

# Substantive issues for review in the areas of market entry, management of scarce resources and general end-user issues

## EXECUTIVE SUMMARY

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## Executive Summary

This study seeks to support the Commission's policy development towards the next review of the EU regulatory framework for electronic communications (RFEC)<sup>1</sup> as regards three *substantive domains*: (1) market entry, (2) the management of scarce resources such as spectrum, numbers and access to land, and (3) the protection of end-users, including 'must carry' rules and rules on electronic programme guides.

Within the scope of those substantive domains, the study is to provide (1) a thorough retrospective evaluation of the framework's functioning to date together with related implementation practices as well as market developments, and (2) a forward-looking analysis of ongoing and foreseeable developments in the marketplace and technology.

Our assessment of the framework in regard to the three substantive domains that are the subject of the present study is based on relevant provisions in the directives that comprise the RFEC. Numerous legislative instruments interact with the RFEC and influence how it is implemented in the Member States.

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<sup>1</sup> The Regulatory Framework for Electronic Communications (RFEC) is identified in Recital 5 of Directive 2002/21/EC (the Framework Directive) as consisting of the Framework Directive itself and the four Specific Directives. Article 3(l) of the Framework Directive defines the Specific Directives as "Directive 2002/20/EC (Authorisation Directive), Directive 2002/19/EC (Access Directive), Directive 2002/22/EC (Universal Service Directive) and Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications)." The Directive on privacy and electronic communications has not been considered in this study.



# 1 Methodology

Our assessment followed the following steps:

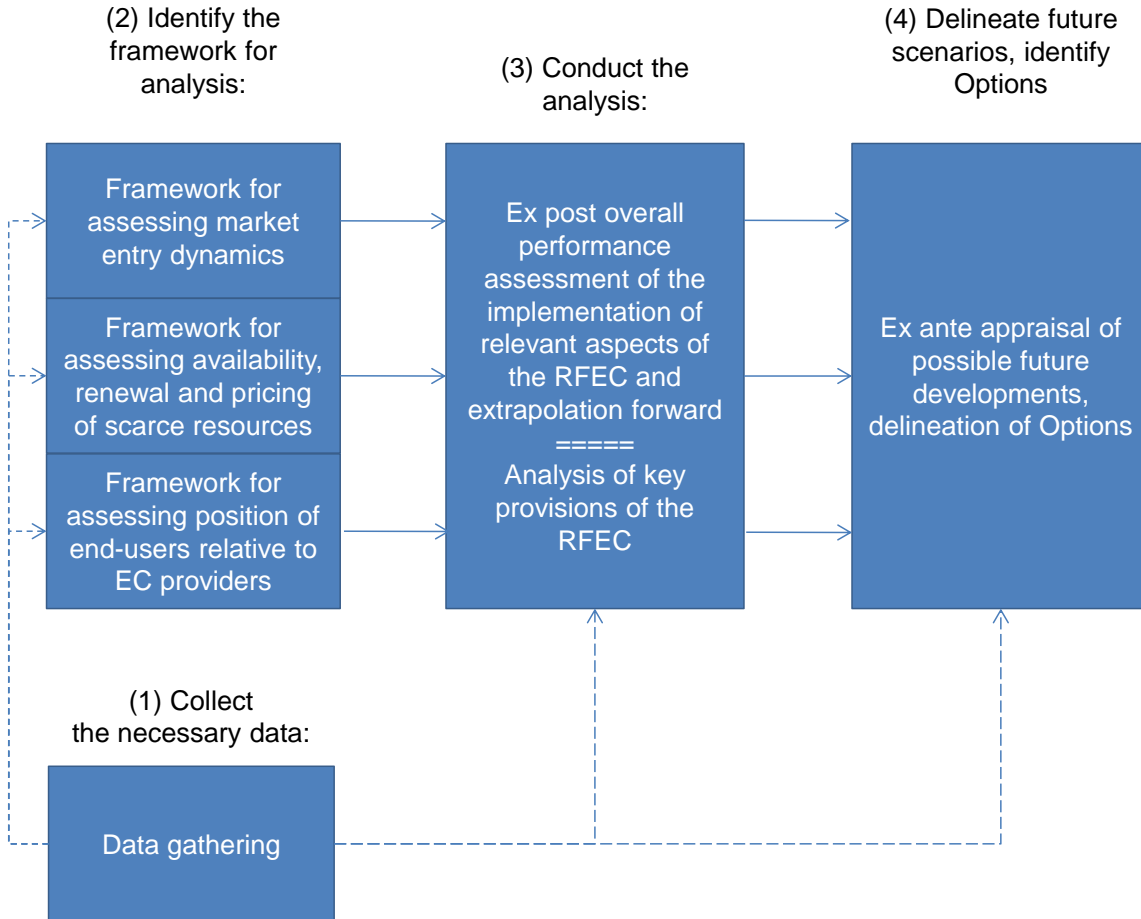
- (1) Collection of the data necessary to drive the analysis. Data was collected through (a) careful review of the RFEC, together with relevant EU documents and primary legislation at Member State level; (b) an extensive compilation of data based on a network of correspondents at Member State level; (c) an examination of the responses to the European Commission's (henceforth: the Commission) public consultation on the review of the RFEC corresponding to the subject matter domains dealt with; (d) in-depth interviews with commercial stakeholders, consumer advocates, regulatory bodies and other interested parties; and (e) a public workshop on interim results.
- (2) Identification of the framework for analysis, including relevant indicators and performance metrics, for each of the substantive domains.
- (3) Analysis of the functioning of the relevant provisions of the RFEC to date (see Section 2 of the report). This includes: (a) an analysis of the implementation of key provisions; (b) an assessment of outcomes and their relation to implementation of the provisions, and identification of problem areas; and (c) an assessment of the performance of key provisions in terms of effectiveness, efficiency, coherence, relevance, and European added value, in line with the Commission's Better Regulation principles.<sup>2</sup> The analysis was backward-looking, assessing performance and identifying problems.
- (4) Based on this retrospective assessment, delineation of Options to improve the performance of the RFEC going forward (see Section 3 of the report). The analysis was forward-looking, assessing possible developments and identifying possible solutions.

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<sup>2</sup> European Commission (2015), Better Regulation Guidelines, Commission Staff Working Document, SWD (2015) 111, 19.5.2015.  
([http://ec.europa.eu/smart-regulation/guidelines/docs/swd\\_br\\_guidelines\\_en.pdf](http://ec.europa.eu/smart-regulation/guidelines/docs/swd_br_guidelines_en.pdf))

The interrelation among these steps is illustrated in the following figure.

Sequence and structure of work in the project



Source: WIK Consult

The study has elements of both an ex-post evaluation and an ex-ante impact assessment, and has been conducted in broad consonance with the Commission's *Better Regulation Guidelines*. A key bridge between the backward-looking evaluation and the forward-looking delineation of Options is a series of *SWOT analyses* (covering *Strengths, Weaknesses, Opportunities* and *Threats*, respectively) for each of the RFEC substantive domains that are covered by this study. The identification of Opportunities and Threats reflected not only predictable developments (as discussed in the next section of this Executive Summary), but also a range of more disruptive possible future developments.

The SWOT analysis then drove the definition of the Problem.

We then proceeded to delineate Options, each of which reflected a broad overall approach to addressing the Problem by mitigating the Weaknesses and Threats, while drawing on the Strengths and realising the Opportunities.

In this study, in light of the presence of multiple substantive domains with complex interrelationships, we have chosen to provide a more granular approach to the Options than is customary by developing candidate *Action Lines*. Each of these seeks to address one or more aspects of the Problem (and thus to mitigate one or more Weaknesses or Threats). These candidate Action Lines were then grouped together into Options, bearing in mind that some appear in more than one Option.

The Action Lines were crafted in view of the most likely scenarios for market and technological evolution. For each substantive domain, we also discussed possible responses to more disruptive but less likely scenarios such as faster-than-expected shifts from fixed to mobile networks (see Section 3.2.2 of the report), or gains in the effectiveness of dynamic spectrum management (see Section 3.2.3 of the report).

## **2 An assessment of the RFEC as enacted and as implemented in the Member States**

The analysis shows the RFEC to be functioning reasonably well in regard to the three substantive domains that we have been called on to study; nonetheless, there is room for improvement.

A number of over-arching themes are visible. In all three substantive domains, the Framework provides for a degree of harmonisation, but not for uniformity. The RFEC establishes broadly consistent rules across the Member States, but does not ensure identical outcomes.

The need to promote connectivity at high and very high speeds is widely recognised today, but was less visible when the RFEC was last amended in 2009, and was not explicitly recognised as a regulatory objective. We have taken this need into account in the Options that we delineate, while noting that the link with the substantive domain of access regulation has been addressed in a separate study undertaken on behalf of the Commission.<sup>3</sup>

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<sup>3</sup> Ilsa Godlovitch, Wolter Lemstra, Christoph Pennings, Karl-Heinz Neumann, Alexandre de Stree et al., “Regulatory, in particular access, regimes for network investment models in Europe”, September 2016, ([http://bookshop.europa.eu/en/regulatory-in-particular-access-regimes-for-network-investment-models-in-europe-pbKK0216677/downloads/KK-02-16-677-EN-N/KK0216677ENN\\_002.pdf?FileName=KK0216677ENN\\_002.pdf&SKU=KK0216677ENN\\_PDF&CatalogueNumber=KK-02-16-677-EN-N](http://bookshop.europa.eu/en/regulatory-in-particular-access-regimes-for-network-investment-models-in-europe-pbKK0216677/downloads/KK-02-16-677-EN-N/KK0216677ENN_002.pdf?FileName=KK0216677ENN_002.pdf&SKU=KK0216677ENN_PDF&CatalogueNumber=KK-02-16-677-EN-N))

Rapid improvements in technology, including the availability of fixed and mobile broadband at progressively higher speeds,<sup>4</sup> generate benefits for European consumers and firms, and mitigate numerous current policy concerns, but also create new ones. Improved technology (1) has increased the demand for high speed mobile broadband, thus also putting demands on spectrum management; (2) has enabled fibre-based broadband, thus also putting demands on access to land (since new fibre needed to be deployed to replace existing copper); (3) has made it possible for largely unregulated *Over-the-Top (OTT)* services that compete with regulated *electronic communications services (ECS)* to enter the market, raising concerns about possible competitive and regulatory asymmetries; (4) has enabled Machine-to-Machine communications and the Internet of Things (IoT), thus putting pressure on existing numbering arrangements; and (5) has enabled existing cable and satellite infrastructure to carry more channels, thus mitigating some of the concerns over scarcity and over competitive issues that had contributed to the need for ‘must carry’ rules, but at the same time creating demand for higher bandwidth channels by potentially a greater number of users with the risk that scarcity might possibly re-emerge.

## 2.1 Market entry

Established market players report that the authorisation regime is not a problem for them; moreover, administrative burdens appear to be low (see Section 2.1.6.1 of the report). For smaller firms seeking entry, however, detailed procedures that vary greatly among the Member States (together with widely varying administrative charges for authorisation) may possibly present a barrier to entry.

Access to scarce resources, especially access to suitable spectrum for network operators that require it, can pose far greater challenges to market entry than does the notification and authorisation regime itself.

## 2.2 Scarce resources

We have been called on to study three thematic areas within the substantive domain of scarce resources: (1) spectrum management, (2) access to numbers, and (3) access to land. A common concern across these three thematic areas is that defects in the assignment of the scarce resource can slow or hinder market entry or network deployment.

A second commonality is that in each of these thematic areas, arrangements vary substantially among the Member States; however, the impacts of that fragmentation also vary among them.

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<sup>4</sup> See Ilsa Godlovitch et al., “Regulatory, in particular access, regimes for network investment models in Europe”, September 2016, op. cit.



Finally, we note that all three thematic areas affect and are affected by technological evolution, notably including (1) the growing deployment and adoption of high speed broadband; (2) the emergence of OTT services; and (3) the emergence of Machine-to-Machine (M2M) communications and the Internet of Things (IoT).

### 2.2.1 Spectrum management

There are many strengths in European spectrum management practices, but also some pronounced weaknesses (see Sections 2.2.5 and 2.2.6 of the report):

- Delays in assignment of 800 MHz and 2.6 GHz spectrum caused a clear loss of macroeconomic efficiency.
- Our evidence base has identified isolated instances of apparently poor practice in spectrum assignment in the Wireless Access Policy for Electronic Communications Services (WAPECS) bands that are used for ECS, including setting reserve prices too high in order to fill budget gaps in the Member State in question, or auction designs that had obvious defects.
- The RFEC does not provide a clear boundary between the roles of politics versus that of regulation in spectrum management.
- Overall, there is no meaningful review of Member State practices by any independent party.

### 2.2.2 Access to numbers

Existing arrangements deal well with the issues that were of interest in the past, but fundamental changes in the nature of the use of numbers are introducing new, but not entirely predictable strains on existing arrangements. Voice over IP (VoIP), Machine-to-Machine (M2M) communications, and the Internet of Things (IoT) raise challenges to traditional arrangements, and may in particular require the ability to use telephone numbers outside of the country that issued them (i.e. extra-territorial use) on an indefinite basis (see Section 2.3.1 of the report).

The European Telephony Numbering Space (ETNS) is now inoperative; however, there continues to be interest in establishing a European identity in terms of numbers.

### 2.2.3 Access to land

The migration to fibre-based fast broadband and mobile broadband is putting stress on existing arrangements. There is an urgent need to find good solutions, particularly in light of the widely recognised need to promote high speed connectivity going forward.

Because granting rights for access to land and rights of way is highly decentralised, procedures are extremely diverse, and harmonisation at EU level extremely challenging.

The time to obtain access to land and building permits needed for network deployment is substantial and not fully predictable. In regard to the rules implemented among the Member States as regards access to rights of way, there is substantial variability in (1) the time period between application and granting of rights of way; (2) the duration for which rights of way are granted; and (3) the fees and charges associated with rights of way (see Section 2.4.3 of the report).

Additionally, rules regarding Electromagnetic Fields (EMF) in some Member States or municipalities are far more stringent than EU recommendations (see Section 2.4.4 of the report). This poses challenges for construction of wireless infrastructure.

## **2.3 End-user rights**

The substantive domain of end-user rights entails both provisions of a contractual nature and other provisions serving end-user interests by enabling measures on issues such as service quality, content carriage ('must carry') and access conditions (Electronic Programme Guide).

### **2.3.1 End-user protection**

We have found a relatively high level of consumer satisfaction with regard to the existing contract information and ease of comparability in surveys, and also a relevant amount of switching in the past. This suggests that many of the end-user protection provisions of the RFEC have worked well.

Fragmentation poses a challenge, both (1) among the Member States due to minimal harmonisation, and (2) between sector-specific end-user protection measures versus horizontal consumer protection measures.

Our assessment of sector-specific and horizontal consumer protection measures has led us to conclude, however, that the overlap between them is not a serious concern (see Section 2.5.5 of the report). Moreover, sector-specific end-user protection rules have distinct value to the extent that they (1) address needs such as quality of service and number portability that are specific to the sector and benefit from the competence of sector regulators, and (2) protect end-users, which include small and medium business customers, while horizontal measures are limited to the protection of consumers.

A number of specific issues need attention (see Section 2.5.7.1.1 of the report). The growing relevance of OTT services raises numerous questions as to which end-user obligations should be applicable to which services. The treatment of bundled services is not always clear with regard to contract duration and termination, for example when a component of a bundle is cancelled. Furthermore, rules on early termination have not been universally imposed and would merit further precision.

### 2.3.2 'Must carry' and Electronic Programme Guide (EPG) rules

'Must carry' rules exist to address two distinct needs: (1) protection of providers of content that consumers value from possible anti-competitive acts on the part of transmission platforms; and (2) protection of media pluralism and freedom of expression.

Over the past decade, technological improvements have largely eliminated scarcity on most broadcast media, which has had the effect of mitigating concerns over possible anti-competitive acts. This is a profound change in the landscape, but it does not necessarily mean that the need for 'must carry' has gone away (see Sections 2.6.4 and 2.6.6.1 of the report).

EPG rules enable Member States to impose obligations on operators regarding application program interfaces, EPG and similar listing and navigation facilities with regard to the presentational aspect; however, only a minority of Member States have imposed such obligations. Findability of radio and television channels might however become an issue as technology evolves (see Section 2.6.1.2.3 of the report).

## 3 Options going forward

The Options that we have identified, from smallest to greatest intervention, are:

- **Baseline scenario:** In keeping with the Commission's Better Regulation Guidelines, the baseline scenario provides a projected development against which all other Options are measured. By definition, this is the Option where no new policy initiatives are undertaken.
- **Modest, incremental improvements:** A second Option groups together Action Lines that go beyond current practice, but without necessitating a substantial, potentially disruptive overhaul of any existing arrangements.
- **Intensive improvements:** A third Option groups together Action Lines that promise greater improvement than in the second Option, even at some risk of disruption.
- **Elimination of certain provisions to promote simplification:** A fourth Option places primary emphasis on elimination of certain existing elements of the RFEC, even at some risk that certain existing protections might be sacrificed. The goal is regulatory simplification, consistent with the Better Regulation principles put forward by the Commission. Elimination of regulations, where feasible, may reduce the risk of asymmetries between traditional services and newer, internet-based services. The essential elements of this Option include (1) elimination of sector-specific rules in support of the rights of end-users (placing reliance instead on horizontal instruments such as the Consumer Rights Directive); and (2) a phasing out of 'must carry' regulation.

- **Centralisation to achieve consistency:** A fifth Option puts primary emphasis on centralisation of authority, seeking to achieve maximum regulatory consistency across the Member States, but at some risk to the principle of subsidiarity. Consistency in areas where we have not proposed full centralisation might be provided by means of either tighter specification in regulations rather than directives, or by means of harmonising decisions or recommendations. This can be viewed as the most radical of the Options put forward.

In our view, a judicious selection of Action Lines from the “intensive improvements” Option is likely to produce better results than remaining with the baseline scenario, and also better results than any of the other Options. The measures put forward are likely to be effective and efficient, and they are consistent with the principles of proportionality and subsidiarity. Their superiority appears to hold both under the most likely and the various disruptive scenarios of future evolution that we consider. Other Options promise more radical benefits on individual Action Lines, which may enjoy considerable support among certain stakeholders, but compare less favourably on balance in terms of effectiveness, proportionality and/or subsidiarity.

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