

Public consultation on the review and prolongation of the current Roaming Regulation

Fields marked with * are mandatory.

Introduction

Since 2017, citizens in the European Union are able to use mobile services without additional charges, when travelling within the EU/EEA. The introduction of [Roam-Like-At-Home](#) has been an overall success, and it is widely recognised and appreciated by European citizens (see the [interim report on the implementation of the Roaming Regulation](#)). The demand for mobile services while travelling in the EU/EEA has rapidly and sharply risen since the introduction of Roam-Like-At-Home.

Roam-Like-At-Home was introduced in the Regulation (EU) [531/2012](#) (the 'Roaming Regulation').

However, this regulation is due to expire on 30 June 2022. Unless prolonged, there is a substantial risk that providing Roam-Like-At-Home will not be sustained. The [review report](#) shows that the competitive landscape of the roaming market remains largely unchanged and is not sufficient to ensure continuation of Roam-Like-At-Home, in the absence of either retail or wholesale regulation.

The Commission published an [inception impact assessment](#), informing citizens and stakeholders about its plans to ensure the sustainability of Roam-Like-At-Home, prolonging and reviewing the Roaming Regulation.

The Commission invites you to participate in this public consultation and aims to collect your views on roaming. Your answers to this questionnaire will inform the impact assessment that will be carried out in the third quarter of 2020. The impact assessment will assess the policy options for revising the Roaming Regulation and their likely impacts on the roaming market in the EU/EEA.

This questionnaire consists of 9 sections: section 1 is targeted to all respondents but part of the section is intended specifically for roaming users, section 2 is targeted to roaming users, and the following 7 sections are dedicated to the different policy options to be covered by the impact assessment. Individual users can choose to reply to additional questions as well. Please note that you are not requested to include any special categories of personal data within the meaning of Article 10 of Regulation 2018/1725, e.g. revealing racial or ethnic origin, political opinions, data concerning health etc.

You can pause at any time and continue later. Once you have completed the questionnaire, you will be able to download a copy of your completed responses.

It is possible to submit additional contributions at the end of the questionnaire.

You are invited to read the [background documents](#) before filling in the online questionnaire below.

In view of the adequate functioning of the safeguard rules at retail level (fair use policy and sustainability derogation) as demonstrated by the review report, the Commission does not intend at this stage to amend the rules laid down in the Implementing Regulation (EU) 2016/2286.

About you

* Language of my contribution

Bulgarian

- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- Gaelic
- German
- Greek
- Hungarian
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union

- Other

* Can you specify, if your organisation is one of the following types (or does represent one or multiple of them)?

- Mobile Network Operator (MNO) (including associations)
- Mobile Virtual Network Operator (MVNO) (including associations)
- Mobile Virtual Network Enabler (MVNE) (including associations)
- Other business stakeholders: SMEs/entrepreneurs/vertical industries/IoT & M2M and industry associations
- Trade, business and professional association
- Other

* Can you specify, if the public authority (that you represent) is one of the following types?

- National Regulatory Authority (NRA), other competent authority, or BEREC
- Government Authority
- Other

* First name

* Surname

* Email (this won't be published)

* Scope

- International
- Local
- National
- Regional

* Organisation name

255 character(s) maximum

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

* Country of origin

Please add your country of origin, or that of your organisation.

- | | | | |
|---|--|--|--|
| <input type="radio"/> Afghanistan | <input type="radio"/> Djibouti | <input type="radio"/> Libya | <input type="radio"/> Saint Martin |
| <input type="radio"/> Åland Islands | <input type="radio"/> Dominica | <input type="radio"/> Liechtenstein | <input type="radio"/> Saint Pierre and Miquelon |
| <input type="radio"/> Albania | <input type="radio"/> Dominican Republic | <input type="radio"/> Lithuania | <input type="radio"/> Saint Vincent and the Grenadines |
| <input type="radio"/> Algeria | <input type="radio"/> Ecuador | <input type="radio"/> Luxembourg | <input type="radio"/> Samoa |
| <input type="radio"/> American Samoa | <input type="radio"/> Egypt | <input type="radio"/> Macau | <input type="radio"/> San Marino |
| <input type="radio"/> Andorra | <input type="radio"/> El Salvador | <input type="radio"/> Madagascar | <input type="radio"/> São Tomé and Príncipe |
| <input type="radio"/> Angola | <input type="radio"/> Equatorial Guinea | <input type="radio"/> Malawi | <input type="radio"/> Saudi Arabia |
| <input type="radio"/> Anguilla | <input type="radio"/> Eritrea | <input type="radio"/> Malaysia | <input type="radio"/> Senegal |
| <input type="radio"/> Antarctica | <input type="radio"/> Estonia | <input type="radio"/> Maldives | <input type="radio"/> Serbia |
| <input type="radio"/> Antigua and Barbuda | <input type="radio"/> Eswatini | <input type="radio"/> Mali | <input type="radio"/> Seychelles |
| <input type="radio"/> Argentina | <input type="radio"/> Ethiopia | <input type="radio"/> Malta | <input type="radio"/> Sierra Leone |
| <input type="radio"/> Armenia | <input type="radio"/> Falkland Islands | <input type="radio"/> Marshall Islands | <input type="radio"/> Singapore |

- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar /Burma
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste

- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam

- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

*** Publication privacy settings**

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only your type of respondent, country of origin and contribution will be published. All other personal details (name, organisation name and size, transparency register number) will not be published.

Public

Your personal details (name, organisation name and size, transparency register number, country of origin) will be published with your contribution.

I agree with the [personal data protection provisions](#)

Section 1. General questions on the Roaming Regulation

The introduction of Roam-Like-At-Home has been an overall success that led to sharp increase in the use of roaming services. One year after its introduction, a Eurobarometer survey showed that 81% of travellers were aware that roaming charges had ended in the EU/EEA and 69% of all Europeans thought that they, or someone they know, benefit or will benefit from it.

This section of the public consultation includes some general questions on the overall functioning of the current Roaming Regulation in relation to a number of the key evaluation criteria established in the Commission's [Better Regulation Guidelines](#) (i.e. effectiveness, efficiency, relevance and EU added value).

Section 1.1 is aimed primarily at individual users. Section 1.2 contains a set of more policy oriented questions, which are more suitable for NRAs and other competent authorities as well as government

authorities, businesses (including M(V)NO/Es), associations and experts. However, individual users are welcome to reply if they wish.

If you are an individual user, do you wish to reply to questions about:

- Policy options for quality of service
- Policy options for value-added services
- Simplification measures of the roaming regulation

Section 1.1 Benefits for end-users of retail roaming services

This section is aimed primarily at end-users to gather information on the perceived benefits of the use of retail roaming services.

1.1 The Roaming Regulation (which introduced Roam-Like-At-Home) prohibits roaming charges to ensure that roaming customers can continue to use mobile communication services as they do at home when travelling in the EU/EAA. Do you agree that you can enjoy the following benefits that the Roaming Regulation aims to bring?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Not worrying about having to pay excessive costs for mobile services when travelling in the EU /EEA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Continue using mobile services like at home while travelling in the EU/EEA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Staying connected while travelling in the EU/EEA and not having to restrict the usage of mobile services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.2 If you are an advanced or professional user, do you agree that you can enjoy the following benefits tha the Roaming Regulation aims to bring?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Increased use of connectivity based services/applications as they have become more attractive since Roam-Like-At-Home enables customers to use them also while travelling in the EU Single Market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increased productivity, for business and professional use, due to easier connectivity while travelling in EU/EEA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Not worrying about having to pay excessive costs to access remote devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 1.3 If you feel that you have not really benefited from the end of roaming charges in the EU/EEA please indicate the possible reason(s) that have prevented you from doing so:

- I do not travel in the EU/EEA
- I do not know what it means in practice that roaming charges have ended in the EU/EEA
- Roaming is not included in my subscription
- My data volume was restricted while roaming in a way that it does not satisfy my roaming needs
- I do not use a mobile device while travelling in the EU/EEA for the fear of high charges
- I was worried about unexpected charges for using value-added services, e. g. calls to free numbers
- The quality of data roaming services in the EU/EEA is not the same as in my home country
- I live in another EU/EEA Member State seasonally (for more than four consecutive months per year) and cannot use Roam-Like-At-Home for the whole duration of my stay
- Other

1.3.1 Please explain

1500 character(s) maximum

Section 1.2 Overall functioning of the Roaming Regulation at retail level

The questions in this section are primarily targeted at NRAs and other competent authorities as well as government authorities, businesses (including M(V)NO/Es) and their associations, consumer/citizen associations and experts.

1.4 To what extent has the Roam-Like-At-Home intervention effectively achieved its objectives of:

	Significantly	Moderately	Neutral	Little	Not at all	I don't know /No opinion
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* The promotion of the interests of the citizens and businesses in EU /EEA?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The development of the the Digital Single Market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 1.5 As regards the relevance of the Roaming Regulation, to what extent is the Roam-Like-At-Home intervention still necessary for EU citizens and businesses?

- Significantly
- Moderately
- Neutral
- Little
- Not at all
- I don't know/No opinion

* 1.6 Do you agree that the EU intervention has a positive effect on ensuring that roaming users do not pay excessive roaming prices in the EU/EEA compared to what could be achieved by Member States by themselves?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

1.7 The Roaming Regulation prohibits roaming charges in the EU/EEA to ensure that roaming customers can continue to use mobile services like at home when travelling in the EU/EEA. Do you agree or disagree with the following statements on the consequences of ending the existing EU intervention on roaming charges?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Without roaming rules customers will lose the benefits of using mobile services like at home when travelling in the EU/EEA (would be concerned about having to pay excessive costs and would restrict the use of roaming while travelling)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* In the absence of regulated wholesale rates, some mobile operators would not be able to sustain Roam-Like-At-Home offers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Nothing would change without regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 1.8 As regards the efficiency of the Roaming Regulation, if you compare the administrative and regulatory costs borne by your organization with the benefits for consumers, how do you rate the cost-benefit ratio at scale 1-5 (1 = costs exceed significantly benefits; 5 = benefits exceed significantly costs)?

- 1 - costs exceed significantly benefits
- 2 - costs exceed benefits
- 3 - neutral
- 4 - benefits exceed costs
- 5 - benefits exceed significantly costs
- I don't know/No opinion

1.8.1 Please explain your response

1500 character(s) maximum

Section 2. Emergency communication and public warning systems

The EU legislation on emergency communications ensures that all EU citizens have free access to emergency services through the single European emergency number "112". End-users with disabilities should benefit from equivalent access through SMS, emergency applications, total conversation, etc. Roaming customers should enjoy the same level of service, when it comes to emergency communications as national customers. The questions in this section aim at gathering information about access to emergency services through emergency communications while roaming in the EU/EEA.

* 2.1 Based on your experience or the experience of people that you know, do you agree that communication with emergency services works well while roaming in the EU/EEA?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

*

2.2 When travelling in another EU/EEA Member State, are you aware of any alternative means of accessing emergency services (other than call) available in the visited country for end-users with disabilities, who are not able to place a voice call to “112”?

- Strongly aware
- Aware
- Neutral
- Slightly aware
- Not aware at all
- I don't know/No opinion

* 2.3 Based on your experience or the experience of people that you know, do you agree that communication with emergency services works well for people with disabilities while roaming in the EU/EEA?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

* 2.4 When travelling in another EU/EEA Member State, are you usually aware of their available public warning systems?

- Strongly aware
- Aware
- Neutral
- Slightly aware
- Not aware at all
- I don't know/No opinion

Section 3. Review of wholesale roaming markets

The questions in this section are primarily aimed at gathering input from M(V)NO/Es, and their associations, NRAs and other competent national authorities as well as government authorities, businesses and experts.

A domestic provider that wants to offer roaming services to customers travelling abroad has to purchase these from mobile network operators located in the visited countries ('roaming provider'). To this end, commercial agreements between domestic and roaming service providers have to be concluded.

The term “wholesale roaming services” refers to roaming services between service providers located in different countries. Wholesale roaming services implies the payment of wholesale roaming charges from the domestic provider to the roaming provider. The level of this wholesale roaming charge is currently regulated at EU level (Regulation (EU) 531/2012).

The questions in this section aim at gathering views from stakeholders on what measures would be needed to ensure the sustainability of Roam-Like-At-Home, cost recovery at wholesale level and competitiveness of the wholesale roaming markets in the EU.

Section 3.1 Functioning of the wholesale market

3.1 Do you agree that the EU intervention had a positive effect in ensuring the sustainability of the following wholesale roaming markets, compared to what could be achieved by Member States acting alone?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know/No opinion
* Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* SMS messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 3.2 Please indicate the relevant factor(s) influencing the sustainability of the wholesale roaming markets:

- The number of mobile operators present on the national market of the visited Member State
- Whether the visited Member State has a positive or negative imbalance of roaming traffic
- The size of the (positive or negative) imbalance in roaming traffic of the visited Member State
- Whether a (positive or negative) imbalance in roaming traffic of the visited Member State is concentrated in a short period of time within the year
- The size of the national market of the visited Member State
- Whether one or more mobile operators in the visited Member State has significant spare capacity in its network
- Other
- I don't know/No opinion

3.2.1 Please explain

1500 character(s) maximum

* 3.3 If you consider that the sustainability depends on the Member State, please indicate the Member State(s) where the provision of retail roaming services at domestic prices in the EU/EEA is unsustainable

- It does not depend on the Member State
- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Iceland
- Norway
- Liechtenstein

* 3.3.1 Please indicate which market(s) (Voice, Data, SMS messages) in that Member State(s) and explain

1500 character(s) maximum

3.4 Do you agree that the EU intervention had a positive effect in ensuring that the following wholesale roaming markets are competitive markets in the EU, compared to what could be achieved by Member States acting alone?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know/No opinion
* Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* SMS messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 3.5 Please indicate the relevant factor(s) influencing the competitiveness of the wholesale roaming markets:

- The number of mobile operators on the national market of the visited Member State
- Whether the visited Member State has a positive or negative imbalance of roaming traffic
- The size of the (positive or negative) imbalance in roaming traffic of the visited Member State
- Whether a (positive or negative) imbalance in roaming traffic of the visited Member State is concentrated in a short period of time within the year
- The size of the national market of the visited Member State
- Whether one or more mobile operators in the visited country has significant spare capacity in its network
- Other
- I don't know/No opinion

3.5.1 Please explain

*

3.6 If you consider that the competitiveness depends on the Member State, please indicate the Member State(s) where the EU intervention did not have a positive effect in ensuring that roaming markets are more competitive compared to what could be achieved by Member States acting alone

- It does not depend on the Member State
- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Iceland
- Norway
- Liechtenstein

3.6.1 Please indicate which market(s) (Voice, Data, SMS messages) in that Member State(s) and explain

3.7 If you are an M(V)NO, please indicate, for each service the level of negotiated wholesale prices that you generally pay compared to the regulated wholesale roaming price caps:

	Same as the regulated cap	Slightly below the regulated cap	Significantly below the regulated cap	It depends on the Member State(s)	I don't know/No opinion
* Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* SMS messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 3.7.1 Please indicate the Member State(s):

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg

- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Iceland
- Norway
- Liechtenstein

3.7.2 Please explain your answer

1500 character(s) maximum

* 3.8 Do you agree that retail roaming services at domestic prices, subject to a fair use policy designed to prevent anomalous or abusive use, are sustainable based on current wholesale roaming price caps?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

3.8.1 What are the obstacles at wholesale level making the provision of retail roaming services at domestic prices in the EU/EEA unsustainable? Rank each obstacle from 1 (limited challenge) to 9 (significant challenge).

	1	2	3	4	5 (Neutral)	6	7	8	9	I don't know /No opinion
* The existence of wholesale roaming regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Wholesale caps are too high	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Wholesale caps are too low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Lack of effective competition, preventing trade in wholesale roaming traffic in a given country at the best pricing conditions at any time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Lack of bargaining power of smaller mobile operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.8.1.1 Are there other obstacles that should be considered? Please specify

1500 character(s) maximum

* 3.8.2 If you consider that the answer to question 3.8 depends on the Member State, please indicate the Member State(s):

- It does not depend on the Member State
- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania

- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Iceland
- Norway
- Liechtenstein

* 3.8.3 Please indicate which market(s) in that Member State and explain your answer

1500 character(s) maximum

* 3.9 Do you agree that wholesale roaming markets are dependant on wholesale price regulation to be able to provide Roam-Like-At-Home at the retail level in line with the domestic charging model?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

* 3.10 Which *one* of the following options at wholesale level would best allow provision of retail roaming services at domestic prices in the EU/EEA to continue, subject to any fair use policy to prevent anomalous or abusive use?

- Lift the wholesale roaming regulation
- Maintain current wholesale roaming price caps
-

Maintain current wholesale roaming price caps, and extend the glide path lowering the wholesale caps for the subsequent years

- Increase current wholesale roaming price caps
- Decrease current wholesale roaming price caps
- Other
- I don't know/No opinion

3.10.1 Please explain

1500 character(s) maximum

3.11 Do you agree that lifting the wholesale price regulation, while maintaining the Roam-Like-At-Home obligation at retail level would have the following impact:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Increase wholesale roaming rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the sustainability of MNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MVNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the number of applications of sustainability derogation from Roam-Like-At-Home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Reduce competition on the national wholesale market resulting in higher domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase in roaming data traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease roaming data traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.11.1 Are there other impacts that should be considered? Please specify

1500 character(s) maximum

3.12 Do you agree that lowering the wholesale rates, while maintaining the Roam-Like-At-Home obligation at retail level would have the following impact:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Increase the sustainability of MVNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the number of applications of sustainability derogation from Roam-Like-At-Home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Reduce competition on the national wholesale market resulting in higher domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase in roaming data traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.12.1 Are there other impacts that should be considered? Please specify

1500 character(s) maximum

3.13 How relevant are the following measures at wholesale level to ensure that all, or virtually all operators, continue to maintain retail roaming services at domestic prices in the EU/EEA, subject to a fair use policy to prevent anomalous or abusive use

	Very relevant	Relevant	Neutral	Not relevant	Not relevant at all	I don't know /No opinion
* Ensure that regulated maximum wholesale caps also apply to alternative wholesale agreement solutions as specified in Article 3 (4) to read together with recital 11 of the Roaming Regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Ensure that MNOs pass on discounts they get on wholesale roaming services to MVNO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Ensure that regulated wholesale caps also apply to the resale of wholesale access with the option to add on administrative charges for the service offered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.13.1 Are there other measures that should be considered? Please specify

1500 character(s) maximum

Section 4. Quality of service of regulated roaming services

The questions aim at gathering views on the policy options to address the possible difference in quality of service offered while roaming compared to when at home.

In the roaming market review, the Commission noted that quality of service is an integral part of the roaming service. While the Roaming Regulation does not include any explicit obligation on quality of service, it requires that the customer has access to the same service across the EU/EEA for the same price, as long as the service can be delivered on a visited network. In its [opinion on the roaming market](#), BEREC also considers that domestic mobile operators should not deliberately lower the quality of service compared to the service offered in the home country, so that the customer can genuinely 'Roam-Like-At-Home'. 4G can normally be provided while roaming, as this technology now covers most of EU's territory.

* 4.1 The Roaming Regulation Article 3(3) requires that wholesale roaming access shall cover access to all network elements and associated facilities, relevant services, software and information systems necessary for the provision of regulated roaming services to customers. Do you consider that the wholesale roaming access obligation in the current Roaming Regulation is sufficient to ensure that M(V) NOs are given access to newest network generations (e.g. 4G, 5G) for wholesale roaming?

- Yes, for 4G and 5G
- Yes, for 4G only
- No
- I don't know/No opinion

4.1.1 Please explain your answer

1500 character(s) maximum

* 4.2 If you are an M(V)NO, can you easily gain wholesale roaming access to all network elements and associated facilities, relevant services, software and information systems, necessary for the provision of regulated roaming services to customers, from MNOs in other EU/EEA Member States?

- Yes, without difficulty
- Yes, but with some difficulty
- No, it is too difficult
- I don't know/No opinion

4.2.1 Please explain your answer

1500 character(s) maximum

* 4.3 If you are an M(V)NO, do you apply roaming traffic steering techniques in the EU/EEA (i.e. routing the traffic of your customer while roaming) to one specific visited network?

- Yes, independently of the visited country or the host network
- Yes, for specific visited countries or host networks
- No

I don't know/No opinion

* 4.3.1 How much of your roaming traffic is steered towards one or more specific visited network?

<10%

10-50%

>50%

I don't know/No opinion

* 4.4 If you are an M(V)NO, do you apply roaming traffic steering techniques in the EU/EEA (i.e. routing the traffic of your customer while roaming) from a visited network, to a domestic network?

Yes, independently of the visited country or the host network

Yes, for specific visited countries or host networks

No

I don't know/No opinion

* 4.4.1 How much of your roaming traffic is steered towards your domestic network?

<10%

10-50%

>50%

I don't know/No opinion

* 4.4.2 Please indicate the main reason(s) why traffic is steered.

For increased quality of service

Commercial wholesale agreements require us to fulfill certain volumes

Steering to MNOs of the same group

Other

I don't know/ No opinion

4.4.2.1 Please explain

1500 character(s) maximum

*

4.5 Do you agree that the Roaming Regulation ensures that roaming customers are offered the same services, under the same conditions (including quality of service), as domestically while roaming in the EU/EEA?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

4.5.1 Please explain your answer

1500 character(s) maximum

4.6 How relevant are the following measures to ensure that roaming customers would enjoy a similar level of quality of service for data services while roaming in the EU/EEA as in their home country?

	Very relevant	Relevant	Neutral	Not relevant	Not relevant at all	I don't know /No opinion
* Include a transparency obligation, e.g. requiring mobile operators to provide clear information about the quality of service in the visited country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Include an obligation on the home mobile operator at retail and wholesale level, prohibiting deliberately lowering the quality of service while roaming, compared to the quality of service offered in the home country.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Include an obligation on the visited mobile operator at retail and wholesale level, prohibiting deliberately lowering the quality of service while roaming (e.g. limiting access to 3G instead of 4G), compared to the quality of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

service offered in the home country.						
* Include an obligation on MNOs to give non-discriminatory access, upon a reasonable wholesale roaming access request, to all network generations (2G, 3G, 4G, 5G etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.6.1. Are there other measures that should be considered? Please explain

1500 character(s) maximum

4.7 Do you agree that the current Roaming Regulation is sufficient to ensure that roaming consumers are given access to newest network generations (e.g. 4G, 5G) while roaming when 4G or 5G is/will be available?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

4.8 Do you agree that an obligation on MNOs to give non-discriminatory access, upon a reasonable wholesale roaming access request, to all network generations would have the following impact:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Decrease the bargaining power of MNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs on the wholesale market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the roaming wholesale market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase roaming data traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase connectivity for consumers and professional users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilitate Machine-to-Machine /Internet of Things services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilitate widespread 5G based cross-border services in the EU Single Market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Nothing would change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.8.1 Are there other impacts that should be considered? Please specify

1500 character(s) maximum

Section 5. Roaming and Machine-to-Machine (M2M) services* and Internet of Things (IoT)

* “Machine-to-Machine services”, refer to an automated transfer of data and information between devices or software-based applications with limited or no human interaction.

The questions in this section are primarily aimed at gathering input from M(V)NO/Es, and their associations, NRAs and other competent authorities as well as government authorities, businesses and experts.

The questions aim at gathering views on the main regulatory options available at the wholesale level, including measures to address permanent roaming for M2M/IoT.

According to the Roaming rules:

- **At the retail level**, roaming providers can apply a fair use policy to the consumption of regulated retail roaming services provided at the applicable domestic retail price level, in order to prevent abusive or anomalous usage of regulated retail roaming services by roaming customers, i.e. for other purposes than periodic travel.
- **At the wholesale level**, mobile operators can include, in their reference offers, conditions to prevent permanent roaming or anomalous or abusive use of wholesale roaming access for purposes other than the provision of regulated roaming services to roaming providers’ customers while the customers are periodically travelling within the Union.
- **Permanent roaming** is not prohibited as such by the Roaming Regulation and can be agreed by two roaming partners in their wholesale roaming contract (Article 3(4)).

According to information received by the Commission services, mobile operators often have an interest to host M2M/IoT communication traffic on their networks, including on a permanent basis, in order to benefit from the related wholesale revenues. However further barriers might still occur preventing the development of pan-European M2M services in the Single Market.

To facilitate this development, the European Electronic Communications Code adopted by the European Parliament and the Council in December 2018 already provides that EU Member States shall ensure that national regulatory authorities make available numbers that may be used on a permanent basis outside of the Member State (“extraterritorial use of numbers”). The implementation of the roaming rules might benefit from some clarifications regarding the wholesale access conditions for permanent roaming for the purposes of connectivity for M2M/IoT.

Section 5.1 Roaming and M2M

Producers of goods sell them across the EU/EEA Single Market. Producers of connected goods aim to ensure uninterrupted connectivity across the EU/EEA. If an object connected in one EU/EEA country can connect in other EU/EEA countries, it facilitates movements of goods in the Single Market.

* 5.1 Do you agree that the measures in Article 3(4) to be read together with Recital 11 of the Roaming Regulation, that allows mobile operators to negotiate alternative pricing schemes for wholesale roaming access, are sufficient to develop more efficient, integrated and competitive markets for roaming services for M2M?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
- I don't know/No opinion

5.1.1 Please explain your answer

1500 character(s) maximum

5.2 Do you agree with each of the following statements on regulating international roaming in the EU/EEA for the M2M/IoT market:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* There is a need for specific M2M /IoT rules at the wholesale level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* There is a need at the wholesale level to clearly distinguish M2M /IoT from person-to-person communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* There is a need at the wholesale level to oblige MNOs to negotiate in good faith and within specific deadlines, wholesale agreements that provide permanent international roaming for M2M/IoT communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Alternative (non volume based) pricing models, as specified in Article 3(4) to be read together with Recital 11 of the Roaming Regulation should explicitly enable M2M/IoT permanent roaming in the EU/EEA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* There is a need at the wholesale level to cap wholesale prices for international permanent roaming in the EU/EEA for M2M/IoT communications, with non-volume based pricing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Regulating permanent roaming would affect competition between different service providers in the wider M2M/IoT market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Rules at the retail level are needed to enable permanent M2M/IoT roaming without surcharges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* There is a need for specific M2M /IoT rules at the retail level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Rules enabling permanent roaming for M2M/IoT communication could be used as a back door for unauthorized entry into other national markets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5.3 Do you agree that separate wholesale regulation of M2M/IoT services, obliging MNOs to provide wholesale agreements for permanent international roaming in EU /EEA for M2M/IoT communications would have the following impact:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Decrease the bargaining power of MNOs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Lower the wholesale rates for M2M/IoT related roaming traffic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the roaming wholesale market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase connectivity on the EU Single Market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Facilitate wholesale access to M2M/IoT services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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5.3.1 Are there other impacts that should be considered? Please specify

1500 character(s) maximum

5.4 Do you agree that separate wholesale regulation of M2M/IoT services imposing a cap on wholesale prices for permanent international roaming for M2M/IoT communication, with non-volume based pricing for wholesale agreements would have the following impact:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
Decrease the bargaining power of MNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Lower the wholesale rates for M2M/IoT related roaming traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the roaming wholesale market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase connectivity on the EU Single Market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilitate wholesale access to M2M/IoT services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5.4.1 Are there other impacts that should be considered? Please specify

1500 character(s) maximum

Section 5.2 Industries using connected machines

A connected machine is often part of a larger offer of service by a specialised industry. The client sectors of telecom operators are often referred to as “vertical industries” because the telecom operators offer “horizontal” connectivity to many sectors and adapt to each of these industries.

The questions in this section are aimed at gathering information from companies that sell connected objects (and services) and their representatives/associations about their use of international roaming in the

EU/EEA. For example, when SIM cards using numbers from a national numbering plan are embedded in products/equipment, and when those products are used in a EU Member State different from the Member State of the numbering plan, any data exchange would require roaming services.

* 5.5 If you are operating in the connected vertical industry, in which sector of the vertical segment do you use international roaming services in the EU/EEA?

- Automotive
- Aerospace
- Computer, electronic and optical products
- Electrical equipment
- Machinery and equipment
- Logistics and transport
- Retail
- Manufacturing
- Healthcare
- Finance
- Oil and Gas
- Energy
- Agriculture and Farming
- Other
- I don't know/No opinion

5.5.1 Please explain

1500 character(s) maximum

5.6 Describe the 3 most important use cases of M2M communications that you use and that involves international roaming in the EU/EEA.

	M2M Communication
*Use case 1	
*Use case 2	
*Use case 3	

* 5.7 In case of M2M/IoT services, which model do you use to implement and deliver such services in the EU/ EEA?

- We function as a licensed telecom operator to provide the M2M/IoT service. [Please also answer relevant questions in sections 3, 4, 5, 6]
- We have established a strategic partnership with an MVNO to provide M2M /IoT service in all countries of operation
- We have established business agreements with some operators that undertake to provide M2M/IoT services in specific regions
- We have a distinct business agreement with one (or more) operator(s) in each country where we operate
- We follow another model
- I don't know/No opinion

5.7.1 If you follow another model, please describe it

1500 character(s) maximum

* 5.8 How important is Roam-Like-At-Home for the M2M services that you use?

- Very important
- Important
- Neutral
- Not important
- Not important at all
- I don't know/No opinion

5.9 List up to 3 reasons justifying importance and/or up to 3 reasons justifying lack of importance of Roam-Like-At-Home for the M2M/IoT services that you use.

	Reasons justifying importance	Reasons justifying lack of importance
1		
2		
3		

* 5.10 How important is the use of international permanent roaming in the EU/EEA for your services/equipment?

- Very important
- Important
- Neutral
- Not important
- Not important at all
- I don't know/No opinion

5.11 Please analyse the most important international roaming related hurdles in the EU/EEA that you face when you seek to use M2M/IoT services (up to 3), e.g. difficulty in getting wholesale access under the Roaming Regulation in the entire EU Single Market.

	Describe the hurdle	Its impact in your business	Actions that you have taken to address it	Outcome of your actions
First hurdle				
Second hurdle				
Third hurdle				

Section 6. Roaming and technological developments

The questions in this section are primarily aimed at gathering input from M(V)NO/Es and their associations, NRAs and other competent authorities as well as government authorities, businesses and experts. The questions aim at gathering views on the potential impact of technological developments on the roaming markets.

The deployment of eSIM and evolution in over-the-top voice and messaging services could impact competition in retail roaming markets. Developments in 5G and IP-based mobile communications in the coming years could also affect the nature, variety and pricing of wholesale roaming products going forwards.

Section 6.1 Impact of technological developments and competitive constraints

6.1 What 5G roaming solutions do you foresee within the next a) 2 years and b) 5 years that can have a significant impact on the functioning of the roaming market? Please describe use-cases and impact on the roaming market.

1500 character(s) maximum

6.2 What impact do you foresee of narrow-band IoT and other alternative solutions (including non-public networks) on the M2M mobile roaming market?

1500 character(s) maximum

6.3 Which of the following technological and business developments are likely to cause the greatest competitive pressure to traditional retail roaming services by M(V)NOs on handsets in the next 5 years? Rank each from 1 (limited pressure) to 9 (significant pressure) and indicate the expected effect separately for (i) voice roaming; (ii) SMS roaming; and (iii) data roaming.

Wi-Fi in the home or at work

	1	2	3	4	5 (Neutral)	6	7	8	9	I don't know/No opinion
* i) Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ii) SMS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* iii) Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Public or outdoor Wi-Fi services

	1	2	3	4	5 (Neutral)	6	7	8	9	I don't know/No opinion
* i) Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* ii) SMS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* iii) Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Over-the-top (OTT) services

	1	2	3	4	5 (Neutral)	6	7	8	9	I don't know/No opinion
* i) Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ii) SMS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* iii) Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

eSIM

	1	2	3	4	5 (Neutral)	6	7	8	9	I don't know/No opinion
* i) Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ii) SMS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* iii) Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5G and network slicing

	1	2	3	4	5 (Neutral)	6	7	8	9	I don't know/No opinion
* i) Voice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ii) SMS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* iii) Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6.3.1 Please explain your answer

1500 character(s) maximum

6.2 Online trading platforms

One solution that has been proposed as a way to support competition in wholesale roaming is the potential development of trading platforms for mobile capacity. Such trading platforms would operate as a regulated exchange (similar to other commodity exchanges) and provide transparency in volumes and prices for mobile capacity (which could include domestic as well as international roaming capacity). The participation would, however, remain anonymous. For more details on trading platforms, see the [study on technological developments and roaming](#).

* 6.4 If you are an M(V)NO, do/have you used online trading platforms as a way of trading wholesale roaming traffic in the EU/EEA?

- Yes
- No
- I don't know/No opinion

* 6.5 If you were an MNO, would you be willing to sell part of your wholesale roaming traffic through an online trading platform?

- Yes
- No
- I don't know/No opinion

6.5.1 Please explain

1500 character(s) maximum

6.6 Do you agree that:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No opinion
* Online trading platforms could be an efficient means to facilitate the negotiation process between mobile operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* A capacity-trading platform could lower wholesale roaming prices for all players on the EU/EEA roaming market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Capacity-trading platforms would affect competition only if obligations would be imposed on MNOs to sell part of the capacity on the trading platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6.6.1 Please explain your answer

1500 character(s) maximum

Section 7. Value-added services

Calls to certain numbers can generate additional costs when roaming in the EU/EEA compared to making the same calls at home. These numbers are typically used for calls to 'valued-added services'.

Communications related to value-added services referred to in the questions below should be understood as communications to:

- (a) **Premium-rate numbers**, for which a domestic customer is charged more than for a regular call and which are used to provide, for example directory enquiries, weather forecasts, technical support and entertainment, as well as other services;
- (b) **Freephone numbers**, which are free of charge to domestic customers, for example a bank hotline, travel agency hotline, insurance helpline);
- (c) **Shared cost numbers**, for which a domestic customer pays only the charge for a local phone call, for example e-shops

* 7.1 Do you consider that the Roaming Regulation should introduce measures to avoid unexpected additional charges due to the use of value-added services while roaming in the EU/EEA?

- Yes
- No
- I don't know/No opinion

7.2 How relevant are the following measures to avoid problems linked to value-added services and high termination rates subject to revenue share of roaming services in the EU/EEA?

	Very relevant	Relevant	Neutral	Not relevant	Not relevant at all	I don't know /No opinion
* Introduce a European database with value-added services /premium number ranges to be made publicly available with relevant termination rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Introduce an obligation on mobile operators to include in the "Welcome SMS" an alert informing that these types of communications may not be under Roam-Like-At-Home principles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Introduce an obligation that access to value-added services must be explicitly requested by the roaming customer (opt-in)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7.3 Are there other measures that should be considered? Please specify

1500 character(s) maximum

7.4 In your view, what would the positive/negative impacts of the measures proposed above be?

1500 character(s) maximum

Section 8. Emergency Communications

The EU legislation on emergency communications ensures that all EU citizens have free access to emergency services through the single European emergency number "112". End-users with disabilities should benefit from equivalent access through SMS, emergency applications, total conversation, etc. Roaming customers should enjoy the same level of service, when it comes to emergency communications as national customers. The questions in this section aim at gathering information about access to emergency services through emergency communications while roaming in the EU/EEA.

8.1 Do you consider the following measures are relevant as an effective means to ensure seamless access to emergency communications for roaming customers in the EU/EEA?

	Very relevant	Relevant	Neutral	Not relevant	Not relevant at all	I don't know /No opinion
* Introduce an obligation on mobile operators in the Roaming Regulation, at wholesale level to ensure that customers have seamless access, and "free of charge", to emergency services through emergency communications by using 112	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Introduce an obligation on mobile operators in the Roaming Regulation, at wholesale level, to ensure that the establishment and transmission of caller location in the visited EU Member State is free of charge for the end-user	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Introduce an obligation on the home operator to inform disabled end-users on the availability of alternative means of access available in the visited EU Member State (opt in)



8.2 Are there other measures that should be considered? Please specify

1500 character(s) maximum

Section 9. Potential simplification/burden reduction

All initiatives to revise existing legislation are required to explore the potential for simplification and improving the efficiency of that legislation (e.g. by reducing regulatory costs).

9.1 Do you have any proposal to simplify and improve the efficiency of the Roaming Regulation? If yes, please indicate the category and explain how your proposal would simplify and improve efficiency of the legislation and what the impacts would be. Please note that the Commission Implementation Regulation (detailed provisions regarding fair use policy and sustainability derogation) is not subject to this review. Your proposals should fall within the scope of the Roaming Regulation. Please note that you are not requested to include any special categories of personal data within the meaning of Article 10 of Regulation 2018/1725.

a. Retail regulation and transparency for customers

1500 character(s) maximum

b. Wholesale regulation

1500 character(s) maximum

c. Supervision/enforcement, dispute resolution, data collection

1500 character(s) maximum

d. Other

1500 character(s) maximum

Thank you

Thank you for your contribution to this questionnaire. In case you want to share further ideas on these topics, you can upload a document below. Please note that you are not requested to include any special categories of personal data within the meaning of Article 10 of Regulation 2018/1725.

The maximum file size is 1 MB

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

Final comments.

Please note that you are not requested to include any special categories of personal data within the meaning of Article 10 of Regulation 2018/1725.

1500 character(s) maximum