. In France the electronic directory has been excluded from the scope of the universal service but the directory enquiry service remains part of the scope for the short term. While the public payphones has been retained as an element of the scope of the universal service in France, obligations regarding coverage need to be redefined to reflect changes in the telecoms market. Flexibility in applying the criteria defined in the Directive needs to be addressed to ensure that society benefits from lower costs where possible.

Germany states that developments in the market and at EU level should be observed further with respect to the public subscriber directory and the public telephone information service and while developments are being observed it maintains that changes to the scope are not recommended. In the case of Germany, with the widespread use and coverage of mobile telephony services the demand for public telephone services has declined resulting in lowering profits for public pay telephones. Affordability issues as well as operating costs of maintaining public pay phones needs to be taken into consideration. Other responses have also signalled the increasing burden of maintaining the public pay telephone network.

Ireland states that the inclusion or removal of services should only be considered if there is a well established alternative in place or if the impact assessment concludes that the service is no longer needed. Another consideration is the possible diversion of investment when alternative approaches, such as direct Government funding or the use of different technologies might achieve similar results.

Latvia expressed the view that there is no market demand for a comprehensive telephone directory. Romania also discusses the need to re-examine the inclusion of directory enquiry services and public directories given that such activities are normally provided under commercial conditions. Spain also suggests that directory services could be removed if the market is competitive. Spain states that it is possible that this service will be removed at the end of the current designation period in 2011. Switzerland informs that the directory enquiry service has been excluded from the USO due to market forces.

Finland states that the telefax should be excluded from the scope of the universal service considering the widely used email service. Italy stated that services provided through international operators should be excluded with EU market liberalisation and a fall off in market demand. Also the Ministry in the Netherlands is in discussion regarding the obligation to provide access at a fixed location in tandem with new generation networks.

BEREC country	**Services that should be included/excluded from the USO, why, and what criteria should be considered – excluding broadband**
Belgium	The opportunity to include public payphones in the USO scope might be reconsidered, because of the decline of their usage. As regards the universal directory Belgium first plans to apply an opt-in system for the paper directory delivery and then to only use the electronic directory.
Bulgaria	Access to public payphones should be excluded from the scope of the US.
Croatia	No official view
Cyprus	Not deliberated on this question
Czech Republic	No. It is up to every MS to consider and to specify national conditions if USO is imposed
Denmark	NITA supports the debate whether basic phone services should still be included in the US due to the development of mobile services and mobile telephony coverage. In Denmark the provision of public pay phones is not included in traditional universal services. A municipality can request a provider of public pay phones to establish and run a public pay phone to be paid by that municipality. NITA therefore supports a debate as to whether public pay phones should remain part of the definition of universal service.
Finland	Telefax should be excluded from the definition of the USO as it has widely replaced by email and therefore cannot be regarded as a regularly used or a customary service anymore.
France	This should be decided at MS level taking account of national disparities. In France the electronic directory has been excluded from the definition of the US as it has been decided that the market has not failed in this regard. However, the directory enquiry service remains an element of the US but Arcep considers it is questionable as to how long these services should remain as part of the US in the short term. Arcep considers that it is still useful to maintain the public pay phones as part of the US but it might be appropriate to redefine coverage obligations to reflect changes in the telecoms markets. Attention should be paid to the fact that some services can be provided by the market in the near future. Applying the criteria defined by the Directive on a strict basis could lead to the inclusion of services in the scope of the US that could easily be provided by the market in the near future at a lower cost to society.
Germany	Developments in the market and at EU level should be observed further with regard to the public subscriber directory and the public telephone information service. Changes at national level regarding the USO are not recommended at the moment. The provision of public coin and card telephones is currently part of the US in Germany. At end 2009 the stock of coin and card telephones was estimated at 94,000 devices. At the same time with around 109million SIM cards there is a far reaching spread of mobile connections. With the extensive spread of mobile telephony and full coverage of fixed telephony network a complete change of behaviour has emerged resulting in low demand for public payphones. The mobile phone represents a substitute for public telephones and therefore resulting in lower profitability for public telephones. Affordability for users of this service as well as operating costs should be taken into account to ensure efficient service provision for the population. DT AG plans to dismantle a total of 11 000 coin and card telephones at extremely unprofitable sites by 2010. The dismantling process requires agreement with the local authority decision makers in each place. The local authority can always request lower maintenance cost-provision with a basic telephone instead of complete dismantling. A process for further continuous reduction of the number of sites across the country is agreed. In this regard, DT AG has also declared to the German NRA that it is the goal of the company to also fulfil its legal mandate to provide public telephones in future. Furthermore a semi-annual reporting obligation has been agreed with the DT AG.

Hungary	Text from QB5 - The USPs have complained about the loss incurred in operating and maintaining public booths as these booths were rarely used. They are willing to reduce the number of public booths based on the recent amendment of the law which enables such reduction.
Ireland	The inclusion or removal of services as provided for in the Directive should only be considered if there is a well established alternative or if an impact assessment concludes that the service is no longer needed, in particular, for vulnerable users. Another consideration is the possible diversion of investment when alternative approaches, including direct Govt funding or the use of different technologies might achieve similar results. For the moment the NRA has not identified any services for exclusion.
Italy	Public pay phone services should be excluded from the USO as usage is low and it continues to decrease due to the popularity and accessibility of mobile phones. Services provided through human operators should be excluded because of EU market liberalisation and fall off in market demand
Latvia	Public pay phone services should be excluded from the USO as usage is low and it continues to decrease due to the popularity and accessibility of mobile phones. Also no demand for a comprehensive telephone directory in the market.
Lithuania	No
Malta	Malta is currently undergoing a public consultation regarding the USO. The NRA view is that those services that are widely available in the market should be excluded from the USO
Netherlands	The Govt determines and sets the scope of the USO. The response to QB5 states that The Ministry of Economic Affairs is no longer upholding the phone booth obligation on request of the USP. Also there is discussion regarding obligation of access at a fixed location in cohesion with new generation networks.
Norway	The printed telephone directory will not be included in the USO from 2010 but the electronic directory will remain
Poland	Currently, in connection with the impending choice of a designated USP undertaking work is carried out to review a whole model of USO and to assess the validity of its current shape. The purpose is to determine the future scope and shape of USO in Poland. Exclusion of the public payphones obligation from the scope of the USO is being considered. End users demand for public pay phones is constantly declining. At the same time only a small part of the population uses them, which was confirmed with a consumer poll. At the same time modification of directory enquiry services model is considered or exclusion of these services from the scope of the USO for the same reasons as for the public pay phones.
Portugal	The issue is currently under analysis. No decision has been taken.
Romania	Access to public payphones should be reconsidered in terms of its inclusion in US. The criteria for assessment should include, the usage, the ubiquity of other means of communications which can substitute the payphone. The inclusion of directory enquiry services and public directories should also be re-examined, given the fact that such activities are normally provided under commercial conditions. In Romania there is a strong opposition to disclosure of personal information and as a result such services would never benefit from complete databases.
Slovak Republic	No
Slovenia	NA
Spain	Directory services could be removed if the market is competitive. In Spain it is possible that this service will be removed from the USO when Telefonica finishes the current period of designation (2011)
Sweden	PTS does at the moment not see the urgent need to include or exclude any services to the USO
Switzerland	The directory enquiry service has been excluded from the USO because this service was provided adequately by the market.
United Kingdom	The scope of the USO is determined and set by Government

5. The appropriate approach to ensure access to and usability of electronic communications for vulnerable persons

With respect to the approach taken to ensure that access to and usability of electronic communications for vulnerable persons (such as disabled and older users) that would be comparable to the levels enjoyed by the majority of users. BEREC countries have answered this question by focusing on varying aspects and therefore, provided a variety of information on this topic:-

Description of vulnerable users

When answering the question BEREC countries while using the term vulnerable users also mostly referred in their answers to consumers with disabilities. Bulgaria and Croatia additionally referenced people with special social needs and with low incomes. The Netherlands response refers to a definition that includes people with specific categories of disabilities and the elderly. Poland view is that this should address those who are in danger of being digitally excluded because of household circumstances (because of its weak financial conditions), age and disability. Belgium and Sweden responses refer to people with disabilities, the elderly and those with difficult financial situations. It also stated that the aim should be in line with the UN Convention on the Rights of Persons with Disabilities i.e. all persons in society, regardless of disability and age should be able to communicate independently through electronic communications.

The United Kingdom refers to access and inclusion and reference people with disabilities, those who are financially excluded, low-income households.

- **Mechanism to ascertain needs of vulnerable users**

  The majority of responses referred to the measures proposed under Universal service but did not specify how the measures specified nationally are specifically designed to meet the needs of vulnerable users.

  Hungary stated that the interests of vulnerable users should be comprehensively investigated in order to create a regulatory environment where they can have the services equivalent to the level enjoyed by the majority of users.

  Ireland's response outlined its approach to understanding the needs of vulnerable users; Access to and usability of electronic communications for vulnerable persons is currently addressed by ComReg through consultation and dialogue with stakeholders and organisations representing vulnerable users. ComReg has also established a Forum on services for People with Disabilities.

  In this manner, ComReg can identify the telecommunications issues experienced by vulnerable users that may restrict them enjoying comparable levels of usability enjoyed by the majority of users. This information can then be used as a gauge to ensure that the measures taken by the (Universal Service Provider) USP (and other operators) for vulnerable users are adequate.

In Portugal, ANACOM considers that taking into account that this specific segment has not been actively targeted by the market and that it will be difficult to provide conditions of normal commercial operation, it is necessary to continue to guarantee the minimum provision of current facilities and services to persons with specific social needs.

The United Kingdom and Malta also stated that they adopt an approach of consultation with interested stakeholders. The UK referenced its consultation of March 2009, Access and Inclusion.

The Netherlands referred to its government's report from July 2009 (Toegang tot telecom)[19] (Access to telecom) which recommends the measures to take to ensure that vulnerable social groups have access to basic telecommunications services.

France (on top of existing services for disabled users) and Cyprus stated that they are currently analysing this issue.

In Germany an operator service was set up for deaf and hearing-impaired people in order to enable them to access and use telephone services. This is not an universal service, however, and accordingly not regulated by the universal service provisions (§§ 78ff. of the German Telecommunications Act (TKG), but by a separate regulation (§ 45 TKG).

- **Legal mechanism**

  The majority of responses refer to the placing of obligations on the universal service provider(s) as the current and appropriate mechanism to achieve this objective, recognising that the current legislation is more limited that the revised Directive in this respect.
  In Finland however, no legal provisions have been made to-date with respect to usability for vulnerable users.
  Ofcom reference the fact that it has no specific powers with respect to promotion of usable equipment or to encourage high-speed data transfer services but that it can raise awareness and work with other bodies.

- **Measures in place**

  As the focus of the question was on the approach adopted by Member States not the measures, not all Member States provided details of what measures are currently in place. The list below is therefore not a complete summary of measures in place in all Member States.

  - **Access/Affordability**

    Special priced packages for people with disabilities
    Special priced packages for deaf people (50 free SMS per day free)

[19] http://www.ez.nl/Actueel/Onderzoeken/Onderzoeken_2009/Toegang_tot_telecom

Special priced packages for blind people (90 hours per month internet browsing for blind people) (also half price packages for blind people)
Services for people with disabilities must reflect lowest market prices
Specially priced packages for people with special social needs
Specially priced packages for people with low incomes
Special Directory Enquiry services free of charge
Special telephone number which enables access to the data of all subscribers included in the comprehensive directory with the service of text transfer on terminal of disabled end user (with hearing impairment)
Social security/welfare benefits
Public text telephones
Adapted public pay telephones which enable access to the public pay telephones and terminals in them with wheelchairs
Marked numeric keypad for voice terminals public pay telephones for the blind and visually impaired end users that they can touch it and orient by it
Special operator service for deaf
Special prices
Equivalent prices
Accessible terms and conditions
Accessible information regarding emergency number 112 and other emergency numbers
Assuring to end users with disabilities calls on emergency number 112 and national emergency number with use spoken and signed languages and other forms of non spoken languages (such as a text emergency call service WAP112, a video emergency call)
Transcription service
SMS relay
Relay Services

- **Usability**
  Specially adapted Public Payphones
  Equipment enabling persons with hearing impairment to establish calls equivalent to voice calls but via text message or visual interface at equivalent price
  Alternative format bills such as on-line, over the phone/audio, large print or Braille free of charge

- **Proposed measures (not listed in existing measures)**
  Special subscription for access to broadband
  Subsidised special terminals
  Priority service
  Lower cost or re-distribution of pre-owned devices
  Skills training

- **Financing**
  While many countries refer to subsidies, reduced prices, special tariffs with respect to services and equipment for people with disabilities, mechanisms regarding funding are not

made. Sweden refers to the use of public funds to develop technical solutions. Poland's response suggests the use of union funds to prevent digital exclusion.
In Belgium a specific funding mechanism is established for the USO "social component".

- **Strategy for the Future**
  Poland suggests that digital exclusion could be overcome by placing obligations on designated undertakings and government initiatives to purchase software, computers and training. It is also suggested that an overall approach to ensure that all web pages are accessible especially those for government services and telecommunications companies.
  Additionally, Sweden suggests that Universal Design of products and services will maximise access and usability. PTS also suggests that interoperability and standardisations should be an overarching objective of Member States. Sweden also suggests that disabled consumers should have the appropriate equipment to access public ICT services.

6. Reviews of the universal service scope

6.1. The timeline for evaluating the scope of the USO

The majority of respondents (14) to this question agreed that an evaluation of the scope of the USO within two (or three) years is enough in light of technological, economic and social developments with some countries pointing to the need to give sufficient time for thorough analysis and evaluation of the data. Malta also noted that the USO only established minimum requirements. Croatia maintained that a shorter period is needed to respond to market conditions. Lithuania, Italy, Sweden, Finland, Germany and Czech Republic specified that two years is sufficient, with some citing the need to consider technical developments and practical use as important. NITA considers that 3 years is an appropriate timeframe while Hungary and Belgium stated that the evaluation period should be aligned with the timeframe for market analysis. Ireland noted that the USO is principle based and therefore provides flexibility to Member States regarding implementation. The Netherlands also commented regarding flexibility in implementation and noted that technology use is neutral and as such proposed a 3 to 5 year period as more appropriate. Bulgaria stated, however, that in terms of designation of USP the proposed timeframe may be short.

BEREC country	**In terms of tech, econ and social developments, review within 2/3 years?**
Belgium	Three years seem to be a suitable period, since it is also the time period used for market analysis.
Bulgaria	Agree with timeframe for evaluation of scope but in terms of designation 2/3 yrs may be short
Croatia	Shorter period in response to market conditions
Cyprus	Agree as the time taken to evaluate the data must be considered
Czech Republic	National legislation provides for examination every 2 years - 2 years sufficient
Finland	No need for more frequent evaluation - 2 years appropriate
France	Agree 2/3 years appropriate for review
Germany	Should aim for evaluation every 2/3 years
Hungary	Should apply same period for evaluating scope of USO as applies to market analysis
Ireland	2/3 years is sufficient taking on board that USO is principle based and provides flexibility to

	MS re implementation. This also allows for financial and economic certainly for USPs. A period < 2/3yrs may prove administratively difficult at EU/National level
Italy	Constant review of the scope is necessary considering the evolution of tech framework - 2 yr period suitable for the implementation and adoption of new technologies
Latvia	Agree with proposed timeframe of 2/3 yrs
Lithuania	Considering the development of technologies and their practical use, 2 yrs is better than 3 yrs for reviewing scope of USO
Malta	Review every 2/3 years should be able to address tech developments as USO only establishes min requirements
Netherlands	Considering that implementation is flexible and technology is neutral propose that 3 to 5 years would be more appropriate
Norway	Agree
Poland	Regular review is neccessary. The period of two/three years seems a sufficient period to estimate technological, economic and social change.
Portugal	There is not an official statement on this issue, although 2 or 3 years might be insufficient taking into account the need to guarantee the compliance with the US obligations that might be contracted for a larger period.
Romania	Agree 2/3 yrs is appropriate
Slovak Republic	2/3 years enough in view of tech, econ & social developments
Slovenia	NA
Spain	Not an official statement but it seems that 2/3 yrs is enough
Sweden	2 years soon enough in light of tech, econ & social developments
Switzerland	2/3 yrs more than sufficient
United Kingdom	Regular evaluation is necessary. Any shorter than 2/3 yrs would not provide sufficient time for thorough analysis

6.2. The mechanism for defining, in appropriate circumstances, which groups of consumers or geographic zones would be considered for coverage by a USO

For most countries (among which, Belgium, Croatia, France, Italy, Lithuania, Netherlands, Portugal, Slovenia, Switzerland, Sweden, United Kingdom) universal services should be available to all end-users regardless of their geographic location. Some countries also mentioned that it should be possible to have several designated universal service operators, each covering a specific area.

Some BEREC countries (Ireland, Sweden and Romania, for instance) underlined the fact that there might be a need to establish which consumers or geographic zones are not adequately supplied by market forces by delimiting parts of a country where competitive conditions are different to neighbouring areas. For instance in Romania the regulator conducts periodic studies in order to determine the underserved areas where the USO should be implemented. Malta added that universal service operators do not have to provide a specific universal service in areas where a choice of affordable equivalent services is already provided by the market.

Some countries pointed on the importance of social exclusion issues and define special tariffs for low-income users to make sure less wealthy persons have access to universal services (Belgium, France, Cyprus, Portugal for instance). Eligibility criterion can be based for instance on income.

Criteria of handicap are also established by some countries (among which Belgium, France and

United Kingdom) to make sure that users with disabilities (e.g. deaf, blind, speech-impaired, infirm people) have access to universal services. Also Germany provides an operator service for deaf and hearing-impaired people in order to enable them to access and use telephone services. This operator service is similar to the universal service, but is not regulated in the universal service provisions.

At last, the Bulgarian and the Danish regulators insisted on the fact that the assessment should be made individually by each Member State.

6.3. The level of "majority" take-up needed before a USO can be invoked

Bulgaria and Lithuania underlined the fact that it is difficult to specify today a precise level of "majority" take-up. Romania specifies that the "majority" criteria specified in the directive is obsolete given the technological, economic and social developments.

For NITA and FICORA the assessment should be made by Member States individually. In the same direction France considers that leaving this concept undefined as it is in the 2002 Directive leaves flexibility for member states to define, if necessary, what lies behind the word "majority" (for instance, majority of the population or households).

Ireland considers that penetration or usage rates cannot be solely relied upon to indicate whether the majority of the population is served by a technology. The definition of majority should take into consideration a number of pertinent factors such as the addressable market (subscribers who have both access to a service and have chosen to purchase it), penetration levels and barriers to take-up. For instance where low take-up exists in areas of high availability, it would be pertinent also to consider the factors contributing to low take-up, such as lack of access to an internet–enabled device such as PC or structural barriers such as lack of skills, which may not be resolved solely by the introduction of a universal service obligation in relation to broadband access Czech Republic specifies that it does not use majority take-up criteria.
At last, for the following countries the level of majority take up should be:

- Latvia : approximately 65% of the population
- Cyprus: not less than 80% of population but the percentage of geographical coverage should also be an issue to consider.

7. Universal Service – Harmonisation vs Flexibility

For most of the NRAs from BEREC countries (Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, France, Germany, Ireland, Romania, Spain, Sweden, United Kingdom) the aim of universal service should be to allow flexibility taking into account a common minimum set of standards (definition of a harmonized common target for instance). In other words, flexibility should be afforded to Member States to adapt the minimum standards on the basis of national circumstances. For instance the disparities between countries are such that it does not appear to be possible to define a common procedure to achieve the target or a common schedule. Germany

stressed that there are economic and geographic differences between the member states as well as between citizens' demands of the respective member states. Romania also added that at this moment, a harmonized approach might result in failure of implementation of the Universal Service because targets might be set at too high a level compared to the financial resources available. It seems more appropriate in this context to allow flexibility for instance in procedures and timetable to address these disparities.

The following BEREC countries (Hungary, Malta, Norway, Poland and Slovenia) only specified in their answers that the approach of universal service should be to allow flexibility in this subject because of national differences (these countries did not invoke the necessity to take into account a common minimum set of standards). Portugal noted that some flexibility should be allowed to member states.

Finally according to Italy, in order to grant a safety net for all European consumers, the aims of Universal Service have to be harmonised across Member State. Belgium underlines however that some degree of harmonisation could be useful to allow European scale operators to specialise in some market segments.

C. UNIVERSAL SERVICE AND BROADBAND – APPROACH TO INCLUDING BROADBAND IN THE SCOPE OF THE UNIVERSAL SERVICE

1. Criteria for including different services in the scope of universal service

A majority of NRAs considers that the criteria for including broadband connection in the scope of universal service (laid down in Annex V of the Universal Service Directive) are appropriate. Those regulators are from the following BEREC countries: Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, Hungary, Ireland, Italy, Lithuania, Malta, Netherlands, Norway, United Kingdom, Poland and Sweden. For instance Finland specified that criteria are general in nature and therefore still appropriate, provided that differences in the national circumstances are taken into consideration. Germany specified that the criteria are a first approach at determining whether broadband should be incorporated into the universal service catalogue. Furthermore there exists room for discretion and judgement for the German NRA for their assessment of change in the universal service. A sole reference to the penetration rate does not seem sufficient.

Three BEREC countries express in their answers limits to the criteria of the Universal service directive. For France and Germany the criteria do not take into account market dynamics. Indeed, applying this test could lead to including too soon in the universal service framework a technology in expansion, when market dynamics would enable for full coverage of the territory. Applying the inclusion criteria prematurely may imply a higher cost for society (related to the US financing mechanism) compared to a situation of diffusion by the market. The criteria for including a service in the scope of universal service must also take into account efficiency or cost efficiency.

For Romania, given the rapid development of Internet, more consideration should be given to make available this service to almost everybody (as broadband became like a public utility). From this point of view, the majority criterion could become obsolete (for instance in some countries a majority of household do not have access yet to broadband). Romania considers however that the second criterion should remain unchanged.

Sweden mentioned that in a critical point of view, the criteria can be said to be rather vague, which induces some uncertainty to how the criteria will be considered. The reference made to a minority and majority of consumers should perhaps be described in more detail. A simple majority of consumers may for example be a rather small proportion of a society. In addition, it is difficult to find good guidance about who to include, does the meaning of all include all or just 99 percent of the population? Belgium agrees with that point of view.

2. Assessment of the two criteria for including broadband in the scope of the Universal Service

Currently it cannot be stated clearly that in the majority of BEREC countries the criteria of the Universal Service Directive for including broadband in the scope of Universal Service are met.

There are indeed 7 countries[20] in which the criteria are fulfilled and in 2 additional countries[21] only the criterion "social exclusion" in the case of non-availability of broadband access is questionable. A number of 8 BEREC countries[22], did not make any comments and other 6 members[23] stated that the criteria are not fulfilled, leading to a clear element of uncertainty in the assessment.

Ireland stated that a full analysis and Regulatory Impact Assessment would be required for a comprehensive answer. Slovak Republic and Portugal are currently considering this issue.

3. The role of the market forces in providing universal access to broadband

11 BEREC countries[24] assume that market forces are not sufficient to satisfactorily provide universal access to broadband. In addition NRAs of 2 countries[25] indicate that market forces play a certain role but that in the end market forces may not be enough to reach a satisfactory universal access to broadband.

The NRAs of 4 BEREC countries[26] state without any reservation that market forces will be sufficient to satisfactorily provide universal access to broadband. Additionally it is mentioned by 4 other NRAs[27] that market forces will be sufficient but that in certain areas supporting measures will be needed.

In total NRAs of 21 BEREC countries made substantial contributions to that question. 4 NRAs[28] did not make any comments while one other NRA[29] is currently analysing this matter.

4. The concept of "functional internet access" as referred in art. 4 of the USD

The NRAs were invited to indicate whether the concept of "functional internet access" proposed by the current Universal Service Directive is still adequate.

---

[20] Finland, France (but alternative schemes of funding are important), Italy, Malta, Sweden (but the benefits for society must be considered before including broadband in the USO legislation); Switzerland (already included), United Kingdom

[21] Germany and the Netherlands

[22] Belgium, Denmark, Hungary, Latvia, Lithuania, Poland, Slovenia and Spain

[23] Bulgaria, Croatia, Cyprus, Czech Republic, Norway and Romania

[24] Bulgaria, Finland, France, Italy, Lithuania, Netherlands, Poland, Romania, Slovak Republic, Sweden and United Kingdom

[25] Croatia and Ireland

[26] Czech Republic, Denmark, Spain and Switzerland

[27] Cyprus: "Staid aid for take-up"; Malta: "Nevertheless introduction within the scope of US in the EU-framework; Norway: "Public funding needed" Germany: For rural areas state aid; auction of the "digital dividend" to enable and support broadband access".

[28] Belgium, Hungary, Latvia and Slovenia

[29] Portugal

The majority of the respondents (16 out of 26 BEREC countries[30]) consider the concept of „functional internet access“, as proposed by the current Universal Directive is still adequate. This is because this term gives the Member States room for interpretation[31] and enables them to take into consideration the diversity of situations between member states.[32] Furthermore this allows the definition of 'functional' to progress with current market and technological developments[33]. Broadband at the moment seems matching with the „functional internet access“ concept.[34]

It is not appropriate to mandate a specific data or bit rate at Community level. Flexibility is required to allow Member States to take measures, where necessary, to ensure that a data connection is capable of supporting satisfactory data rates which are sufficient to permit functional Internet access, as defined by the Member States, taking due account of specific circumstances in national markets.[35]

Only 2 of the BEREC countries[36] consider that the concept of "functional internet access“ seems to be outdated (United Kingdom) or is too general and does not reflect the present technological situation (Italy). Portugal mentioned that a clarification of the concept of functional internet acces might be useful.

6 BEREC countries[37] did not make any comments on the first part of the question C. 4.

The NRAs expressed their opinion of amending or not the Directive to include a reference to broadband as such in the scope of universal service.

5 BEREC countries[38] recommend an inclusion of broadband in the scope of the universal service.. This should comprise a definition of the minimum data rate for broadband [39]

10 BEREC countries[40] do not think that it would be preferable to formally amend the Directive to include a reference to broadband as such in the scope of universal service. An amendment to the

[30] Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Ireland, Lithuania, Malta, Netherlands, Poland, Romania, Slovak Republic, Spain and Sweden

[31] Cyprus

[32] France

[33] Ireland

[34] Lithuania

[35] The Netherlands and Malta

[36] Italy and United Kingdom

[37]Bulgaria, Croatia, Hungary, Latvia, Norway and Slovenia

[38] Bulgaria, Croatia, Italy, Lithuania and Malta.

[39] Italy, Bulgaria and Croatia

[40] Belgium, Cyprus, Czech Republic, Finland, France, Germany, Netherlands, Norway, Slovak Republic and Sweden

very recently amended Directive is neither realistic nor necessary.[41] The inclusion of "broadband" in the Directive would be a step from flexibility towards harmonization and would reduce the possibility for member states to independently set the data rate required for functional internet access.[42]

9 BEREC countries[43] did not make any comments on the second part of this question.

5. The data rate considered to be "sufficient to permit functional internet access"

10 BEREC countries[44] responded stating, that a data rate of **less than 1 MB/s** is sufficient to permit functional internet access. The responses suggest data rates as follows: Hungary 9,6 KB/s, the Netherlands and the Slovak Republic 56 KB/s, Norway 64 KB/s, Lithuania 256 KB/s, Germany 384 KB/s, Cyprus and France 512 KB/s as well as Switzerland 600 KB/s.

4 BEREC countries[45] consider a data rate of **1 MB/s** as sufficient to permit functional internet access and 4 other members[46] prefer a data rate of **more than 1 MB/s up to 2 MB/s** as minimum rate. Ireland stated that it needs to consider further the range of speeds available and possible using various technologies.

3 BEREC countries[47] already implemented specific data rates in a legislative instrument. United Kingdom[48] and Germany[49] codified the demanded data rate in their broadband strategies. Spain plans to include the appropriate data rate in their national Telecommunication Acts. 2 BEREC countries[50] did not make any comments. The Swedish government has identified that there are reasons to increase the level of functional access to internet to a speed of 1 MB/s. The means for this are however not yet settled. In "France Numérique 2012" broadband through satellite solutions has been defined as an internet access capable of a download data rate of 512 Kbit/s. In Portugal the concept of functional internet access is being analysed in order to evaluate the need and the possibility of defining a specific bit rate

The criterion which has been or will be employed to decide on this data rate is the technological feasibility,[51] followed by the prevailing bandwidth[52], prevailing technologies[53] and main

[41] Finland

[42] Sweden and France

[43] Denmark, Hungary, Ireland, Latvia, Romania, Slovenia, Spain, Switzerland and the United Kingdom

[44] The Netherlands, Slovak Republic, Norway, Hungary, Lithuania, Germany, Cyprus, France, Switzerland and Italy

[45] Bulgaria, Finland, Romania and Spain

[46] Belgium, Croatia, Poland und United Kingdom.

[47] Denmark, Finland and the Netherlands

[48] Digital Britain

[49] Federal Government Broadband Strategy

[50] Latvia, Slovenia

[51] Croatia, Cyprus, Finland, Hungary, Romania, Ireland and the Netherlands

functions[54] used by the majority of subscribers. Further are stated the requirements of the users in the targeted areas for universal service and the provision of this service at efficient costs[55] and a rough cost-benefit analysis.[56] Italy argues that whatever national indication should, in fact, reflect European guidelines in order to uniform the European broadband market without discrimination between foreign competitors.

6. Definition of broadband speed

In its documents the European Commission establishes as a basis for defining broadband a downstream capacity equal to or higher than 144 Kbit/s.

Based on the increasing number of the internet connections and the development of the access technologies which allow for high rates of data transfer, the available content diversified and required a considerable level of bandwidth.

On the Communication on the second periodic review of the scope of universal service in electronic communications networks and services in accordance with Article 15 of Directive 2002/22/EC, the European Commission asked whether it is appropriate to indicate a particular speed or range of speeds that would be taken to represent "broadband" or an updated notion of functional internet access and whether a speed set at between 1 and 2 Mb/s would ensure quality of service and today's active participation in society.

Of the 26 answers received to the questionnaire, 14 NRAs (Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Malta, The Netherlands, Norway, Romania, Slovak Republic, Sweden and UK) consider that flexibility should be left to the member states in establishing the speed that would define a broadband connection[57] and no amendment should be made to the directive in order to indicate a particular speed or range of speeds (and relevant technical characteristics) that would be taken to represent "broadband" or an updated notion of functional internet access. The main arguments in favour of this opinion were the different degrees of market development and the general economic and geographic differences between the member states as well as between the demands of citizens of the respective member states. The speed suggested by the Commission in its Communication it is not embraced by these NRAs on the same grounds as the flexibility argument.

Only 2 BEREC countries (Croatia and Italy) had a positive approach on introducing a definition in the directive as to what broadband or functional internet access represents in terms of download

[52] Belgium, Finland, Hungary, Romania, Cyprus

[53] Hungary.

[54] Belgium, Finland.

[55] Romania.

[56] Cyprus.

[57] Portugal

data rates. In their view such an approach might reduce transaction costs (i.e. avoid controversy about what to expect in terms of services and what to include when talking about broadband in a US context). Although it does not respond directly to the question, Bulgaria stated that if the directive defines a particular speed, it should be set as a minimum, based on the prevailing range of speeds applied by Member States in providing broadband access in the Community and this speed in any case should not exceed 1 Mbit/s.

Spain specified that the matter of broadband is in discussion at national level both in terms of finding the best models for achieving national coverage of broadband access and defining the respective data rates whereas other 7 NRAs did not respond to this question or declined their competence in this matter.

7. Broadband development in the context of the USO

According to the Commission Communication[58] coverage of broadband networks is now very high in most Member States, being available, on average, to 90% of the EU population. Use of the internet is now approaching the level of a service used by the majority, with 49% of EU households using the internet, 36% of which are on broadband. Although broadband is not yet used by the majority of consumers and is therefore not encompassed by the USO as laid down and described by the present wording, take-up is approaching the threshold of use by a majority of consumers. For these reasons the Commission is of the opinion that the situation does need to be kept under review.

The main question is therefore whether universal service at EU level is an appropriate tool to advance broadband development, especially in underserved areas, and, if so, when and how it should be invoked, or whether other EU policy instruments or national measures would be more efficient.

Based on the answers to the questionnaire, 10 NRAs consider that introducing broadband in the scope of the Universal Service could be an appropriate tool to advance broadband, either as a stand-alone measure or in conjunction with other measures.

European funds (7 NRAs mentioned it as an option), national measures (8 answers) or local authorities (which constitute a solution for advancing broadband in 4 cases) are also suggested individually or in conjunction with others.

Also, 6 NRAs pointed out market development and increase in competition as being the most efficient instruments in the rollout of broadband. NITA considers that competition and national measures are effective in the development of broadband.

[58] The Communication on the second periodic review of the scope of universal service in electronic communications networks and services in accordance with Article 15 of Directive 2002/22/EC from The Commission to the European Parliament, The Council, The European Economic And Social Committee And The Committee of the Regions, published at 25th of September 2008

Hungary appreciated that universal service as a tool to advance broadband development should be considered depending on the market structure and national circumstances, while UK stated that this is a matter for its government.

Spanish regulator considers that if broadband access should be guaranteed through the USO, measures such as end users subsidies could be used as a less distorting mechanism for competition in order to foster the affordability of broadband service.

3 NRAs (Latvia, Lithuania and, Slovenia and) did not respond to this question while in Portugal this matter is under consideration.

The matrix of the answers:

BEREC country	Including Broadband	EU Policy Instruments	National Measures	Competition	Local authorities
Belgium				x	
Bulgaria	x		x		
Croatia	x	x	x		
Cyprus			x		
Czech Republic		x	x		
Finland	x				
France				x	x
Germany				x	x
Ireland	x				
Italy	x				
Malta	x				
Netherlands	x	x	x		
Norway				x	
Poland	x	x	x	x	x
Romania	x	x	x		x
Slovak Republic		x			
Sweden		x	x	x	
Switzerland	x				
Total	**10**	**7**	**8**	**6**	**4**

The matrix of the answers shows the mix of measures the NRAs would consider being the most efficient in advancing broadband penetration (one row corresponds for one country). However, some NRAs might have not mentioned the entire range of methods they consider efficient, especially where inclusion of broadband is mentioned as an exclusive measure (some of the NRAs only pointed out whether universal service is an appropriate tool to advance broadband development).

Eleven NRAs indicated what would represent an "underserved/undersupplied area" in their view[59]:

[59] Some BEREC countries like Belgium are not concerned as their territory is more than 99% covered by at least two infrastructure types.

Croatia	Underserved/undersupplied area - area with low density population (rural areas), areas which are geographically isolated (mountain areas, islands, etc.)
Cyprus	The definitions of 'underserved/undersupplied' could coincide with the terms 'white' and possibly 'grey' as used in the Commission Recommendation regarding State Aid for broadband.
Finland	There is no specific national definition for underserved/undersupplied areas. One clear indication, however, is that the download speed, which is used by the majority of the end users, is not available in the underserved areas.
Ireland	An underserved area would be evaluated in terms of the availability of a broadband service of a particular speed at an affordable price.
Italy	Underserved areas – smaller towns or rural and mountain areas, where population density makes data grid investment uneconomic.
Malta	Currently in Malta there are no underserved or undersupplied areas given Malta's high population density.
Netherlands	An undersupplied area would be considered as any geographic area where the market would not by itself serve services enjoyed by the majority of consumers.
Poland	Areas described as 'undersupplied' are mainly rural areas where there is a smallest number of internet users because of lack of infrastructure, poverty (lack of computers).
Romania	In Romania, the term "underserved/undersupplied area" refers to rural areas. As criteria, an area could be considered undersupplied when the penetration of a service is below the national average.
Slovak Republic	Underserved/undersupplied areas – areas with low density population, areas where is lack of infrastructure and where cost of provision US services exceed benefit.
United Kingdom	Underserved/undersupplied area would be considered as any geographic area or (vulnerable) groups of people whom the market would not otherwise serve and/or would be involuntarily excluded from services enjoyed by the majority of consumers.

8. Alternatives for developing broadband

The Commission asked Member States to elaborate national broadband strategies and set national targets for broadband usage. In the Competitiveness Council of March 2009, the Member States agreed to "a common indicative goal being 100% coverage of broadband between 2010 and 2013".

In achieving the above mentioned objective, Member States could use a number of policy tools such as loans, grants to public-private partnerships, fiscal incentives to subscribers - to support broadband in under-served areas, action at EU, national, regional and local level and involve policy areas such as regulation, regional and rural development, State aids and an intelligent use of

the digital dividend.

The Commission notes that, in particular, the EU structural and rural development funds are available to bring broadband to sparsely-populated rural and remote areas, where the market is failing to invest in adequate infrastructure, as long as the schemes are well-justified and proportionate to remedy a well-defined market failure, as well as to meet cohesion objectives, and are in compliance with requirements for open access and technological neutrality and with competition, including State aid, rules[60].

Also, the Commission already approved almost 60 broadband projects for compliance with State aid rules. In order to help Member States to accelerate and extend broadband deployment, the Commission adopted the State Aid Guidelines in 2009, by outlining its policy and past practice on individual cases of public support for "traditional broadband" as well as addressing public financing of very high speed, next generation access networks.[61].

Regarding the answers to the questionnaire, there seems to be a wide consensus among authorities in relation to the use of alternative measures. These measures are favored both by the most NRAs which support the inclusion of broadband in the scope of the Universal Service and the ones which are against such a measure. One Member State points out that the universal service mechanism should be used only when it turns out that these alternative measures are not appropriate.

However, one BEREC country mentioned that using the universal service mechanism for implementing a “broadband for all” policy has a certain advantage on other measures by imposing an obligation of providing widespread internet access with determined quality of service, while another NRA introduced the financing criteria as an important consideration in the choice of mechanism.

The Spanish regulator considers that the incidence of market regulation measures and other network financing instruments –state aid- should be taken into account before including broadband in the scope of Universal Service. Network deployment support through public budget as funding mechanisms could have less impact on competition. NITA supports public private cooperation regarding the rollout of broadband

One NRA has not had a chance to consider these aspects in the context of a “broadband for all” policy.

Five NRAs did not provide an answer to this question.

In the table below, there are presented the options for the alternative measures suggested in the questionnaire:

[60] The current structural funds programmes of 2007-2013 are to invest almost € 2.3 billion in communications infrastructures, mainly broadband networks.

[61] Annex 3 of the Questionnaire for the Public Consultation on Universal Service Principles in E-Communications issued by the European Commission, Information Society and Media Directorate-General on 2nd of March 2010

BEREC country	Use of structural funds	Regional open access network scheme	Stimulation measures	Public private partnerships
Belgium	x	x	x	x
Bulgaria	x	x		x
Croatia	x	x	x	x
Cyprus	x	x	x	x
Czech Republic	x	x	x	x
NITA				x
Finland	x	x	x	x
France	x	x	x	x
Germany	x	x	x	x
Ireland	x	x	x	x
Italy	x			
Malta	x	x	x	x
Netherlands			x	
Norway		x	x	
Romania	x	x	x	x
Slovak Republic	x	x	x	x
Spain			x	
Sweden		x	x	x

9. Extending the USO to include broadband

According to the Universal Service Directive, Member States may compensate the net cost of providing the universal service, where such an obligation results in the imposition of an unfair burden on the universal service provider, by general taxation or by putting in place a mechanism (universal service fund) under which contributions by market players in the e-communications sector must be made. Also, a reference to alternative financing of infrastructure rollout has been introduced in the recital 5 to the Citizens' Rights Directive "Alternative financing of underlying network infrastructure, involving Community funding or national measures in accordance with Community law, may also be implemented."

Broadband internet enables consumers to access a wide range of services that extends beyond the telecom sector to various digital services, applications and content that are produced and provided both by public authorities and private businesses. It is necessary to examine whether the current financing model of universal service remains sustainable and equitable in the new convergent digital environment.

9.1. The impact of extending broadband on universal service's net cost

Trying to assess the costs of including broadband in the Universal Service proved difficult for the NRAs responding to the questionnaire. Therefore, 19 NRAs indicated that would be very difficult to estimate such costs because the costs incurred by the deployment of the infrastructure in the underserved and remote areas will vary depending on a multitude of factors among which the

technologies employed for the roll-out play a key role, and the level of the "affordable price" imposed.

However, the NRAs that provided an answer to this question (France and Sweden) estimated cost of hundreds of millions of euros for deploying broadband as a universal service obligation. Spanish regulator doesn't have reliable data in order to forecast the increase of costs. However, CMT believes that this will be estimated in millions of euros. Malta and The Netherlands, though, indicated that the cost will be relatively small, taking into account that the coverage of broadband is near 100 %.

Germany estimated the costs incurred by the cable and telecommunications companies in building up their broadband networks and setting up high-performance networks to be up to 50 billion euros in the next year. Also UK specified that in the Digital Britain Report, the Government estimates that the cost of the Universal Service Commitment (covering speeds up to 2MB) to be in the order of £200m.

As regards the financial benefits no estimation was given by anybody. However, 8 NRAs presented the advantages which would derive from including broadband in the universal service:

BEREC country	Benefits
Croatia	- broadband services would be available at reasonable price to all citizens in all areas of the country - everyone would have access to the broadband infrastructure and services. - a more balanced regional development and bridging digital divide.
France	- making broadband available to "dead zones" would give access to a part of the population access to new way of living: consumption, education, relations with public administrations, e-government, social networking, etc.
Germany	Financial benefits: - Promotion of economic growth through rapid information and knowledge exchange. - Securing jobs in rural areas as well as improving the attractiveness and earnings potential of these regions. - Future-oriented eWork or eHealth applications increase property values - Broadband is an important location factor for the settlement of companies and families (see Federal Government Broadband Strategy, p. 6f.). Non-financial benefits: - It should be noted that the competitive distribution of broadband connections is continuously progressing and technological developments give grounds for this to become even more dynamic. - The usage possibilities in eWork, eGovernment, eHealth and eLearning enable people to live and work longer than hitherto in the environment they are used to - Enables access to ever more diverse and high-quality audio-visual media content and infotainment services (see Federal Government Broadband Strategy, p. 6f).
Italy	- easy access to banking, financial and commercial services will bring a consistent time and costs saving for both end-users and enterprises
The Netherlands	- preventing social exclusion.
Romania	- a high potential of improving the quality of life and the development of the respective communities.

Spain	The Spanish regulator agrees with ragard to the benefits of the broadband extension to all citizens without exclusion. However, in CMT opinion the benefits of widening broadband coverage could not be fully achieved if consumers do not demand these services due to lack of acknowledge of potential benefits of Internet or appropriate equipments.
Sweden	Financial benefits - some savings to be made by the fact that broadband inclusion in USO makes it possible to cut down on expensive real life services as well as rationalise public institutions and control mechanisms in rural areas - broadband as part of an USO scheme could spur innovation activities among market actors – paving way for energy and cost efficient solutions (as well as potential export products) Non-financial benefits - USO means greater opportunity to create a continuous inclusion in the cultural heritage of society (no matter of the geographical location). - the feeling of safety (a connection to the urban part of society). - the notion of being able chose to live a rural life without sacrificing modern services (quality of life).
United Kingdom	- Digital Britain Report: "we are moving into a world where not having broadband access creates social and economic disadvantage – whether it is for children keeping up with homework with their school peers, job opportunities increasingly advertised online-only, cheap goods and services online and access to information"

9.2. Financing the USO with broadband as part of its scope

The NRAs answering to this question emphasized the need for a change in the financing mechanism if broadband would become part of the Universal Service Obligation. Various financing methods are considered in this respect.

Bulgaria, Croatia and Romania would choose a mix of methods involving European structural funds, national public funds and contributions from market players.

France specified that introducing broadband in the Universal Service would require a change in the financing mechanism which is currently based on market players' contributions. Thus, if the scope of universal service is widened to include broadband, the net cost burden may be included in a new framework with alternative financing solutions, while in Germany local authorities can access various state and federal government assistance programmes.

Spanish regulator considers the cost should be financed by Public Funds in case of the introduction of broadband in the Universal Service Obligation. Anyway, CMT is of the opinion that Directives do not allow financing every cost associated to the provision of broadband service but only those costs related to the broadband connection to the public telephone network.

Italy would opt for public funding instead of industry financing. Ireland stated that where a funding mechanism is activated, ComReg may share the established net costs defined as within the USO among electronic service providers. However, where the universal service extended beyond the defined minimum set of services, the member state would have discretion to finance by other means if it deemed this appropriate. The Netherlands mentioned that the financing issue is a

governmental matter.

Slovakia would choose public private partnerships for financing the potential net cost generated by the introduction of broadband in the Universal Service.

In Switzerland although there is a universal service obligation for providing broadband, the designated undertaking did not request compensation.

If broadband was to be included as part of the scope of USO in the UK, the NRA would need to determine whether or not the additional cost, alongside the provision of all other USO elements, posed a significant and unfair net burden on the Universal Service Providers. If an unreasonable net burden was demonstrated, then it would consider appropriate funding mechanisms going forward. Belgium follows the same approach. The same considerations would be made in Sweden.

Also, NITA relies on market forces for rolling out broadband, having no plans of including it in the Universal Service.

12 NRAs did not provide an answer to this question.

9.3. Affordability of broadband access under a universal service obligation and access to and usability of broadband for vulnerable persons

Most of the NRAs answering to this question mentioned the need for ensuring the affordability of the broadband connections for disadvantaged users. Two distinct opinions were identified in order to prevent social exclusion:

- **Subsidies, special tariffs and financial assistance for low income users** were mentioned in most cases. The existing system ensuring affordability of the services included in the Universal Service should be reviewed if broadband would be part of the Universal Service. Such means of protection were mentioned by Belgium, Bulgaria, Croatia, France, Germany, Ireland, Italy, Malta, Portugal, Romania, Slovak Republic, Sweden and United Kingdom.
- **Competition in the market** ensures in some cases low tariffs for broadband access. Regulators from Denmark, Malta, Norway, The Netherlands, Romania (urban areas) and Sweden (open net providing foundation needed for market forces and competitive prices even in remote areas) would rely on competition for lowering the prices on broadband access.

Ireland stated that mechanisms are currently in place to ensure affordability, Switzerland imposed a price cap while UK believes that flexibility of contract duration can also be an important consideration for some income groups as people on low incomes can be reluctant to enter into contracts with a long duration.

Belgium mentions that the European regulatory framework, as transposed in Belgian law, allows for the provision of social tariffs while using a competitive mechanism. Each operator is obliged to provide for social tariffs.

One of the most important purposes of the Universal Service policy is ensuring access to the set of

services in its scope to the vulnerable social categories, like people with disabilities and elderly persons.

NRAs answering to this question mentioned a whole range of measures that would be needed to ensure access to and usability of broadband for vulnerable persons (such as disabled and older users) that would be comparable to the levels enjoyed by the majority of users. Some of these measures are presented below:

- national and regional specialised libraries/databases in order to provide large scale access via Internet for blind people and people with visual impairment problems;
- making available accessible public telephones, public text telephones or equivalent measures for deaf or speech-impaired people, services such as directory enquiry services or equivalent measures free of charge for blind or partially sighted people, and providing itemised bills in alternative format on request for blind or partially sighted people;
- continuous work with organisations representing disability groups for achieving the best solutions in helping the vulnerable persons;
- provsion of special equipments: user-friendly keyboards for disabled users, improved display screens, voice recognition features etc;
- Braille-line and speech module to use the internet;
- special tariffs and subsidies for equipments;
- training and assistance in using ICT and ensuring that there is adequate support available.

9.4. Impact on competition and long-term benefit of end-users

No common opinion was the given by the answering NRAs on what is the impact of introducing broadband in the scope of universal service on competition and long-term benefit of end-users.

Four NRAs (Bulgaria, Croatia, Italy and the Slovak Republic) consider that the introduction of broadband in the Universal Service would have a positive impact on competition especially because the increased number of broadband users who can generate more demand for products and services. Also, connecting everybody would create ubiquitous on-line communities. Consumers increased welfare involves improving access to public services, entertainments mediums, political, democratic, educational and cultural resources. In the context of our Access and Inclusion work, UK considers that broadband stimulates both competition and end users welfare.

There are 3 NRAs (Czech Republic, Malta and The Netherlands) which estimate that such a measure would not have a significant positive impact on either competition or end users welfare, mostly because in the respective countries there is almost 100% coverage with such services.

The NRAs from Denmark, France and Germany are of the opinion that introducing broadband in the Universal Service would affect competition. However, the motivations are different; firstly the designated undertaking might artificially strengthen its position in the electronic communication market while the other fear would be that companies that are currently participating voluntarily in the infrastructure development would want to abandon it in the context of a universal service extension. Spain also agrees that introducing broadband connection in the Universal Service may seriously affect competition due to the designated operator might strengthen its position in the market.

Also, Poland stated that in order to remove barriers on the demand side (e.g. adequate financial resources for the purchase of suitable equipment) other (than the USO mechanism) state actions are needed. A State may for example strive to maximize the use of EU aid funds dedicated to combating the digital exclusion to financially support the potential users. Only in the absence of the effect of such actions it may be considered whether the inclusion of broadband access will have a positive impact on competition.

When analysing this question 7 NRAs indicated that the impact would have to be evaluated depending of various factors:

- **market dynamics** – only if markets fail to deliver universal broadband access, and in the absence or failure of other policy tools or levers such as state investment in broadband roll-out, introduction of a universal service obligation concerning broadband would generate a positive impact on competition and consumers welfare (Belgium, France and Ireland);
- **criteria for determining the relevant areas and groups of people** – if the areas where broadband services were to be deployed as part of USO are correctly targeted and only those who need help are subject to special tariffs and conditions, the introduction of broadband in the scope of the universal service would have a minimum impact on competition (Romania);
- **funding method** – depending on the details and especially the funding mechanism it could have serious effects on competition (Belgium, Switzerland and Sweden);
- **enforcement principles** – public procurement could be a less market distorting option than an obligation (Sweden).
- **complementary measures-** national measures to stimulate the demand such as direct subsidies to the end users (Spain).

10. Solutions to frame a "broadband for all" policy

Four scenarios are envisaged for the implementation of a "broadband for all" policy that are balancing the need to have a harmonised European approach in respect of universal service and the flexibility needed to take into account different levels of development in the national markets:

e. Include broadband in the scope of universal service by indicating in the relevant EU Directive a particular speed/range of speeds that should become common definition at EU level;
f. Trigger the inclusion of broadband in the scope of universal service by a "sunrise clause" included in the relevant EU Directive, by which broadband (again defined as a particular speed/range of speeds common at EU level) should be included only when its level of development in the national market has become such as no more than a minority of citizens are excluded and the net cost is not a disproportionate burden;
g. Let each Member State decide whether broadband (and which particular speed/range of speeds) should be included in the scope of universal service by allowing them full flexibility on the data speeds guaranteed to their citizens (this is the arrangement under the current Citizens' Rights Directive);
h. Do not include broadband in the scope of the universal service.

According to the responses the NRAs gave to the questionnaire, 14 of them chose the option c, based on the fact that it allows for the highest degree of flexibility in setting the scene for the rollout of broadband as part of the Universal Service. NITA mentioned that option c is under

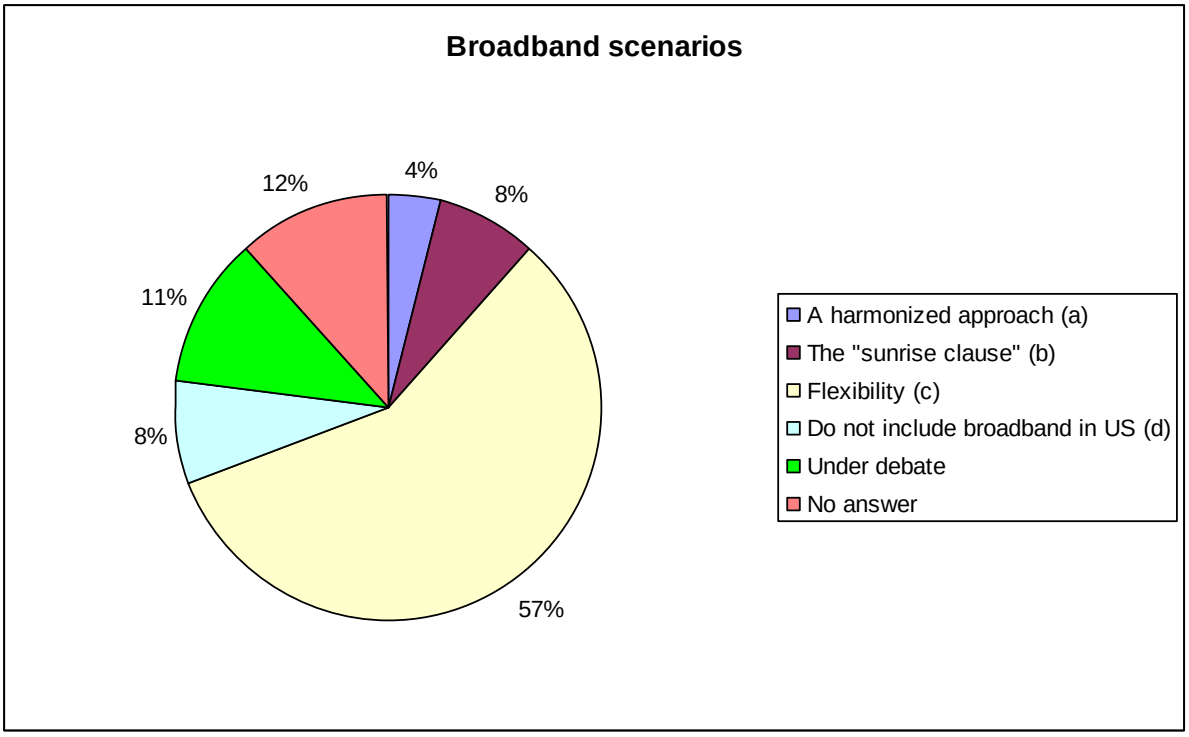
debate.

3 NRAs expressed their preference for a more harmonized approach in implementing the broadband through Universal Service choosing option a (1 NRA) and option b scenario (2 NRAs).

Only 2 NRAs were in favor of option d which excludes entirely the concept of broadband from the Universal Service, while 1 other NRA had no preference between options c and d, nominating both as possible solutions.

Three NRAs did not answer to this question, while 2 countries are still debating this issue.

The chart below shows the percentage of the chosen scenarios among the 20 NRAs that gave an answer to this question:



In the table below you will see the summary of responses:

BEREC country	A harmonized approach (a)	The "sunrise clause" (b)	Flexibility (c)	Do not include broadband in US (d)
Belgium			c	
Bulgaria			c	
Croatia		b		
Cyprus				d
Czech Republic				d

Finland		b		
France			c	
Germany			c	
Hungary	no answer			
Ireland			c	
Italy			c	
Latvia			c	
Lithuania	no answer			
Malta			c	
Netherlands			c	
Norway			c or d	
Poland			c	
Portugal	under debate			
Romania			c	
Slovak Republic			c	
Slovenia	no answer			
Spain	under debate			
Sweden			c	
Switzerland	a			
UK			c	

The difference between the 10 NRAs considering that introducing broadband in the scope of the Universal Service could be an appropriate tool to advance broadband in chapter 7 and the 17 countries which opted for a form of broadband in the Universal Service as an answer to this question could be best explained by the different view on option c which is seen by some as a way to advance broadband through Universal Service while others consider it as a mean to avoid the actual inclusion of broadband in the Universal Service with a clear definition of a particular speed/range of speeds.

This issue was triggered by the co-legislator which deemed it necessary, in the light of developments, to address one particular aspect of regulatory flexibility by amending the current recital in the Directive dealing with functional internet access. In particular, the new recital seeks to allow Member States to define nationally the minimum data rates of the connection *"which are sufficient to permit functional internet access […] taking due account of specific circumstances in national markets, for instance the prevailing bandwidth used by the majority of subscribers in that Member State, and technological feasibility, provided that these measures seek to minimize market distortion*".