



## Teleindustriens besvarelse til EU-Kommissionens spørgeskema om revision af roamingreglerne

### 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	No t at all	I don't know /No ...
* The promotion of the interests of the citizens and businesses in EU/EEA?		<input checked="" 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 checked="" 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
* 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 checked="" 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 checked="" 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 checked="" 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*

Siden RLAH trådte i kraft har EU's roamingmarkeder udviklet sig markant. Konkurrencedynamikken baseret på kommercielle aftaler er dog samtidigt afgørende elementer i den løbende markedsudvikling i roamingmarkederne.

Det oprindelige formål med RLAH er i dag opnået, og har samlet set medført betydelige gevinster for borgere og virksomheder, herunder blandt små- og mellemstore virksomheder, der i dag kan rejse og roame næsten uden begrænsninger i alle EU/EØS-lande.

Lavere engrosprislofterne kan, som set op til nu, være til gavn for konkurrencen og – i sidste ende – i målet om lavere priser for slutbrugerne. Markant lavere engrosprislofter er essentielle for, at det fortsat er muligt for europæiske forbrugere at bruge stigende dataforbrug, opnå alle fordelene af fremtidens innovative og digitale tjenester samt at kunne realisere det fulde potentiale ved det digitale indre marked.

## 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)NOs, 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	Neutral	Disagree	Strongly disagree	I don't know/No
* Voice	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* SMS messages	<input checked="" 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

Engrosmarkedet for roaming fungerer effektivt, grundet især konkurrencen på markedet. Implementeringen af RLAH og presset, som reglerne har medført, har desuden medført væsentlig forøgelse i volumenerne, hvilket i sig selv har sikret en nedgang i engrospriserne i de seneste år. Markedspriserne udvikles delvist uafhængigt af de regulerede prislofter, og prislofterne agerer således reelt som et sikkerhedsnet.

---

\* 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

- \* 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

*1500character(s)maximum*

N/A

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

N/A

\*

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

N/A

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 checked="" type="radio"/>
* Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* SMS messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

\* 3.7.1 Please indicate the Member State(s):

- \* 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

*1500character(s)maximum*



* Lack of effective competition, preventing trade in wholesale roaming traffic in a given country at the best pricing conditions at any	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" 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

*1500character(s)maximum*

N/A

\* 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

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

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

*1500 character(s) maximum*

**N/A**



\* 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

På trods af de mange kommercielle engrosaftaler, der ofte bliver forhandlet med rater under de nuværende prislofter, udgør engrosprislofterne fortsat et sikkerhedsnet, når en MNO forhandler roamingaftaler. Samtidig sender det et klart signal til MNO'er i primært netto inbound-markeder, om at koordination af markedsrater bestemt ikke er noget, der skal

udforskes.

Om rimeligt forbrug anerkender EU-Kommissionen i rapporten fra 2019, at kun et ekstremt lille mindretal af de mest intensive roamingforbrugere i praksis er berørt af anvendelsen af politikken vedrørende rimeligt forbrug i medfør af forordningens artikel 6 b, mens det overvældende flertal af forbrugere ikke er det. Selvom det i høringsdokumentet fremgår, at EU-Kommissionen ikke har til hensigt at foreslå ændringer til bestemmelserne om rimeligt forbrug, vil TI gerne fremhæve kompleksiteten og omkostningen ved denne proces samt opfordre til, at politikken fastholdes som hidtil og ikke opfindes på ny.

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
* Increase wholesale roaming rates	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MVNOs	<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase domestic retail prices	<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease domestic retail prices	<input type="radio"/>	<input type="radio"/>		<input checked="" 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 checked="" 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 checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease roaming data traffic	<input type="radio"/>	<input checked="" 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*

**N/A**

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
* Increase the sustainability of MVNOs	<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs	<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs	<input type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase domestic retail prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease domestic retail prices	<input type="radio"/>	<input checked="" 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 checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase in roaming data traffic	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>

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

N/A

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
* Ensure that regulated maximum wholesale caps also apply to alternative wholesale agreement solutions as specified in Article 3 (4) to read together with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Ensure that MNOs pass on discounts they get on wholesale roaming services to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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

TI anerkender, at engrosaftaler om roaming mellem to mobilnetværksoperatører (MNO) kontra mellem en MNO og en virtuel mobiloperatør (MVNO) oftest er mere fordelagtig i MNO'ens favør, som det tillige fremgår af EU-Kommissionens arbejdsdokument. TI opponerer dog imod at indføre krav om, at en MNO forpligtes til at videregive/-sælge en 'rabat' til en MVNO, som MNO'en opnår gennem engrosroamingtjenesten. Dette begrundes i, at et sådan krav ikke tager højde for de omkostninger afholdt af MNO'en, som er vært for den indgående roamingtrafik, hvilket er det afgørende element for den rabat, som MNO'en opnår fra et besøgt netværk. Desuden vil et sådan krav givet vis have en stigende effekt på de indenlandske engrospriser. TI henfører desuden til BEREC's bemærkninger herom, som ses på side 90 i EU-Kommissionens arbejdsdokument, som henført ovenfor, der forklarer, at en sådan mekanisme vil være meget kompliceret at implementere i

praksis (fx fordi en MNO har flere bilaterale aftaler i hvert enkelt medlemsland, ofte med komplekse prisstrukturer; og rabatter afhænger af mængder og tildeles ofte i slutningen af de specificerede perioder), samt at det vil være særdeles vanskeligt at overvåge og håndhæve af de nationale tilsynsmyndigheder.

Om rimeligt forbrug anerkender EU-Kommissionen i rapporten fra 2019, at kun et ekstremt lille mindretal af de mest intensive roamingforbrugere i praksis er berørt af anvendelsen af politikken vedrørende rimeligt forbrug i medfør af forordningens artikel 6 b, mens det overvældende flertal af forbrugere ikke er det. Selv om det i høringsdokumentet fremgår, at EU-Kommissionen ikke har til hensigt at foreslå ændringer til bestemmelserne om rimeligt forbrug, vil TI gerne fremhæve kompleksiteten og omkostningen ved denne proces samt opfordre til, at politikken fastholdes som hidtil.

## 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*

Ti vurderer, at den eksisterende bestemmelse er tilstrækkelig effektiv og teknologineutral.

\* 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*

Generelt tager det adskillige år at opnå adgang til den seneste teknologi gennem reguleret footprint. Det har fx taget flere år at udrulle 4G-netværket. Dette begrundes i måden, hvorpå roaming test og implementering udføres samt de forskellige stadier af den teknologiske klarhed mellem MNO'er. Dette er dog ikke alene et EU-specifikt men et globalt problem. 5G-dækning i EU vil ligeledes tage flere år at etablere.

\* 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%

X>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

N/A

\*

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

Roamingnetværket er ikke nødvendigvis af samme kvalitet som hjemmenetværket, og dette kan ikke kontrolleres af hjemmenetværket. Oftest ønsker en roamende kunde adgang til multiple netværk i markedet, mens en kunde i hjemmemarkedet er "låst" til netværket fra deres nationale udbyder. En roamende kunde vil derfor ofte nyde godt af en bedre service og dækning kontra kunde i hjemmemarkedet.

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? NEUTRAL for the first

	Very relevant	Relevant	Neutral	Not relevant	Not relevant at all	I don't know /No
* Include a transparency obligation, e.g. requiring mobile operators to provide clear information about the quality of service in the visited	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>* 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 service offered in the home country.</p>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>* 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.)</p>	<input type="radio"/>	<input checked="" 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*

**N/A**

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
* Decrease the bargaining power of MNOs	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs on the wholesale	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the roaming wholesale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase roaming data traffic	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilitate Machine-to-Machine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Nothing would change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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

I EU-Kommissionens arbejdsdokument (SWD(2019)416 final), der ledsager roaming-rapporten fra november 2019, bemærkes det, at slutbrugerne generelt har en meget lav utilfredshed med den servicekvalitet (QoS), der leveres, mens der roames. Dette er baseret på få eller ingen klager herom, som er modtaget af de nationale tilsynsmyndigheder. TI er ej heller bekendt med sådanne klager i Danmark. Slutbrugere er generelt opmærksomme på, at forskellige lande og forskellige netværk kan have forskellige niveauer af QoS. TI ser ikke umiddelbart noget tegn på, at hverken danskere eller borgere fra andre EU-lande opfatter roaming-QoS som et emne, der kræver lovgivningsmæssig indgriben.

TI mener, anser forskellige niveauer af QoS på tværs af landegrænser som naturligt, og idet det umiddelbart ikke er et problem for hverken privatkunder eller for virksomheder, bør indgriben maksimalt udstrækkes til krav om oplysning af minimum QoS til slutbrugeres mulighed for roaming i andre EU-lande end hjemlandet. Det kunne også eventuelt overvejes at lovgive imod diskrimination i QoS mellem en kunde, der roamer på en udenlandsk netværksoperatørs netværk, og en kunde i hjemlandet, der anvender samme netværksoperatørs netværk.

### **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*

IoT- og M2M-tjenester er et komplekst problem i forbindelse med roaming. TI opfordrer til, at EU-Kommissionen overvejer de grundlæggende forskellige karakteristika af IoT/M2M-tjenester fra traditionelle tale- og datatjenester. Herudover mener TI, at der behov for at lave en dybdegående analyse, for at afdække eventuelle problemer med permanent roaming, påvirkningen på

indenlandske tjenester samt specifikke spørgsmål som meget små datatransmissioner - fx på nye mobilteknologier såsom Narrowband IoT. Danmark bør ikke gå enegang med en M2M-lovgivning, der kan diskriminere danske udbydere i en konkurrence, der ubestrideligt er international. En gradvis international harmonisering er den eneste farbare vej på M2M-området. Erfaringen hos TI er, at de virksomheder, der efterspørger M2M-løsninger udmærket forstår udfordringerne og forstår at indrette sig herefter i forbindelse med aftaleindgåelse. Eventuelle udfordringer i forbindelse med større offentlige udbud bør på tilsvarende vis også relativt enkelt kunne løses ved, at der fremover kan stilles specifikke krav til leverandører allerede i forbindelse med de offentlige udbud og indkøb af M2M-tjenester. TI finder således, at M2M- og IoT-tjenester bør holdes udenfor RLAH-forordningen.

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 checked="" 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 checked="" 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 checked="" 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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	<input type="radio"/>	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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	<input type="radio"/>	<input checked="" 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
* Decrease the bargaining power of MNOs.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Decrease the sustainability of MNOs.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Lower the wholesale rates for M2M/IoT related roaming	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the roaming wholesale	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



### 5.3.1 Are there other impacts that should be considered? Please specify

1500character(s) maximum

N/A

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
Decrease the bargaining power of MNOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase the bargaining power of MVNOs	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Lower the wholesale rates for M2M/IoT related roaming	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the roaming wholesale	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase connectivity on the EU Single Market	<input checked="" 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 checked="" 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

1500character(s) maximum

N/A

## 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

*1500character(s)maximum*

N/A

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

	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

*1500character(s) maximum*

N/A

\* 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		Hovedsageligt permanent roaming
2		M2M er ude af RLAH for permanent roaming
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. **N/A**

	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.

*1500character(s)maximum*

TI finder ikke, at 5G ændrer væsentligt ved præmisserne ved roaming. Generelt har enhver kommerciel aftale mellem netværksoperatører positive implikationer for udrulningen og netværksdækningen og bør derfor ikke begrænses.

Nuværende roaming aftaler skal allerede i dag være i overensstemmelse med konkurrencemæssige krav. Dette bør ikke være anderledes for 5G.

5G introducerer dog også Network Slicing, som kan medføre en komplet ny måde, at udbyde roamingtjenester. Det er vanskeligt præcist at vurdere følgerne af Network Slicing, men det kan rykke engrosmarkedet fra at være volume-baseret til mere skræddersyede løsninger i markedet. Samtidig kan muligheden for at tilbyde en Network Slice til roamende kunder også udfordre måden, hvorpå sådanne kunder behandles ift. QoS relativt til egne kunder.

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?

*1500character(s)maximum*

- Narrow-band IoT vil først og fremmest blive udrullet på 4G-roaming (NB-IoT og LTE-M) og vil senere blive intensiveret på 5G SA roaming.



- Narrow-band IoT medfører mange flere opkoblede enheder, der udsender små mængder af data (per enhed).

- Narrow-band IoT vil ændre flere roaming-forretningsmodeller fra en anvendelses baseret tilgang til en tilgang som abonnementsbaseret.

Desuden vil Narrow-band IoT og LTE-M medføre et behov for en anden afregningsform mellem MNO'er, da den nuværende afregningsmodel ikke understøtter abonnementsbaseret afregning. Dette vil medføre yderligere omkostninger hos MNO'er.

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

## 5G and network slicing KEEP 5

	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 checked="" 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 checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 6.3.1 Please explain your answer

1500character(s) maximum

N/A

## 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

1500character(s) maximum

En frivillig handelsplatform kan muliggøre, at MNO'er hurtigere får mulighed for at respondere til behovet for yderligere roamingtjenester, og samtidig tiltrække indbound roaming omsætning, som man ellers ikke ville have opnået. Et sådant

scenarie vil yderligere kommodificere roamingengrosmarkedet med 'spot trading' og dag-til-dag handel. Det vil dog være afgørende, at MNOen kender til sine handelsparter, herunder i forhold til compliance formål.

6.6 Do you agree that:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know /No
* Online trading platforms could be an efficient means to facilitate the negotiation process	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6.6.1 Please explain your answer

1500 character(s) maximum

N/A

## 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 'value-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
* Introduce a European database with value-added services /premium number ranges to be made publicly available	<input type="radio"/>	<input checked="" 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 checked="" 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	<input checked="" 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

TI er enige i spørgsmålene, der er knyttet til 'value added'-tjenester, især problematikken i forbindelse med ukendte prisniveauer for sådanne tjenester i det besøgte land, der faktureres til en høj sats til operatøren i hjemlandet. Der er også svigagtig anvendelse af dette problem, som EU-Kommissionen bør kigge nærmere på.

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

1500 character(s) maximum

Hvis disse reelt var en forpligtelse til at introducere en alarm, bør længden og læsevenligheden af SMS'en overvejes nøje.

TI finder reelt ikke, at 'value added'-tjenester i en roaming-situation er et problem for slutbrugere men hovedsageligt MNOer i deres respektive engros-/detailforretninger.

## 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

* 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 checked="" 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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				<input checked="" type="radio"/>		

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

*1500 character(s) maximum*

Med hensyn til udvidelse af alarmkommunikation fra opkald til fx SMS, bør det sikres, at de løsninger, der implementeres, harmoniseres med løsninger i det øvrige EU. Dels for at sikre ensartet funktionalitet på tværs af landegrænser særligt ved roaming. Dels for at drage nytte af en rationel fælles udvikling af tjenesterne, hvilket også kan være med til at reducere omkostningerne ved de nye tekniske tjenester.

Som det er nu, vil der være en række tekniske udfordringer ved at foretage alarmkommunikation via SMS, hvis man anvender inbound eller outbound roaming. Der er pt. ikke nogen teknisk løsning eller standard, som favner problemet, og kan sikre en pålidelig håndtering af alarm-SMS'er fra danskere i udlandet og udlændinge i Danmark.

Ved inbound roaming vil alarm-SMS'en blive sendt direkte til hjemmeoperatørens SMSC, der vil forsøge at videresende SMS'en som en alarm-SMS til alarmcentralen i slutbrugerens hjemland. Det samme gør sig gældende ved outbound roaming, hvor alarm-SMS'en vil blive sendt til den danske alarmcentral, trods slutbrugeren er fysisk placeret i et andet land. Operatøren har ikke mulighed for at identificere, hvor slutbrugeren er, og derved ikke have mulighed for at sende alarm-SMS'en til det rette lands alarmcentral.

TI opfordrer til, at EU forsøger at opnå en global standard for alarmkommunikation ved SMS gennem GSMA. Alternativt at der laves en europæisk standard.

## 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

*1500character(s) maximum*

Reglerne om rimeligt forbrug bør simplificeres. TI finder, at de eksisterende rammer er for komplekse og ikke funktionsdygtige i praksis, hvilket skaber smuthuller for svindel og misbrug.

### b. Wholesale regulation

*1500character(s) maximum*

Engrosprislofterne bør mindskes i takt med at operatørernes omkostninger mindskes og stigende forbrug af data år-for-år.

### c. Supervision/enforcement, dispute resolution, data collection

*1500character(s) maximum*

N/A



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