SYNOPSIS REPORT
on the public consultation on the evaluation and review of the regulatory framework for electronic communications

1. Introduction

The consultation on the regulatory framework for electronic communications networks and services was launched to gather input for the evaluation process in order to assess the current rules and to seek views on possible adaptations to the framework in light of market and technological developments, with the objective of contributing to the Digital Single Market Strategy.

The consultation targeted consumers, providers of electronic communications networks and services, national and EU operator associations, civil society organisations, broadcasters, technology providers, Internet and online service providers, undertakings relying on connectivity and wider digital economy players, national authorities at all levels, national regulators and other interested stakeholders. The consultation gathered a total of 244 online replies from stakeholders in all Member States as well as from outside the Union. The consultation elicited both consolidated contributions from umbrella organisations and individual contributions from various stakeholders.

The participation of different stakeholder categories was overall balanced with stakeholders from the wider digital economy actively responding as well as consumer groups, public authorities and electronic communications networks and services providers. This includes stakeholders affected by the policy, those who have to implement it and those with a stated interest in the policy. Online contributions by public authorities (national administrations and sector regulators) were relatively fewer than the inputs of electronic communications network or service providers or wider digital economy market actors. Among stakeholders representing electronic communications networks and services providers, different clusters of economic actors with diverse economic power gave input – traditional/incumbent operators, alternative operators.

This report uses the above categorisation of stakeholders in presenting converging or differing views on issues addressed in the consultation. The contributions of the stakeholders who gave their consent to publication are available online. This report also takes account of BEREC’s\(^1\) input to the evaluation and the review process provided at the request of the Commission, the RSPG\(^2\) opinion on DSM and the Framework Review and some 20 other contributions received outside the online consultation as well as feedback received via the dedicated public hearing dedicated to this review. The BEREC opinion was published in December 2015, and can be found on this website.

\(^1\) Body of European Regulators for Electronic Communications

\(^2\) Radio Spectrum Policy Group
This analysis does not represent the official position of the Commission and its services and thus does not bind the Commission.

The input gathered corresponds to the objective of the consultation in both assessing the performance of the regulatory framework to date and also providing insights about possible adjustments in order to respond to market and technological advancements and prospective challenges.

2. Analysis of responses

The analysis in subsequent sections of this report is based on inputs received by different stakeholder categories.

2.1. Objectives and overall performance

In terms of the effectiveness, it is acknowledged by most stakeholders (consumer organisations, Member States, operators, regulators, other) that while the framework has been successful in bringing more competition in the market and promoting the interests of EU citizens, it was less successful in promoting the internal market.

On the objective of achieving the internal market, most respondents indicated a moderate contribution. Alternative operators generally perceive the framework as having set the right environment for the internal market to develop. Conversely, several incumbents are rather negative on this point and also some small players point out that the provisions of the framework are not apt to foster cross-border deployments. Many respondents have stated that this objective has not been achieved owing to the lack of a consistent approach by NRAs (national regulatory authorities), with some of them being seen as more willing and ready to enforce framework provisions than others. Hence this objective can be considered as only partially achieved.

The framework's contribution to the objective of protecting the interest of European citizens is rated more positively. Most stakeholder groups (alternative operators, incumbents, others) consider that the framework has contributed moderately to citizens' rights and interest. Alternative operators and small fibre operators tend to attribute a more significant impact on EU citizens' interests, while several incumbents are rather negative on this point, considering that the interest of the European citizens has been promoted only to a certain extent, owing to the hurdles to investment in NGA allegedly caused by access regulation. Some large operators and entities wonder if the interest of
citizens has been harmed by the focus on lower tariffs rather than on network quality. Finally, the sparse contributions by private individuals have a much more negative character, with 8 out 12 pointing to little or no impact at all.

In terms of efficiency and whether the costs involved were reasonable, there was a somewhat negative perception. Larger operators (incumbents and those with mobile arms) consider that the administrative and regulatory costs borne have exceeded the results achieved. Alternative operators believe, on the contrary, that the benefits have exceeded the costs, underlining that competition, economical offers and several clear consumer benefits would not exist without the framework and that access regulation is necessary and proportionate. Some alternative operators underline the value of having a stable, predictable regulatory regime, whilst also highlighting some unnecessary costs: the costs of market analysis for termination markets where the outcome of the analysis in any event is stable, the cost of questionnaires, the overlap of tasks of public authorities, the lack of harmonisation in consumer regulation including data protection and data retention, of universal service obligations.

In terms of relevance of the framework and whether EU action is still necessary, the general perception is that framework is still necessary and there is a consensus amongst incumbents and alternatives, large and small, consumer organisations. Alternative operators, consumer associations, wholesale operators underline that competition cannot be maintained without ex ante regulation and that full duplication of network infrastructures is not realistic. Most incumbents argue for a simplified access regulation (limited to fixed infrastructures, with only one access product, based on commercial negotiations and dispute resolution rather than on ex ante cost orientation). Some operators and equipment manufacturers argue for a progressive transition to ex-post competition law. Many respondents groups support the relevance of the framework for network and service security.

In terms of EU added value and whether similar progress could have been achieved at national or regional levels, most operators highlighted the importance of competition for increasing choice and transparency, lowering prices and bolstering consumer rights. Incumbents acknowledged the role of the framework in liberalising monopolies. Many respondents highlighted a risk of fragmentation due to national implementing measures and of incoherence with other regulation and competition law. Equipment vendors in particular acknowledged the role of the framework in promoting competition. While the desire to deregulate in one form or another is present in almost all categories of contributors, albeit not equally, none of the contributions concludes that full repeal of the framework is warranted. Consumer protection rules and universal service were the subject of widely contradictory opinions from different stakeholder groups, with disabled user group noting that without the framework, many measures to facilitate a disabled person’s access might not have happened. In terms of process, there were calls from some operators for a maximum harmonisation to address fragmentation.

Connectivity is the overall converging theme in many contributions across different stakeholder groups, with many suggesting that it should be a more prominent focal point in the revised framework. Including investment as one of the objectives, however, divides the respondents. In particular, consumer organisations, alternative operators and regulators fear that this could be seen as undermining the current competition objective. Incumbents and many mobile operators stress the increased need for connectivity and investment but diverge in the proposed solutions. Connectivity to the benefit of end-users as an overarching objective to which competition, internal market and investments provide the means, could be considered as a central theme supported by most stakeholder groups.
2.2. Network access regulation

Extensive inputs were received from all of the major fixed and converged fixed/mobile electronic communications providers active in the EU, whether they are former monopolies, small or large access seekers relying on their networks, or independent fixed infrastructure owners including cable and independent fibre networks.

Good connectivity is perceived as a necessary condition to achieve the Digital Single Market, with many respondents pointing to the need for policy measures and possible adjustments to current policy and regulatory tools to support the deployment of infrastructure in line with future needs.

2.2.1. Evaluation of the network access regulation

Amongst stakeholders from the industry, the positions expressed on network access and interconnection regulation, including the current SMP-based approach, can be divided in two blocks, with on the one hand **operators whose business model predominantly relies on access** (and who strongly support the current ex-ante regulatory approach) as well as **broadcasters**, and on the other hand the **incumbents** (who call for a reform of the regulatory regime in place). **Cable operators** are supportive of the role that the SMP regime has had to promote competition, but warn that overly aggressive regulation could hinder infrastructure deployment.

The main argument from **alternative operators and their national and European trade associations** is that regulated access and interconnection have driven competition, innovation and investment and that with the ongoing shift to NGA networks the needs for SMP-based regulated access to broadband networks will remain acute. In addition, they submit that the current regulatory approach provides NRAs with the right level of flexibility. **Telecom users** are also strongly in favour of the current access regulation, with the exception of one business users association which considers that the emphasis should be put on service competition rather than on the underlying infrastructure, and that the sharing of infrastructure should be emphasised.

On the other hand, **incumbents** consider that the access regime in general is a deterrent to investment in NGA networks, does not provide enough predictability, and is a burden for operators and regulatory authorities with high administrative costs. They claim in particular that promoting infrastructure investments by enabling competition downstream (first by the imposition of wholesale remedies and then by encouraging access seekers to gradually build their own infrastructure closer and closer to end customers), the so called "ladder of investment" approach, has failed, in particular when applied to NGAs, and that a lighter regime should be put in place with a focus only on situations where monopolistic conditions persist. The need to incentivize investment is raised by many incumbent operators. While many **mobile operators** also follow this line of thought, some of the mobile operators support the regulatory approach in place.

**Regulators** consider that the current approach drives investment. On the other hand, some responding **Member States** call in general for a pro-investment regulatory regime, estimating that the current ex-ante SMP-regulation is outdated and should be adapted, with some suggesting that it should enable NRAs to apply a more flexible approach for imposing symmetrical obligations of access to high-capacity networks.

With respect to the interconnection of voice, **mobile operators** and certain **incumbents** call for a phasing out of the ex-ante regime in place, arguing that the IP-based delivery of voice services is modifying market circumstances. **MVNOs** have an opposing view on the matter, on the ground that
terminating networks will always remain a bottleneck. OTTs consider that interconnection rules are needed to avoid discrimination.

Many of the access seekers consider that the current rules were effective in addressing single dominance. This view is also shared by consumer organisations and part of the regulatory community. Those operators in principle agree with the existing scope of access remedies, while raising issues with its implementation in detail. On the other hand incumbent operators consider that the full set of access remedies is often imposed mechanically, without cost/benefits assessment and without regard to modulation according to actual problems identified. Intrusive access remedies, imposed at all levels of the "ladder of investment" hamper investments in modern networks. Moreover, the broad provisions concerning access regulation contained in the current framework allows NRAs to engage in product micro-management, business case design and steering market outcomes. This is said to cause significant delays in delivering new technologies and network upgrades.

2.2.2. Review of the network access regulation

The majority of Member States/public authorities that have responded highlight the positive effect that the implementation of the Framework has had on the market and the role of competition in promoting investments. However, there is an acceptance that updating the framework will be necessary, for reasons varying from promoting investment in next-generation infrastructures, responding to technological and market changes and diminishing administrative costs. Some Member States argue for flexibility in the application of incentives to meet future challenges at a national or sub-national level. Access seekers and some other operators also call for greater guidance to be given to NRAs to analyse sub-geographic markets to increase consistency. There are also calls from certain Member States, which perceive limits in dealing with oligopolistic market structures, for a greater role for symmetrical rules. Regulators broadly underline the achievements of the current system but argue that some flexibility may be needed, for instance by considering more prominently symmetrical obligations or by simplifying the regulatory approach to the termination rates markets.

Among operators, the responses of the two largest groups of stakeholders (incumbents on one side and access seekers on the other) correspond to the general lines of the two groups: the first advocating a de-regulatory push in the name of changed market dynamics and the risks involved in future investment plans, the second defending the link between competition and investments and calling for a protection of access rights to legacy networks as well as to upgraded networks, where they fear that a deregulatory approach would lead to the loss of the welfare gains achieved so far by the regulatory framework. Those seeking further deregulation resist ideas that they fear may result in an increase of the regulatory burden, particularly in relation to regulatory measures that may lead to the continued regulation of markets even in the absence of proven market power. On the other hand, those that rely on regulation resist proposals that imply establishing a link between investment incentives and a lighter regulatory approach, as they fear that upgraded networks will become increasingly inaccessible and that broadband markets will become increasingly concentrated or even re-monopolised. In each case, however, the general approach is typically also accompanied by a recognition that regulated networks and their related markets have changed, leaving scope for adaptations.

In relation to the simplification of access products and focussing on key access points, network owners responded in favour of a drastic simplification to a single access product (if at all necessary), whereas access seekers insist on the importance of different access products to compete at the retail level. On the other hand, access seekers reject the idea that retail market considerations should be
the focus of wholesale regulation, an idea that is strongly supported by network owners, who consider that continued wholesale regulation is not justified if retail markets are competitive.

In relation to different treatment of legacy copper networks (whether pure copper access networks or upgraded FtTC networks with copper sub-loops) to incentivise upgrades, operators invoked the principle of technological neutrality and leaving the market to decide how to best meet demand. However, a number of contributors consider that copper-based solutions will not represent a credible alternative in the long term. Investors in FttH solutions and some access seekers call for a recognition that the risk involved in rolling out fibre to the premises is higher than upgrading copper, so that regulatory incentives, if any, should not include FtTC solutions. Regulators also propose the idea that any risks specific to a particular new investment network project should be considered if wholesale tariffs are subject to regulation, in order to allow the operator a reasonable rate of return on adequate capital employed.

Network owners request discretion to decide whether and how to continue to use copper assets (full copper loop or sub-loop), whereas access seekers request guarantees that physical access to copper networks will continue to be guaranteed. While a majority of respondents, including regulators, would not agree to mandating the switch-off of copper networks where fibre is present, they still see a role for regulators to manage the transition where switching off copper makes economic sense, with copper networks owners advocating minimal intervention, and others rather invoking public intervention to preserve competition (e.g. transitional migration regime).

With regard to co-investment models, many stakeholders can see the advantages of co-investment for increasing the reach of NGA networks, for example, in less densely populated areas. Their views however differ on the related regulatory regime. While incumbents favour co-investments on commercially negotiated terms, access seekers call for strict conditionality to ensure fairness and openness of the co-investment.

The responses overwhelmingly affirm the important role that civil engineering plays in the roll-out of NGA. Some Member States and a number of infrastructure owners don't see the need to further intervene to ensure access to civil engineering falling within the scope of the Cost Reduction Directive (2014/61/EU). However, alternative operators highlight the importance of detailed SMP obligations, beyond the general obligations in that directive. Furthermore, incumbent operators call for symmetrical access to in-house wiring.

There is broad alignment between regulators, Member States and many others that longer review periods (compared to the current mandatory three years) would be beneficial, particularly in stable markets such as termination rates.

Regarding measures aimed at facilitating the roll-out of high-speed networks in the most challenging areas, responses were cautious with regards to any first mover advantages (to operators that are willing to roll out next generation networks in challenge areas). Access seekers and consumer associations warned about the risk of re-monopolisation, whereas network owners challenged the proposition that a risk of strategic overbuild can be defined and distinguished from competition. Some Member States highlighted the need for local responses to sub-national competitive and investment challenges, indicating openness to consider approaches to incentivise first movers on a geographical basis, subject to suitable safeguards being built in. In supporting first mover incentives, vendors and wider digital economy players suggest a concession model, with some operators noting that in such a case regulators should be able to define a period in which the network operator is allowed to use its network exclusively. Most stakeholders agreed that any first mover advantage should be subject to safeguards against re-monopolisation. Wholesale-only models (which may
counterbalance fears of re-monopolisation) found the support of equipment vendors and smaller/fibre-only network operators, but operators in general and public authorities disagree on whether such models would have a positive effect on investment.

On oligopolistic markets, on the basis of BEREC’s recently adopted report, all respondent regulators and some Member States are calling for the widening/strengthening of regulatory powers to deal with new duopolies or oligopolies (where such market structures lead to sub-optimal market outcomes) albeit still with a high threshold for intervention. Some propose symmetrical regulation as a possible solution. Some alternative operators also raised concerns about the adequacy of approach under the current SMP test and guidelines to tackle joint dominance or “tight oligopoly” market structures. However, many operators warn of the risk of over-regulation if ex ante regulation tools are broadened, without a clear economic underpinning, to tackle oligopolistic conditions beyond the current joint dominance test, as set out in Annex II of the Access Directive and the SMP Guidelines, or beyond the current threshold for applying symmetrical rules.

2.3. Spectrum management and wireless connectivity

The importance of wireless connectivity and wireless broadband, and its link and complementarity to a very high capacity fixed connectivity is acknowledged in consultation responses. Industry is supportive of a more co-ordinated approach and looks for additional certainty in investment and possibilities to develop throughout the EU new wireless and mobile communications including 5G. Member States generally underline the achievements in the field of technical harmonisation, and the need for additional coordination to be bottom-up and voluntary; some of them call for a better balance between harmonisation and flexibility. There is widespread recognition of the importance of more flexible access and use of spectrum in the future from both operators and public authorities, although disagreeing about how to realise this.

2.3.1. Evaluation of the current rules on spectrum management

While a majority of respondents consider the current regime to have significantly contributed to promoting competition, almost half say it has only moderately achieved the aims of providing market operators with sufficient transparency and regulatory predictability, promoting citizens’ interests and ensuring effective and efficient spectrum use. A third of respondents considered that the current regime had only a minor impact on keeping the administrative burden appropriate and on promoting the Internal Market.

A majority of respondents that spans public authorities, regulatory and trade bodies both in and outside the electronic communications sectors, MNOs, converged and satellite operators, user associations and vendors, consider the current regime to have contributed to harmonised conditions for the availability and efficient use of spectrum. Member States and regulators have in particular, been consistent supporters of this position. More reserved views are found among broadcasters and other respondents, notably from the transport sector. The regime has been significantly more effective for new bands than for bands still requiring freeing.

There is a general perception among several respondents (converged operators, operator associations, vendors) that technical harmonisation has worked well and that the involved actors (RSPG, RSC/CEPT and the Commission) have delivered. Even those parties seeing little or no benefit from the existing regime (M(V)NOS, cable, converged operators, non-ECS associations) acknowledge the achievements in technical harmonisation, but stress persistent regulatory fragmentation. Points of criticism concern the ineffectiveness in addressing interference issues (transport) and ensuring usage efficiency.
As for the selection processes for limiting the number of rights of use, industry respondents, including operators and vendors, criticize a lack of consistency as well as sometimes unnecessary restrictions of usage rights. Some respondents recognise coherence of application in the sense of certain rules being widely used, while results still differ (converged operators, ECS associations). A majority of respondents (spanning ECS and non-ECS associations, M(V)NOs, converged operators and vendors) considered that the lack of coordination of selection methods and assignment conditions has impaired the development of electronic communications services. The authorisation methods most often mentioned as efficient for wireless broadband were auctions and general authorisations.

While respondents comprising broadcasters, mobile operators, associations of mobile and alternative operators, regulators and vendors consider that inclusion of spectrum provisions in several instruments should not per se impede their effective interpretation and/or implementation, several respondents including incumbent operators and some Member States nevertheless consider a single instrument to be potentially more effective, stressing the benefits of applying the same set of rules to all spectrum users, which is also supported by most vendors and operators/associations, subject to the rules being consistently applied.

2.3.2. Review of spectrum management rules

Regarding objectives and principles, most economic actors and some Member States seek more consistency in spectrum management to increase legal certainty and spectrum value, and to secure greater transparency and predictability for investment, in particular on licence durations, pricing and availability of spectrum. There is also large support from public authorities to remove barriers to access harmonised spectrum across the EU, in order to foster economies of scale for wireless innovations and to promote competition and investment, as well as to avoid cross-border service impairments. Operators also stress problems - in particular, late access to spectrum, high reserve prices, inefficient spectrum packaging, spectrum left idle and lack of long-term vision.

The majority of respondents consider that spectrum assignment procedures have a significant impact on structuring the mobile markets and their competitive landscape, e.g. number of operators, price, network investment, and consumer prices. Some (generally large operators) criticise the use of assignment measures as indirect means to ex ante regulate the market (through caps, reservations) without the associated objective criteria. Others (vendors, some regulators) also consider that additional factors such as regulatory conditions (e.g. access obligations for MVNOs) and historical national market development have a similar structuring impact.

Most responding Member States, broadcasters and alternative operators associations insisted on national specificities and are generally satisfied with the current framework. While public authorities could envisage limited coordination through common deadlines for making a band available or the common definition of certain general principles, many economic actors seek greater harmonisation of award methods and procedures (need and timing of spectrum release and selections, general principles and objectives, transparency, ex-ante competition assessment, refarming conditions, timing of advanced information to market participants, measures to promote use efficiency, spectrum packaging) so as to enhance legal certainty, support investments, promote competition, provide more clarity to manufacturers and support economies of scale. Member States expressed much resistance regarding coordination of spectrum valuation and payment modalities, while many operators oppose fee disparities and excesses, and in general support greater coordination of assignment processes. Most vendors supported harmonisation for predictability and a robust end-to-end value chain, but warn that timetables alignment should not delay early movers.
Assignment conditions generally are considered as heavily impacting investment and business decisions, competition and the single market. Most operators agree on the need for more consistent binding assignment conditions to increase investment predictability, and in particular to support and ensure objective, transparent and non-discriminatory treatment of operators, transparency and alignment of timing and conditions of licence renewals, longer licence duration, flexibility to trade, lease or share, technology and service neutrality limits, refarming conditions, technical performance, use-it-or-lose-it clauses and interference mitigation before assignment decisions are taken. On the contrary, there is strong opposition to harmonise or even use wholesale access conditions from operators and to a certain extent to harmonisation of coverage obligations from Member States. For broadcasters, decisions on criteria and conditions should remain at national level to consider local specificities or media pluralism and cultural diversity. Some also insist on the need for compensation in case of refarming.

Member States reject full harmonisation but are open to a more common approach to spectrum management, some could accept a peer review of national assignment plans as well as a certain level of harmonisation or approximation of conditions and selection processes. A number of Member States expressed their desire to remain flexible to support early take-up of new technologies and to adequately balance harmonisation and flexibility in order to be able to adapt to market demand.

Most public and commercial respondents are calling for flexible or shared access to spectrum to meet future demand, in particular for 5G, preferably on a voluntary basis; vendors and operators insist on exclusive or licensed shared access for quality purposes. Broadcasters raise interference issues and thus urge for careful selection of compatible sharing usages; in addition, some point to their incapacity to at the same time compete for spectrum and meet cultural targets if flexibility is purely market-based.

On refarming, a large majority including operators, vendors and their associations as well as responding Member States and regulators seek further facilitation, notably on a voluntary basis except in cases of inefficient use. The large majority of operators, vendors and their associations consider that longer licence duration would be helpful in this regard. Most operators see a need to protect and give priority to existing users to safeguard investments or avoid interference, while a minority believes that appropriate spectrum pricing, trading and auctions can address this issue. When facilitating refarming, some seek a careful balance between flexibility and preservation of harmonisation.

With regard to facilitating deployment of denser networks, many respondents pointed to obstacles - lengthy permit process, high administrative fees for back-haul provision, inappropriate fee structure, lack of harmonisation of management of electromagnetic fields’ emission - to the roll-out of small area access points needed for mobile services, while some Member States disagree. Many market actors and public authorities consider that a general authorisation regime would foster innovation and competition both for services and end-devices and should include access rights to public and private property to build a network. Vendors seek a common definition of small-area wireless access points and the harmonisation of technical characteristics about their design, deployment and operation.

While opinions are divided as to whether end-users should be entitled to share access to their Wi-Fi connections with others as a key prerequisite for the sustainable deployment of denser small cell networks in licence-exempt bands, many public authorities and private respondents supported the deployment of commercial/municipal Wi-Fi networks in public premises, while seeking appropriate regulatory safeguards for a.o. liability or exposure to EMF. Some operators reject such idea as
network roll-out could be facilitated via various forms of public-private partnerships, many stressed that any such public support should be technologically neutral.

With regard to public protection and disaster relief (PPDR), a majority of respondents reject the inclusion in licence conditions of obligations of service quality and resilience of network infrastructure to enable a dual use of commercial mobile networks for PPDR, as MNOs' individual business models do not combine easily with stringent PPDR requirements, and therefore should be on a voluntary commercial basis only and based on net neutrality rules. Some operators believe that providing PPDR services via commercial networks would be economically more efficient than funding a separate network for PPDR services.

2.4. Sector-specific regulation for communications services
2.4.1. Evaluation of the current sector specific regulation for electronic communications services

With regard to the effectiveness of the current regulatory framework in ensuring a high level of consumer protection, the clear majority of respondents (Member States, telecom operators and their associations, broadcasters, vendors and OTT providers) believe that the current framework contributed to effectively achieving the goal of ensuring a high level of consumer protection in the electronic communications sector across the EU. Member States noted that in general the framework had positive effects on the protection of consumer rights regarding traditional electronic communication services (ECS). In particular, provisions related to contracts and those facilitating change of provider (switching) have diminished unfair lock-in practices and ensure a high level of consumer protection. Users and ECS/ECN associations, as well as the majority of operators consider that the existing rules have delivered good outcomes and high levels of consumer satisfaction.

Many respondents, however, consider that the current regulatory framework has failed to deliver consumer protection with respect to emerging services, which are based on new technological developments and currently fall outside the remit of the sector-specific rules. Most responding Member States support specific requirements to be applied to all communications services irrespective of the provider ("traditional" telecom operators or "new" OTTs) in order to avoid risks of (a) insufficient customer protection, (b) a lack of clarity, and (c) confusion among consumers who might mistakenly believe that their communication is protected by sector-specific rules.

Some telecom operators think that the current provisions have become outdated with little substantial value for consumers, except for basic provisions on emergency services, number portability and interconnection and argue that competition in the sector would allow for the removal of regulation.

Regarding provisions constituting a particular administrative or operational burden, a majority of respondents (mainly operators and their associations) believe that there are administratively or operationally burdensome provisions. The biggest concerns are expressed regarding different and overlapping legal frameworks, e.g. Consumer Rights Directive (CRD); Universal Service Directive; Unfair Commercial Practices Directive. Some respondents argue that this leads to over-regulation, too detailed provisions, and inconsistency of rules. Some alternative operators consider the application of end-user protection rules to business customers as burdensome. According to other incumbents and their subsidiaries almost the entire Universal Service Directive is burdensome.

With regard to provisions to be repealed, the majority of respondents (mainly telecom operators and their associations, a few broadcasters, vendors and OTTs and a Member State) have identified certain sector-specific end-user rights’ provisions, which they consider are no longer relevant. These
include provisions such as contract rules which are covered by various other directives, in particular the CRD. Regarding the maximum contract duration, some telecom operators suggest either an application of these rules also to OTT communications, or their abolition. One telecom operator suggests the repeal of Art. 34 USD as out-of-court dispute settlements are also addressed in the Directive on Consumer Alternative Dispute Resolution (ADR) and the Regulation on Consumer Online Dispute Resolution (ODR). Some operators suggest the repeal of the provisions on printed directories and public payphones. Some Member States, mobile operator association, EU and national consumer associations and a trade union have not identified any provision to be repealed.

With respect to provisions protecting disabled end-users, the USD contains specific requirements under the universal service obligation (USO) and regarding the equivalence in access and choice. The majority of the respondents (telecom associations, telecom operators, users' associations, an association of users with disability, other NGOs, regulators and Member States) found that the current regulatory framework has been effective in achieving these goals. Several operators and NGOs stated that the relevant Art. 23a is too weak ("Member States shall encourage"), it leaves too much discretion ("where appropriate") and does not contain financing provisions. They consider that it has therefore been only moderately effective in achieving the goals of providing equivalent access. As a consequence, an inconsistent diversity of approaches has developed across the EU.

Incumbent and larger operators raised the financing issue. Initiatives designed to improve accessibility of services to disabled people should be borne by the public authorities. If any contribution is required from the sector, it should be requested to all players, including OTTs, in proportion to their incomes and the number of users ("responsibility-sharing based on a proportionality principle").

With regard to the efficient implementation of number portability (NP) provisions, a large majority of respondents consider that the current NP provisions allow significantly or moderately for their efficient implementation. However, operators criticised the diversity of approaches, and of technical means put in place, in various Member States. In some Member States, there is no common database of ported numbers and in a few of them direct routing of ported calls is still not available. Some operators and their associations argued in favour of a receiving provider-led porting process. Some respondents stated that the current NP obligations are not well suited to new services such as M2M or IoT.

With regard to the relevance of 112 provisions to ensure an effective access to emergency services, a large majority of respondents agreed with the significant relevance of the scope and requirements of the current regulation of access to emergency services. National authorities are also in line with this trend. The telecom industry highlights the importance of reliable access to emergency services that, in view of the technical standards and legal arrangements in place today, can be provided today only through ECS/ECN/ECS argue that access to 112 obligations should be imposed on OTTs as well, if technically feasible. A large number of stakeholders consider that all the voice services perceived by the users as substitutive to the current PSTN voice service and which also give access to E.164 numbers should be subject to the same obligations regarding the access to emergency services. In the same vein regulators support an obligation on all communication services (including OTTs) that give access to numbers in the numbering plan.

As regards the effectiveness of network and service security rules in achieving their objectives, over half of all respondents (including several Member States, most telecom operators and some vendors) consider that the rules have been effective. A minority (one Member State, a few telecom operators and some associations of operators) found them ineffective. More than a third of the respondents (many incumbent and alternative telecom operators and associations, several ENISA-
member national authorities) underlined the need to involve the complete Internet value chain (including OTT services, software and hardware).

2.4.2. Review of the sector specific rules for communications services

With regard to the scope of the future rules and the need for sector-specific regulation of communication services, the majority of respondents including BEREC, Member States, several associations of broadcasters, of cable operators and of alternative operators, consumer associations, cable players and OTTs note that there is still a need for sector-specific regulation of communications services as ECS have become an essential service in every person's life, crucial to ensuring a well-functioning society and economy. Therefore sector-specific rules are still considered necessary for sustainable competition, innovation, a healthy low concentration of providers' market power and also to guarantee that consumers can reap the benefits of such competition. Several areas were listed, where sector-specific regulation is still needed: retail Internet access services, numbering, end-user protection, universal service obligations, roaming and downstream availability and accessibility of a wide variety of audio-visual services etc. Nevertheless, several of those respondents prefer horizontal to sector-specific regulation wherever possible. A few of them, however, oppose the inclusion of OTTs within the scope of such rules, because there remain fundamental differences between the telecoms market and the market for Internet applications and content, and applying the same detailed sector-specific obligations would be a disproportionate burden for a highly dynamic industry sector.

Regarding the revision of the current ECS definition, BEREC, several Member States, most operator associations, most incumbents, some cable players, all user associations and some broadcasters consider that the current definition of ECS should be reviewed owing to the increasing uncertainty on the scope of the definition of ECS related to "conveyance of signals", the inconsistent regulatory obligations for similar services and the convergence of communications services. Several respondents emphasised that a future-proof definition needs to be end-user-centric, the key factor being substitutability from a customer perspective. Those opposing revision of the definition, (some Member States, OTTs, software and equipment vendors, cable operators, some broadcasters and a few individuals), argue that the concept of ECS has proven itself and changes may create regulatory, legal and investment uncertainty. According to some stakeholders, instead of including OTT services in the definition of ECS, the current regulatory requirements on traditional electronic communications providers should be loosened. In OTTs' view, if the definition is reviewed, the difference between Information Society Services and telecoms networks should be maintained.

The majority of respondents (some Member States, operator associations, most incumbents and vendors) are of the opinion that for consumers OTT services are a functional substitute for traditional ECS. The minority of respondents (some Member States, a few operators, OTTs and consumer and user associations) submit that OTT services are functionally different from ECS. The majority of respondents (Member States, regulators, most incumbents, alternative operators, associations, trade unions, vendors) are of the opinion that all functionally substitutable communications services should fall under a new common definition, but have significantly varying positions on the types of obligations that should apply to services falling within such a definition.

The minority of the respondents (several Member States, NRAs, some associations, broadcasters, OTTs, a few cable and fixed players) suggest maintaining the "conveyance of signals" criterion in the definition of ECS. For broadcasters that criterion helps in distinguishing telecommunications from audiovisual services. However, the majority of respondents (several associations, most MNOs, most incumbents and few software and equipment vendors) do not consider "conveyance of signals" as a necessary criterion. Rather, the lack of clarity in the ECS definition, when assessing whether services
"consist wholly or mainly in the conveyance of signals", opens the door to different interpretations and inconsistencies. According to BEREC, it "is worthwhile to examine whether it is still an appropriate distinguishing factor."

With regard to the elements of the ECS definition related to transmission services in networks used for broadcasting, all broadcasters and their associations, alternative operators and their associations, many fixed and converged fixed/mobile operators, an equipment vendor and private individuals advocate that these should continue to be considered as ECS. For broadcasters, excluding transmission services from the definition would mean that they are omitted entirely from the telecom framework, undermining important legal protections for broadcasting (e.g. transmission obligations). For some respondents "transmission services in networks used for broadcasting" should not be considered as ECS. They argue that in the light of the convergence of the legacy broadcasting transmission services and internet media services (including broadcasting), the transmission of the service is platform-based and no longer network-based and any reference to services provided on a network has to be eliminated.

With regard to a possible differentiation between managed and best-effort services in the ECS definition, the majority of respondents (incumbents and alternative operators and their associations, vendors and broadcasters) prefer no differentiation between managed and best-effort services in the ECS definition as such a differentiation would facilitate circumvention of the rules by opting for 'best effort provision' free of obligations. As to the question whether sector-specific regulation should be limited to Internet Access Service, there is almost no support for such reduction, with only a few exceptions.

Regarding the application of sector-specific provisions (end-user and other) to the IAS, telecom operators, industry associations and vendors agree that as a general rule only horizontal competition and consumer law should apply to internet access service and that, if any sector-specific provisions are needed, these should apply to all other digital services. Almost all national authorities, user associations, OTTs, some broadcasters and IT service providers see a need for further end-user rights in relation to IAS in addition to those included in the proposal for the Telecoms Single Market Regulation, although in many cases these stakeholders do not provide detailed arguments to explain this position.

On the issue of definition of communication services, a significant number of respondents (incumbents and alternative operators) emphasise that in an "all IP" environment network interconnection is to be distinguished from the interoperability of services as users would be tied to a single connectivity provider but not to a single communications service provider any more.

Some respondents do not believe that there is a need to apply the existing, as well as any further end-user rights, to communication services (some Member States, a large number of mobile, fixed, and cable operators, and OTTs). The main argument put forward by them is that horizontal regulation (consumer and data protection), together with competition-law tools, should suffice. Those who were in favour of having end-user rights applicable to communication services are mostly Member States and consumer protection bodies, while alternative operators suggested that maximum harmonisation is needed for contractual information, transparency measures, contract duration, switching, and bundles.

Several associations, most broadcasters, a few incumbents and converged fixed/mobile players consider that there are new sector-specific end-user protection issues that need to be addressed. Among the areas listed are: bundling of contracts and their impact on switching; communications contracts with subsidised equipment; continuity of service (telephone or internet) when switching;
control of consumption; contract termination in case of the tacit extension of contracts; rights of the end-users when relocating; improved rules for end-users with disabilities, findability of public-interest content.

Finally, regulators and others indicated that some new end-user protection concerns can be anticipated in relation to services which are substitutable to traditional ECS, including access to emergency services, network resilience, cyber security and interoperability between different digital services, transparency, protection of data confidentiality and privacy.

Trade unions, consumer organisations, vendors and directory services expressed support for specific rules with regard to voice services for end-users. These contributions highlighted the importance of availability (call to emergency services, functionality during power outages and disasters) and the importance of voice quality as a distinctive characteristic. Some mobile operators considered voice-specific requirements still relevant, noting the need to ensure interconnection and access to emergency services, while others noted the importance of requirements such as data retention/lawful intercept. In general most incumbent operators would prefer horizontal regulation, while maintaining the possibility of a few specific requirements (such as emergency services) and consumer information was noted as safeguard measure. Directory service providers noted a risk that without a specific requirement (Art. 25 USD), operators might not provide them with subscriber information on a fair, objective, cost-oriented and non-discriminatory basis.

Half of the respondents (some Member States, broadcasters, a few telecom operators and consumer protection bodies) are of the view that providers of communication services as newly to be defined should potentially be subject to an SMP-based regulatory regime, if they can limit competition, based on a market analysis and consistent with the non-discrimination principle. Those disagreeing (some Member States, associations of incumbents, alternative and mobile operators, vendors and OTTs) highlighted the existing high level of competition, market dynamics and diversification of providers, and stated that competition law and horizontal consumer protection offer sufficient protection in this regard.

There is a majority support ranging from national authorities to mobile operators and incumbents, to extend the scope of the access obligations to emergency services to best-effort services. At the same time, it is recognized by all stakeholders that minimum quality of service should be ensured for emergency communications and best-effort communication cannot provide the end-to-end quality that managed services can. Some operators support imposition of a general obligation to give access to emergency services, adapted to the quality of service requirements that each type of services (managed vs. best-effort) can provide.

Regarding numbering resources and assigning numbers directly to M2M users, most MNOs, including smaller ones, highlight that this solution raises many implementation and security issues and risks of fraud, could exhaust national numbers, would endanger interoperability and end-to-end connectivity. There is a clear consensus that to cope with the numbering needs of M2M in the future, a clear framework for extra-territorial use of numbers is necessary to ensure sufficient numbering resources. A majority of respondents see a demand for over-the-air provisioning of SIM cards for M2M communications, and to a lesser extent for end-users’ own devices later on. However, the idea of regulatory promotion of over-the-air provisioning is not supported, with the argument that it should be up to the markets to decide on specific technological options.

While there is a majority view that transmission obligations imposed on electronic network operators (‘must-carry’ rules) and rules related to electronic programme guides should be adapted to new market and technological realities, there is sharp disagreement as to how such adaptation should be
conceived. Extension of the current rules is supported by some Member States and most broadcasters, whereas most telecom operators are in favour of reducing the scope of the rules. Public service broadcasters consider that the future scope of rules should extend to interactive and non-linear services, should also cover hybrid TV signalling and should apply on a technologically neutral basis to all distributors of audiovisual content, not only to ECNs. Telecom operators call for a level playing field between broadcasters and online platforms and call for improving access to content rights. Some cable and telecom operators call for complete removal of must-carry obligations or at least to limit them to the main/most essential general interest channels. Commercial broadcasters, one telecom operator and a citizen consider that the current provisions are adequate.

Media regulators and some telecom and cable operators consider that the presentation and the order on navigation interfaces is crucial for user choices of audiovisual content and that ensuring non-discrimination of general interest content is sufficient. Public service broadcasters consider that Member States should be competent to ensure ‘findability’ of general interest content on user interfaces of significant networks and audiovisual platforms and that regulated EPGs should be included in new TV sets. A pay-TV provider considers that prominence of content could also be improved by better referencing/tagging of national and European offers. Several telecom operators point to the need for broadcasters to be obliged to make real-time signalling available, in order for EPGs to work satisfactorily.

2.5. The universal service regime
2.5.1. Evaluation of the current rules on universal service

The majority of Member States and regulators agree that universal service has been effective and efficient in safeguarding end users from the risk of social exclusion, while most of the operators see little or no impact and efficiency at all. Proponents of universal service argue that the availability of certain basic services increased and that services became affordable and accessible to all. Opponents claim that (1) the universal service regime has become outdated; (2) the high level of competition for fixed and mobile services ensures the affordability of tariffs and not the regulatory obligation; (3) the calculation of net costs have been fraught with controversy, challenges, and appeals; and (4) the overall administrative burden and regulatory uncertainty have been very high, for a regime which has not produced major benefits.

As for coherency with other rules, the majority of Member States agree that universal service has been coherent with other provisions of the framework and state aid, while most of the operators see little or no coherence at all.

The vast majority of operators consider that this review should be the opportunity to redefine or completely reconsider the universal service regime (including its financing), with many claiming that it has become obsolete. Member States mostly claim the need to maintain a universal service scheme, with flexibility at Member State level on funding and on broadband. Regulators support maintaining the status quo.

2.5.2. Review of the universal service rules

With regard to the scope of universal service most respondents consider that the current scope is outdated because it was shaped in a context of market liberalisation and since then market conditions have drastically evolved, with more competition and choice available to consumers.

There is a general acceptance among the respondents to exclude public payphones and comprehensive directories and directory enquiry services from the scope. Due to availability of
mobile telephony and internet, there is no usage of or demand for public pay phones. Regulators acknowledge a decreasing demand/usage for public pay phones but argue that Member States should retain flexibility to include pay phones within the scope. As for directories, the availability of the same information through the internet is a further competitive alternative. However, some directory and local search providers underline that access to data risks being refused in the future, absent a universal service obligation guaranteeing access to directory enquiry services.

Concerning the provision of telephony services at a fixed location, operators mostly agree that this inclusion in the universal service scope is no longer necessary, because various types of players are providing voice services (mobile, VoIP) on a competitive basis while regulators and Member States mostly claim the opposite.

With regard to the inclusion of broadband within the scope of universal service, while most operators and their associations have no doubts about the positive impact of broadband on social and economic life, they claim that USO is not the right instrument to foster broadband deployment. In any case, if broadband were to be included in the US regime, it would have to be revised substantially. Respondents supporting both in and out options (mostly Member States and regulators) submit that Member States should retain the flexibility to make the choice at national level.

Most operators and their associations, several Member States and regulators consider that broadband under universal service bears high risks of market distortions and cost inefficiencies. In particular, industry funding is considered too distortive. The risk of lowering incentives to invest, crowding-out effects, delays in network expansion and unpredictable large financial transfers between competitors (if industry funding is used) are considerable. Instead, an investment-friendly regulatory framework, lowering of deployment costs, demand stimulation, and well-designed public subsidy schemes targeted at cases of clear market failure (evaluated by an impact assessment) should be used for fostering broadband instead of USO. Many also highlight the need to promote competition and commercial investment via regulatory tools. The use of such other public policy measures should be based on timeliness (so as not to come in too early to disrupt or crowd out private investments), proportionality, non-discrimination and technological neutrality.

As to how broadband should be defined if included: those favouring the speed aspect (consumer groups, several Member States, media players, operators) consider it a simpler and more neutral parameter. Media players argue for sufficient speeds to deliver media content. Those favouring the criterion of the use of certain types of services (ECS/N associations) generally feel that it is more flexible, able to evolve with time, more technologically neutral and has a more direct link to social inclusion. Some players are wary of setting the speeds based on the average speeds used by the majority of the population, so that the speeds are not set at a high level. With regard to the list of essential services, most of the respondents agree that the list of services should be based on what is necessary for social (digital) inclusion, but they have varying views on what set services this would entail.

With regard to financing universal service, most operators and associations agree that the most appropriate and equitable way of financing the universal service, in particular in light of the possibility to include broadband within the universal service, would be through public funds. Broadband for all should be supported through general taxation since it is a general public interest goal that benefits society as a whole. The scope of universal service should be defined narrowly, representing only a safety net in a market-driven sector. Many operators state that industry funding, especially when limited to operators, is disproportionate. The use of public funds would have the advantage of limiting the risk of setting too high targets for the universal service and is the only way
of ensuring that Member States properly weigh the needs against costs because of the need of reducing public expenditure and maximising public economic welfare. The high uncertainty of the right to compensation in the present universal service system and the difficult enforcement that led to numerous disputes/litigations are a considerable weakness to be eliminated.

Several actors considered a combination of public funding and industry funding acceptable with the majority of respondents however specifying that providers of on-line content, applications and services should contribute, given they are the biggest beneficiaries of access. Broadcasters warned against the redirection of resources from audio-visual content, innovative online services and digital skills activities to the financing of infrastructure, since availability of such content is an important determinant for the development of broadband networks.

According to regulators, the current funding mechanisms for USO remain relevant and that flexibility should be retained, allowing Member States to choose the appropriate mechanism.

Most market actors and regulators agree that universal service is not the right instrument to foster very high-capacity connectivity for public places. Market forces deliver these services and other public funding policies should be used because the service is of public interest. Only a small minority of respondents (satellite operators) agree that universal service should play a future role in to help realise public interest objectives, but this should be financed by public funds.

Most market actors, Member States and consumer organisations submit that obligations related to disabled end-users should be incorporated in horizontal law. Respondents stress that any obligations should apply equally to all market players. Through the broader implementation of the provisions of Article 23a of the Universal Service Directive, a wider choice of services and tariffs for disabled users could be achieved. According to regulators, specific provisions for disabled end users are already included in the national regulatory frameworks of many Member States. Measures in the Directives should continue to be flexible enough to adapt to the situation of each country.

2.6. Institutional set-up and governance

2.6.1. Evaluation of the current institutional set up and governance structure

The perception as regards NRAs’ independence is generally positive, in particular those safeguards applicable to independent NRAs. This perception is supported by different kinds of stakeholders, in particular public and private, including operators (mostly incumbents as well as some alternative operators and trade associations).

Just over half of the respondents consider that there is generally a sufficient degree of coherence in the application of the regulatory framework by the various institutional players (NRAs, BEREC, the European Commission). This idea was supported by public authorities, especially regulators and approximately half of the operators. Some operators propose to reduce the overlapping competences at EU and national level and to reduce and prioritise the objectives of the framework.

BEREC’s role is positively perceived in relation to the Art.7 procedure, roaming, net neutrality, M2M communications and advice to EU Institutions. While more than half of respondents (including national regulators) considered that BEREC has achieved its main objective, a group of incumbent operators, on the contrary, considered that BEREC has not achieved its main objective, arguing that flexibility is overall favoured compared to harmonisation/consistency of application and that BEREC has a tendency to support over-regulation. Some operators stated that BEREC should be constituted as a supervisory authority independent from national interests or that it should be a proper EU regulatory authority with decision-making powers.
Some respondents submit that BEREC's current institutional set-up results in it opting for greater flexibility at national level or the lowest common denominator instead of focusing on a more consistent or harmonised approach for the single market, and therefore, BEREC's Positions and Guidelines are sometimes just descriptive documents and not a collective commitment or a development of best practice guidelines. Suggested proposals for addressing this include: allowing BEREC to make binding decisions, appointing board members for four years, establishing a Director appointed by the Board, more adequate funding, reassessment of the location of the BEREC Office, more consistent launch of consultations, longer consultation periods and introducing a two-stage consultation process on key policy matters. There were also calls for a stronger advisory role to the Commission, more pro-activeness, and improved transparency and stakeholders' involvement.

As regards consistency of market regulation, just over half of the respondents answered that the Art.7/7a process had been effective in achieving greater regulatory consistency, while a third were of the opinion that this process had little or no effect on consistency. In the first category of positive responses, there were many alternative operators, FtTH-operators and some incumbents and MVNOs. Also those regulators and Member States who responded were largely positive. With regards to areas which could be improved, many respondents who were generally positive suggested that the entire process could be streamlined, made less burdensome for all stakeholders and that the Commission's role vis-à-vis remedies (under Art.7a) should be strengthened, either by a veto power, or by a so-called double-lock veto (i.e. regulators would be required to withdraw the draft regulatory measures if BEREC agrees with the Commission's serious doubts).

Those who disagree, are mainly incumbents as well as some individual respondents. The main arguments brought forward for this view differ widely. On one hand, it is criticised that the current process does not lead to enough consistency. On the other hand, some respondents complained that the current system attempts a 'one-size-fits-all' approach not taking sufficient account of the need for different solutions in different Member States, i.e. not giving regulators enough discretion. Regulators challenged the need to ensure further regulatory consistency and the link between the lack of consistency and the current institutional set-up. Regulators state that access markets are intrinsically local and the nature of competition is not homogeneous either for supply or demand reasons.

As regards the current spectrum governance, the technical side of harmonisation is seen by most respondents to be working well with its aim of harmonising the least restrictive conditions. There is criticism of the present system's capability to bring the actual services into being in a coordinated and timely manner.

There is significant support for the role of RSPG in assisting and advising the Commission on radio spectrum policy issues, with some respondents promoting it for a status similar to BEREC. The interplay between national experts and the European format is seen to work well. In particular, vendors would like the RSPG deliberations to be more open to industry participation.

### 2.6.2. Review of the institutional set-up and governance structure

#### Institutional set-up for market regulation

Almost half of the respondents agree that the current institutional set-up at EU level should be revised in order better to ensure legal certainty and accountability. Respondents call for i) a clearer division of powers between the different institutions (to avoid overlapping), ii) making sure that institutions are accountable for their decisions (both politically and legally), iii) a high level of transparency in decision-making (improved stakeholders’ involvement). The arguments brought
forward for change, however, differed considerably. On the one hand, a group of mainly incumbent operators proposed more discretion for NRAs with a reduced role of the Commission (or BEREC), highlighting the need for taking account of national circumstances. On the other hand, a number of voices have called either for an increased role of the Commission to ensure consistency (through a veto for remedies, for example), or even the establishment of a pan-EU regulator. The regulatory community was of the view that there are benefits associated with all NRAs having a common toolkit and flexibility to determine which tools to use, in particular in view of the increasing complexity of the sector.

Amongst those who favoured a revision of the current institutional set-up, proposals differed from BEREC adopting a limited advisory or benchmarking role (giving opinions and giving assistance to NRAs where needed, providing timely technical guidance, etc.) to turning it into an EU regulatory authority with proper decision-making power. Some respondents called for strengthening BEREC’s role within the Art.7 procedure and also for improving coordination rather than implementing institutional changes. Some incumbents and alternative operators submit that BEREC in its current form has shown a limited ability to act strategically and in the interest of EU competitiveness and, in particular, for the development of the single market. Further it was alleged that it does not contribute to the objectives of the framework in a satisfactory manner. Most respondents (all types of operators and public bodies) considered that the current EU consultation process can be streamlined. However, in the detail as to how this could be done the respondents vary considerably. Whilst some respondents call for more NRA discretion (and a less prominent role for the Commission), others ask for full harmonisation measures, at a minimum regarding the termination markets. In addition, a shift from ex-ante to ex-post control is proposed, rendering an Art.7 procedure less relevant. Among those who disagree (largely alternative operators), most argue that the current process is well-balanced and has proved effective.

Some incumbents advocate for dividing competence between EU and national levels, making BEREC redundant, arguing that stronger compliance or a more binding nature of BEREC guidance would not be appropriate. On the contrary, some alternative operators supported a stronger role of BEREC within the Art.7 procedure and the strengthening of its influence on the scope of remedies in case of a veto of the Commission. The sentiment as regards whether BEREC should be given more executive tasks or binding powers is generally negative (including the majority of operators as well as public authorities). Some respondents are concerned by the lack of accountability of BEREC because it has a 'de facto' significant influence on national regulatory decisions and decisions by the Commission.

The majority of the respondents disagreed with the establishment of an EU Agency with regulatory decision-making powers for all the different areas (market regulation, EU spectrum management, end-user protection and other). Some respondents, mainly operators, recommended that an EU agency should be responsible for services of the EU single market or for issues such as consumer protection, content, service platforms, whilst NRAs should continue dealing with local issues (e.g. network access). As regards spectrum and numbering there was a call for more harmonisation, but there were divergent positions as to whether these issues should be dealt with by an EU agency.

The regulatory community expressed its view against further harmonisation and indicated that differences in regulatory approaches can be beneficial where they allow experimentation and innovation (leading to the discovery of new best practices). Respondents were divided as to whether a common EU approach would add value in addressing the differences in the regulatory approach chosen by NRAs for individual markets in similar circumstances. The regulatory community also notes that, in the wider digital ecosystem, it is particularly important to adopt a “light touch” regulatory approach so as not to undermine investment and innovation. In principle, there could be more room for co-regulation and self-regulation mechanisms. According to regulators, while this
kind of innovative and “softer” approach to regulation can be effective, where it is pursued it will be important that its details are defined “bottom-up”, through the direct involvement of the affected stakeholders.

**Consumer associations** called for caution and considered that co-regulation and self-regulation should only be used on very specific issues and under strict conditions, such as: strong independent governance of the self-regulatory scheme, oversight and enforcement across the sector, and the presence of effective sanctions in cases of non-compliance.

As regards BEREC and the BEREC Office, almost half of the respondents had identified provisions in the framework which in their opinion should be revised. Proposals put forward include longer or extendable mandates for the BEREC Chair, relocation of the BEREC Office and definition of the role of BEREC in drafting Recommendations. Some national regulators considered that the governance structure is satisfactory but suggested a number of proposals for the mandate (consultation by the Commission on legislative initiatives, new responsibilities as regards connectivity objectives, more involvement in the area of spectrum through the exchange of best practices in the design of auctions and beauty contests and monitoring of coverage and QoS), deliverables (binding acts in limited circumstances, reinforced data collection) and functioning (simplification of the role of the Management Committee, establishment of an office in Brussels).

**Consumer and civil society organisations** referred to the need for better collaboration of BEREC with consumer organisations, civil society organisations and individual operators in addition to operators' associations as well as with other bodies/agencies such as ERGA and ENISA. The regulatory community has also identified the need to strengthen the cooperation with other networks of regulators established in adjacent economic sectors.

**NRA status and competences**

There is overall support for strengthening NRAs' independence, in particular by ensuring i) complete separation between ownership of providers and regulatory tasks, ii) political independence in particular in cases of restructuring, iii) control of adequate human and financial resources and iv) no political appointment of Board members. Alternative operators stated that NRAs' independence may also be affected when sector-specific NRAs are merged with other authorities. Respondents favoured that the powers of NRAs are extended to areas such as State Aid, consumer protection and coordination of spectrum policies. The regulatory community stressed the need of aligning the minimum competences (including end-user protection) of NRAs to those of BEREC.

A clear majority of respondents considered that NRAs should have a role in mapping areas of investment deficit or infrastructure presence because they are vested with the necessary powers to access relevant information and have the necessary expertise, as well as independence. Those opposed to such a role contested as a matter of principle any public interference with investment. There is strong support to a revision of the framework to better accommodate the role of NRAs regarding state aid, notably i) identification of target areas, ii) setting access price and access obligations, iii) ensuring better coherence between state aid and ex-ante regulation and iv) resolution of disputes. A few respondents propose that the role of NRAs regarding mapping of infrastructures or setting target areas must be limited to provide technical assistance to the relevant competent authorities or to being consulted.

Most operators indicated the need to revise several aspects of the general authorisation conditions, strictly interlinked with some general substantive choices on the scope and extent of regulation on ECNS (level playing field), in order not to hinder the cross-border provision of electronic
communications services and networks. Several operators suggested a specific lighter regime for some categories of services (best efforts OTT, business services, small cross-border providers) in order to reduce cross-border obstacles. Other suggestions included the harmonisation of Mobile Network Codes conditions, reducing the scope of national discretion in setting the conditions attached to rights of use, and a common notification template.

The principle according to which established and non-established operators should be subject to the same rules in the country of provision was stressed by several respondents. The extension of notification requirements to OTTs as well as the harmonisation of a notification template and administrative simplification (online submission, single language version, one-stop-shop, harmonisation of categories of services) were suggested, in particular by business users and cross-border providers.

On numbering, most respondents do not consider it necessary to allocate more executive powers to BEREC, in particular since numbering is a national competence and existing harmonisation at CEPT/ITU/COCOM level seems to be working. On the contrary, some operators did not exclude the power to grant pan-EU numbers for specific services (M2M).

Institutional set-up for spectrum management

With regard to spectrum governance, in order to serve the future wireless connectivity needs of the EU, a common EU approach to governing spectrum access was welcomed by respondents in order to enable technologies to be used seamlessly, but respect for spectrum as a national asset is required. Delays in availability of spectrum and fragmentation between conditions of use in different Member States were noted. Some respondents promoted a stronger role of the Commission. Some respondents disagreed and stressed the national character of spectrum policy.

As regards spectrum management, the regulatory community encompassing both BEREC and RSPG was of the view that the EU already benefits from substantial coordination and harmonisation processes, and no further EU-level coordination procedures are necessary. However, RSPG showed openness to a peer-review mechanism as regards spectrum assignment.

As regards the need for binding guidance on certain aspects of assignment procedures and conditions, there was a split between regulators and (mainly) broadcasters that preferred a national approach and telecoms operators that supported a certain level of binding guidance. Most respondents supported the Commission issuing Recommendations (Art.19 FD) on assignment conditions and/or procedural aspects, often qualifying it with basing any Recommendation on an RSPG/RSC process. The majority of respondents supported the idea of establishing a mechanism similar to that set by Article 4 of the Radio Spectrum Decision for certain key assignment parameters, at times pointing out the need to choose between this process and the one under Art.19 FD.

There is little demand for mandatory pan-EU or regional assignments. Most respondents questioned the need for EU-wide licences. A preponderance of answers viewed assignment as a national matter. Any wider geographical scope should involve the MS with some respondents viewing it as a Council matter.