



An Coimisiún um  
**Rialáil Cumarsáide**  
Commission for  
**Communications Regulation**

# Review of the Numbering Conditions of Use and Application Process

Consultation

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**An Coimisiún um Rialáil Cumarsáide**  
**Commission for Communications Regulation**

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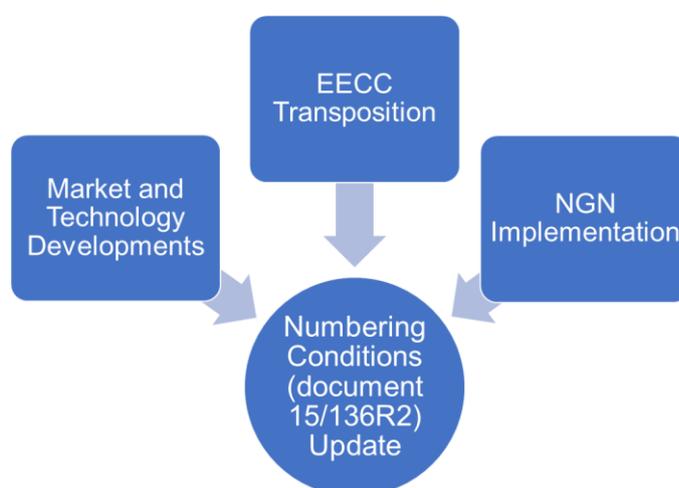
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# 1 Introduction and Overview

- 1 The Commission for Communications Regulation (“ComReg”) aims to review and update the Numbering Conditions of Use and Application Process (“Numbering Conditions”) document approximately every 2 years. The last review and update was completed in 2019<sup>1</sup>. The purpose of these updates is to address any issues that have arisen since the prior update, by proposing new or amended conditions of use. In general, we aim to propose new or amended conditions to take account of new legislation, changes to industry processes, new products and market developments. It is also an opportunity to make any necessary administrative amendments.
- 2 There are three main areas that will be addressed by this update:



## The European Electronic Communications Code (“EECC”)<sup>2</sup>

- 3 The EECC came into effect on 21 December 2020. It is currently being transposed<sup>3</sup> into Regulations entitled: “The European Union (European Electronic Communications Code) Regulations 2021”.

<sup>1</sup> [ComReg 19/88](#) ‘Updating the Numbering Conditions of Use and Application Process’ – consultation – 27 September 2019. [ComReg 19/104 and D14/19](#) ‘Updating the Numbering Conditions of Use and Application Process’ - Response to Consultation - 28 November 2019.

<sup>2</sup> [Directive \(EU\) 2018/1972](#) OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 establishing the European Electronic Communications Code

<sup>3</sup> The Department of the Environment, Climate and Communications (DECC) will shortly consult on the draft Regulations. This is likely to happen around the same time as this ComReg consultation.

- 4 Section 2 of this paper provides details of the small number of new numbering obligations and amendments to existing numbering obligations that are contained in the EECC and sets out how ComReg intends to take these forward.
- 5 Where appropriate, ComReg will propose to incorporate new or amended conditions of use that give effect to certain new numbering obligations in the EECC. Some new obligations will also be taken forward as separate workstreams, which are outlined in this paper.
- 6 The following are the key new and amended numbering measures that are addressed:
  - i. *Numbers for Non-ECN/ECS*: Under Article 93(2) of the EECC, ComReg may assign numbers to Non-ECN/ECS entities under certain conditions. Based on Recitals in the EECC and other sources, it appears that large M2M/IoT end-users are considered to be the main context, although others may exist. ComReg considers whether there is any evidence of demand for such assignments and highlights any issues that might arise. We also consider which number ranges might be suitable for assignment to non-ECS/ECN, should ComReg choose to make numbers available.
  - ii. *Porting after termination of service*: Article 106(3) sets out that, where an end-user terminates a contract, Member States (MS) shall ensure that the end-user can retain the right to port a number to another provider for a minimum of one month after the date of termination, unless that right is renounced by the end-user. ComReg considers an amendment to the Numbering Conditions to support this in the detail, taking into account that industry already supports porting of numbers within the current 13 month quarantine period.
  - iii. *OTA provisioning of numbers*: Article 93(6) is a new requirement for MS to promote over-the-air (OTA) provisioning, in particular to facilitate switching between service providers. OTA provisioning allows for the remote activation or switching of a user profile on an 'embedded' SIM ("eSIM") in a portable device by consumers (e.g., smart phone, smart watch, fitness band or tablet) or for M2M applications (e.g., connected vehicle). This paper provides an outline of a separate workstream that ComReg has just commenced to fulfil this requirement. This project will develop a strategy for ComReg to promote OTA provisioning for switching providers in line with Article 96(6) and assess the options for ComReg and other relevant bodies in ensuring the full realisation of the benefit of OTA switching to end-users.

OTA provisioning also contributes to ComReg's connectivity objective, insofar as it enables more consumer and IoT devices to be connected more easily. This aligns with the clear business benefits of OTA provisioning for mobile operators and other service providers, so will also be factored into the development of a strategy. ComReg will engage with both national and international stakeholders as part of this new workstream. This project may also lead to further future workstreams, noting that Article 106(6) provides that NRAs may establish switching and porting processes, which may include a requirement for porting to be completed OTA.

- iv. *116000 hotline*: In relation to 116 harmonised services of social value, Articles 96(3) and 96(4) now require MS to also take appropriate measures to ensure that necessary resources are allocated to the operation of the 116000 missing children hotline and that end-users are adequately informed of the hotline, and where appropriate, the 116111 child helpline hotline.
  - v. *Extraterritorial use of numbers*: Article 93(4) requires MS to introduce numbers with a right of extraterritorial use in the EU and the coordination of activities by NRAs to ensure the efficient management of numbering resources. This has already been addressed for the most part by ComReg's work to introduce the 088 M2M number range in 2018.
- 7 The balance of the legislative framework for numbering is largely unchanged, although references to new Regulations and other administrative changes will be needed in the revised Numbering Conditions.

### **NGN Implementation**

- 8 Section 3 of this paper provides details of elements of the ongoing Non-Geographic Number (NGN) implementation project that have highlighted the need for amendments or additions to the Numbering Conditions and the Decision Instrument in ComReg Document 18/106<sup>4</sup>.
- 9 ComReg's Decision Instrument in 18/106 set out two measures to improve the NGN platform. In summary, the measures were 1) 'geo-linked' retail tariffs for NGN calls, which was implemented as planned on 1 December 2019, and 2) the consolidation of five NGN ranges (1850, 1890, 076, 0818 and 1800) down to two (0818 and 1800), which will be completed by 1 January 2022. Discussions in the NGN Industry Working Group ("NGN WG") highlighted several developments that need to be factored into the current Numbering Conditions review:

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<sup>4</sup> [ComReg 18/106 and D15/18](#) Review of Non Geographic Numbers, Response to Consultation 18/65 and Decision. Annex 1 contains the Decision Instrument

- i. *Mobile numbers for PPDR:* ComReg proposes to assign mobile numbering resources for Public Protection and Disaster Relief (PPDR) services, which use a Terrestrial Trunked Radio (TETRA) system. Currently the PPDR service uses numbers from the 076 range which is being ceased on 31 December 2021 as part of the NGN consolidation measure. The paper sets out why mobile numbering resources are more suitable for PPDR services. Since the PPDR service will no longer require 076 numbers, ComReg also proposes to amend its Decision Instrument in ComReg document 18/106 that currently provides for an exception to the consolidation measure in the case of 076 numbers used to provide emergency services. While consensus has been reached on these issues at the industry NGN Working Group (NGN WG), ComReg is nevertheless consulting on this proposal before its formal adoption.
- ii. *Utility emergency contact numbers:* ComReg proposes to grant a two-year extension beyond the NGN Consolidation deadline of 31 December 2021 for six 1850/1890 utility emergency contact numbers. The NGN WG has agreed strict criteria for the consideration of requests for extension. Consensus has been reached with the NGN WG, the utilities and the Commission for Regulation of Utilities on this matter.
- iii. *Calling 1800 from abroad:* ComReg has explored the possible implementation of international access to 1800 Freephone numbers. Currently 1800 Freephone numbers are not generally internationally accessible. While the NGN WG has advised ComReg that it is technically possible to enable such calls, billing and settlement issues arise. The costs of addressing these issues are currently unknown. Notwithstanding that the EECC requires access to all numbers, subject to economic feasibility, ComReg also notes a growing use of 1800 Freephone for cloud-based services. ComReg therefore wishes to fully assess the economic feasibility of the implementation of international access to 1800 Freephone through this consultation.
- iv. *Notifying end-users about numbers being ceased:* The current Numbering Conditions require operators to notify their customers of forthcoming number changes in a timely manner, to implement recorded announcements, and so on. In the case of NGN consolidation, the need to notify customers and manage their transition to an alternative number intensifies, as these customers will otherwise lose service. Whilst this is understood by the NGN WG, ComReg nevertheless considers that the Numbering Conditions should be clarified in relation to the scenario where a number range is being ceased.
- v. *Assignment of NGNs:* ComReg and industry together moved to an Individual Number Assignment (INA) process in 2019, which utilises the capabilities of the industry Fixed Number Portability (FNP) system, provided by PortingXS BV (Netherlands). The INA system delivers a world-leading solution whereby individual 1800 and 0818 numbers are assigned by ComReg and are operational on all networks within 1 working day.

ComReg also notes that the currently agreed industry process expects that operators should have a valid end-user order prior to ordering a number via the INA system. This may need a formal underpinning, so ComReg proposes a new condition of use in relation to this.

- vi. *Resellers*: ComReg sets out its view on the presence of NGN resellers in the market. In particular, the NGN implementation project has highlighted the need for ComReg to receive accurate data, particularly for use in tracking the migration of users of 1850, 1890 and 076 numbers to 0818, 1800 and other numbers. The presence of resellers in the market and the effects this might have on the generation of accurate data is explored.

## Market and Technology Developments

- 10 Section 4 of this paper focuses on the growth of cloud communications platforms, sometimes referred to as communications platform as a service (CPaaS). These platforms offer innovative communications solutions to online and traditional businesses and to consumers. These solutions often use numbers, sometimes on a temporary basis.
- 11 ComReg highlights a number of generic cloud-based services / capabilities and how they use numbers, to assist in determining if the existing numbering conditions of use provide adequate support for such services while also ensuring the protection of consumers. These generic services are:- privacy enhancement, conference platforms, call centres and 'click to call'. In addition, the potential need for updates to the Numbering Conditions to take account of temporary numbers used in classified advertising and similar applications is considered, since this use is beginning to emerge in other jurisdictions.
- 12 ComReg also seeks to encourage the emerging use of the improved NGN platform by cloud communications and other online platforms in Ireland (e.g. Google Ads). This encouraging development and the more general use of geographic numbers for Cloud Services is considered. To inform this analysis, ComReg commissioned Behaviour & Attitudes Limited ("B&A") to conduct a consumer market research survey and gather relevant research in order to understand how users engage with the geographic numbering platform. The full survey results are published<sup>5</sup> alongside this paper and are also summarised in Section 4.

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<sup>5</sup> ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

## 1.1 Overarching context of the consultation

- 13 ComReg has the statutory function to manage the national numbering resource. ComReg performs this function under section 10 of the Communications Regulation Act 2002, as amended, (“2002 Act”)<sup>6</sup> and subject to its related objectives as mainly set out in section 12 of the 2002 Act and regulation 16 of the Framework Regulations<sup>7</sup>, and in accordance with any directions issued by the Minister for Communications, Climate Action and Environment under section 13 of the 2002 Act. This ComReg function and related objectives will not substantially change with the introduction of the Regulations transposing the EECC in 2021.
- 14 Key requirements under ComReg’s statutory function to manage the national numbering resource, and its objective to ensure the efficient use and effective management of numbering resources, are:
- i. establishing open, objective, transparent, non-discriminatory and proportionate procedures for the granting of rights of use for national numbering resources;
  - ii. specifying conditions to be attached to rights of use for numbers in accordance with legislation<sup>8</sup>;
  - iii. giving notice of all non-minor amendments to the rights of use (i.e. consultation process for such amendments); and
  - iv. ensuring that all relevant information on rights, conditions, procedures, charges, fees and decisions concerning the rights of use are kept up to date in an appropriate manner so as to provide easy access to that information for all interested parties.
- 15 It is important to note that for the most part, the provisions relevant to management of the numbering resource set out in the EECC are identical to the equivalent provisions set out in the current EU Telecoms Framework<sup>9</sup> (which is repealed and replaced by the EECC).

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<sup>6</sup> Communications Regulation Act, 2002, as amended –

<http://revisedacts.lawreform.ie/eli/2002/act/20/revised/en/html>

<sup>7</sup> S.I. No. 333 of 2011 – <http://www.irishstatutebook.ie/2011/en/si/0333.html>

<sup>8</sup> Principally (currently) the Authorisation Regulations, including the schedule to those Regulations which refers also to other Regulations. Also Universal Service Regulations for some items (e.g. “00” code, Northern Ireland access dialling, EC Decision on the “116” services of a social nature, etc.). Relevant legislation will of course include the Regulations transposing the EECC.

<sup>9</sup> That is, the Authorisation Directive, Dir 2002/20/EC; the Framework Directive, Dir. 2002/21/EC; the Universal Service Directive, Dir 2002/22/EC; and the Access Directive, Dir. 2002/19/EC, (as amended).

- 16 ComReg manages numbers principally by granting rights of use for classes or types of numbers to authorised undertakings who apply for same, and by attaching conditions to such rights of use as are considered justified and proportionate, under regulations 13 and 14 of the Authorisation Regulations.<sup>10</sup>
- 17 Certain numbering conditions attach to the General Authorisation<sup>11</sup> rather than to individual rights of use for numbers. A General Authorisation condition (“GA Condition”) has general effect – i.e. it binds all undertakings which use a number – whereas a condition attached to an individual right of use for a number (a “RoU Condition”) only binds the specific undertaking which was granted that individual right of use<sup>12</sup>.
- 18 Under the EU-wide harmonised framework for the regulation of electronic communications, an undertaking intending to supply an electronic communications service has to notify ComReg of its intent to provide an electronic communications network or service (pursuant to regulation 4 of the Authorisation Regulations), at which point the undertaking is deemed to be authorised to provide that network or service, subject to the conditions attaching to the General Authorisation.
- 19 ComReg is committed to regularly reviewing the numbering regime, including all numbering conditions. In this regard, ComReg seeks to strike a balance between having a clear and predictable set of numbering conditions in place while also having the flexibility to review and, if necessary, adjust those conditions from time to time where it is appropriate and proportionate to do so.
- 20 ComReg published its “Numbering Conditions of Use and Application Process” in 2015 (“the Numbering Conditions” - Doc 15/136) and as noted above, the last update took place in 2019<sup>13</sup>. The Numbering Conditions is structured so as to clearly distinguish between (a) statutory obligations in respect of numbers which are imposed by the legislature, and (b) regulatory conditions in respect of numbers which are imposed by ComReg. The latter conditions are further divided between those which apply to all classes of numbers (see Section 3 of the Numbering Conditions) and those which apply only to specific classes of numbers (see Sections 4 and 5).

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<sup>10</sup> S.I. No. 335 of 2011 – <http://www.irishstatutebook.ie/2011/en/si/0335.html>

<sup>11</sup> Doc 03/81R4 – [http://www.comreg.ie/\\_fileupload/publications/ComReg0381R4.pdf](http://www.comreg.ie/_fileupload/publications/ComReg0381R4.pdf)

<sup>12</sup> The “GA Conditions” as set out in the Numbering Conditions constitute a sub-set of the conditions contained in the *General Authorisation - Conditions for the provision of Electronic Communications Networks and Services* (Doc 03/81R5).

<sup>13</sup> [ComReg 15/136R2](#): “Numbering Conditions of Use and Application Process”

- 21 Section 6 and Appendices 1 – 8 of the Numbering Conditions set out the administrative processes for applying for rights of use for numbers and for transferring those rights of use between undertakings. Appendix 9 sets out all classes of numbers used in the National Numbering Scheme and the Access/Area Codes. Appendix 10 describes the key statutory provisions relating to number management. Appendix 11 contains a glossary of key terms, many of which are defined terms contained in relevant statutes or statutory instruments.
- 22 For the convenience of stakeholders, a draft updated version of the Numbering Conditions (ComReg 21/28a), containing the proposed amendments, is published alongside this consultation paper.
- 23 Interested parties are now invited to comment on the draft Numbering Conditions and issues raised in this consultation by responding to the questions set out in the consultation paper. Interested parties are also asked to explain their comments and to provide any supporting information that they may possess.
- 24 The Numbering Conditions and the updates which are proposed in this consultation paper are compatible with the provisions relating to numbering (i.e. Articles 93, 94, 95, 96, 97, 106, 109 and 112) contained in the EECC. As noted above, the EECC has not yet been transposed in this jurisdiction.

## 2 EECC Transposition

### 2.1 Introduction - Transposition of the EECC

- 25 This chapter sets out ComReg’s proposals to implement and reflect relevant new provisions relating to numbering in the EECC<sup>14</sup>, so far as such provisions are required to be implemented or reflected in the Numbering Conditions document, or the Numbering Conditions document has to be amended to take account of such provisions.
- 26 The EECC is in the process of being transposed in draft Regulations entitled “The European Union (European Electronic Communications Code) Regulations 2021” drafted by the Department of the Environment, Climate, and Communications (“the Department”).
- 27 It is important to note that for the most part, the provisions relevant to management of the numbering resource set out in the EECC are identical to the equivalent provisions set out in the current EU Telecoms Framework<sup>15</sup> (which is repealed and replaced by the EECC).
- 28 For instance, the general principles relating to numbering resources set out in Article 93 of the EECC are essentially identical to the general principles relating to numbering resources set out in Article 10 of the existing Framework Directive<sup>16</sup>. Furthermore, the procedure for granting of rights of use for numbering resources set out at Article 94 of the EECC is essentially identical to the rights of use for numbers set out in Article 5 of the existing Authorisation Directive<sup>17</sup>.
- 29 This section of this consultation paper relates to new provisions in the EECC, different to the provisions set out in the current EU Telecoms Framework.
- 30 The key new provisions in the EECC in relation to numbering issues are the following, which will be discussed sequentially below:
- i) allowing the possibility to assign numbers to undertakings other than providers of electronic communications networks or services (Article 93(2));
  - ii) enabling the extraterritorial use of non-geographic numbers within the EU for the provision of non-interpersonal communications services (Article 93(4));

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<sup>14</sup> Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (EECC)

<sup>15</sup> That is, the Authorisation Directive, Dir 2002/20/EC; the Framework Directive, Dir. 2002/21/EC; the Universal Service Directive, Dir 2002/22/EC; and the Access Directive, Dir. 2002/19/EC, (as amended).

<sup>16</sup> Directive 2002/21/EC(as amended)

<sup>17</sup> Directive 2002/20/EC (as amended).

- iii) promoting, where technically feasible, the over-the-air (OTA) provisioning of numbers for easier switching (Article 93(6));
  - iv) Missing children and child helpline hotlines (Article 96);
  - v) Provider switching and number portability (Article 106)
  - vi) Further consequential amendments, including adding a definition of interpersonal communications service to take account of expanded definition of “electronic communications service”.
- 31 In its analysis of the above provisions carried out in this section on the EECC, ComReg concludes that, with the exception of provider switching and number portability, these provisions do not currently require changes to the conditions of use of numbers and consequently to the Numbering Conditions document.

## 2.2 Assignment of numbers to non-ECS/ECN entities

### *Introduction*

- 32 The first new numbering topic introduced by the EECC that merits discussion is the granting to national regulatory or other competent authorities of the right to grant rights of use for numbering resources to undertakings other than providers of electronic communications networks or services.
- 33 Article 93(2) of the EECC provides as follows: “National regulatory or other competent authorities may also grant rights of use for numbering resources from the national numbering plans for the provision of specific services to undertakings other than providers of electronic communications networks or services, provided that adequate numbering resources are made available to satisfy current and foreseeable future demand. Those undertakings shall demonstrate their ability to manage the numbering resources and to comply with any relevant requirements set out pursuant to Article 94. National regulatory or other competent authorities may suspend the further granting of rights of use for numbering resources to such undertakings if it is demonstrated that there is a risk of exhaustion of numbering resources.”

- 34 Recital 250 of the EECC provides as follows: “Access to numbering resources on the basis of transparent, objective and non-discriminatory criteria is essential for undertakings to compete in the electronic communications sector. Member States should be able to grant rights of use for numbering resources to undertakings other than providers of electronic communications networks or services in light of the increasing relevance of numbers for various Internet of Things services. All elements of national numbering plans should be managed by national regulatory or other competent authorities, including point codes used in network addressing. Where there is a need for harmonisation of numbering resources in the Union to support the development of pan-European services or cross-border services, in particular new machine-to-machine based services such as connected cars, and where the demand could not be met on the basis of the existing numbering resources in place, the Commission can take implementing measures with the assistance of BEREC.”
- 35 ComReg considers that Article 93(2) needs to be read along with Article 94(7) which provides as follows: “This Article shall also apply where national regulatory or other competent authorities grant rights of use for numbering resources to undertakings other than providers of electronic communications networks or services in accordance with Article 93(2).” This means that non-ECS applicants for number assignment have to follow the same procedure as set out for ECS applications set out in Article 94.
- 36 We note that pursuant to Article 93(2) of the EECC, the Body of European Regulators for Electronic Communications (“BEREC”) has adopted guidelines on common criteria for the assessment of the ability to manage numbering resources and of the risk of exhaustion of numbering resources (“BEREC Article 93(2) Guidelines”)<sup>18</sup>.

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<sup>18</sup> BoR (20) 50, 06.03.2020, BEREC guidelines on common criteria for the assessment of the ability to manage numbering resources by undertakings other than providers of electronic communications networks or services and of the risk of exhaustion of numbering resources if numbers are assigned to such undertakings, see here-

[https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/regulatory\\_best\\_practices/guidelines/9034-berec-guidelines-on-common-criteria-for-the-assessment-of-the-ability-to-manage-numbering-resources-by-undertakings-other-than-providers-of-electronic-communications-networks-or-services-and-of-the-risk-of-exhaustion-of-numbering-resources-if-numbers-are-assigned-to-such-undertakings](https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/9034-berec-guidelines-on-common-criteria-for-the-assessment-of-the-ability-to-manage-numbering-resources-by-undertakings-other-than-providers-of-electronic-communications-networks-or-services-and-of-the-risk-of-exhaustion-of-numbering-resources-if-numbers-are-assigned-to-such-undertakings)

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- 37 The BEREC Article 93(2) Guidelines give as examples of non-ECN/ECS entities the following: “providers of connected homes services, e-Health services, truck fleets or connected cars services, i.e. IOT services with potentially a huge customer base.”<sup>19</sup>
- 38 The BEREC Article 93(2) Guidelines provide the following information:
- The legal framework under the EECC is set out;
  - Relevant terminology is defined for the purposes of the Guidelines;
  - Criteria for the assessment of the ability to manage numbering resources for non-ECN/ECS entities is set out;
  - Criteria for the assessment of the risk of exhaustion of numbering resources for non-ECN/ECS entities is set out.
- 39 It should be noted that ComReg understands that BEREC received no responses from non-ECN/ECS entities to its consultation on the BEREC Article 93(2) Guidelines.
- 40 ComReg notes that Article 93(2) uses the word “may” so that, when the Article is transposed by the Member State, it is thus up to the discretion of the NRA or CA concerned as to whether it permits the assignment of numbering resources to non-ECS/ECN. The BEREC Guidelines also fully reflect this: “The provisions of Article 93(2) also imply that some National Regulatory Authorities or other Competent Authorities (NRAs/CAs) may decide not to assign any numbering resources to non-ECN/ECS entities, whereas others may decide to assign numbering resources to non-ECN/ECS entities but limit the assignment to specific types of numbering resources.”<sup>20</sup>
- 41 The BEREC Guidelines go on to state: “Consequently, BEREC considers that each MS should decide which types of numbering resources, if any, may be assigned to the non-ECN/ECS entities on the basis of their needs.”<sup>21</sup>

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<sup>19</sup> See page 3 of the BEREC Article 93(2) Guidelines.

<sup>20</sup> See page 2 of the BEREC Article 93(2) Guidelines.

<sup>21</sup> See page 3 of the BEREC Article 93(2) Guidelines.

- 42 ComReg notes the reference in Recital 250 of the EECC to the benefits for the IoT/M2M sector in permitting the assignment of numbers to non-ECS/ECN. With regard to IoT/M2M, ComReg carried out a review of mobile numbering resources in 2018 which, following a public consultation<sup>22</sup>, concluded with the introduction of the 088 M2M number range in 2018<sup>23</sup>. As the EECC sees the benefit of assigning numbers to non-ECS/ECN in the IoT/M2M sector, it is ComReg's preliminary view that 088 M2M numbers should be the only candidate number range for such assignments.
- 43 ComReg notes the option provided in the EECC for it to assign numbers to non-ECS/ECN. While the EECC highlights the potential use of such assignments in the IoT/M2M sector, as noted above, no use cases were identified in responses to the BEREC public consultation on its Guidelines. In addition, ComReg has not received queries from any IoT end-users in relation to potential assignments of numbers, and ComReg is not aware (via its participation in CEPT Working Groups) that any other NRA has been approached on this issue. Therefore, ComReg's preliminary position is that it is not minded to make amendments to the Numbering Conditions in respect of this option at this time. Instead it will consult further with industry on appropriate conditions of use attaching to numbers assigned to non-ECS should a use case be presented to it in the future. Furthermore, in noting the EECC's identification of the IoT/M2M sector as the source of potential use cases, ComReg proposes to only consider the assignment of 088 M2M numbers to non-ECS/ECN in the future.

**Q. 1 Do you agree with ComReg's preliminary position on the assignment of numbers to non-ECS/ECN as permitted by Article 93(2) and Article 94(7) of the EECC? Please explain the basis for your response in full and provide supporting information.**

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<sup>22</sup> Document 18/03 Review of Mobile Numbering - promoting innovation and facilitating new services – 24 January 2018

<sup>23</sup> Review of Mobile Numbering – Promoting Innovation and Facilitating New Services - Response to Consultation and Decision, ComReg 18/46 and Decision D06/18 - 11 June 2018.

## 2.3 Extra-territorial use of numbers

- 44 Article 93(4) of the EECC provides as follows: “Each Member State shall ensure that national regulatory or other competent authorities make available a range of non-geographic numbers which may be used for the provision of electronic communications services other than interpersonal communications services, throughout the territory of the Union, without prejudice to Regulation (EU) No 531/2012<sup>24</sup> and Article 97(2)<sup>25</sup> of this Directive. Where rights of use for numbering resources have been granted in accordance with paragraph 2 of this Article to undertakings other than providers of electronic communications networks or services, this paragraph shall apply to the specific services for the provision of which the rights of use have been granted.”
- 45 Recital 246 of the EECC provides as follows: “In order to effectively support the free movement of goods, services and persons within the Union, it should be possible to use certain national numbering resources, in particular certain non-geographic numbers, in an extraterritorial manner, that is to say outside the territory of the assigning Member State. In light of the considerable risk of fraud with respect to interpersonal communications, such extraterritorial use should be allowed only for the provision of electronic communications services other than interpersonal communications services. Enforcement of relevant national laws, in particular consumer protection rules and other rules related to the use of numbering resources should be ensured by Member States independently of where the rights of use have been granted and where the numbering resources are used within the Union. Member States remain competent to apply their national law to numbering resources used in their territory, including where rights have been granted in another Member State.”

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<sup>24</sup> Regulation (EU) No. 531/2012 of the European Parliament and of the Council of 13<sup>th</sup> June 2012 on roaming on public communications networks within the European Union. Recital 248 of the EECC provides that: “The extraterritorial use of numbering resources should be without prejudice to Union rules related to the provision of roaming services, including those relative to preventing anomalous or abusive use of roaming services which are subject to retail price regulation and which benefit from regulated wholesale roaming rates. Member States should continue to be able to enter into specific agreements on extraterritorial use of numbering resources with third countries.”

<sup>25</sup> Article 97(2) of the EECC relates to the requirement on Member States to ensure that NRAs are able to require providers of public ECNs/ECS to block access to numbers or services where justified by reasons of fraud or misuse.

- 46 Article 93(4) concerns numbers with a right of extraterritorial use in the EU and the coordination of activities by NRAs to ensure the efficient management of such numbering resources. The Article sets out that “In order to facilitate the monitoring by the national regulatory or other competent authorities of compliance with the requirements of this paragraph, BEREC shall establish a database on the numbering resources with a right of extraterritorial use within the Union”. ComReg is liaising with BEREC in the population of this database with the appropriate Irish numbering resources. ComReg does not see a need and so does not propose to carry out an administrative update to the Numbering Conditions in respect of this database.
- 47 ComReg introduced a dedicated Machine-to-Machine (M2M) number range in 2018<sup>26</sup>, following public consultation. This was prompted in part by forecasted exponential growth of M2M connections on mobile networks and a clear trend for the ‘extraterritorial’ use of national numbers across the EU and internationally by M2M Service Providers e.g. in the context of cross-border road journeys.
- 48 In Document 19/104<sup>27</sup>, ComReg made changes to the Numbering Conditions to take into account the M2M Decision, including adding a condition that the number holder shall ensure that M2M numbers used extraterritorially are used in compliance with consumer protection and other national rules in the country in which they are used, and adding definitions for ‘extraterritorial use’, ‘M2M service’ and ‘OTT service’.
- 49 The second paragraph of Article 93(4) of the EEC Directive provides as follows: “National regulatory or other competent authorities shall ensure that the conditions listed in Part E of Annex I that may be attached to the rights of use for numbering resources used for the provision of services outside the Member State of the country code, and their enforcement, are as stringent as the conditions and enforcement applicable to services provided within the Member State of the country code, in accordance with this Directive. National regulatory or other competent authorities shall also ensure in accordance with Article 94(6) that providers using numbering resources of their country code in other Member States comply with consumer protection and other national rules related to the use of numbering resources applicable in those Member States where the numbering resources are used. This obligation is without prejudice to the enforcement powers of the competent authorities of those Member States.”

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<sup>26</sup> ComReg Document 18/46 “Review of Mobile Numbering” – Response to Consultation and Decision - 11 June 2018

<sup>27</sup> [ComReg 19/104](#) “Response to Consultation 19/88 on Updating the Numbering Conditions of Use and Application Process Document” – 28 November 2019

- 50 As noted above, currently paragraph 4.8 (3) of the Numbering Conditions, which is in the section of the Numbering Conditions that sets out Rights of Use Conditions in relation to Machine to Machine numbers, provides that: “The number holder shall ensure that M2M Numbers used extraterritorially are used in compliance with consumer protection and other national rules in the country in which they are used.”
- 51 ComReg understands that the Department aims to transpose the EECC by virtue of pure copy-out, where possible, and ComReg consequently expects the second paragraph of Article 93(4) to be transposed fully in the Transposing Regulations. Note that this analysis also applies to Article 94(6) of the EECC, which also relates to the rights of use for numbering resources used extraterritorially within the Union in accordance with Article 93(4).
- 52 With regard to Article 93(4), ComReg has already made available the 088 range non-geographic number range for M2M. Furthermore, the conditions of use attaching to these M2M numbers, such as permission for their use extraterritorially, are reflected in ComReg’s current Numbering Conditions. Consequently, as ComReg has already implemented Article 93(4), ComReg’s preliminary view is that no further amendments to the Numbering Conditions in this respect are necessary.

Q. 2 Do you agree with ComReg’s position that Article 93(4) of the EECC does not require further amendments to the Numbering Conditions document? Please explain the basis for your response in full and provide supporting information.

## 2.4 Promotion of Over-The-Air Provisioning

- 53 Article 93(6) of the EECC provides as follows: “Without prejudice to Article 106, Member States shall promote over-the-air provisioning, where technically feasible, to facilitate switching of providers of electronic communications networks or services by end-users, in particular providers and end-users of machine-to-machine services.”
- 54 Article 106(6) of the EECC states that “National regulatory authorities may establish the details of the switching and porting processes, taking into account national provisions on contracts, technical feasibility and the need to maintain continuity of service to the end-users. This shall include, where technically feasible, a requirement for the porting to be completed through over-the-air provisioning, unless an end-user requests otherwise”
- 55 ComReg is currently undertaking a project is to develop a strategy for how ComReg will promote OTA provisioning to facilitate provider switching in order to implement Article 93(6).

- 56 To assist in this, ComReg has procured expert advisors WIK-Consult GmbH to complete the following tasks, set out in summary here:
- 1 Provide a technical and descriptive background;
  - 2 Assess the future potential of eSIM and OTA provisioning in the State for each of the identified primary use categories;
  - 3 Assess the potential impact of OTA provisioning on competition, end-consumers and network security and identify challenges to the realisation of the full benefits of OTA provisioning, particularly as regards switching;
  - 4 Assess the current situation for OTA provisioning in Ireland;
  - 5 Propose a Vision for best-in-class OTA provisioning to facilitate switching in Ireland;
  - 6 Develop a strategy for OTA provisioning in Ireland (with particular regard to switching) in light of the Vision developed in Task 5; and
  - 7 Recommend actions to ComReg, operators and international associations in order to realise the full benefits of OTA provisioning in light of the findings of Tasks 3, 5 and 6.
- 57 ComReg intends to publish the above (in report format with confidential information suitably redacted), together with a public preliminary consultation in Q3 2021. ComReg may also commission further expert advice on specific issues, relating to the Service Provider's findings.
- 58 ComReg does not presently consider that amendments to the Numbering Conditions document need to be made to take account of OTA as set out in the EECC, as transposed.

Q. 3 Do you agree with ComReg's position that amendments are not presently required to the Numbering Conditions document in light of Article 93(6) or Article 106(6) of the EECC? Please explain the basis for your response in full and provide supporting information.

## 2.5 Missing children and child helpline hotlines

- 59 Article 96 of the EECC, entitled "Missing children and child helpline hotlines", provides as follows:

(1) Member States shall ensure that end-users have access free of charge to a service operating a hotline to report cases of missing children. The hotline shall be available on the number '116000';

(2) Member States shall ensure that end-users with disabilities are able to access services provided under the number '116000' to the greatest extent possible. Measures taken to facilitate access by end-users with disabilities to such services whilst travelling in other Member States shall be based on compliance with relevant standards or specifications laid down in accordance with Article 39;

(3) Member States shall take appropriate measures to ensure that the authority or undertaking to which the number '116000' has been assigned allocates the necessary resources to operate the hotline; and

(4) Member States and the Commission shall ensure that end-users are adequately informed of the existence and use of services provided under the numbers '116000' and, where appropriate, '116111'.

60 There are a number of provisions in the current Numbering Conditions document that relate to child helplines.

61 Section 5 of the Numbering Conditions document sets out conditions for specific classes of short codes. Paragraph 5.5, which relates to harmonised codes of social value, provides as follows:

#### RoU Conditions

1. Harmonised Codes of Social Value shall be 6-digit codes with the structure 116XXX, where X is a number from 0 – 9 incl.
2. Harmonised Codes of Social Value shall be used only to provide harmonised services of social value as defined in Decision 2007/116/EC13 and shall be subject to the conditions of use set out therein.

#### GA Conditions

- 3 A caller shall not be charged for a call to a Harmonised Code of Social Value.”

62 Chapter 6 of the Numbering Conditions document sets out the procedures for applying for a right of use for a number. Paragraph 6.2 relates to eligibility criteria, and at sub-paragraph 6 provides as follows: “Rights of use for Harmonised Codes of Social Value are reserved for the provision of harmonised services of social value as defined in Decision 2007/116/EC, as amended by Decision 2009/884/EC. They may be directly granted to the provider of the harmonised service of social value, since the conditions of use in Decision 2007/116/EC apply directly to that provider.”

- 63 ComReg does not consider that amendments to the Numbering Conditions document need to be made to take account of Article 96 of the Code at this time.
- 64 ComReg would underline that it is important that Article 96(3) of the EECC is fully transposed. This Article provides as follows: “Member States shall take appropriate measures to ensure that the authority or undertaking to which the number “116000” has been assigned allocates the necessary resources to operate the hotline”.
- 65 ComReg recommends that relevant Government departments should review the operation of these services to ensure that they are adequately resourced. ComReg suggests that any promotion of these services to end-users, as also required by Article 96, should be contingent on the outcome of such a review.

Q. 4 Do you agree with ComReg’s position that no amendment to the Numbering Conditions in respect of Article 96 of the EECC is required? Please explain the basis for your response in full and provide supporting information.

## 2.6 Provider switching and number portability

- 66 Article 106 of the EECC, which is in Title III (End-user rights) of Part III (Services) of the EECC, relates to provider switching and number portability, and provides inter alia as follows:

“3. Where an end-user terminates a contract, Member States shall ensure that the end-user can retain the right to port a number from the national numbering plan to another provider for a minimum of one month after the date of termination, unless that right is renounced by the end-user.”

- 67 As highlighted in ComReg Information Notice 20/111R,<sup>28</sup> ComReg understands the provision in the EECC to mean that one month is the minimum time which a provider should offer to an end user to port their number following termination of their contract, unless that right is clearly renounced by the end user. ComReg is of the view that providers would need to expressly seek and receive a renouncement of this right from the end user and that the end user must be provided with information regarding the consequences of a decision to renounce this right. Providers must be able to prove an end user’s decision to waive their right to port their number.

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<sup>28</sup> Regulatory Guidance on Title III: End-User Rights of the European Electronic Communications Code, ComReg Document 20/111R, 23 December 2020.

- 68 ComReg is aware that the current industry practices allow for more than one month for end users to port their number in such circumstances (i.e. any time within the quarantine period) and ComReg has already flagged that it sees no reason why this would not continue. Industry has already been advised by ComReg to now review all industry porting processes to ensure they are fully aligned to the EECC requirements in general, and Article 106 (3) in particular.
- 69 The current Numbering Conditions document provides as follows at sub-paragraph (7) of paragraph 3.1 (“General Authorisation Conditions”) of Chapter 3 (“Conditions for all classes of numbers”):
- “Number Portability - The following conditions support [Regulation 25(1)] of the [Universal Service] Regulations which requires undertakings to ensure that subscribers can, upon request, retain their numbers independently of the undertaking providing the service, at a specific location in the case of Geographic Numbers and at any location in the case of Non-Geographic Numbers: (a) all undertakings involved in the porting of a number shall use the established industry processes relating to porting of numbers in compliance with all regulatory requirements for facilitating change of service provider; (b) porting of a Mobile Number shall include porting of the corresponding mailbox number.”
- 70 Having considered the matter, ComReg does not consider that significant changes are necessary to the Numbering Conditions document in light of the relevant provisions relating to provider switching and number portability set out in Article 106 of the EECC set out above. It is of course incumbent on industry to review all industry porting processes to ensure they are fully aligned to the EECC requirements in general, and Article 106 (3) in particular.
- 71 ComReg proposes to add a clarification to the Numbering Conditions document that the Industry porting process includes porting numbers out of quarantine, as follows:

Section 3.2 “Rights of Use Conditions” paragraph 7: “When a number is surrendered by an end-user or is otherwise recovered by the holder which assigned the number or by the undertaking to which the number was ported, the number shall thereupon be placed in quarantine for a period of 13 months and shall not be assigned to anyone other than the previous end-user during the 13-month period of quarantine. *In addition, the end-user retains the right to port the terminated number to another provider at any time during the quarantine period unless that right is renounced by the end-user. There shall be no conditions placed on an end-user to re-contract or make contact with the provider where the number is quarantined in order for that number to be ported.* The quarantine period may be waived if the previous end-user and the new end-user both consent to this in writing, and the holder for the number shall make such end-users aware of the consequences of waiving the quarantine period”.

Q. 5 Do you agree with ComReg's proposed implementation of relevant provisions of Article 106 of the EECC relating to provider switching and number portability? Please explain the basis for your response in full and provide supporting information.

## 2.7 Consequential EECC Amendments, such as Amendments to Annex 11 "Definitions" of the Numbering Conditions Document

72 This topic relates to certain consequential amendments to the Numbering Conditions document, brought about by the EECC, including amendments to Annex 11 ("Definitions") of the Numbering Conditions Document.

73 To ensure that the scope of the regulatory framework keeps pace with technological and market developments, the definition of electronic communication service (ECS) under the EECC has been expanded to cover:

- internet access services;
- interpersonal communications services (ICS); and
- services consisting wholly or mainly in the conveyance of signals.

74 Under the EECC, number-dependent ICS, meaning services that connect with numbers in national or international numbering plans, will be regulated in the same way as traditional ECS services (such as voice telephony) and will be subject to the full regulatory regime.

75 Relevant definitions from Article 2 of the EECC are as follows:

(4) 'electronic communications service' means a service normally provided for remuneration via electronic communications networks, which encompasses, with the exception of services providing, or exercising editorial control over, content transmitted using electronic communications networks and services, the following types of services: (a) 'internet access service' as defined in point (2) of the second paragraph of Article 2 of Regulation (EU) 2015/2120; (b) interpersonal communications service; and (c) services consisting wholly or mainly in the conveyance of signals such as transmission services used for the provision of machine-to-machine services and for broadcasting;

(5) 'interpersonal communications service' means a service normally provided for remuneration that enables direct interpersonal and interactive exchange of information via electronic communications networks between a finite number of persons, whereby the persons initiating or participating in the communication determine its recipient(s) and does not include services which enable interpersonal and interactive

communication merely as a minor ancillary feature that is intrinsically linked to another service<sup>29</sup>;

(6) ‘number-based interpersonal communications service’ means an interpersonal communications service which connects with publicly assigned numbering resources, namely, a number or numbers in national or international numbering plans, or which enables communication with a number or numbers in national or international numbering plans;

(7) ‘number-independent interpersonal communications service’ means an interpersonal communications service which does not connect with publicly assigned numbering resources, namely, a number or numbers in national or international numbering plans, or which does not enable communication with a number or numbers in national or international numbering plans;

76 To take account of the expanded definition of “electronic communications service” in the EECC, which as noted above now includes ICS, we have expanded the definition of “electronic communications service” in Appendix 11 – Definitions of the Numbering Conditions document, and we have consequently added a new definition of “interpersonal communications service”.

### **Access to numbers and services**

77 Article 97(1) of the EECC provides as follows: “Member States shall ensure that, where economically feasible, except where a called end-user has chosen for commercial reasons to limit access by calling parties located in specific geographical areas, national regulatory or other competent authorities take all necessary steps to ensure that end-users are able to: (a) access and use services using non-geographic numbers within the Union; and (b) access all numbers provided in the Union, regardless of the technology and devices used by the operator, including those in the national numbering plans of Member States and Universal International Freephone Numbers (UIFN).”

This is already reflected in the Numbering Conditions of Use and Application document at Section 3.1 (9) of ComReg 15/136R2 or Section 3.1 (10) of the draft Numbering Conditions, ComReg 21/28a.

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<sup>29</sup> Recital 17 provides further guidance on what an ICS is, e.g. “Interpersonal communications services are services that enable interpersonal and interactive exchange of information, covering services like traditional voice calls between two individuals but also all types of emails, messaging services, or group chats.”

In relation to international access to freephone 1800 numbers, please see Section 3.4 of this consultation paper for further discussion on this issue.

**Q. 6** Do you agree with ComReg’s proposed reflection in the Numbering Conditions Document of consequential amendments to Appendix 11 “Definitions” arising from the EECC? Please explain the basis for your response in full and provide supporting information

# 3 Proposed Amendments to Support Implementation of the New NGN Platform

## 3.1 Introduction

78 ComReg completed its review of Non-Geographic Numbers in December 2018<sup>30</sup>. The current Numbering Conditions document (15/136R2) partially reflects ComReg's Decision Instrument (DI) in 18/106:

- i. "Geo-linking Non-Geographic Numbers with Geographic Numbers - The retail tariff charged to any end-user for a call to a Non-Geographic Number in any of the four ranges 1850, 1890, 0818, or 076 shall not exceed the retail tariff that would be charged to the same end-user for a national call made to a Geographic Number, at the same time".
- ii. "With the exception of 076 numbers used to provide emergency services, and save for any exceptional circumstances as ComReg shall determine, all rights of use for Non-Geographic Numbers in the ranges 1850, 1890, and 076 shall be withdrawn from all undertakings to whom such rights of use were granted at midnight on 31 December 2021 and from the date of this decision no new rights of use for Non-Geographic Numbers in the ranges 1850, 1890, and 076 shall be granted to any undertaking. All rights of use for Non-Geographic Numbers in the ranges 1800 and 0818 shall remain in effect and new rights of use for numbers in those ranges may be granted to any authorised undertaking which applies for same".

79 Measure (i) was factored into the last Numbering Conditions update in 2019<sup>31</sup>. In relation to Measure (ii), hereafter referred to as "NGN Consolidation", some recent developments should be factored into the current update of the Numbering Conditions, with the DI in 18/106 also amended accordingly.

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<sup>30</sup> Review of Non Geographic Numbers, Response to Consultation 18/65 and Decision. Annex 1 contains the Decision Instrument

<sup>31</sup> ComReg document 19/104 – Response to Consultation 19/88 on updating the Numbering Conditions of Use and Application Process

- 80 In March 2019, ComReg established an NGN Industry Working Group (NGN WG) to develop and agree a detailed Implementation and Communications Plan and to oversee implementation of the Geo-linking Condition and NGN Consolidation. ComReg engaged Analysys Mason Ltd. to provide project management support and Pender & Associates (trading as PR360) as communications advisers. ComReg would like to express its appreciation to operators for their active participation in the NGN WG to date, for their constructive contributions to discussion and for reaching consensus on several implementation issues that have arisen.
- 81 ComReg now needs to formalise the consensus reached with industry on a number of issues. The following sections describe these and other remaining NGN issues for which proposed amendments to the Numbering Conditions of Use and the DI in ComReg Document 18/106 arise. These include:
- Numbering for Public Protection and Disaster Relief (PPDR) Services
  - Utility emergency contact numbers
  - International access to 1800 numbers
  - Number Changes – Obligations on Operators
  - Customer Validation – Condition of Use
  - Reseller Services

### **3.2 Numbering for PPDR Services**

- 82 In Ireland Public Protection and Disaster Relief (PPDR) services use the Terrestrial Trunked Radio (TETRA) system. TETRA is a cellular mobile technology, the current generation of which is based on GSM technology. The next generation of TETRA will be based on Long Term Evolution (LTE) technology.
- 83 The TETRA network is interoperable between a range of different State agencies including Gardai, fire services and ambulance services, as well as the Irish Coast Guard and the Irish Prison Service.

- 84 In 2018, ComReg issued the Non-Geographic Number (NGN) Decision<sup>32</sup> to improve the NGN platform in Ireland. As part of that Decision, the number of NGN ranges will reduce from five (1800, 1850, 1890, 0818 and 076) to two (1800 and 0818) by 31 December 2021 (NGN Consolidation). The 1850, 1890 and 076 numbers will be withdrawn from service and, from 1 January 2022, only the 1800 and 0818 number ranges will remain in operation.
- 85 The current number assignment for TETRA services in Ireland is in the 076 number range. At the time of making the NGN Decision, ComReg considered it appropriate to allow the continued use of 076 numbers by the emergency services beyond the NGN Consolidation deadline of 31 December 2021. ComReg understood the services were limited to a closed user group and therefore that the consumer harm described in Consultations 17/70 and 18/65 should not apply.
- 86 However, ComReg also indicated that it would engage further with the Office of the Government Chief Information Officer (OGCIO) on the use of 076 numbers by the emergency services in Ireland.
- 87 ComReg since understands that the 076 numbers in use by the emergency services in Ireland are dialable by members of the public. Furthermore, given that 076 numbers will be withdrawn from service by the end of 2021, and consumers will become aware of this withdrawal, the use of 076 numbers by the emergency services no longer appears appropriate.
- 88 The public-facing usage scenarios and ongoing technology developments suggest that mobile numbers would be more suitable for PPDR services in the longer term.
- 89 In the 2019 Numbering Conditions Consultation<sup>33</sup>, ComReg suggested the use of mobile numbers for TETRA, on the basis that both technologies have much in common and a significant proportion of European Member States already use mobile numbers for PPDR services. ComReg highlighted that if a member of the emergency services provides a personal contact number to a member of the public, that person's reasonable expectation would be that it would be a mobile number. ComReg proposed making an initial 100,000 block of 089 numbers available for TETRA.
- 90 The OGCIO agreed with ComReg's proposal at that time and indicated that TETRA devices need to have the same functionality as any other mobile device. However, some operators submitted that further information and industry discussion was needed on matters such as number portability and commercial aspects.

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<sup>32</sup> Decision D15/18 and ComReg 18/106 - Review of Non-Geographic Numbers – Response to Consultation 18/65 and Decision

<sup>33</sup> ComReg Document 19/88 - Updating the Numbering Conditions of Use and Application Process document

91 ComReg therefore decided to consider the matter separately and indicated its intention to discuss further with industry and the OGCI<sup>34</sup>.

## Engagement with OGCI

92 The OGCI manages the provision of PPDR services in Ireland. TETRA Ireland Communications Ltd. is currently contracted by the OGCI to provide the TETRA network to support Ireland's PPDR services. The TETRA network in Ireland is only accessible from other networks via Government Networks, also managed by OGCI.

93 ComReg's discussions with the OGCI confirmed that PPDR numbers are dialable by members of the public. In addition, the inherent mobility of PPDR users suggests that a mobile number assignment in the 08X mobile number range would be more suitable than retaining 076 numbers.

94 Moving PPDR to mobile numbers also allows for the complete withdrawal of 076 numbers from the national numbering resource as envisaged by the NGN Decision, "future-proofs" the PPDR service and is in line with how other countries in the EU deal with PPDR.

## Discussion at NGN Working Group (NGN WG)

95 The NGN WG addressed numbering for PPDR at meetings in 2020 and 2021. Several key issues were discussed including:

- Mobile number assignment: The NGN WG considered a proposal to replace the existing 076 numbers for PPDR with an appropriate number block assignment in the 089 range, which is primarily used for Mobile Virtual Network Operators (MVNOs).

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<sup>34</sup> ComReg Document 19/104 - Response to Consultation 19/88 on updating the Numbering Conditions of Use and Application Process Document

- **Number Portability:** If PPDR services are assigned 08X mobile numbers, the portability of those numbers to a Mobile Network Operator (MNO) or Mobile Virtual Network Operator (MVNO) will not be required. Although all 08X number ranges are currently included in the Mobile Number Portability (MNP) system, the current MNP solution provider has confirmed that individual number blocks can be excluded from the MNP system. So, if an 08X number block is identified for PPDR, this could be excluded from the MNP system. Safeguards are in place in the MNP system to ensure that accidental porting of these numbers would not occur. Therefore, there are no envisaged implications for the present MNP system should numbers from an 08X range be assigned to PPDR services.
- **Switching:** Although MNP is not a requirement for PPDR services, the possibility of the OGCIO switching the PPDR user base to another network can still be catered for (block switching).
- **Mobile Number Portability prefix:** ComReg would need to assign a mobile number portability prefix (176XX) to enable the use of 089 numbers for PPDR services. This is because some operators use the routing code to ensure the correct routing of calls.
- **Interconnect arrangements:** Connectivity between the TETRA Ireland network and public fixed and mobile networks will be facilitated through peering/interconnect arrangements with Government Networks. The OGCIO has indicated that it will consider peering with any network operator in Ireland. In relation to this, OGCIO will provide contact details to ComReg for circulation to all NGN operators.
- **Messaging Service:** Short Data Service (SDS) functionality, like SMS text messaging, is provided in TETRA networks and SMS–SDS gateways are available. However, the OGCIO has indicated there is no current plan to allow PPDR users to send/receive text messages to or from public mobile networks.
- **Commercial aspects:** The OGCIO does not presently charge a termination rate for calls terminating into Government Networks. The OGCIO has confirmed there are no plans to change these arrangements.

96 Following extensive discussion, the WG agreed by consensus to assign 089 mobile numbers to PPDR services.

## Network Codes and Identifiers

- 97 Mobile Network Codes (MNCs) are 2-digit short codes in the range 01 - 99 inclusive. MNCs are used only to identify mobile terminals and mobile end-users. An MNC is inserted after the Mobile Country Code (MCC) “272” as part of the International Mobile Subscriber Identity (IMSI <sup>35</sup>).
- 98 Since TETRA networks are based on GSM and LTE technologies, MNCs and IMSIs are also a requirement. As set out in ITU T Rec. E.218 (05/2004), the Terrestrial trunk radio Mobile Network Code ((T)MNC) is a component part of the Individual Terrestrial trunk radio Subscriber Identity (ITSI).
- 99 Terrestrial trunk radio Mobile Network Codes (T) MNCs) are 4-digit short codes. (T)MNCs shall be used only in TETRA networks. An (T)MNC shall be inserted after the Terrestrial trunk radio Mobile Country Code ((T)MCC) “272” as part of the Individual TETRA Subscriber Identity (ITSI). To support any mobile number assignment to PPDR services, an MNC and (T)MNC assignment will also be required. ComReg intends to assign an MNC and (T)MNC to OGCI0.

## Transition from 076 to 089 for PPDR

- 100 It is crucial that the transition of PPDR services from 076 to 089 numbers is managed properly and that calls are not disrupted.
- 101 The 089 mobile number range is already open on fixed and mobile networks in Ireland. The agreed industry lead-time for opening new number blocks on networks is three weeks. However, at the NGN WG, it was suggested that a three-month period for network preparations to support 089 for PPDR may be needed.
- 102 While it is reasonable to provide enough time for operators to make any required network changes, ComReg considers that three months is excessive. Consensus on the PPDR switch from 076 to 089 numbers has already been reached at the NGN WG and MNP is not a factor. As the numbers are contained in a single number block it should be possible to create a routing rule for just that block and ComReg notes that interconnect settlement is simplified, since OGCI0 does not presently charge a termination rate for calls terminating into Government Networks. Operators should therefore be pragmatic and start planning for the transition as soon as possible.

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<sup>35</sup> “international mobile subscriber identity” (IMSI) means a string of decimal digits, up to a maximum length of 15 digits, which identifies a unique subscription. The IMSI consists of three fields: the mobile country code (MCC), the mobile network code (MNC), and the mobile subscription identification number (MSIN)

103 ComReg therefore expects the 089 number blocks to be open for routing on all fixed and mobile networks by 30 September 2021.

104 In the run up to switching PPDR over to 089 numbers fully, there will be a period of parallel running of both 076 and 089 numbers for these services. This period of parallel running will run from 31 October 2021.

105 The intervening month provides time to allow OGCI0 to complete its testing programme before 089 numbers go live for PPDR services.

106 It would clearly be simpler for industry to cease operation of 076 numbers for PPDR services coincident with ceasing operation of 076 numbers more generally, on 31 December 2021. However, OGCI0 has highlighted to the NGN WG that it is currently dealing with a number of other higher priority projects e.g. related to supporting communications in new vaccination centres and the complete switchover to 089 for PPDR services may need to be pushed out beyond 31 December 2021. ComReg is interested in the OGCI0's and operators' views on this.

## Numbering Proposal for PPDR Services

107 Following on from the consensus reached at the NGN WG, the following is proposed for PPDR service numbering:

- ComReg to assign the first block of numbers in the 089 3 range, i.e. 0893000000 to 0893099999 (100k numbers) to OGCI0;
- ComReg to assign a MNC and (T)MNC to OGCI0;
- ComReg to assign the mobile number portability routing prefix 176 70 to OGCI0; and
- ComReg to revise the text of part (ii) of the NGN Decision to remove the text at the beginning of the clause referring to 076, as follows:

*~~With the exception of the 076 numbers used to provide emergency services, and~~ Save for any exceptional circumstances as ComReg shall determine, all rights of use for Non-Geographic Numbers in the ranges 1850, 1890, and 076 shall be withdrawn from all undertakings to whom such rights of use were granted at midnight on 1 December 2021 and from the date of this decision no new rights of use for Non-Geographic Numbers in the ranges 1850, 1890, and 076 shall be granted to any undertaking. All rights of use for Non-Geographic Numbers in the ranges 1800 and 0818 shall remain in effect and new rights of use for numbers in those ranges may be granted to any authorised undertaking which applies for same.*

The revised text of part (ii) of the NGN Decision will also be reflected in Section 4.2 of the Numbering Conditions.

108 Given the consensus reached at the NGN WG on the assignment of mobile number resources to OGCI0 the following underlined amendment to Section 6.2 (2) “Eligibility Criteria” of the Numbering Conditions is proposed:

*Rights of use for Mobile Numbers and MNCs shall only be granted to MNOs and MVNOs, OGCI0 for Public Protection and Disaster Relief (PPDR) services and to OTT Service Providers, provided the OTT Service Provider qualifies as an ECS, and the OTT Service Provider has a contract with an Irish MNO to access its network. A right of use for one MNC shall be granted upon first application and the basis for any request for an additional right of use for an MNC must be fully set out.*

109 ComReg proposes to insert the following paragraphs to the RoU Conditions in Section 5.7 “Mobile Network Codes” of the Numbering Conditions:

*(4) Terrestrial trunk radio Mobile Network Codes ((T)MNCs) shall be 4-digit short codes and their structure and use shall conform with ITU-T Recommendation E.218.*

*(5) (T)MNCs shall be used only in TETRA networks.*

*(6) A (T)MNC shall be inserted after the (T)MCC “272” as part of the Individual TETRA Subscriber Identity (ITSI).*

Q. 7 Do you agree with ComReg’s proposal for PPDR Numbering? Please explain the basis for your response in full and provide supporting information.

### 3.3 Utility Emergency Contact Numbers

110 As part of the implementation of the NGN Decision<sup>36</sup>, the number of NGN ranges will reduce from five to two by 31 December 2021. The 1850, 1890 and 076 ranges will be withdrawn and, from 1 January 2022, only the 1800 and 0818 NGN ranges will remain in operation.

<sup>36</sup> D15/18 and ComReg 18/106 - Review of Non-Geographic Numbers Response to Consultation 18/65 and Decision

111 Irish utility providers<sup>37</sup> currently use, often as emergency contact numbers, NGNs in the ranges to be withdrawn. These providers, and the Commission for Regulation of Utilities (CRU), referred to this in their submissions to ComReg's public consultations on NGNs. Some respondents outlined what they consider would be the difficulties in transitioning from those NGNs by 31 December 2021, due to the many physical assets upon which such NGNs are displayed.

112 ComReg responded to these submissions in Document 18/106 and, in relation to claims that removal of the 1850 range would have serious and significant safety and cost implications for consumers and for the public, noted that:

- The existing gas safety line (or water or electricity line) is already exposed to the risk of certain consumers being unable to report an actual or suspected gas leakage e.g. due to a lack of credit on their mobile
  - Using 1800 (Freephone) numbers would allow any consumer to report a potential gas leak immediately and without delay. This is current practice in other jurisdictions.
- Service Providers<sup>38</sup> (SPs) using 1850 NGNs should be able to migrate to 1800 (Freephone) as part of the five-to-two consolidation and at a lower cost in terms of the cost of providing services using NGNs

113 Mindful of the complexities of withdrawing three NGN ranges (1850, 1890 and 076), ComReg set down a three-year transition period for NGN Consolidation, to ensure that SPs using the NGNs to be withdrawn had sufficient time to migrate to new numbers and to notify their customers.

114 ComReg also noted that certain SPs may have requirements that will have implications for their own migration planning and indicated it would engage with industry and utilities in planning the implementation of the decision to accommodate such needs as far as is practical.

115 The NGN Decision was adopted with a clause to allow for the potential extended operation of NGNs beyond the NGN Consolidation deadline in "exceptional circumstances".

## Emergency contact numbers on assets

116 Figure 1 highlights the NGNs currently used by utility providers in Ireland for the provision of safety related services:

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<sup>37</sup> ESB Networks (ESBN), Gas Networks Ireland (GNI) and Irish Water (IW)

<sup>38</sup> Organisations using NGNs as contact numbers for callers

Utility	Emergency contact number
ESB Networks (ESBN)	1850 372 999 (372 is used to represent the phone word 'ESB')
Gas Networks Ireland (GNI)	1850 20 50 50 1850 42 77 47 (Dial Before You Dig) 1850 211 615 (Test number for SCADA system)
Irish Water (IW)	1850 278 278 1890 278 278

**Figure 1: Emergency contact NGNs in use by utilities**

117 The utility providers promote awareness of the relevant emergency contact numbers through several channels including websites, customer bills, and vehicle liveries. All the utility providers also recommend the use of 999/112 in the event of an emergency.

118 However, the utility providers currently display the contact NGNs on different types of network asset e.g. on wooden poles and residential gas meters, and have indicated that the numbers are displayed on a significant number of such assets that would not be changed in time for the 31 December 2021 NGN Consolidation deadline.

## Dialogue with industry and utility providers

119 There has been constructive dialogue between ComReg, industry, and the utility providers on how best to address the concerns highlighted by the utility providers and the CRU in their consultation responses. This has included:

- Discussions with utility providers and the CRU at NGN Working Group <sup>39</sup> meetings; and
- Bilateral meetings between ComReg, the CRU and utility providers.

<sup>39</sup> The NGN WG is comprised of fixed and mobile telecoms operators, ComReg and its Project Management and Communications Consultants for the NGN Implementation project.

## Initial discussion at NGN WG

120 The utility providers and the CRU were invited to attend an NGN WG meeting in April 2019, at which ComReg and industry discussed the various concerns raised by the utility providers.

121 At this meeting draft criteria, to identify certain individual NGNs that may need to be kept in service for a period beyond 31 December 2021, were also discussed and agreement was reached, in principle, that such criteria could be adopted.

122 The criteria included that:

- the SP must be a transmission system owner, distribution system owner, the holder of a licence granted by the CRU under the Electricity Regulation Act 199 (as amended) or Gas (Regulation) Act 2002 (as amended), or an entity regulated by the CRU under the Water Services Acts 2007 – 2014; and
- the particular NGN of concern must provide a vital service relating to the safety of life or property and/or the security of supply of water, electricity or gas
- the particular NGN is clearly visible on a significant number of assets used by the SP
- The SP is actively promoting the use of an NGN to replace the particular NGN and will not deploy any new infrastructure where the NGN is visible and that the particular NGN would be withdrawn from service by a certain date.

123 Although the criteria were agreed, there was no conclusion reached at that NGN WG meeting on the duration of the proposed extended operation of the identified NGNs beyond the 31 December 2021 deadline. Further discussion was required.

## Bilateral meeting between ComReg and the CRU

124 In June 2019, ComReg met with representatives from the CRU to discuss a possible extension to the lifetime of utility emergency contact numbers, in view of the nature of these calls and the many physical assets on which the numbers are displayed.

125 Various matters were discussed, including the potential impact of the introduction of new wholesale charges for 1800 NGNs which would lower the cost of organisations maintaining 1800 NGNs.

126 In May 2020 new wholesale charges were introduced for 1800 NGNs. The positive consequence of this change was a significant reduction in the cost of maintaining 1800 NGNs for SPs. 1800 NGNs are now a realistic and cost-effective option for organisations.

127 Another meeting between ComReg and the CRU was held in early June 2020, during which several matters were discussed further, including the duration of any potential extended operation of the relevant NGNs.

128 Further discussion with the utilities and industry on this matter was needed.

### **Bilateral meetings between ComReg and utilities**

129 ComReg has held several bi-lateral meetings with the utility providers about the NGNs to be withdrawn. ComReg reiterated its view that 1850 numbers are inappropriate as emergency contact numbers (given that they rely on callers having credit to call) and that utility providers are expected to actively promote the use of a new NGN, ideally using the prefix 1800, to replace 1850/1890 emergency contact numbers.

130 ComReg notes that the utility providers have acquired new 1800 Freephone numbers to replace their emergency contact numbers and have agreed to start promoting these instead.

131 However, the issue of 1850/1890 emergency contact numbers displayed on a wide range of assets throughout the country, and for which replacement before the NGN Consolidation deadline of 31 December 2021 is unlikely, remains.

132 Given the nature of these NGNs as emergency type contact numbers, ComReg and the utilities were keen to reach a consensus with industry on how to treat these numbers.

## NGN WG consensus

133136 The emergency contact numbers were discussed further at the NGN WG meeting in September 2020. The CRU and utilities participated in the WG discussions. The key goal for the meeting was to identify and agree on an appropriate duration, beyond the NGN Consolidation deadline, by which to extend the operation of the emergency contact numbers.

134 To assist the WG discussion, Analysys Mason (ComReg's Project Management Consultant for the NGN Implementation project) prepared an "Options Review" document to consider the different extension options available and, using objective analysis, identify an extension duration which is most appropriate.

135 The Options Review considered:

- the potential costs in transitioning from the 1850<sup>40</sup> NGNs due to the many physical assets on which the NGNs are displayed
- the benefits that may be realised by utility providers in proactively migrating to 1800 Freephone numbers, including cost savings
- the consumer benefits of using 1800 to report safety related issues
- the potential risk arising from continued display of the NGNs on signs and notices after the withdrawal date of 31 December 2021.

136 The Options Review also identified two measures to mitigate the risk of the emergency contact numbers continuing to be dialled after the 31 December 2021 NGN consolidation deadline:

- Parallel running of the "old" 1850 number with replacement 1800 number: whereby both numbers will work in tandem until an agreed end date.
- Recorded announcements (after parallel running period ends): whereby callers dialling an "old" 1850 number could receive a recorded message informing them of the new 1800 number.

137 The Options Review proposed a short-term extension (to 31 December 2023) to the lifetime of the relevant numbers of two years, preceded by a review process.

138 This duration was considered appropriate for two reasons:

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<sup>40</sup> Note Irish Water also uses an 1890 contact number - see Figure 1

- i. it minimises the overhead imposed on telecoms operators, and
- ii. allows a sufficient time to have passed to gauge the impact on public perception of the “old” 1850 numbers.

139 Any ComReg decision to potentially further extend the lifetime (beyond 2023) of one or more of the numbers in service at that point would be informed by the outcome of an evidence-based review process, which would consider inter alia,

- Volume of calls continuing to be made to the relevant numbers
- Consumer perception of the numbers
- Consideration of residual risk
- Impact to telecoms operators

140 The Options Review also set out several recommendations relevant to the evidence-based approach, including

- Possible further reviews e.g. if the operation of any of the numbers requires further extension beyond 2023. ComReg would need to consider relevant information before any such approval.
- Consideration of the impact on telecoms operators. A limit should be placed on the combined duration of any such extension and this should be agreed by all stakeholders well in advance of the first review.
- A notice period in the event of a decision being made to remove an 1850 number from service. The duration of any notice period should be sufficient to allow all relevant stakeholders to plan accordingly.
- Commitments from utility providers e.g. to only promote Freephone numbers for the relevant emergency services going forward, to update customer communications material to include the new Freephone emergency numbers and to actively contribute to any future reviews.

141 At the September 2020 meeting of the NGN WG, the CRU and the utility providers considered the Options Review and agreed by consensus to the proposed option i.e. two-year extended operation (to 31 December 2023) for the NGNs in Figure 1, with a preceding evidence-based Review Process.

142 The following points were noted from the September 2020 NGN WG meeting:

- The CRU agreed with the proposed option, noting that the inclusion of a reference in the Options Review to the CRU ALARP (As Low As is Reasonably Practicable) risk guidance is a positive step.

- ESNB agreed with the proposed option and indicated its plans to “dead-end” its 1850 emergency number to an announcement in mid-2021.
- GNI agreed with the proposed option and noted the inclusion of a reference to the ALARP guidance as being a positive step. GNI is currently setting up a replacement 1800 number and intends to promote this new 1800 number as its emergency contact number.
- IW agreed with the proposed option and explained that it is working to change the 1850 number which currently appears in its advertising and marketing collateral.
- While acknowledging that the purpose of the Options Review was to set out the principles underpinning the proposed option and not necessarily the details, the utilities and operators sought further clarity in relation to the proposed review process.

## Review Process

143 Following the September 2020 meeting of the NGN WG, Analysys Mason prepared a Review Process document to outline a framework for the review process.

144 The Review Process sets out the risk treatment approach, the factors that will be considered (consumer perception, impact on telecoms operators, residual risk and volume of calls), and the risk assessment methodology.

145 Any decision to potentially further extend the lifetime of one or more of the 1850/1890 numbers in service at that point will be made by ComReg in accordance with, inter alia, its statutory function of managing the national numbering resource, and its statutory objectives of ensuring the efficient management and use of numbers from the national numbering scheme.

146 ComReg plans to discuss and agree the review framework with the CRU, utilities, and industry in the coming months, and intends to complete its evidence-based review in advance of the 31 December 2023.

## Proposal for Utility Emergency Contact Numbers

147 Following the consensus of participants at the NGN WG in September 2020, it is proposed to extend the operation of the emergency contact numbers in Figure 1 by two years beyond the NGN Consolidation deadline of 31 December 2021. The proposed extended operation for these numbers would therefore run until 31 December 2023. Any further extension to the operation of these numbers will be subject to an evidence-based review to be completed by ComReg before 31 December 2023.

148 Part (ii) of the NGN Decision currently reads:

“With the exception of 076 numbers used to provide emergency services, and save for any exceptional circumstances as ComReg shall determine, all rights of use for Non-Geographic Numbers in the ranges 1850, 1890, and 076 shall be withdrawn from all undertakings to whom such rights of use were granted at midnight on 31 December 2021 and from the date of this decision no new rights of use for Non-Geographic Numbers in the ranges 1850, 1890, and 076 shall be granted to any undertaking. All rights of use for Non-Geographic Numbers in the ranges 1800 and 0818 shall remain in effect and new rights of use for numbers in those ranges may be granted to any authorised undertaking which applies for same”.

149 It is proposed to amend the NGN Decision D15/18 to add the following:

*The following numbers shall remain in operation until 31 December 2023:*

<i>Utility</i>	<i>Emergency contact number</i>
<i>ESB Networks (ESBN)</i>	<i>1850 372 999</i>
<i>Gas Networks Ireland (GNI)</i>	<i>1850 20 50 50 1850 42 77 47 1850 211 615</i>
<i>Irish Water (IW)</i>	<i>1850 278 278 1890 278 278</i>

**Q. 8** Do you agree with ComReg’s proposal to extend the operation of the utility emergency contact numbers in Figure 1 until 31 December 2023? Please explain the basis for your response in full and provide supporting information.

Q. 9 Do you agree with ComReg's proposal to conduct an evidence-based review in 2023 to determine if any further extended operation of any of the NGNs in Figure 1 is needed? Please explain the basis for your response in full and provide supporting information.

### 3.4 International Access to 1800 Freephone Numbers

150 Article 28 of the Universal Services Directive (USD) requires that end-users throughout the EU shall be able to access non-geographic numbers in Member States' national numbering plans, where technically and economically feasible. This requirement has been implemented in Ireland as Regulation 23 of the Universal Service Regulations.

151 Article 97 of the European Electronic Communications Code (EECC), which sets out revisions to the existing telecoms regulatory framework, similarly requires Member States to ensure that, where economically feasible, end-users are able to access and use services using non-geographic numbers within the Union.

152 In Ireland however, the 1800 non-geographic number range currently presents a difficulty in respect of international accessibility as there is no trunk prefix (leading 0 (zero)) and preceding an 1800 NGN with the international prefix would result in a geographic call to a Dublin number range (i.e. 00353 1 800 XXXX) instead of to the relevant Service Provider. Consequently, to avoid the potential for unwanted calls to subscribers if they were provided with 800 XXXX numbers in the 01 area code, ComReg has not assigned any numbers in this range to operators.

153 The choice of digit '1' for Irish Freephone numbers was a historical one, made in the days before telecommunications liberalisation and when the need for international access to these number ranges was not foreseen. However, the fact remains that Ireland has not implemented the open access foreseen by Article 28 of the USD and Article 97 of the EECC.

154 In addition to enhancing the reputation of Ireland within the EU through the removal of the current barriers to 1800 access (of both the numbering resource and the underlying services), such access also provides a number of economic benefits which are summarised in Table 1.

Stakeholder	Potential Benefits of international access to Irish 1800 numbers
Consumers	<ul style="list-style-type: none"> <li>Consumers travelling outside Ireland would be able to access services that they are currently unable to (assuming there is no geographic number for the same service)<sup>1</sup>.</li> </ul>
Service Providers	<ul style="list-style-type: none"> <li>Irish Service Providers using 1800 numbers may realise benefits arising from increased revenue associated directly with increased call traffic (for example, the sale of products); or indirectly through the provision of customer support, advice or information<sup>2</sup>.</li> </ul>
Operators	<ul style="list-style-type: none"> <li>Operators in Ireland (and possibly from other countries) may benefit from increased revenues from terminating calls to Irish 1800 numbers</li> </ul>

Note 1: Measured as consumer surplus (the amount consumers are willing to pay for a service over and above what they actually pay)

Note 2: Measured as the average revenue (both direct and indirect) generated for businesses through their 1800 number multiplied by the potential increase in call traffic from international callers

**Table 1: Potential benefits of international access to Irish 1800 numbers**

155 Since 1800 Freephone has been marketed to date as a national service, operators may currently perceive that there is limited demand for international access. However, a significant new use of 1800 numbers is on online platforms, as described in Section 4 of this document. One example of such use is Google Ads platform which uses a 'Click to Call' button to establish communication between a consumer and a business. For this and other similar applications, it seems reasonable to ComReg that many businesses based in Ireland will want to target their online advertising beyond Ireland, so demand for international access is likely to grow very quickly.

## Discussions at NGN WG

156 In respecting the European Commission's objectives in respect of Article 28 of the USD and Article 97 of the EECC, and the potential for rapidly increasing demand, ComReg has been discussing with the NGN WG how best to address the difficulties in providing international accessibility for Irish 1800 Freephone numbers.

157 Following these discussions, the WG agreed by consensus that, from a technical viewpoint, the routing and terminating of incoming international calls to 1800 Freephone can be accommodated.

158 With respect to billing and settlement, there are several implementation issues being actively considered by the NGN WG. These include:

- The potential impact of facilitating international access to Irish 1800 Freephone numbers to operators' existing billing system configurations and processes
- How the Roaming Regulation should apply to such calls, and in particular the extent to which Roam Like at Home rules may apply

## Roaming Regulation

159 Mobile telephony services in Europe are subject to the Roaming Regulation<sup>41</sup> which regulates roaming charges within the European Economic Area. This includes the charges mobile network operators can impose on subscribers for using telephone and data services outside of the network's member state.

160 Roaming charges were abolished in the EU in 2017. Roam Like at Home (RLAH) principles now apply where a roaming consumer dials another EU country.

161 However, it is currently unclear how RLAH would apply to calls to freephone numbers and whether there may be flexibility in how such calls could be treated e.g.

- If such services could be free of charge when roaming within the EEA or
- If such services could be charged at a rate not exceeding the rate of an ordinary roaming call (and included in subscriber bundles of call minutes).

162 ComReg notes the recent publication by the European Commission of a proposed Regulation<sup>42</sup> on roaming. Draft Article 14 of that proposal describes additional transparency measures for consumers in relation to Value Added Services (VAS). VAS services refer to communications to certain numbers used for providing value added services, for example, premium-rate numbers and freephone numbers. Calls to VAS numbers can generate additional costs when roaming compared to calls at home. ComReg is mindful that discussions on this issue are ongoing and will keep abreast of developments.

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<sup>41</sup> Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public mobile communications networks within the Union, as amended

<sup>42</sup> [Proposal for a Regulation of the European Parliament and of the Council on roaming on public mobile communications networks within the Union](#)

## Changes required by operators outside of Ireland

163 Whilst Irish operators are willing to accommodate the required changes, the same cannot necessarily be said about operators in other territories. Such changes will require Irish operators to coordinate with foreign operators. In this regard, practices adopted by the ITU-T and the GSMA are relevant:

- ITU-T Recommendation E.129 is intended to facilitate the notification of changes to national numbering plans and to make available information on numbering plans changes that influence the routing, charging and accounting of international telecommunication traffic
- The GSMA IR.21 Roaming Database is used to centrally record information relating to public mobile networks (PMNs). When data for a PMN changes, or when a new PMN is introduced, GSMA IR.21 sets out procedures for updating the Roaming Database and for distributing the information to other PMNs

164 Although the universal application of any changes required by operators outside of Ireland cannot be guaranteed, ComReg is of the view the necessary changes could at least be applied in those territories most frequented by Irish consumers (e.g. Member States visited by consumers for business reasons and holidays) and markets most likely to be buying online from Ireland.

## Consumer interests

165 The number plan for Ireland, like most other countries' dial plans, features a trunk code or trunk prefix – meaning a digit, usually 0 (zero), is placed in front of telephone numbers for domestic calls. However, this digit generally needs to be dropped when numbers are dialled from abroad.

166 It may therefore not be intuitive for callers to understand how to dial 1800 Freephone numbers from abroad as the leading digit is not zero and, likewise, no leading digit should be removed (i.e. callers would be required to dial +353 1 800 XXXXXX). This could potentially undermine the success of such an initiative, as callers would need to be informed of how to correctly dial an Irish 1800 Freephone number from abroad. This contrasts with callers dialling a 0818 number, for example, which does include the regular trunk prefix, and does require the removal of the leading zero when dialled from abroad (i.e. +353 818 XXXXXX). A consumer information initiative may therefore need to be considered by ComReg and industry if international dialling to Irish 1800 numbers is implemented. Ireland is not unique in using the prefix 1800 for Freephone and some of the other countries (e.g. Australia) provide international access to their 1800 numbers, so the consumer information deficit can presumably be addressed to some extent.

167 It is currently not proposed that any fixed-line international calls to 1800 would be free to the caller. However, it is unlikely that all consumers would be aware that a call to an Irish 1800 freephone number, when dialled from a fixed line abroad, would be subject to a call charge based upon an international rate. This potential misunderstanding may also exist in the case of mobile originating calls to Irish 1800 Freephone numbers where Roam Like at Home rules are not applied. The use of pre-call announcements may help to alleviate any misunderstanding, but would also increase implementation costs.

168 Various consumer protection rules form part of the General Authorisation and standardise all electronic communications service (ECS) providers' related obligations. These include a rule which requires that calls which are normally free-of-charge are not to be identified on consumer bills, for example 1800 XXXXXX numbers. However, a call to an Irish 1800 number, when originating from a mobile user abroad, will not be free-of-charge to the caller where Roam Like at Home rules are not applied. It is therefore arguable whether these protection rules should apply in such circumstances<sup>43</sup>.

169 Currently, due to the social nature of some 1800 Freephone services, these calls are not identified on consumer bills in Ireland.

170 If international access to 1800 numbers were to be introduced on a chargeable basis, they it is ComReg's preliminary view that they would then need to be identified on consumer bills.

## Economic feasibility

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<sup>43</sup> This issue is only relevant to mobile operators, as calls to Irish 1800 numbers from a fixed-line would only potentially appear in the consumer bill within the country where the call originated.

171 Article 97 of the EEC requires ComReg to take all necessary steps to ensure that end-users can access, and make use of, services using non-geographic numbers within the EU, except where this is not economically feasible.

172 It is therefore necessary for industry to consider the full impact of removing the current barriers to 1800 access from an economic standpoint. This involves determining the estimated costs of implementation, together with a consideration of the likely demand for such access.

173 Although detailed analysis has been carried out at the NGN WG on the issue of implementing international accessibility for 1800 numbers, a consensus has not yet been reached on a way forward. In particular, ComReg is now seeking information on the likely financial impact of implementing international access to 1800 numbers. For the avoidance of doubt, no update to the Numbering Conditions specifically in relation to the issue of providing international access to 1800 is being proposed at this time.

174 To further its consideration of the issue, ComReg is now keen to explore the potential economic impact to telecoms operators of introducing international access to 1800 numbers in Ireland.

Q. 10 On what basis do you consider international calls to Irish 1800 Freephone numbers should be facilitated (e.g. free to call or otherwise)? Please explain the basis for your response in full and provide supporting information.

Q. 11 Do you consider that the cost of implementing international access to 1800 Freephone numbers would be reasonable for your organisation? Please explain the basis for your response in full and provide supporting information, clearly presenting any associated financial costs.

Q. 12 Do you foresee demand for international access to Irish 1800 Freephone numbers? Please explain the basis for your response in full and provide supporting information.

Q. 13 Are there any other issues relating to the potential introduction of international access to Irish 1800 Freephone numbers that ComReg should consider? Please explain the basis for your response in full and provide supporting information.

### 3.5 Number Changes – Obligations on Operators

175 The obligations on operators to provide support services to their customers during number changes are set out in the General Authorisation conditions in Section 3.1 (8) of the Numbering Conditions. These conditions envisaged a scenario such as the expansion of a number range by the addition of a digit(s) to end-user numbers.

176 However, the decision to cease 1850, 1890 and 076 NGNs means that end-users or Service Providers (“SPs”), using these NGNs need to switch to a new number as these number ranges will no longer operate after the 31 December 2021. The current obligations on operators do not fully address this scenario where there is a need to migrate customers to new numbers in time. An amendment to the Numbering Conditions is required to take account of these requirements.

177 To take account of the circumstances whereby ComReg has decided to cease a number range, it is proposed to insert the following text as a new Section 3.1 (9) in the Numbering Conditions:

Ceasing of Number Ranges – Undertakings shall inform their customers of any requirement to change number sufficiently in advance of the ceasing of the number range, and undertakings shall take appropriate measures in respect of such number changes to include the following:

- a) there shall be a period following the provision of a new number and before the ceasing of the number range during which the customer can use the original number or the new number and the charge for calling the original number shall remain the same while the cost of calling the new number shall be the operator’s published rates for calling that number;
- b) when the period of parallel running of the original and new number ends, or after the ceasing of the number range, in-call announcements shall be put in place to inform callers that (1) the original number has been replaced and is no longer in use, and (2) make adequate provision to direct the caller to the new number; and
- c) there shall be no charge whatsoever for any call made to a number which has been replaced and is no longer in effect.

178 In relation to the proposal above, two points are noteworthy both for the current NGN implementation project and in general. Firstly, what constitutes informing customers ‘sufficiently in advance’? ComReg considers that this will vary from case to case and should be made clear to industry as part of any Decision to cease number ranges.

179 In the case of the NGN implementation project, ComReg's Decision D15/18 clearly provided a 3-year notice period. As was made clear by ComReg, the purpose of this long notice period was to ensure that SPs could secure new numbers in a timely manner and run them in parallel with old numbers, to minimise changeover costs. ComReg has repeatedly reminded operators of their obligations to inform customers but it has recently become apparent that some operators have chosen not to avail of this notice period to inform their customers. Indeed, a minority may not have notified their customers at all, to date. ComReg accepts that for 1800 NGNs, the ComReg Decision<sup>44</sup> on wholesale pricing was not finalised until January 2020, but this did not prevent operators from informing SPs of all options, with a caveat for 1800 prior to January 2020. In conclusion, in the case of the NGN implementation project, ComReg considers that having a minimum of 2 years notice during which time operators could inform their SPs was appropriate.

180 Secondly, and again in the context of the NGN implementation project, ComReg notes that the NGN WG is currently considering the options around making *'adequate provision to direct the caller to a new number'*. ComReg appreciates that the challenge with NGN consolidation is that an SP's new number will be different for each SP. The option to offer unique announcements for each SP is unrealistic. In past number changes, callers would be prompted to consult Directory Enquiries, but the NGN WG considers that current retail pricing of these services is prohibitive. ComReg nevertheless considers that the National Directory Database, suitably updated with details of SPs and their NGNs, could be part of any solution and requests respondents to consider this option further.

181 ComReg also welcomes views on the following possible announcements for callers to 1850, 1890 and 076 numbers from 1 January 2022:

*"You have dialled an 1850 number. 1850 numbers are no longer in service. Please check the number you are calling. You have not been charged for this call."*

*"You have dialled an 1890 number. 1890 numbers are no longer in service. Please check the number you are calling. You have not been charged for this call."*

*"You have dialled an 076 number. 076 numbers are no longer in service. Please check the number you are calling. You have not been charged for this call."*

ComReg may decide on an appropriate announcement(s) as a result of this consultation. If so, ComReg may set out such announcement(s) as a condition of use or decision instrument.

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<sup>44</sup> Access to Non-geographic Numbers: Imposition of price control and transparency obligations, ComReg Document 20/04R, 16 January 2020.

Q. 14 Do you agree with ComReg's proposed text for the Numbering Conditions to take account of operator obligations arising due to the ceasing of number ranges? Please explain the basis for your response in full and provide supporting information.

Q. 15 Do you have any views on the format of recorded announcements? Please explain the basis for your response in full and provide supporting information.

### 3.6 End-User Validation – Condition of Use

182 The application process in the current Numbering Conditions requires applicants for individual 1800 and 0818 NGNs to enter a unique end-user identifier on the FNP assignment system to allow an assignment to be validated. This identifier may be the end-user name, or suitable alternative such as account number or order number. This is an important requirement to prevent hoarding of numbers, including 'golden' numbers, by operators or their resellers. The numbering team now wishes to strengthen this requirement by setting it out as a new condition of use.

183 To introduce the need for a valid end-user when assigning NGNs on the FNP system, it is proposed to add the following text to the Numbering Conditions:

Add the following as paragraph 2 of Section 4.3 "Freephone Numbers", RoU Conditions;

*An authorised undertaking shall only be granted the Rights of Use of 1800 Freephone Numbers if it is in receipt of a written order from an end-user for the number(s) being applied for together with the end-user's unique identifier. This identifier shall be the end-user's name, or suitable alternative such as account number or order number which enables ComReg to validate the authenticity of the assignment order.*

Add the following as paragraph 4 of Section 4.4 "Standard Rate Numbers", RoU Conditions;

*An authorised undertaking shall only be granted the Rights of Use of 0818 Standard Rate Numbers if it is in receipt of a written order from an end-user for the number(s) being applied for together with the end-user's unique identifier. This identifier shall be the end-user's name, or suitable alternative such as account number or order number which enables ComReg to validate the authenticity of the assignment order.*

184 To provide further information to operators on the Individual Number Assignment (INA) system that incorporates use of the FNP system to assign 1800 and 0818 NGNs, it is proposed to add the following underlined text to Section 6.1 paragraph 14(a) of the Numbering Conditions

“Applications for 1800 and 0818 numbers must be submitted through the FNP system and must be based on valid end-user orders / requests. *Details of the application process for 1800 and 0818 numbers are set out in the Individual Number Assignment (INA) process manual which is available on request by emailing the ComReg numbering team at [numapps@comreg.ie](mailto:numapps@comreg.ie).*”

Furthermore, ComReg proposes to insert the following definition of the INA in Appendix 11 “Definitions” of the Numbering Conditions:

*“Individual Number Assignment (INA)” means the ComReg system that incorporates use of the Fixed Number Portability (FNP) system to assign individual 1800 and 0818 NGNs.*

Q. 16 Do you agree with ComReg’s proposal to introduce the need for a written end-user order as a RoU condition of use for 1800 and 0818 NGNs and do you agree with ComReg’s proposed text to reflect this in the Numbering Conditions? Please explain the basis for your response in full and provide supporting information.

### 3.7 Reseller Services

185 The objective of this section is to highlight the need for operators holding assignments of numbers to maintain accurate and current records on all of those numbers, including any numbers provided to resellers.

186 For the purposes of this consultation and the proposed additions to the Numbering Conditions, a reseller is an authorised undertaking that enters into a contract with another authorised undertaking to receive number dependent services that the reseller then uses to provide a number dependent service to its end users or to other authorised undertakings. ComReg recognises that resellers are a natural presence in the ECN/ECS market and provide useful services to end users and other operators, thereby encouraging more entrants to the market and so facilitating competition.

187As set out in Section 2 paragraph 2 (a) of the Numbering Conditions, there are conditions attached to the rights of use of numbers (“RoU Conditions”) granted by ComReg. The Numbering Conditions further indicate that a RoU condition applies only to the individual authorised undertaking that holds the right of use for the number to which the RoU Condition is attached. Therefore, in the value chain involving reseller services, it is the number holder that is solely responsible for the RoU Conditions attached to those numbers. Section 3.2 (8) of the Numbering Conditions sets a RoU condition that, for the purposes of ComReg making any information requirement under regulation 18 of the Authorisation Regulations, holders shall maintain accurate and current records in respect of rights of use for all classes of numbers granted to them, to include certain usage information as detailed in the Numbering Conditions. Consequently, number holders need to provide ComReg with these records/data when required.

188ComReg’s current NGN Information Requirement (Monthly NGN Data Request) seeks accurate and current data from operators on NGN number usage. Analysis of this data will enable the monitoring of the switch of customers from 1850, 1890 and 076 NGNs to 1800, 0818 or alternative numbers. It will also enable the recovery of unused reseller 0818 and 1800 NGNs and so will contribute to the efficient use of numbers, with unused numbers being immediately available for reassignment. Whilst ComReg’s expectation in relation to resellers is implicit, ComReg now proposes to provide an explicit reference in the Numbering Conditions to their existence and to the obligations on the number holder in relation to their resellers.

189Also in relation to the NGN implementation project, In 2019 ComReg introduced the Individual Number Assignment (INA) system for 1800 and 0818 NGNs. Prior to the introduction of this system, ComReg processed applications from operators for blocks of NGNs. These applications were submitted via email/post. In contrast to this legacy process, the INA system allows operators to automatically (i.e. without the need for manual assistance ComReg) assign themselves individual 1800 and 0818 NGNs. The more granular approach brought about by individual rather than block assignments of NGNs should have ensured a more efficient use of these numbers. This would have allowed the maximum availability of 1800 and 0818 NGNs for operator customers switching from 1850, 1890 and 076 numbers to these numbers. To assess if this benefit was being realised, ComReg carried out an analysis of the current assignments of 1800 and 0818 NGNs on its numbering database and compared this data with that previously gathered for the NGN project. ComReg found discrepancies between the quantity of NGNs in use according to the current data compared with the previous data and concluded that further analysis was needed.

190 Individual NGNs are only assigned to operators on the basis of an end-user request so that all NGNs are either in use by end-users or free for assignment. ComReg's analysis of its numbering database indicated that the quantity of NGNs either claimed by operators for their existing customers at the initial INA system set up in 2019, or subsequently assigned to operators, is over 68,000 for each of the 1800 and 0818 NGN ranges. Of these, the majority were claimed by operators for their customers at the time of INA set up. As a comparison, the DotEcon report<sup>45</sup> indicated that there were 18,300 numbers terminated in the 1800 range and 11,217 in the 0818 range. In further analysing the current data, ComReg identified blocks of contiguous 1800 and 0818 NGNs, submitted to ComReg as in use by operators. For example, there are over 42,000 individual 0818 NGNs in blocks of 1,000 numbers or more. There are also over 23,000 individual 1800 NGNs in blocks of between 100 and 1,000 numbers. While ComReg does not have information on operator customers, either resellers or end-users, the analysis suggests that, of the numbers recorded by operators as being used, many are in blocks of individual numbers provided to resellers. If many of these NGNs are not in use then this would explain at least some of the discrepancy between the previous and current data. In such cases, operators need to report to ComReg on the actual usage of these reseller numbers to ensure accurate data is provided to ComReg.

191 To clarify ComReg's acceptance that number holders may provide services to resellers in the market, ComReg proposes to insert the following as paragraph 11 in Section 3.1 of the Numbering Conditions:

*For the avoidance of doubt, ComReg recognises the presence of resellers in the market. In the provision of number based services, the number holder is responsible for the rights of use conditions that attach to those numbers as set out in Section 2 (a) of the Numbering Conditions.*

192 Also, ComReg proposes to add the following definition to Appendix 11 of the Numbering Conditions:

*"Reseller" means an authorised undertaking that enters into a contract with another authorised undertaking to receive number dependent services that the reseller uses to provide its own number dependent service to its end-users or to other authorised undertakings.*

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<sup>45</sup> ComReg 17/70a: Report from DotEcon on Non-Geographic Numbers in Ireland– Section 3.5 Table 2

Q. 17 Do you agree with ComReg's proposals to (a) insert a paragraph in Section 3.1 of the Numbering Conditions confirming ComReg's acceptance that authorised undertakings may provide services to resellers in the market as described and (b) insert the definition of reseller in Appendix 11 of the Numbering Conditions? Please explain the basis for your response in full and provide supporting information.

# 4 Market and Technology Developments

## 4.1 Numbering Resources for Cloud Communications Service Providers

### 4.1.1. Introduction and Background

193 Cloud communications services are infrastructure platforms and software that are hosted by third-party providers to connect businesses or service providers with consumers by providing communications services which are made available through the internet. These include telephony services to enhance privacy of end users, online 'click to call' services, and providing telephony access to conference platforms and call centres. Numbering resources are used to deliver such use cases and services, which are described more fully below. Such numbering resources are sometimes referred to as 'virtual' or 'Cloud' numbers.

194 In researching the use of numbers for Cloud communications services, ComReg has attended meetings with several Cloud Service Providers (SPs), taking note of their need for numbers. These SPs include Twilio, Microsoft and Vodafone and we reference the material provided by these organisations in assessing Cloud numbering in this section.

195 It is estimated by Gartner that worldwide consumer spending on public cloud services will grow by 18.4% in 2021<sup>46</sup>. As Irish consumers and businesses begin to further engage with cloud-based solutions and services there is likely to be a greater requirement for numbering resources for the delivery of such services. In that regard, ComReg is of the view that there is benefit in considering the use of the numbering resource for Cloud-based services at this time, in order to determine whether any further amendments to the Numbering Conditions are required to provide for effective and efficient use of the numbering resource in line with its statutory framework.

196 The remainder of this section is laid out as follows.

- Section 4.1.2 details the various use cases that can be delivered using the numbering resource (Cloud Use Cases).

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<sup>46</sup> [Gartner Press release entitled "Gartner Forecasts Worldwide Public Cloud End-User Spending to Grow 18% in 2021", 17 November 2020. Forecasts specifically for cloud communications services are not currently available.](#)

- Section 4.1.3 describes the numbering resources that can be used to deliver the Cloud Use Cases (Cloud Numbers and the Numbering Resource).
- Section 4.1.4 describes the main policy issue for consideration (Policy Issue).
- Section 4.1.5 provides the results of a survey on consumers user experience of Geographic Numbers (Consumer Survey).
- Section 4.1.6 provides ComReg’s substantive assessment of the main policy issue (ComReg’s Assessment).
- Section 4.1.7 briefly describes concept of minimum numbering areas (Review of MNAs).
- Section 4.1.8 describes Calling Line Identification and Number Portability with regard to Cloud Numbering (Review of Other Cloud Numbering Topics).

#### 4.1.2. Cloud use cases

197 Cloud service providers (“Cloud SPs”) offer a range of Number-Based Interpersonal Communications Services (“NB-ICS”). These services include Unified Communications as a Service (“UCaaS”) and Communications Platform as a Service (“CPaaS”). UCaaS includes cloud-based video conference services such as MS Teams and Zoom. CPaaS integrates communications directly into business applications, allowing business owners to manage voice, messaging and other communication functions on a single platform and build new services. Both UCaaS and CPaaS allow communication tools to be delivered via the Cloud.

198 The remainder of this section refers to the numbering solutions provided by NB-ICS as Cloud Numbers.

#### Use Cases

199 Cloud services have expanded in recent years, increasing the requirement for Cloud Numbers to support a variety of use cases. In assessing Cloud services use cases for this consultation, ComReg has identified four categories based on the functionality provided. These are:

- I. Privacy Enhancement;
- II. Conference Platforms;
- III. Click to Call; and
- IV. Call Centres.

## I. Privacy Enhancement

200 This use case supports the exchange of information between parties unknown to each other, where there is a requirement to maintain privacy. In this case, information can be exchanged between the two parties without revealing personal information, such as mobile phone numbers.

201 For example, car-sharing applications such as Uber allow customer privacy to be protected using Cloud Numbers during the communications between the driver and the passenger. The customer's personal mobile number is not made visible to the driver, instead a Cloud Number is dynamically allocated to users of the application from a database of Cloud Numbers. This allows the customer and driver to communicate via their personal mobile device without their personal numbers being exchanged, protecting privacy during a short-term transaction.

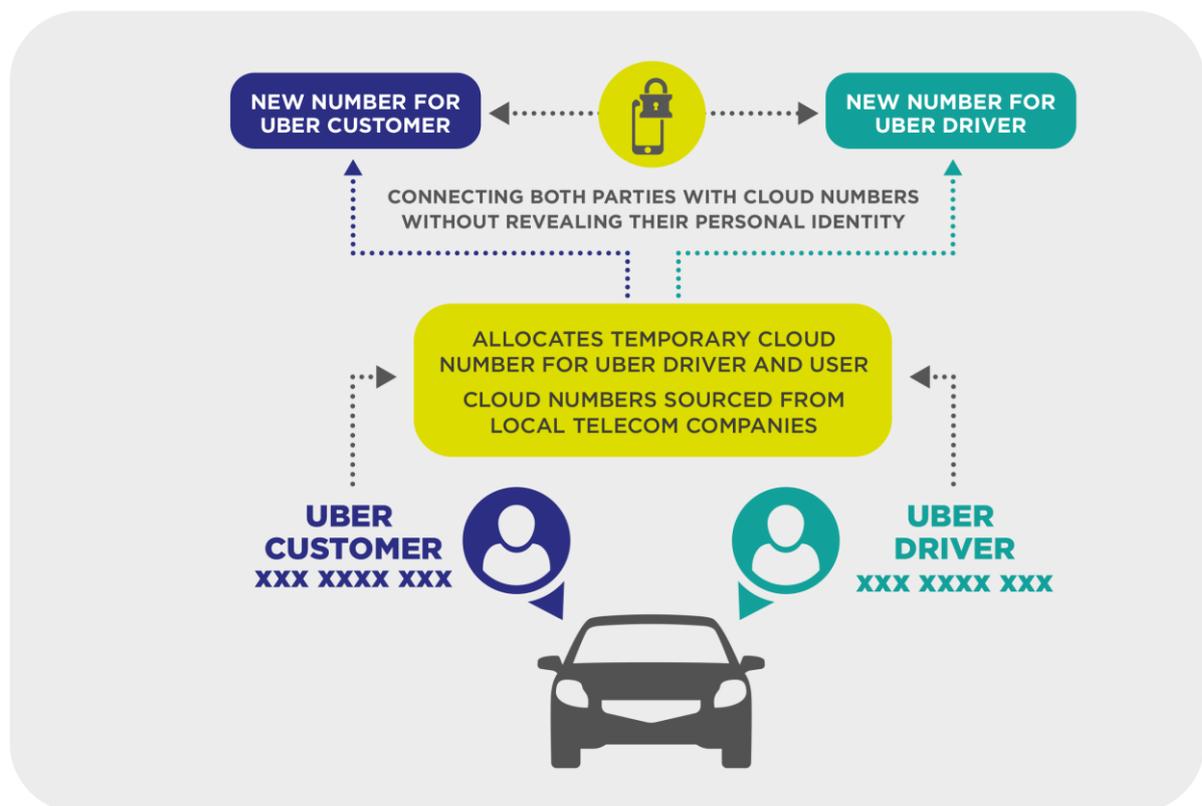


Figure 2 : Privacy Enhancement Use Case – Example of UBER Platform

## II. Conference Platforms

202 This use case provides consumers with local access to global conference and collaboration platforms.

203 Examples include Zoom, MS Teams and Google Hangouts. These platforms provide a range of Cloud Numbers to allow users connect from many worldwide locations, using fixed and mobile connections.

204 Access to global conference platforms has become more important during the Covid-19 pandemic. These platforms allow workers to work from home in a flexible and safe way.

### **III. Click to Call**

205 This is a form of web-based communication, in which a user clicks an object such as a button, image or text, to request an immediate connection with another person or business in real-time, by phone, Voice over IP (VoIP) or text.

206 For example, sites such as Google use a 'Click to Call' button to establish communication between a consumer and a business. A Cloud Number is dynamically allocated, and the call is routed via the Google analytics platform. This allows the consumer and business to communicate easily without personal details being exchanged. In addition, the analytics capability of the platform provides further advantages, allowing the business to track 'clicks' to measure success rates and conversation rates for their business.

207 Use cases include Internet search (e.g. Google Ads) and car dealerships (e.g. Carwow in the UK).

### **IV. Call Centres**

208 This use case allows companies to manage global access to their call centre by providing local number dialling for consumers. Examples of the use case include Call Centre platforms (e.g. Twilio, Blueface) and Global Enterprise Call Centres.

209 ComReg hereafter collectively refers to the use cases described above as Cloud Services.

## **4.1.3. Cloud Numbers and the Numbering Resource**

210 Cloud Numbers and associated cloud-based solutions can be provided using two different categories of numbering resources, which are (i) Non-Geographic Numbers (NGNs) and (ii) Geographic Numbers.

### **Non-Geographic Numbers**

211 ComReg notes that the following are all classes of Non-Geographic Number as defined in the Numbering Conditions (Document 15/136R2): (a) Freephone Numbers (b) Standard Rate Numbers (c) Mobile Numbers<sup>47</sup> (d) Premium Rate Service Numbers (e) Internet Access Numbers (f) M2M Numbers. For the purpose of this assessment, ComReg notes that only Non-Geographic Numbers under (a) – (c) can be used in respect of Cloud Numbers. The remaining categories provided for separate use cases<sup>48</sup> and their use in relation to Cloud Numbers does not arise.

212 With that in mind, ComReg notes that these Non-Geographic Numbers can already be used to deliver cloud-based services because NGNs have no physical destination address of their own but can reach real destinations and/or real services once they are translated by an intelligent network (“IN”) into other number classes such as a Geographic Number or Mobile Number or any other class of number.

213 In that regard, ComReg notes that its recent measures in respect of the NGN platform<sup>49</sup> which, among other things, addressed the high cost of using such numbers by consumers and organisations. These measures have significantly increased the potential for the NGN platform to be used in the delivery of cloud-based services.

### Geographic Numbers

214 Geographic Numbers are telephone numbers linked to a particular geographic location<sup>50</sup>. For example:

- 01 is the area code for Dublin,
- 061 is area code for Limerick, and
- 043 is area code for Longford.

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<sup>47</sup> As set out in Section 6.2 of ComReg’s Numbering Conditions (document 15/136R2 as amended), the rights of use for Mobile Numbers and MNCs shall only be granted to MNOs and MVNOs, and to OTT Service Providers, provided the OTT Service Provider qualifies as an ECS, and the OTT Service Provider has a contract with an Irish MNO to access its network. Mobile numbers are assigned in blocks of 100k numbers. Cloud SPs that wish to use mobile numbers for their services should contact a holder of such mobile numbers.

<sup>48</sup> For example, Internet Access Numbers shall only be used by internet service providers (ISPs) for the purpose of routing traffic. Premium Rate Numbers shall only be used to provide “Premium Rate Services and M2M Numbers shall only be used for the provision of an M2M Service or a bundle of services in which an M2M service is a predominant component.

<sup>49</sup> <https://www.comreg.ie/industry/licensing/numbering/ngn-review/>

<sup>50</sup> <https://www.comreg.ie/industry/licensing/numbering/area-code-maps-2/>

215 At present, Cloud Services are also provided using Geographic Numbers where Cloud SPs assign Cloud Numbers to businesses and organisations in line with the current Numbering Conditions of Use. In that regard, Geographic Numbers are assigned by Cloud SPs to those businesses which have an address in that particular area where services are provided. If a Geographic Number for an area is not available in the Cloud Service platform, businesses typically use NGN numbers (e.g. Freephone) as described above.<sup>51</sup> For example:

- Google 'Click to Call' provides forwarding numbers which share the same area code or prefix number as the business, wherever possible.<sup>52</sup>
- Microsoft Azure Communication Services also provides local numbers, however this facility is currently restricted to Azure subscriptions that have a billing address in the United States.<sup>53</sup>

216 The current system also holds value for the Cloud Service analytics as it can identify the number of calls generated by clicks on their platform and so identify the level of business originating on that platform. ComReg notes that demand for Geographic Numbers for Cloud Services arises in part because those numbers have higher levels of trust among consumers and lower call costs. Indeed, ComReg notes the views of Vodafone that "In many cases with Cloud Numbering, a customer wishes to offer its calling parties a local geo-number to call (for trust, or cost reasons)."<sup>54</sup>

#### 4.1.4. Main policy issue for consideration

217 Notwithstanding the existing use of the numbering resource in the provision of cloud-based services, some stakeholders have raised certain regulatory challenges associated with the use of Cloud Numbers in supporting these use cases. In particular, the requirements for a customer to have a local registered address, either at a national level, or at a local level (matching the geo-location of the number) has been raised by Vodafone as an issue challenging Cloud numbering deployment in Ireland and elsewhere.<sup>55</sup>

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<sup>51</sup> [Google forwarding number - Google Ads Help](#)

<sup>52</sup> Google forwarding numbers in "click-to-call" use case, share the same area code or prefix number as the business or organisation. If such a number is not available in Google platform, a toll-free number is provided. [Google forwarding number - Google Ads Help](#)

<sup>53</sup> To be assigned a local Cloud Number by Microsoft Azure Communication Services, the business or organisation is required to have a payment instrument with billing address in that particular country. Phone number availability is currently restricted to Azure subscriptions that have a billing address in the United States and communications services resources that have a US data location. <https://docs.microsoft.com/en-us/azure/communication-services/concepts/telephony-sms/plan-solution>

<sup>54</sup> A new regulatory approach to Cloud Numbering Vodafone Group White Paper December 2020 [https://www.cept.org/Documents/wg-nan/61944/nan-2020-12-022\\_cloud-numbering\\_vodafone\\_white\\_paper\\_december\\_2020\\_final](https://www.cept.org/Documents/wg-nan/61944/nan-2020-12-022_cloud-numbering_vodafone_white_paper_december_2020_final)

<sup>55</sup> Ibid

218 However, ComReg notes that the assignment by Cloud SPs to businesses which do not have an address in the relevant area would require a change to the Numbering Conditions.

219 In that regard, the second Rights of Use (“RoU”) condition attached to Geographic Numbers would need to be changed. This RoU condition is currently stated as:

*“A Geographic Number shall only be assigned to an end-user whose residential/business premises is physically located within the designated minimum numbering area (MNA) for that Geographic Number.”<sup>56</sup>*

220 In respect of Cloud based services, the main policy issue is to consider whether it is appropriate to change this condition such that Cloud Services could be facilitated using Geographic Numbers without the requirement that premises be physically located within the designated minimum numbering area (MNA). ComReg notes that this could be achieved in a number of ways.

221 For example, the requirement for being physically based in an area to be assigned a Geographic Number associated with that area could be removed entirely. This would imply that an entity does not require to have a physical location at a certain area to be assigned a Geographic Number corresponding to that area. Another example is to remove this requirement for certain use cases and retain it for others (e.g. Cloud Service Providers could be assigned Geographic Numbers other than the ones corresponding to their physical location, but households/businesses require a physical location to be assigned Geographic Number in the relevant area).

222 However, any change would involve the removal of the physical location requirement from some or all assignments and for the remainder of this section ComReg refers to removal of the physical location requirement as the “Proposed Change”.

#### 4.1.5. Consumer Survey

223 In light of its statutory objective to promote the interest of users and protect consumers, ComReg considers it appropriate and timely to assess the extent to which the Geographic Numbering platform is used efficiently and effectively and in a manner that promotes competition and protects consumers. Such an assessment is necessary in order to determine if regulatory intervention in respect of Cloud Numbering is appropriate given ComReg’s statutory framework.

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<sup>56</sup> Paragraph 2, Section 4. 1 - Numbering Conditions of Use and Application Process, Document 15/136R2, published 28/11/2019.

224 In this regard, ComReg commissioned Behaviour & Attitudes Limited (“B&A”) to conduct a market research survey (“Consumer Survey”) and gather relevant research in order to understand how users engage with the Geographic Numbering Platform<sup>57</sup>. In particular:

- the attitudes to and level of awareness consumers have of the Geographic Numbering platform;
- to understand if consumers attach value and trust to the location significance of Geographic Numbers.
- the level of satisfaction consumers have with the current Geographic Numbering platform; and
- how any changes to the Numbering Conditions of use (including the removal of obligation of physical presence in designated minimum numbering area<sup>58</sup>) might affect consumer behavioural reactions.

225 The nationally representative Consumer Survey of 1,030 adults is published in full in ComReg Document 21/28b.

226 The results of the Consumer Survey are assessed below across three topics.

- I. Awareness and use of Geographic Numbers.
- II. Significance of information provided by area codes and overall trust in Geographic Numbers.
- III. Satisfaction with a requirement that residential/business premises is physically located within the designated MNA and behavioural change due to Proposed Change.

## I. Awareness and use of Geographic Numbers

227 Geographic Numbers are widely used by consumers and business in the provision of services and represent a significant and important use of the numbering platform. For example:

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<sup>57</sup> ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>58</sup> Conditions for specific classes of numbers – RoU Condition (2) - “A Geographic Number shall only be assigned to an end-user whose residential/business premises is physically located within the designated minimum numbering area (MNA) for that Geographic Number”.

- Around 768 million minutes were made to Geographic Numbers in Ireland in Q4 2020.<sup>59</sup>
- A substantial proportion of the population (54%) are **dialling** Geographic Numbers regularly/occasionally (more than 4 times a month).<sup>60</sup> A further 38% also use Geographic Numbers but less regularly (i.e. 1-4 times a month).<sup>61</sup> Regular/occasional use increases to 70% among consumers over 65 years of age.
- A substantial proportion of the population (55%) are **receiving calls** from Geographic Numbers regularly/occasionally (more than 4 times a month).<sup>62</sup> A further 40% also receive calls from Geographic Numbers but less regularly (i.e. 1- 4 times a month).<sup>63</sup> Regular/occasional incidence of receiving calls from Geographic Numbers increases to 70% in the over 65 category.

228As noted above, Geographic Numbers contain geographic information (i.e. Area Codes which consist of the initial 2 to 4 digits) making it possible for the consumer receiving a call from such a number to identify the location of the Geographic Number.

229While consumers do not know exactly how many Area Codes there are in Ireland (there are 49 area codes in Republic of Ireland), there is a strong level of awareness among respondents about the geographical significance of these numbers and the information they contain. In particular, consumers are strongly aware of their own local area code and metropolitan area codes<sup>64</sup>. For example:

- Only 7% were not aware that Area Codes correspond to different geographic locations in Ireland. The remaining 93% were at a minimum aware that the Area Code corresponded to a Geographic area<sup>65</sup> broken down as follows:
  - 8% did not know any Area Codes, but understood the geographical significance of Area Codes<sup>66</sup>;
  - 16% were only aware about their local Area Code<sup>67</sup>;

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<sup>59</sup> See Quarterly Data Portal – 2020 Q4 (Mobile to Fixed call minutes and domestic Fixed to Fixed call minutes).

<sup>60</sup> Slide 10 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>61</sup> Ibid

<sup>62</sup> Ibid, Slide 22

<sup>63</sup> Ibid

<sup>64</sup> Area Code for Dublin (“01”) was most recognised across the respondents, with 021 (“Cork”) and 051 (“Waterford”) outside Dublin.

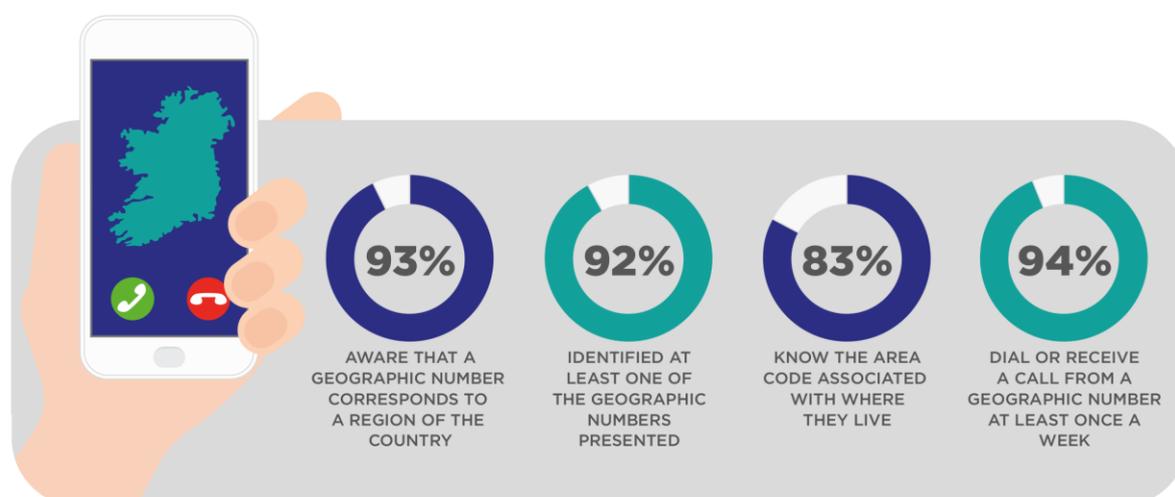
<sup>65</sup> Slide 25 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>66</sup> Ibid

<sup>67</sup> Ibid

- 50% were familiar with few of the Irish Area Codes<sup>68</sup>;
  - 15% reported that they recognise many of the Irish Area Codes<sup>69</sup>; and
  - 3% claimed to know all 49 Area Codes in Ireland<sup>70</sup>.
- 92% of people correctly identified at least one of the Geographic numbers presented, with 01 and 021 more likely to be identified compared to others.<sup>71</sup> Overall awareness of Geographic Numbers is similar to Mobile Numbers.<sup>72</sup>
  - Importantly, 83% know the area code associated with the Geographic Number in their area, increasing to over 90% for those aged over 55.<sup>73</sup>

230 In conclusion, it is clear that consumers use Geographic Numbers to a significant extent and have a high level of awareness that the Area Code provides information about the geographic location of the Geographic Number.



**Figure 3: Summary of Consumer Awareness and Use of Geographic Numbers**

## II. Significance of Geographical Information and Trust in Geographic Numbers

<sup>68</sup> Ibid

<sup>69</sup> Ibid

<sup>70</sup> Ibid

<sup>71</sup> Slide 16 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>72</sup> Ibid

<sup>73</sup> Ibid, Slides 14 & 15

231 The Consumer Survey also aimed to understand the significance of the geographic information provided by the Area Codes and the extent to which consumers value this information when calling and/or answering a call from a Geographic Number.

232 Consumers attach significant importance to the geographic information provided by these numbers and this assists in the decision-making process of making a call to any Geographic Number or answering a call from same. The Consumer Survey found that Area Codes help consumers identify the location of the Geographic Number or to narrow down who is trying to contact them. The value of the geographic information is particularly high for consumers when they need to contact a business or service provider. For example:

- 3 out of 4 people consider it important to know the geographic location of the caller while receiving a call.<sup>74</sup>
- 7 in 10 respondents claimed that it is important to know the geographic location of a number when making a call.<sup>75</sup>
- This number rose to 4 in 5 when considering making a call to Geographic Number in order to reach a business.<sup>76</sup>

233 Consumers also have high levels of trust in Geographic Numbers. Almost 3 in 4 trust that the caller is making the call from the location associated with the Geographic Number, with only 10% having no trust and the remainder having no opinion on this<sup>77</sup>. Trust in Geographic Numbers is stronger for respondents over 65 years of age, as well as among those who dial or receive calls from Geographic Numbers regularly or occasionally.

234 In conclusion, consumers appear to value and trust Geographic Numbers to a significant extent and believe that it is important to know the geographic location when making or receiving a call, particularly if that call is in their local area.

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<sup>74</sup> Slide 28 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>75</sup> Ibid, Slide 30

<sup>76</sup> Ibid, Slide 49

<sup>77</sup> Ibid, Slide 44



**Figure 4: Summary of Consumer Value and Trust**

### III. Satisfaction in Current Approach and Behavioural Change if there's a Change in Current Approach

235 According to the second RoU condition attached to Geographic Numbers, a Geographic Number is allocated to someone who has a physical presence in the designated minimum numbering area.<sup>78</sup> Consumers are satisfied with this current approach.

- 48% of respondents are very satisfied and 34% are fairly satisfied with the current system i.e. 82% are satisfied. Only 10% of consumers are dissatisfied with the current approach.<sup>79</sup>

236 Regarding behavioural change and reactions of consumers, ComReg notes that consumers would have significant concerns arising from the Proposed Change. In particular, if a business is not required to have a physical presence in the relevant geographic area to use a Geographic Number:

- 78% of consumers would have less trust in geographic calls<sup>80</sup>;
- 86% of consumers would have increased concerns in relation to scam calls<sup>81</sup>;
- 76% of consumers would not be likely to answer calls from numbers they don't recognise, regardless of Area Code<sup>82</sup>; and

<sup>78</sup> Paragraph 2, Section 4. 1 - Numbering Conditions of Use and Application Process, Document 15/136R2, published 28 November 2019.

<sup>79</sup> Slide 55 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>80</sup> Slide 57 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>81</sup> Ibid

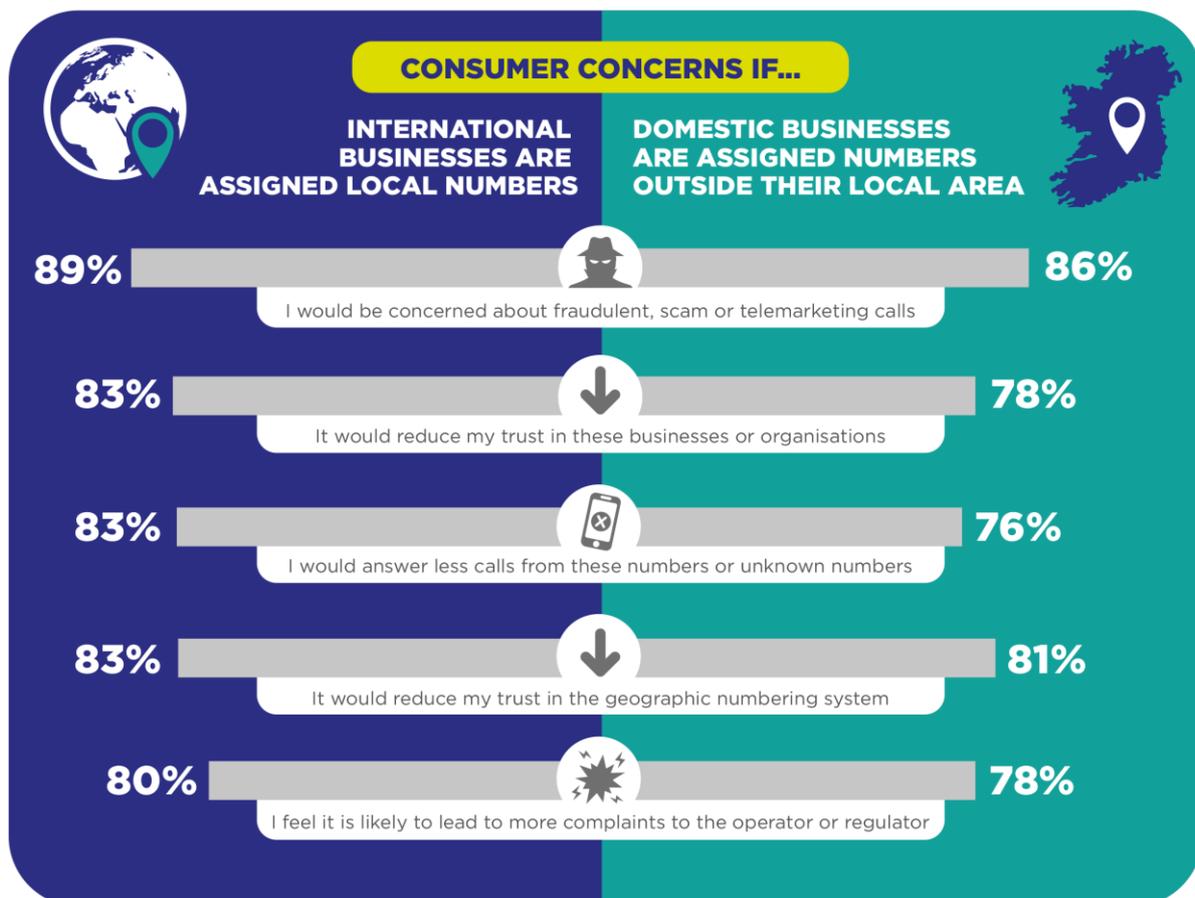
<sup>82</sup> Ibid

- 81% of consumers suggest that they would not trust the geographical numbering system<sup>83</sup>.

237 These concerns are significant and have clear consequences in terms of how consumers engage with the Geographic Numbering platform.

238 ComReg notes that Geographic Numbers are used by various organisations and businesses (particularly local businesses) to provide various telephone-based services such as delivery, sales and consumer helplines.

239 If the Proposed Change were to be adopted, the likely reduced level of consumer utilisation of Geographic Numbers and the consequential reduced accessing of services provided by businesses through geographic numbers would be to the detriment of consumers and businesses alike. Indeed, a significant aspect of ComReg’s recent review of NGNs<sup>84</sup> concerned the extent to which consumers’ trust in certain numbers created a number of distinct effects that hindered the efficient and effective functioning of the NGN platform.



<sup>83</sup> Ibid

<sup>84</sup> ComReg Document 18/106 - Review of Non-Geographic Numbers - Response to Consultation 18/65 and Decision

## Figure 5: Summary of Consumer Concerns about Proposed Change

### 4.1.6. ComReg's Assessment of the Proposed Change

#### Background – statutory framework

240 By way of background to the relevant statutory framework informing ComReg's consideration of the Proposed Change, readers are referred to the statutory provisions relating to its number management function which are set out in Appendix 1 and which may be summarised as follows:

- to promote competition and the interest of users in the electronic communications sector;
- to contribute to the development of the internal market;
- to ensure the efficient management and use of the national numbering resource; and
- to promote efficient investment and innovation in new and enhanced infrastructures.

241 In addition, even if ComReg considers that a proposed measure is aimed at achieving a statutory objective, ComReg must also consider whether that measure is objectively justified, transparent, non-discriminatory, and proportionate to its intended purpose.

242 In summary, in conducting this assessment, ComReg aims to ensure, amongst other things, that the numbering resource is used efficiently and effectively in a manner that protects consumers and promotes competition. This assessment shall also have regard to the fact that ComReg, as the designated national regulatory authority for the electronic communications sector in the State, is required to take all reasonable measures which are aimed at achieving its prescribed statutory objectives while such measures must also be proportionate to those objectives.

243 Before turning to its substantive assessment below, ComReg firstly addresses some preliminary matters.

244 First, ComReg does not believe it necessary to conduct a regulatory impact assessment at this time but may do so later following appropriate stakeholder engagement. Nevertheless, the potential implications of any change to the Numbering Conditions on industry stakeholders, competition and consumers are considered in the context of relevant aspects of ComReg's statutory framework below.

245 Second, ComReg remains open to stakeholders submitting further information in light of the assessment provided in this document and ComReg may decide to make changes to the Numbering Conditions in the future having regard for any change in circumstances as may arise.

### ComReg's assessment

246 Given the above, ComReg is of the view that Cloud Numbers can assist Cloud SPs in providing improved connectivity solutions and innovative service solutions for end users, including consumers. Further, such solutions have the potential to promote investment and innovation in new and enhanced infrastructures.

247 However, the use of Cloud Numbers in and of itself is not sufficient to best ensure the efficient and effective functioning of the Geographic Numbering platform, for consumers and SPs. Any potential for increased innovation in the delivery of services that use the numbering resource must be balanced against achieving other relevant statutory objectives, including promoting the interests of users (i.e. consumers), protecting consumers more generally, promoting competition, and ensuring the efficient and effective use of numbers.

248 In that regard, and based on the information before it, ComReg is of the view that the Proposed Change (i.e. removing the physical location requirement) would not be appropriate in the context of ComReg's statutory framework, including being objectively justified and proportionate as required by Regulation 15 of the Authorisation Regulations.

249 Factors informing this view are outlined below.

250 First, the Proposed Change would not accord with the objective to promote the interest of users and protect consumers because, among other things:

- consumers clearly attach value to the information provided by Geographic Numbers such that it informs the decisions they take in relation to whether to make or answer a call.
- consumers have indicated a high level of satisfaction with the current Numbering Condition, and the Proposed Change would significantly reduce consumers' confidence in the Geographic Numbers when making a call.

251 Second, it would likely create several distinct effects that would hinder the efficient and effective functioning of the Geographic Numbering Platform, including:

- it would create uncertainty about whether calls dialled/received are to/from the location indicated by the Area Code which may affect consumers' trust in numbers.

- such problems would likely decrease the volume of calls made over Geographic Numbers, reducing the effectiveness of the Geographic Numbering Platform.
- a reduction in the use of Geographic Numbering services by consumers will eventually reduce the incentives for businesses to continue to provide services over the Geographic Numbering Platform.

252 Third, the current Numbering Conditions of Use already support certain Cloud Services using Geographic Numbers:

- Cloud SPs currently find value when they assign Geographic Numbers for the provision of Cloud Services in line with the current Conditions of Use.
- Cloud Services benefit from the information provided by Geographic Numbers as there is value in referring to the businesses as local to consumers using local area codes or prefix numbers.

253 Fourth, the Proposed Change would not achieve the claimed benefit in relation to the use of Cloud Numbers. For example, Vodafone's stated benefit of the change is that "*In many cases with Cloud Numbering, a customer wishes to offer its calling parties a local geo-number to call (for trust, or cost reasons).*" [Emphasis added]. The Consumer Survey provides clear evidence that trust in Geographic Numbers would fall significantly in the event of the Proposed Change being introduced. In this regard, the main benefit Vodafone suggests for the Proposed Change would consequently be lost following its introduction.

254 Fifth, such changes would not be proportionate because, among other things:

- the objective of the Proposed Change (i.e. facilitating Cloud Numbering using the Geographic Numbering Platform) would not accord with ComReg's statutory objectives and regulatory principles as described above.
- there is a less onerous means by which the objectives and principles could be achieved using the existing Numbering Conditions of Use. For example,
  - numbers from the NGN ranges 0818 and 1800 can be assigned as an alternative for NB-ICS, where such services do not meet the needs of the Numbering Conditions; and
  - Geographic Numbers are already used in the provision of Cloud Services in compliance with the Numbering Conditions (where the business address is within the MNA of the geo number).

- the use of the NGN platform in the provision of Cloud Numbering would not involve any change to the current numbering conditions and would therefore not impact any stakeholders.

### ComReg's Preliminary Views on Cloud Numbering

255 ComReg is of the preliminary view that the Numbering Conditions continue to support new and innovative services enabled by Cloud Numbers. In order to provide sufficient clarity about how Cloud Services can be delivered using the numbering resource, ComReg notes the following:

- The Numbering Conditions permit the use of NGN ranges (i.e. 1800 and 0818) for the provision of Cloud Services.
- ComReg recently addressed confusion and cost issues (wholesale and retail) previously associated with the NGN platform and NGNs now provide a fit-for-purpose solution for businesses and consumers, as evidenced by recent increases in use of the NGN platform in support of same.
- ComReg is not minded to change the numbering condition attached to the use of geographic numbers, that requires an end-user to have a residential/business premises located within the designated minimum numbering area (MNA) for that Geographic Number.
- For businesses or consumers with a requirement for Geographic Numbers, Cloud SPs must ensure that the end-user's residential/business premises is physically located within the designated MNA for that Geographic Number.

Q. 18 Do you agree with ComReg's proposal to retain the Geographic Number condition requiring the end-user's premises to be physically located within the designated MNA for that number? Please explain the basis for your response in full and provide supporting information.

Q. 19 Do you agree that Non-Geographic Numbers (0818 Standard Rate and 1800 Freephone) provide a valid solution for Cloud Services? Please explain the basis for your response in full and provide supporting information.

### 4.1.7 Review of MNAs

256 At this point it is worthwhile considering the idea of the MNA and whether it should be retained. The concept of an MNA was originally adopted and defined in 1998 by the Office of the Director of Telecommunications Regulation (ODTR). MNAs correspond to the “charge group areas” used by the then Telecom Eireann and so the MNA boundaries (and Area Code boundaries) were based on Telecom Eireann’s exchange area boundaries - i.e. the boundaries were defined by physical elements of the network such as ducts and pole runs. Exchange area boundaries will evolve, particularly as Eir continues to modernise its network, and so it will be necessary in due course to assess if there is a need to maintain MNAs, noting that their removal would not entail any number changes and could result in improved efficiencies.

257 A Geographic Number contains an Area Code and a subscriber number. Ireland has 49 Area Codes and 106 MNAs, with some Area Codes containing more than one MNA. The boundaries of the 49 Area Codes and 106 MNAs are shown in ComReg Doc 03/147. ComReg makes a .kml map, which indicates MNA boundaries, available to operators on request to email [numapps@comreg.ie](mailto:numapps@comreg.ie).

258 In 2017 ComReg carried out a public consultation<sup>85</sup> on its Numbering Conditions in which it did not propose any changes to the geographic boundary for Geographic Numbers at that time. Instead, ComReg indicated it would further welcome respondents’ views on the future relevance of the MNA concept. In its Response to Consultation<sup>86</sup>, ComReg remained of the view that the geographic boundary for Geographic Numbers should remain at MNA level. However ComReg also indicated that it had no objection in principle to geographic boundaries for Geographic Numbers being increased and would continue to monitor this issue and to engage with industry, so as to ensure that appropriate geographic boundaries are adopted now and into the future. ComReg is of the view that, given the passage of time since the last consultation on this subject, it is timely to re-visit the MNA concept as part of the current consultation.

**Q. 20** Do you have a view as to the need to retain the MNA concept? Please explain the basis for your response in full and provide supporting information.

### 4.1.8 Review of other Cloud Numbering Topics

259 This section explores conditions of use regarding Calling Line Identification (CLI) and Number Portability.

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<sup>85</sup> ComReg 17/102 “Numbering Conditions of Use and Application process – Consultation – 7<sup>th</sup> December 2017

<sup>86</sup> ComReg 18/44 “Numbering Conditions of Use and Application process – Response to Consultation – 1<sup>st</sup> June 2018

## Calling Line Identification

260 The numbering conditions relating to Calling Line Identification are set out in Section 3.1 (5) of the Numbering Conditions. These conditions identify CLI related obligations on the undertaking that originates the call. One of the conditions is that the undertaking shall ensure that the presentation CLI for the call shall be the assigned number for the calling party. Numbers used for CLI must also fall within a permissible class of number.

261 In the Privacy Enhancement use case, such as a car sharing application, numbers are dynamically allocated by the application for use in communications between the passenger and driver over a short period. In considering the communications between the customer and the driver, the correct CLI is not transmitted all the way to the driver/caller as the application inserts its own numbers into the transmission path. However, as privacy is part of the service-offering that the customer has chosen to access, ComReg is minded to accept the use of CLI in this way for this type of service.

262 In the case of international call centres, inbound calls from the call centre to local Irish customers may use local Irish numbers rather than international numbers for CLI. This is to allow Irish customers inexpensive call back to the call centre if needed. If the call centre business is using a number provided to it by the operator to whom the number has been assigned and these numbers are within the class of number permitted for CLI, then these numbers are used in accordance with the Numbering Conditions in respect of CLI.

263 In the case of an international conference call platform, a local number may be advertised to facilitate calls from Irish customers to the platform. As this is mainly an inbound service to the platform, rather than a call to a consumer, the consumer does not receive a CLI and its use for this service is not considered further here.

264 The Click to Call use case allows customers and businesses to communicate directly over the internet when a customer clicks on an object such as a button. The main purpose of this use case is to facilitate easy customer access to businesses. The Click to Call platform may also provide a number of other features, including an analytics capability to allow businesses to track 'clicks' to measure success rates and conversion rates for their business. As this is an inbound service to a customer that has requested inclusion in the Click to Call service, then there should be no issue with CLI as far as the customer is concerned.

265 In cases where a business wishes to use local numbers for CLI but may not, for example, be eligible to receive geographic numbers from its serving operator, then the use of 1800 and 0818 NGNs should be considered. 1800 Freephone provides an inexpensive way for businesses to encourage calls from potential customers. And, since calls to 0818 numbers are now included in consumer call bundles or charged at no more than geographic number calls, businesses can be assured that using this NGN should also encourage callers to make contact.

### Number Portability

266 ComReg notes that the ability to switch provider underpins the concept of competition and consumer choice. Therefore, for each of the Cloud Service use cases, ComReg has assessed the suitability of the current Numbering Conditions concerning number portability. The conditions attached to numbers in respect of number portability are set out in Section 3.1 (7) of the Numbering Conditions.

267 In the Privacy Enhancement use case, such as a car sharing application, numbers are dynamically allocated by the application for use in communication between the passenger and driver over a short period. The subscriber that has contracted with an operator to use these numbers, such as the owner of the application or service, has the right to port its numbers to another operator if it so wishes.

268 Similarly, in the case of numbers used to access call centres/conference platforms and in Click to Call applications, the subscriber that has contracted with an operator to use these numbers, such as the owner of the call centre, conference platform or Click to Call application or service, has the right to port its numbers to another operator if it so wishes.

### ComReg's Preliminary Views on other Cloud Numbering issues

269 ComReg considers that, with regard to CLI and Number Portability, the current conditions attached to the use of numbers as set out in its Numbering Conditions broadly support the needs of Cloud Service Providers, while ensuring protection of customers. ComReg will seek to resolve any issues that arise in line with its statutory obligations. To that end, and being mindful of the request from Industry for a more harmonised approach by NRAs to these issues, ComReg will support and participate in an initiative by CEPT WG NaN to prepare a recommendation on the approach to assigning and setting out appropriate conditions of use for numbers for Cloud Services.

**Q. 21** Do you agree with ComReg's assessment of the conditions around CLI and Number Portability in relation to the use of numbers for Cloud Services? Please explain the basis for your response in full and provide supporting information.

## 4.2 Temporary Numbers

### 4.2.1. Introduction and Background

270 ComReg is aware of an emerging use case for the temporary assignment of Geographic Numbers. The purpose of such temporary Geographic Numbers is to allow consumers to advertise goods and personal services. These services could include for example, selling personal items such as a car or household goods. Whilst the assignment and use of temporary Geographic Numbers for such services is prevalent in other jurisdictions (e.g. UK), is not commonplace in Ireland.

271 In this instance, a temporary number refers to a number that could be used for a limited time period for the purpose of facilitating personal transactions as mentioned above. For example, if a person wants to sell a car online, they could use a unique temporary phone number, instead of their own personal phone number, on the advertisement. This would protect their personal phone number from scammers and nuisance callers.

272 The temporary number would only be valid for the duration of the advertisement.

### 4.2.2. Consumer Survey

273 In order to consider the need for temporary numbers to facilitate personal transactions, ComReg considered it appropriate to assess the likely attitudes of the consumers towards temporary numbers and likelihood that such numbers would be used, while ensuring the effective using of the numbering platform.

274 In particular, ComReg measured the following in the Consumer Survey conducted by B&A:

- the level of confidence consumers would have in businesses that use temporary numbers; and
- the attitude of consumers to introducing temporary numbers in the Irish market.

275 In summary, consumers prefer if the sellers they buy from have permanent phone numbers, citing reasons of perceived trust and ability to recontact when required<sup>87</sup>. There is a low requirement for temporary numbers among the public for the purpose of advertising goods or services. For example:

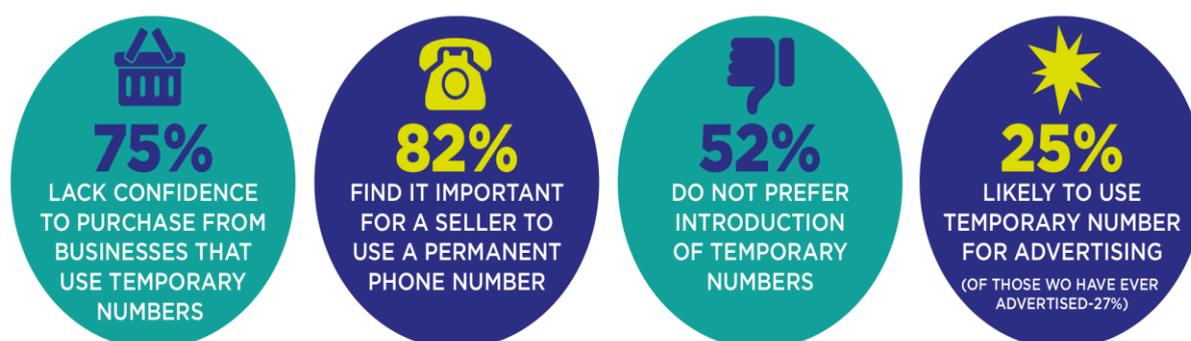
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<sup>87</sup> Slide 84 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

- 82% of respondents consider it important for the seller to use permanent phone numbers.<sup>88</sup>
- In the event of the business using a temporary number, 3 out of 4 respondents have stated that they would lack confidence in purchasing from such an entity.<sup>89</sup>
- Around 52% of the respondents explicitly said that they would prefer if temporary numbers were not introduced. The preference for thenon-introduction of temporary numbers increases with age. Younger generation consumers are more likely to favour temporary numbers.<sup>90</sup>
- 27% of consumers have advertised products or services to sell and only 1 out of 4 of such respondents are likely to use a temporary number for the purpose of advertising. 48% did not have a clear understanding and are neither likely nor unlikely to use temporary numbers.<sup>91</sup>

276 ComReg found that consumers place huge value on the geographic information of a Geographic Number - 36% of respondents deem it suitable to introduce temporary numbers only if the geographic numbers relate to the geographic location of the number owner<sup>92</sup>.

277 In conclusion, businesses or persons using temporary numbers are unlikely to be serving the needs of consumers who have a clear requirement that goods or services offered over the telephone should use a permanent phone number.



**Figure 6: Summary of Consumer Views on Temporary Numbers**

<sup>88</sup> Slide 83 of ComReg Document 21/28b – Geographic Numbering Survey – published 29 March 2021

<sup>89</sup> Ibid, Slide 85

<sup>90</sup> Ibid, Slide 88

<sup>91</sup> Ibid, Slides 86 & 87

<sup>92</sup> Ibid, Slide 88

### 4.2.3. ComReg's Assessment

278 ComReg is of the view that temporary numbers have the potential to support new business and innovation in the market. However, in the context of ComReg's statutory framework, several issues arise. In particular, and among other things, Consumers find it important for businesses to use permanent phone numbers and lack the confidence to purchase from business organisations that use temporary numbers.

279 Consumers' current understanding and trust of Geographic Numbers is based on residential/business premises being physically located within the designated minimum numbering area and any deviation from that risks the effective functioning of the geographic numbering platform. Two issues arise, in this regard, and depending on the level of transparency associated with their use.

- First, if consumers are made aware that the number they are receiving a call from or dialling is temporary, there is clear evidence that consumers would be significantly less likely to engage with such a business (for the reasons set out above). Businesses/persons would then be less likely to use temporary numbers if consumers are less likely to engage with them.
- Second, if consumers are not aware the number is temporary, there would be obvious concerns around the transparency of Geographic Numbers, creating a risk of contagion and confusion across the geographic numbering platform. Consumers may not engage with Geographic Numbers as they currently do, out of fear that the number may be temporary and the caller may not be located at the physical address.

280 Just a single bad experience with a temporary Geographic Number may create a contagion effect across all Geographic Numbers over a period of time, noting that Geographic Numbers currently have a high level of trust. Such contagion may not occur over a short period but rather over a long period of time creating a need for regulatory intervention in the future, and ComReg is conscious of not setting a seed for future contagion.

281 In this regard, ComReg notes its recent experience in addressing issues related to the NGN platform. For example, ComReg notes that similar contagion and confusion occurred across NGN ranges such that by the time of its review in 2017, only a third of those aware of NGNs thought that 1800 calls are free from a mobile<sup>93</sup>. Similarly, 30% of those aware of NGNs confused 1800 Freephone numbers with premium numbers.<sup>94</sup>

282 Therefore, ComReg is minded not to introduce temporary numbers at this time and awaits the views of stakeholders on the issues raised above.

Q. 22 Do you agree with ComReg's assessment of temporary numbers? Please give reasons for your answer highlighting any solutions that you think might support the introduction of temporary numbers.

### 4.3 EU & CEPT Status

283 The Electronic Communications Committee (ECC) is part of the European Conference of Postal and Telecommunications Administrations (CEPT) and develops common policies and regulations in electronic communications for Europe. One of its primary objectives is to harmonise the efficient use of numbering resources across Europe.

284 The ECC has published several reports on the use of numbering resources across Europe. It has also commenced a detailed study of numbering resources for Cloud services. As a CEPT member, ComReg actively participates and contributes to ECC projects that will inform the debate on Cloud numbering resources.

285 ComReg is of the view that policy harmonisation across Europe for Cloud services is in the interests of consumers and providers alike. To this end, ComReg will continue to advocate for greater European policy harmonisation for Cloud services.

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<sup>93</sup> Slide 41 of ComReg Document 17/70b – Non-Geographic Numbering Consumer Study – published 16<sup>th</sup> August 2017

<sup>94</sup> Slide 47 of ComReg Document 17/70b – Non-Geographic Numbering Consumer Study – published 16<sup>th</sup> August 2017

Q. 23 Do you agree with the proposal that ComReg will continue to monitor developments in Cloud services at ECC/CEPT, to promote greater policy harmonisation for Cloud services across Europe? Please explain the basis for your response in full and provide supporting information.

## 5 Further Topics for Consultation

286 The previous sections addressed proposed updates to the Numbering Conditions in respect of the EECC, NGN Implementation project and Cloud Numbering. The following sections present a further topic for consultation. Information on administrative updates to the Numbering Conditions is also provided.

### 5.1 Numbers for Drama Use

287 Many countries reserve number ranges for drama use. In Ireland, the number range with the prefix 020 is currently designated for such use. Numbers for drama are not assigned to operators and, being inactive on networks, are suitable for use in films etc. This is because these numbers are not provided to end-users and so their appearance in, for example, a film poses no risk that an end-user would receive unwanted calls from viewers of the drama.

288 According to a report<sup>95</sup> commissioned by the Irish Government in 2016, the Film, TV and Animation sector in Ireland was worth €692M in 2016. To support this industry, ComReg is considering the requests it has received from film production companies for a number range that is more suitable for mobiles. As all mobile numbers in Ireland begin with 08X, ComReg recognises that 020 is not a suitable prefix for drama use where mobiles are identified. Consequently, ComReg proposes to reserve the 089 011 0000 to 089 011 0999 (1,000) numbers for drama use. The 089 range is chosen as it provides an authentic mobile range that is not associated with any one operator and so would be sufficiently anonymous for use in drama. ComReg also proposes to add an administrative update to the notes section of the 089 range in Appendix 9 “Classes of Numbers” highlighting the reservation of this range for drama use.

289 ComReg also considered whether 020 is a suitable number range for geographic or landline numbers for drama use. As ComReg has not received any requests for an alternative number range for geographic or landline numbers for drama use, ComReg proposes to retain 020 as the number range to be used for this purpose.

**Q. 24** Do you agree with ComReg’s proposal to reserve 1,000 numbers in the number range 089 011 0000 to 089 011 0999 for drama use? Please explain the basis for your response in full and provide supporting information.

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<sup>95</sup> Report by Olsberg•SPI with Nordicity on Economic Analysis of the Audio Visual Sector in the Republic of Ireland <https://www.o-spi.co.uk/wp-content/uploads/2018/06/Olsberg-SPI-Analysis-of-the-Audiovisual-Sector-in-the-Republic-of-Ireland.pdf>.

## 5.2 Number Trading

290 In paragraph 6 of Section 3.2 of the Numbering Conditions, ComReg sets out its Right of Use condition that no charge of any kind shall be made for transferring a right of use for a number, other than a charge limited to covering the associated administrative costs. For clarity ComReg wishes to also highlight that it does not permit trading in numbers. Therefore the following underlined amendment will be added to this Right of Use condition as follows:

*No charge of any kind shall be made for transferring a right of use for a number, other than a charge limited to covering the associated administrative costs. For clarity, trading of numbers is not permitted.*

Q. 25 Do you agree with ComReg's proposal to add the said text to paragraph 6 of Section 3.2 "Rights of Use Conditions", clarifying that trading of numbers is not permitted? Please explain the basis for your response in full and provide supporting information.

## 5.3 Further Topics

Q. 26 Are there any matters which you wish to raise as part of this consultation? Please provide detailed reasoning supporting your submission.

## 6 Next Steps

291 ComReg invites and welcomes the views of all interested parties and will consider all information submitted to it on foot of this consultation. Upon completion of this consultation, which will include a review of all responses received and publication of ComReg's response to this consultation, the Conditions of Use and Application Process document will be published.

### **Submitting comments**

292 The period for submitting responses to this consultation will run until 5pm on Tues 11 May 2021. Considering the extent of the material contained in the document, ComReg has given an additional two weeks over the normal four identified in ComReg's Consultation Procedures (ComReg 11/34). However, please note that no extension to this deadline will be granted.

293 ComReg requests that all responses reference the relevant question numbers and/or paragraph numbers from this document. ComReg also requests that respondents set out the rationale for their submitted views, to include any supporting information.

294 ComReg will publish all responses to this consultation in due course in accordance with its policy. Respondents are therefore asked to provide confidential and non-confidential versions of any document in respect of which any confidentiality is claimed (e.g. commercially sensitive information). In this respect, please see ComReg's Consultation Procedures (ComReg 11/34) and Guidelines on the Treatment of Confidential Information (ComReg 05/24).

295 ComReg requests that responses to this consultation be submitted electronically and in an unprotected format in order that they can be appended into ComReg's submissions document for electronic publication.

296 All responses to this consultation should be clearly marked:- "Reference: Consultation 21/28 "Review of the Numbering Conditions of Use and Application Process", and sent by e-mail to arrive on or before 5pm, on 11 May 2021, to:

Conor Mahon  
Commission for Communications Regulation  
Email: [marketframeworkconsult@comreg.ie](mailto:marketframeworkconsult@comreg.ie)

## 7 Consultation Questions

- Q. 1 Do you agree with ComReg’s preliminary position on the assignment of numbers to non-ECS/ECN as permitted by Article 93(2) and Article 94(7) of the EECC? Please explain the basis for your response in full and provide supporting information..... 19
- Q. 2 Do you agree with ComReg’s position that Article 93(4) of the EECC does not require further amendments to the Numbering Conditions document? Please explain the basis for your response in full and provide supporting information.....22
- Q. 3 Do you agree with ComReg’s position that amendments are not presently required to the Numbering Conditions document in light of Article 93(6) or Article 106(6) of the EECC? Please explain the basis for your response in full and provide supporting information.....23
- Q. 4 Do you agree with ComReg’s position that no amendment to the Numbering Conditions in respect of Article 96 of the EECC is required? Please explain the basis for your response in full and provide supporting information. .25
- Q. 5 Do you agree with ComReg’s proposed implementation of relevant provisions of Article 106 of the EECC relating to provider switching and number portability? Please explain the basis for your response in full and provide supporting information.....27
- Q. 6 Do you agree with ComReg’s proposed reflection in the Numbering Conditions Document of consequential amendments to Appendix 11 “Definitions” arising from the EECC? Please explain the basis for your response in full and provide supporting information .....29
- Q. 7 Do you agree with ComReg’s proposal for PPDR Numbering? Please explain the basis for your response in full and provide supporting information. .37
- Q. 8 Do you agree with ComReg’s proposal to extend the operation of the utility emergency contact numbers in Figure 1 until 31 December 2023? Please explain the basis for your response in full and provide supporting information. .45
- Q. 9 Do you agree with ComReg’s proposal to conduct an evidence-based review in 2023 to determine if any further extended operation of any of the NGNs in Figure 1 is needed? Please explain the basis for your response in full and provide supporting information. ....46
- Q. 10 On what basis do you consider international calls to Irish 1800 Freephone numbers should be facilitated (e.g. free to call or otherwise)? Please explain the basis for your response in full and provide supporting information. .51

- Q. 11 Do you consider that the cost of implementing international access to 1800 Freephone numbers would be reasonable for your organisation? Please explain the basis for your response in full and provide supporting information, clearly presenting any associated financial costs. ....51
- Q. 12 Do you foresee demand for international access to Irish 1800 Freephone numbers? Please explain the basis for your response in full and provide supporting information. ....51
- Q. 13 Are there any other issues relating to the potential introduction of international access to Irish 1800 Freephone numbers that ComReg should consider? Please explain the basis for your response in full and provide supporting information. ....51
- Q. 14 Do you agree with ComReg’s proposed text for the Numbering Conditions to take account of operator obligations arising due to the ceasing of number ranges? Please explain the basis for your response in full and provide supporting information. ....54
- Q. 15 Do you have any views on the format of recorded announcements? Please explain the basis for your response in full and provide supporting information. ....54
- Q. 16 Do you agree with ComReg’s proposal to introduce the need for a written end-user order as a RoU condition of use for 1800 and 0818 NGNs and do you agree with ComReg’s proposed text to reflect this in the Numbering Conditions? Please explain the basis for your response in full and provide supporting information. ....55
- Q. 17 Do you agree with ComReg’s proposals to (a) insert a paragraph in Section 3.1 of the Numbering Conditions confirming ComReg’s acceptance that authorised undertakings may provide services to resellers in the market as described and (b) insert the definition of reseller in Appendix 11 of the Numbering Conditions? Please explain the basis for your response in full and provide supporting information. ....58
- Q. 18 Do you agree with ComReg’s proposal to retain the Geographic Number condition requiring the end-user’s premises to be physically located within the designated MNA for that number? Please explain the basis for your response in full and provide supporting information. ....75
- Q. 19 Do you agree that Non-Geographic Numbers (0818 Standard Rate and 1800 Freephone) provide a valid solution for Cloud Services? Please explain the basis for your response in full and provide supporting information. .75

- Q. 20 Do you have a view as to the need to retain the MNA concept? Please explain the basis for your response in full and provide supporting information. .76
- Q. 21 Do you agree with ComReg’s assessment of the conditions around CLI and Number Portability in relation to the use of numbers for Cloud Services? Please explain the basis for your response in full and provide supporting information.....78
- Q. 22 Do you agree with ComReg’s assessment of temporary numbers? Please give reasons for your answer highlighting any solutions that you think might support the introduction of temporary numbers.....82
- Q. 23 Do you agree with the proposal that ComReg will continue to monitor developments in Cloud services at ECC/CEPT, to promote greater policy harmonisation for Cloud services across Europe? Please explain the basis for your response in full and provide supporting information. ....83
- Q. 24 Do you agree with ComReg’s proposal to reserve 1,000 numbers in the number range 089 011 0000 to 089 011 0999 for drama use? Please explain the basis for your response in full and provide supporting information. ....84
- Q. 25 Do you agree with ComReg’s proposal to add the said text to paragraph 6 of Section 3.2 “Rights of Use Conditions”, clarifying that trading of numbers is not permitted? Please explain the basis for your response in full and provide supporting information. ....85
- Q. 26 Are there any matters which you wish to raise as part of this consultation? Please provide detailed reasoning supporting your submission...85

## Annex: 1 Legal Basis

ComReg manages the national numbering resource under the Communications Regulation Act 2002, as amended (“2002 Act”) and the Common Regulatory Framework including the Framework Regulations 2011 and Authorisation Regulations 2011.

ComReg’s key objectives are to ensure the efficient management and use of numbers and to promote competition, to contribute to the development of the internal market, and to promote the interests of users<sup>96</sup>. ComReg must take all reasonable measures to achieve those objectives. These include measures to ensure no distortion or restriction of competition, to encourage efficient investment in infrastructure and to promote innovation, and to encourage the efficient use and effective management of numbers<sup>97</sup>. Measures must be proportionate<sup>98</sup>, must have regard to international developments<sup>99</sup>, and should not favour particular technologies or services<sup>100</sup>.

In pursuit of its objectives as outlined above ComReg must apply objective, transparent, non-discriminatory and proportionate regulatory principles. These include: promoting regulatory predictability; ensuring that there is no discrimination in the treatment of comparable undertakings; safeguarding competition; promoting efficient investment and innovation; taking due account of the variety of conditions relating to competition and consumers that exist in the various geographic areas within the State, and imposing ex ante regulatory obligations only where there is no effective and sustainable competition.

Regulation 4 of the Authorisation Regulations requires that any undertaking, intending to provide an electronic communications network or service, must first notify ComReg. The undertaking is thereby deemed authorised to provide the network or service concerned, subject to such conditions as may be specified by ComReg. Regulation 8 mandates that ComReg “shall ... specify conditions to be attached to a general authorisation only as are listed in Part A of the Schedule.”

Regulations 13(1) and (2) of the Authorisation Regulations provide that ComReg may grant a right of use for any class or description of number to any authorised undertaking, through open, objective, transparent, non-discriminatory and proportionate procedures.

Regulations 14(1)-(3) of the Authorisation Regulations provide that ComReg shall specify non-discriminatory, proportionate and transparent conditions to be attached to such rights of use for numbers, though only as are listed in Part C of the Schedule to

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<sup>96</sup> Section 12(1)(a) of the 2002 Act as amended.

<sup>97</sup> Section 12(2)(a) of the 2002 Act as amended.

<sup>98</sup> Section 12(3) of the 2002 Act as amended.

<sup>99</sup> Section 12(5) of the 2002 Act as amended.

<sup>100</sup> Section 12(6) of the 2002 Act as amended.

the Authorisation Regulations. [There is a distinction between (a) statutory obligations relating to numbers which exist under primary or secondary legislation and (b) conditions attached to numbers which are imposed by ComReg pursuant to regulation 8 or 14 of the Authorisation Regulations.]

The numbering conditions set out in sections 4 and 5 of the Numbering Conditions of Use and Application Process Document fall into two broad categories in that they are either “General Authorisation Conditions” or “Rights of Use Conditions”. Most of the numbering conditions are attached to the General Authorisation. These conditions are created and imposed pursuant to Regulation 8 and Part A of the Schedule to the Authorisation Regulations. This category of condition has universal effect in that applies equally to all authorised undertakings or to such categories of authorised undertaking as may be specified. An authorised undertaking which uses a number, to which one more conditions under the General Authorisation have been attached, is required to comply with those conditions.

Some of the numbering conditions are attached to “rights of use for numbers” which ComReg has granted to individual undertakings. These conditions are created and imposed pursuant to Regulations 13 & 14 and Part C of the Schedule to the Authorisation Regulations. This category of condition does not have universal effect in that it applies only to the individual authorised undertaking which applied for and was granted the right of use to which the condition is attached. Only the individual authorised undertaking which applied for and was granted the right of use for a number is required to comply with the conditions attached to that right of use.]

Regulation 20(1) of the Authorisation Regulations requires ComReg to “ensure that all relevant information on rights, conditions, procedures, charges, fees and decisions concerning the general authorisation, rights of use for radio frequencies, rights of use for numbers and rights to install facilities is published and kept up to date in an appropriate manner so as to provide easy access to that information for all interested parties.

Regulation 20(5) of the Framework Regulations requires ComReg to “ensure that adequate numbers and numbering ranges are provided for all publicly available electronic communications services ... in a manner that gives fair and equitable treatment to all undertakings providing publicly available electronic communications services.”

Regulation 15 of the Authorisation Regulations provides that ComReg may amend the rights, conditions and procedures concerning rights of use for numbers, in an objectively justified and proportionate manner. Except where such an amendment is minor in nature and agreed to, ComReg shall give notice of its intention to make any amendments and shall invite interested parties to make representations.

The updates to the Numbering Conditions which are proposed in this consultation seek to reflect, where relevant, the provisions relating to numbering (i.e. Articles 93 and 94)

contained in the European Electronic Communications Code (Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code) (“the EECC”). The EECC, which comes into force on 21 December 2020, has not yet been transposed in this jurisdiction. The numbering provisions in the EECC are for the most part identical to the numbering provisions in the existing EU Telecoms Framework.