

BEREC Report on Transparency and Comparability of International Roaming Tariffs

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Executive summary and Main Findings

In July 2015 BEREC sent a questionnaire to operators and the National Regulatory Authorities (NRAs) in order to gather information on two aspects that are key issues for customers when selecting tariffs for international roaming services: firstly, *transparency*, meaning the availability of clear information about prices and conditions for each tariff, as well as simple procedures for customers to switch between tariffs; and, secondly, the *comparability of tariffs*. By comparability BEREC means the ability for customers to compare different types of tariffs offered by operators and to select the one best suited to their needs and pattern of consumption.

In the questionnaire for NRAs, BEREC focused on information about complaints received by NRAs on transparency issues since July 2014 as well as any information about tariff comparison tools that may be offered by different organizations such as customer associations; recommendations available for customers on how to select the most adequate tariff and any tools and hints for customers to estimate data traffic that may be facilitated by NRAs and any third party (i.e. consumer) associations. The questionnaire for providers was directed at seeking information about tariff structures offered, information for customers on the use of the tariffs and at how to switch between tariffs as well as information and tools for comparing tariffs and to estimate consumption.

Transparency is a key issue in order to be able to take informed decisions. Customers should have easy access to understandable information on prices and conditions for each existing tariff. It should also be possible to switch between tariffs quickly and conveniently.

When BEREC asked whether NRAs had received transparency related customer complaints, 50 % of the NRAs confirmed having received such. Among these, the number of complaints per NRA is very low. The complaints are mainly due to customers not being aware that they are on an alternative tariff. This leads to misunderstandings about the content of the invoice. A few NRAs report complaints regarding the lack of welcome SMS and problems with the cut-off limit for data roaming. There are also some complaints regarding maritime roaming, roaming on board of planes, and charges for usage outside of the EEA. However this is outside of the scope of the Roaming Regulation.

Most of the operators report that they provide extensive information on the conditions and prices for each tariff on their websites and inform customers about tariffs by sending out SMS or USSD (Unstructured Supplementary Service Data) messages. However, the responses indicate that quite a number of operators who offer alternative tariffs do not actively inform

their customers when they reach a time or volume limit and how services are charged when the usage has reached this limit. This is clearly a point where improvement can be made to avoid bill-shock issues and improve customer experience when using alternative tariffs for roaming services. In any case, this information should be available for customers at least on the website and in the contract, as customers may have to pay additional charges without having been informed in advance.

Regarding issues related to switching from one tariff to another, most respondents provide information on their websites, via call centers or points of sale.

Information about consumption and charges for past use may help customers to take informed decisions on selecting a tariff. Results of the questionnaire show that almost all providers that responded to the questionnaire supply historical service records to their customers.

Providing data on real-time consumption is more challenging for roaming services, as it is typically dependant on the collaboration between the home network and the visited network, and the home network does not always have information available on real-time consumption of all services. The most popular way among the providers to supply data on real-time consumption is via call centre agents (67 %). The second choice of providers to delivering data on real-time consumption to their customers is publication of information in customer areas on providers' websites (52 %) followed by interaction via the mobile phone using short codes (51 %).

Specially designed applications available on smartphones or tablets do not seem to be very popular compared to call centres, websites and sending SMS. Nevertheless, applications for accessing historical and real time information are offered by some providers (43 % of all providers offer apps for historical data and 38 % for real-time data). Although BEREC expected that in the short or medium term more applications for tablets and smartphones would be available to customers, this has not happened yet.

With regard to the comparability of tariffs, the responses received show that there is a large variety of different types of tariffs, ranging from linear tariffs (such as the Eurotariff) to daily/weekly or monthly bundles of different services and specific tariffs where domestic prices are combined with different kinds of additional fees. Compared to the previous report, more and more providers offer tariffs where customers can use their domestic bundle when roaming, although generally restricted to EEA countries or within the footprint of the group. More than a quarter of responding operators have at least one "RLAH-like" offer. These are mainly domestic offers including a certain number of minutes, SMS and/or MB, i.e. a limitation in

terms of volume. (32 % of European operators). This trend could be partly due to the impact of political negotiations at European level to end roaming surcharges as of mid-2017.

BEREC welcomes this diversity of tariffs as it increases a customers' ability to adapt and select the most suitable tariff based on their pattern of consumption even though the number of different available tariffs for a European customer varies from country to country. However, choosing from such a wide range of different types of offers makes it more challenging and difficult for customers to make informed and optimal decisions. In summary, the more options customers have, the more difficult it results to compare them and make informed decisions. BEREC will continue to assess the evolution of the current diversity of tariffs.

Regarding the availability of tables and/or tools for comparing different tariffs, customers in general do not have simple access to any information summarising the features of each set of roaming tariffs offered by operators. Due to the high burden of updating information about changing tariffs and the focus of public interest on domestic tariffs, this information on international roaming tariffs is not provided in a comprehensive way by consumer associations, thus limiting the information only to certain recommendations and the analysis of only certain alternative tariffs. In general, there is also a lack of availability of simple tables comparing all tariffs offered by the provider. Currently, international roaming is contracted with the same provider that supplies domestic services, and it may help customers to make informed decisions and compare different tariffs if providers supply tables on their website and in their retail outlets. 57 % of the providers reported supplying a table comparing international roaming tariffs, and almost all of them also provided a link to their website. A closer look, however, at the links showed that a minority of the providers actually allow customers to compare tariffs at one glance, whereas most providers either present the different tariffs separately not allowing for a comprehensive comparison of tariffs, or just publish their own tariffs for intraEU international roaming. When it comes to providing customers with applications to help them to select an adequate tariff, only 9% reported doing so.

Customers must be able to select the most suitable tariff based on their own estimated pattern of consumption. In this regard, BEREC also explored the availability of tools and information for customers to estimate their traffic based on the use of internet services such as e-mail sending/checking, web-page browsing, video streaming, etc. BEREC's analysis shows that customers do not have straightforward and simple access to information and tools to estimate their consumption of data traffic (MB) and prices for usage of roaming services. Although some of the providers supply convenient tools and clear information, this is not the case in general and the situation has not changed significantly since the previous reviews made in 2014 and 2013. This is one of the potential issues that may result in bill-shock as well as customers

underestimating or overestimating traffic when they contract bundles leading to non-optimal decisions. Tools, hints and other information allowing customers to estimate data traffic significantly increase transparency and efficiency in the market.

In general, apart from some isolated cases, NRAs and consumer organizations do not provide tools to help customers to estimate data traffic, but some of them supply information and hints on how to estimate traffic consumption. BEREC identified some good examples such as tools using icons and other customer-friendly interfaces which estimate data consumption that could be used as a reference for the further enhancement and development of new and existing tools that may help customers to make informed decisions. Additionally, something considered as advisable would not only be to provide data traffic estimates in MB, but also the maximum price that customers would have to pay under the Eurotariff. This could help users to better compare the Eurotariff with alternative tariffs.

BEREC will repeat this exercise each year to assess the evolution and advances in increasing transparency and comparability of tariffs.

1 Introduction and objectives of the document

The market for electronic communications has been providing a steadily increasing number of offers. Accordingly, users may find it more difficult to compare the various offers as well as to compare the performance parameters of different services. Specific tools to measure consumption could help to create certainty about the offers in order to allow customers to assess and compare what they pay for and what they use. Regarding service providers, these tools may help them to differentiate their offers more clearly. Especially in the case of data services, considering the increased use of smartphones and tablets, the availability of applications for the most common operating systems would enable customers to take informed decisions based on their patterns of consumption.

The selection of an alternative tariff should be done taking full account of the possibility to use the Eurotariff and of the conditions for the alternative tariff chosen. Such an awareness, together with policies and instruments which allow customers to estimate their consumption and compare international roaming tariffs, will lead to better informed customer decisions.

In this context, and in accordance with Article 19(4) of the Regulation on roaming on public mobile communications networks within the Union (III) (EU) No. 531/2012 (hereinafter "the Roaming Regulation"), each year BEREC will publish information on transparency and comparability of different tariffs offered by operators to their customers.

In line with the provisions set out in the Roaming Regulation, the Report has the following objectives:

1. To investigate specific problems which prevent or impede customers from taking informed decisions. As part of this objective, the Report aims to assess whether offers are transparent, and to investigate transparency issues concerning charges which may be applied and other billing issues.

2. Comparability of tariffs. Under this objective, the report aims to assess how easy/difficult it is for customers to compare different roaming tariffs, especially to compare the Eurotariff with other alternative tariffs, and to identify whether customers are able to take informed decisions in order to select the most suitable tariff based on their needs. The report also includes an overview of the different structure of roaming tariffs offered by the mobile operators.

2 Information collected by BEREC

In order to investigate whether customers face transparent conditions, and are able to compare different tariffs, BEREC prepared two questionnaires addressed to the operators and the NRAs respectively.

With regard to assessing transparent market conditions, the questions focused on the availability of roaming tariffs and the conditions applied (price limitations in terms of volumes or the geographical area, or any other restrictions as well as any linkages to domestic tariffs etc.). Operators were also asked whether they provided transparent information about the start and end of a specific period for a given, time-limited, tariff. Furthermore, BEREC asked whether operators informed their customers about any possible tariffs/charges when a bundle is exhausted or where the valid time period for the tariff elapses, as well as whether bills were itemized. NRAs were requested to provide any information on customer complaints concerning any alleged lack of transparency.

With regard to assessing the comparability of tariffs, BEREC's attention was focused on the availability of tools, applications and any information facilitating the selection of the most adequate tariff to suit the customers' pattern of consumption.

A total of 30 NRAs sent their responses to BEREC.

BEREC received a total of 158 responses from mobile providers operating in EEA countries. Of these 158 responses, 106 corresponded to MNOs and 52 to full MVNOs or resellers.

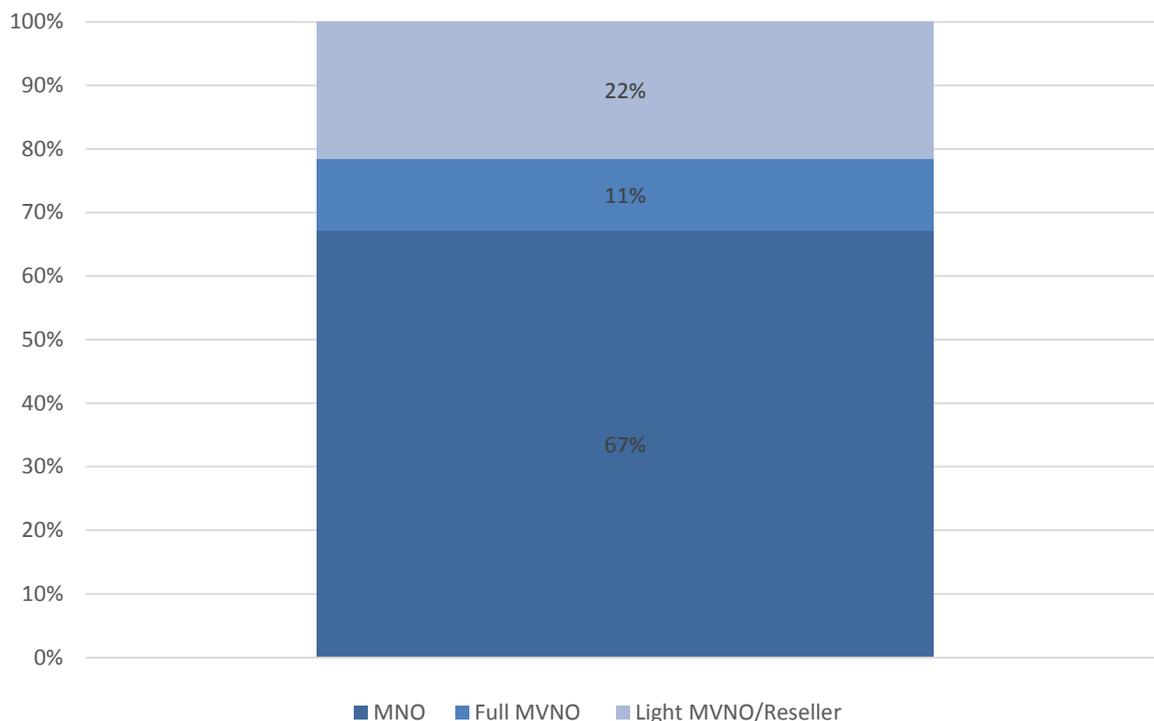


Figure 1: Type of mobile providers responding to the BEREC questionnaire

3 Transparency of roaming services

3.1 Transparency of complaints received by NRAs

50 % of the responding NRAs received complaints on transparency issues since July 2014. This is an increase compared to the previous period, where 45 % of the responding NRAs had received complaints. In general, most NRAs that reported having received such complaints stated that the number is relatively low. The complaints are due to customers not being aware that they are on an alternative tariff. This leads to misunderstandings about the content of the invoice. A few NRAs report complaints regarding the lack of a welcome SMS and problems with the cut-off limit for data roaming. There are also some complaints regarding maritime roaming, roaming on board planes, and charges for usage outside of the EEA. However this is outside of the scope of the Roaming Regulation.

40 % of the NRAs reported that they are aware of problems regarding the clarity or the accessibility of information on international roaming tariffs. This shows an increase compared to last year's result, where 26 % of NRAs reported such problems. Some of these problems are due to customers misunderstanding the difference between international calls and regulated roaming calls.

3.2 Information on switching between alternative tariffs

The majority (around 82 %¹) of providers offering alternative tariffs do not apply any activation charge when their customers switch between any of their tariffs.

For alternative tariffs limited in time, 77 % of the respondents inform their customers actively about the start and the end of the tariff period. They also inform customers about the charges that are applied for roaming services when the alternative pricing period ends. This still means that about 23 % of the providers do not actively inform their customers on what charges are applied after the end of the alternative tariff period.

When customers have contracted a bundle with roaming services that includes a limited number of minutes, SMS and/or limited amount of data services, the majority, (around 77 % of respondents), notify their customers when they reach the limit included in the bundle. On the other hand, this means that there are still some operators that do not inform their customers when they reach the limit included in the bundle. This can be damaging for customers as they could end up paying additional charges without having been thoroughly informed in advance. 91 % of providers offering bundles, inform their customers via SMS, the website etc. about the charges that apply for out-of-bundle consumption.

Providers mainly inform customers about the issues mentioned above by sending them a notification SMS, providing USSD²-based tools or through information on their website. Many operators provide a landing page, or so called MyPage service, or have developed smartphone applications. Some also send newsletters or leaflets. Customers can contact the customer care service via phone or online chat functionality or the points of sale for information on tariffs.

Most respondents provide information concerning switching between tariffs on their websites, via call centers or points of sale. The figure below shows the different channels of information that are used most. Other means include, for example, so called MyPage service, redirection to the web page, IVR³, brochures, invoices, information via emails, TV advertising or via mobile applications.

¹ Providers that do not offer alternatives to the linear Eurotariff are excluded from the calculations in this chapter (they have answered N/A to the questions). In previous reports they were included in the figures.

² Unstructured Supplementary Service Data

³ Interactive Voice Response

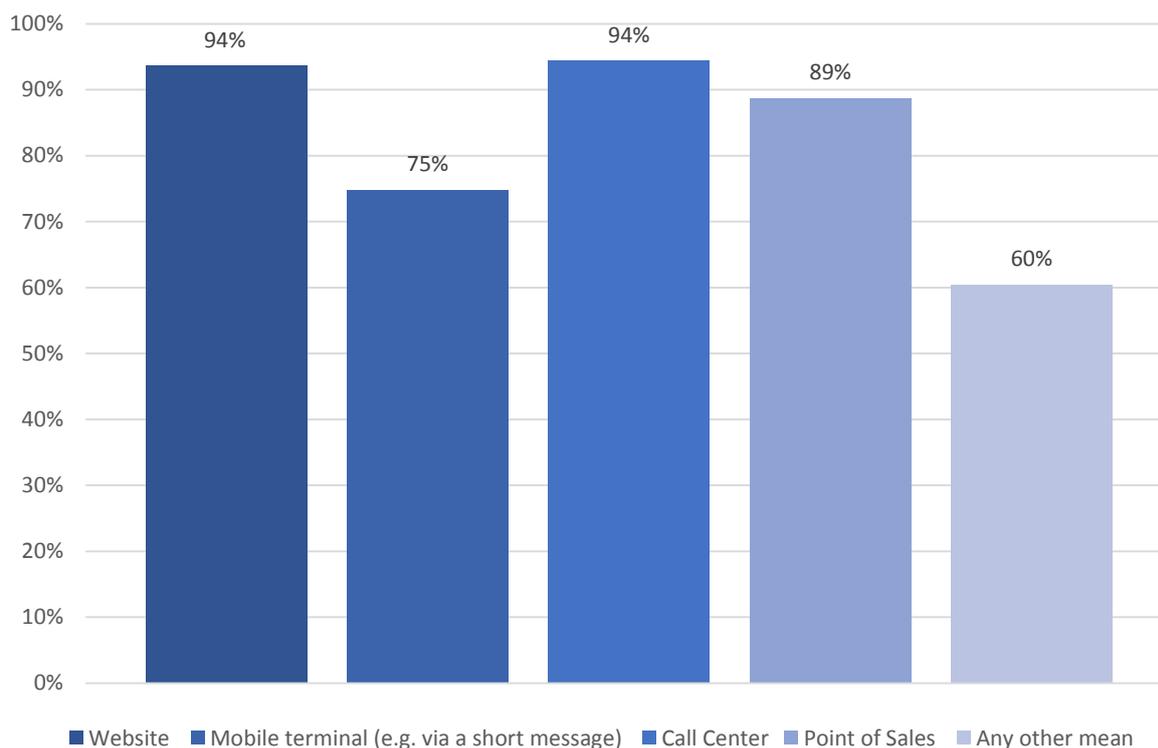


Figure 2: Supply of information concerning switching between tariffs

3.3 Methods of providing information about consumption

This section addresses the methods used by providers to inform their customers on historical and real-time consumption of international roaming services. The questionnaire provides some examples of methods commonly used by providers for providing information about consumption such as the providers' websites, interaction with the mobile terminal of the customer, call centres, applications or any other means specified by the provider.

BEREC notes that, aside from bills, providers are using different methods to provide historical information on consumption and charges, ranging from the customer area of the website, calls to the customer centre and, interaction via the terminal using short codes, to specific applications for smartphones and tablets. The majority of the operators enable their customers to use different methods to access this information.

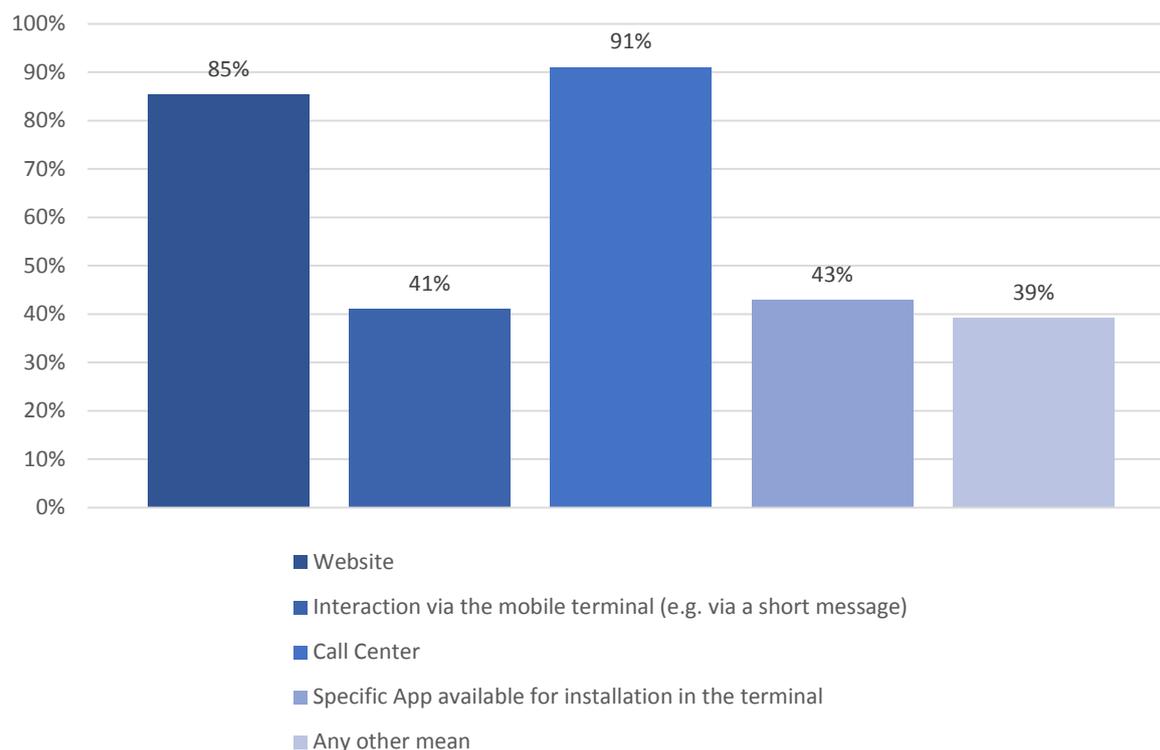


Figure 3: How providers inform about the charges and/or volumes consumption (historical)

Results of the questionnaire show that almost all providers who responded to the questionnaire supply historical service records to their customers. The most used communication channel for delivering historical information to customers is via call centre agents (91 %), followed by the customer area on the providers' website (85 %) and via a specific application for smartphones and tablets (43 %) or interaction via the terminal using short codes (41 %).

As shown in the following figure, similar methods are also used to provide information on real-time consumption.

For clarity reason, "real-time" information in this report also includes information provided in "near" real-time. "Near" real-time means that information on consumption is delivered instantaneously, but it might occur that certain information on roaming consumption is not available yet, since some of the providers get data from their roaming partners within a 24 to 48 hour time lag.

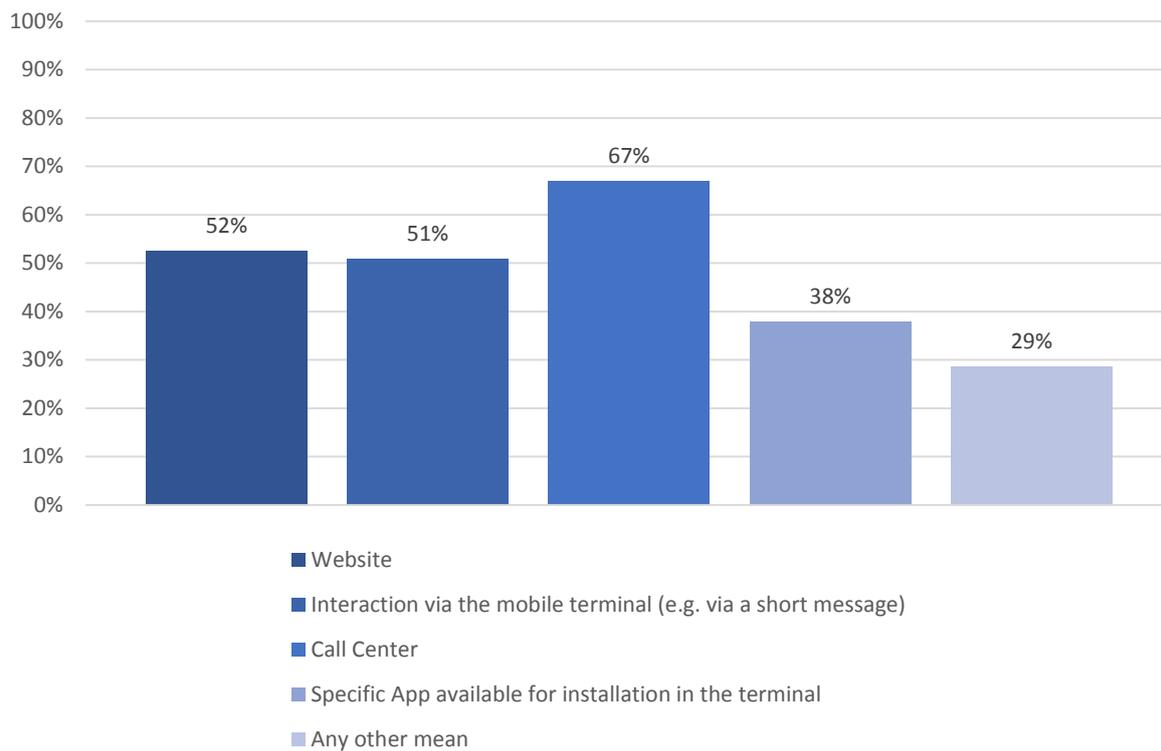


Figure 4: How providers inform about the charges and/or volumes consumption (real time information)

The most popular way among the providers for supplying data on real time consumption are call centre agents (67 %). The second choice of providers to deliver data on real-time consumption to their customers is publication of information in customer areas on providers' websites (52 %) followed by interaction via the mobile phone using short codes (51 %).

There are some methods which require some action by the customer such as dialling a short code or sending a keyword to a short code and upon doing so they receive an SMS giving their call credit and data usage balance.

Specially-designed applications available on smartphones or tablets do not seem to be very popular compared to call centres, websites and sending out an SMS. Nevertheless, applications for accessing historical and real time information are offered by some providers (43 % of all providers offer apps for historical data and 38 % for real-time data). Although BEREC expected that in the short or medium term more applications for tablets and smartphones would be available to customers, this has not happened yet.

BEREC notes that the most popular communication channel used by providers to supply information on the consumption to their customers is the same for historical and real-time supply of information on consumption (call centres agents, as preferred way). When it comes

to supplying historical information, the second preferred communication channel is the customer area on a provider's website, while for the real-time supply of information on consumption, the second preferred way is via the mobile phone using short codes.

BEREC notes that operators provide more or less the same level of transparency when it comes to supplying information on consumption, both historical and real-time consumption, compared with the previous report on transparency and comparability of tariffs.

3.4 Information on volume consumption and charges

This section analyses the provision of separate itemized information relevant to the roaming services, charges and volumes in the monthly bills as well as real-time billing information. The wide adoption of such practices ensures transparency among the European providers with regard to roaming charges as it makes clear how much the subscribers pay and what they get in return.

BEREC asked operators whether customers were provided with service records containing volumes and charges as well as real-time billing information. The information collected on charges and volumes was then separated into information on outgoing voice calls, incoming voice calls, outgoing SMS and data services.

Customers generally have a good knowledge about the roaming charges and the volumes of the regulated roaming services they consume, as about 94 % of the operators deliver the necessary service records to their customers in the monthly bills, both for service charges and volumes.

In addition, only 38 % provide itemized charges and volumes in real-time for calls and 36 % for SMS. 59 % of the operators provide real-time information concerning charges for data services.

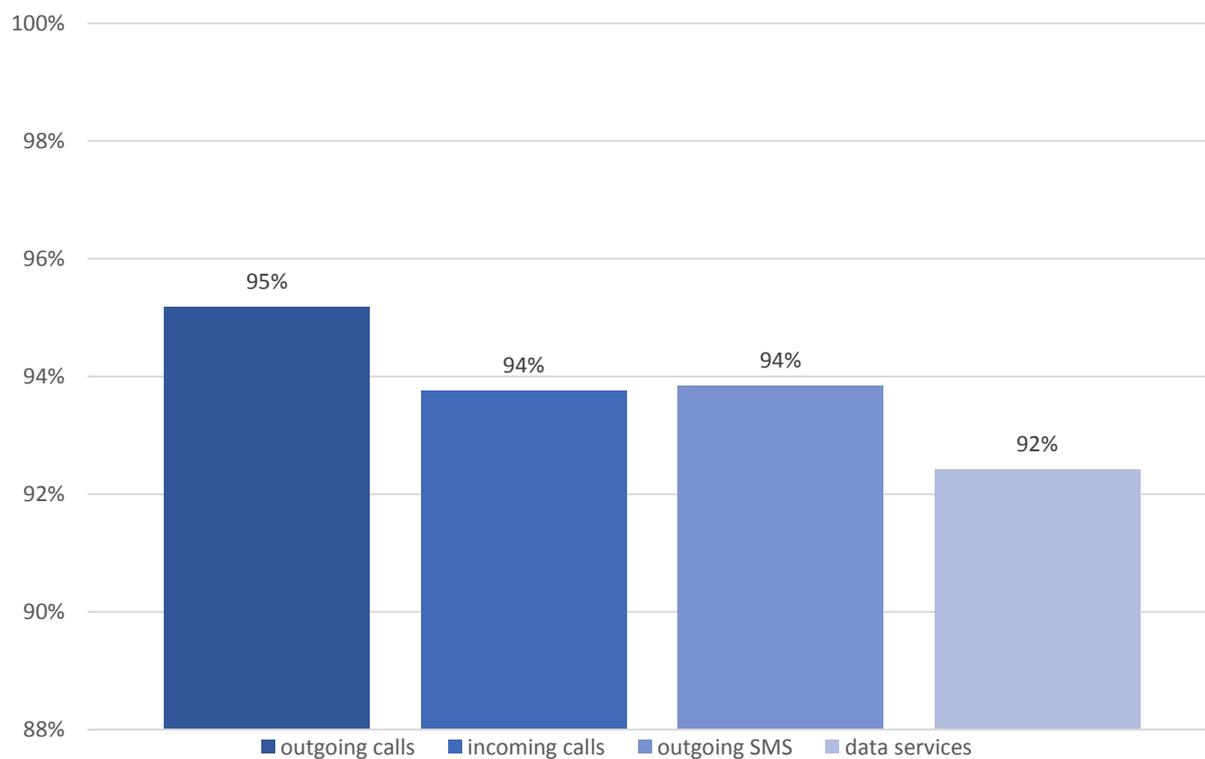


Figure 5: Information for customers about charges for intra-EU roaming (monthly information)

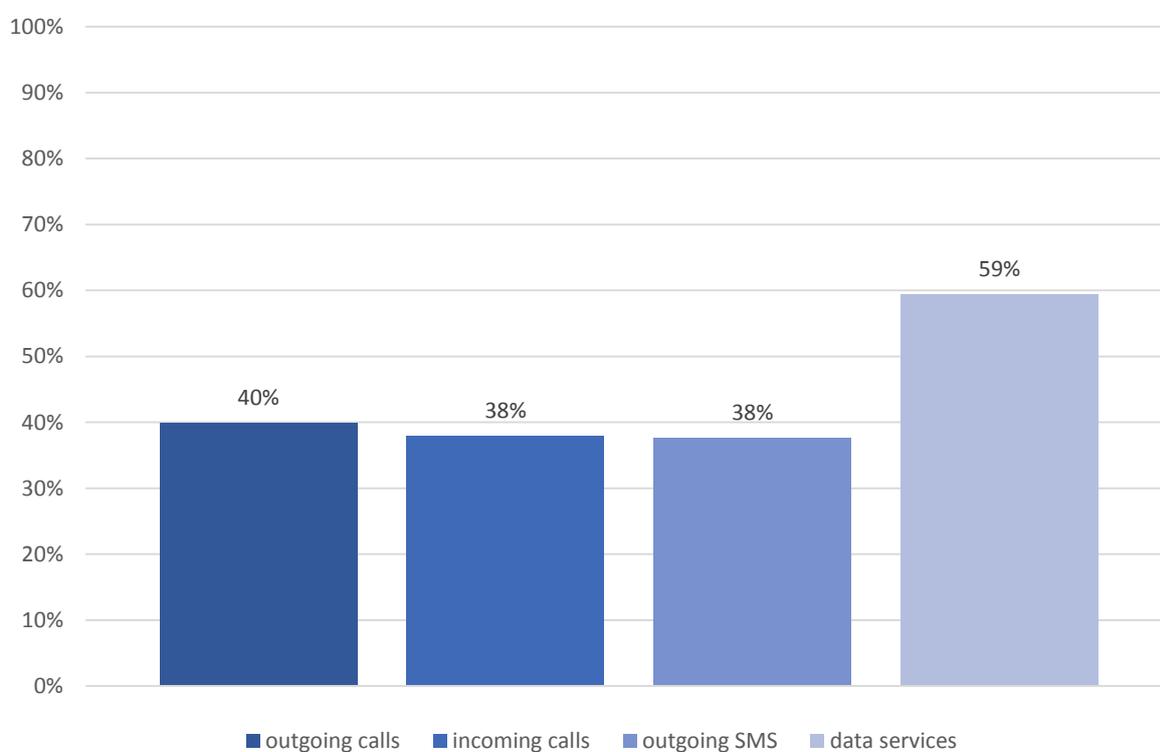


Figure 6: Information for customers about charges for intra-EU roaming (real time information)

BEREC notes that there is a variety of ways to provide prices or volumes for the three services to the customer. Some operators only deliver information on volumes, others only on the prices. In certain cases, operators provide price and traffic information on all three services, but in other cases the records are restricted to one or two services only. Overall there is no significant difference between providing real-time information on prices and volumes regarding the type of service considered.

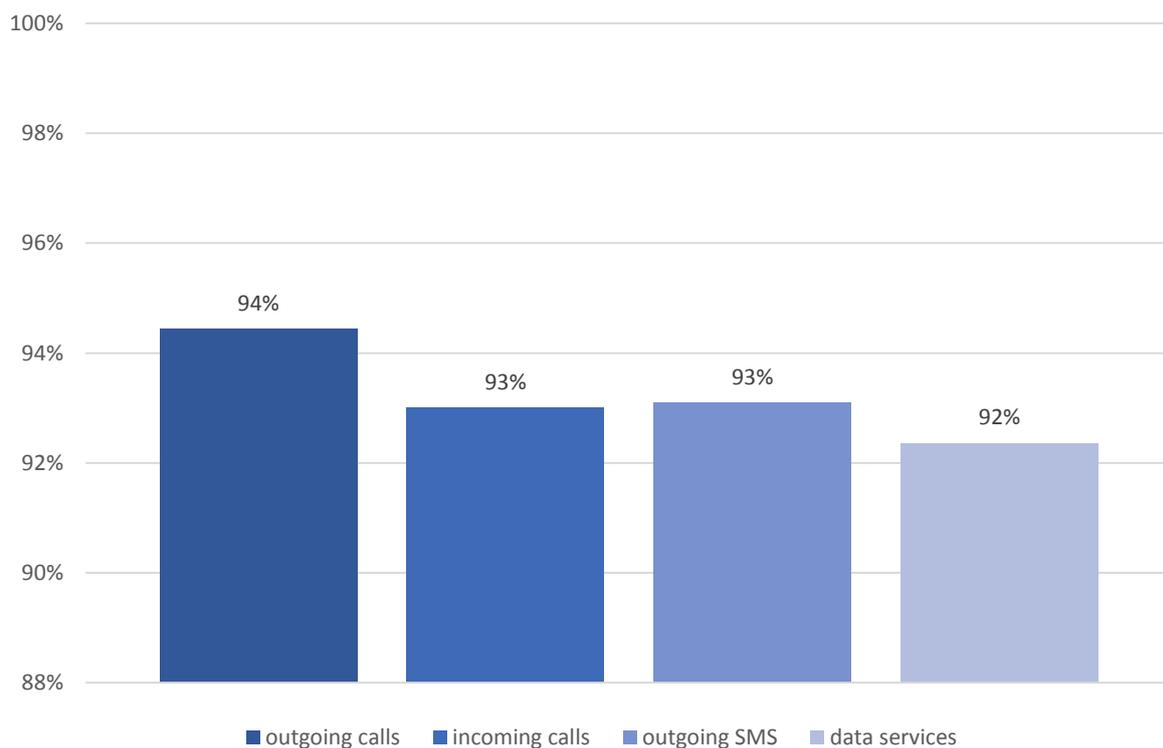


Figure 7: Information for customers about consumption for intra-EU roaming (monthly information)

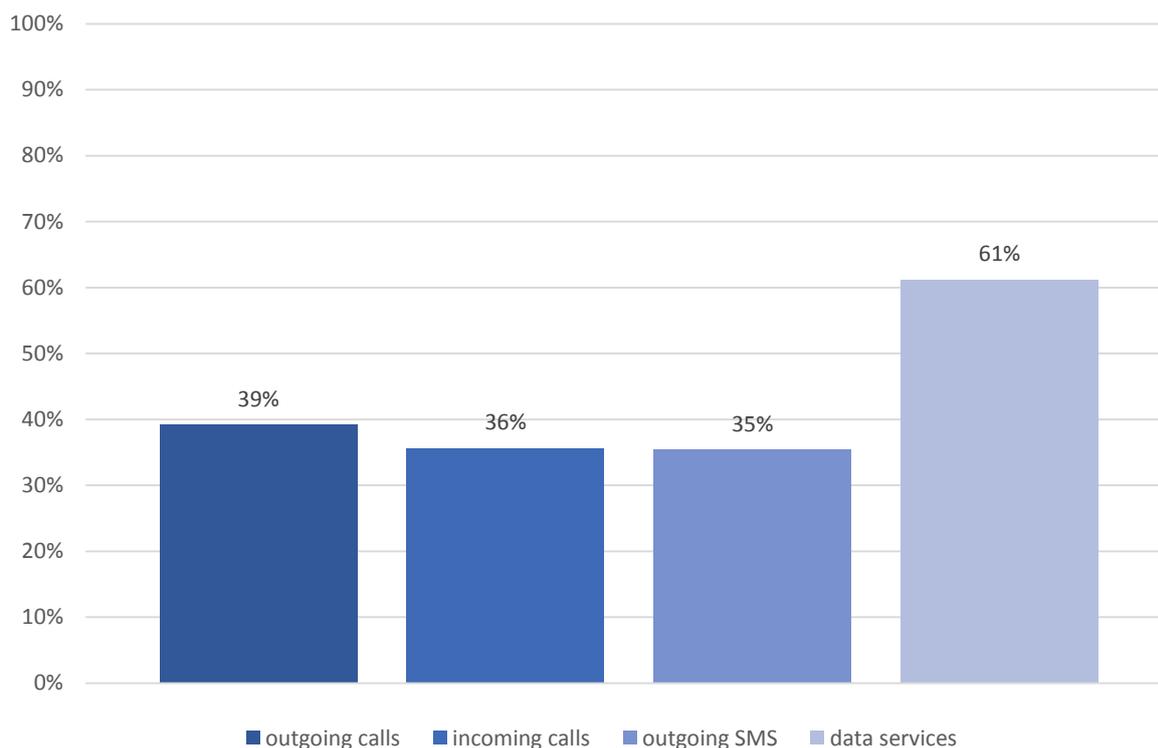


Figure 8: Information for customers about consumption for intra-EU roaming (real time information)

4 Comparability of international roaming tariffs

4.1 Diversity of tariff structures

Problems on the comparability of alternative roaming offers can arise because of many different reasons, either because there is a lack of information, as described in the previous chapter, or due to other factors such as an increasing number of different tariffs, the increasing complexity of tariff structures, as well as bundling of different services. Moreover, with the take-off of tariff plans including roaming volume, the fair-use limits set by the roaming providers in terms of volume or period could leave customers puzzled⁴.

This diversity of offers could lead to non-optimal decisions when customers wish to choose the most suitable roaming tariff. This section gives an overview of the different roaming tariffs that are offered by European operators.

⁴ Especially in the cases of operators who automatically apply travel packages to these customers

So, complexity for customers increases with the number of different alternative tariffs available in their country. Roaming operators in general offer:

- bundles, which mean that a certain amount of units of one or more services (minutes, SMS, MB) is included in a fixed fee for a specified period (day, week, month) or;
- tariff plans where domestic rates are applied for roaming services, i.e. tariffs where customers could use their domestic bundle while abroad without paying (“roam like at home” tariffs) or an additional fee, or paying a daily connection fee for example

This situation should improve when all operators apply RLAH. Depending on the future fair use policies allowed, customers will be in a position to compare roaming volumes as they compare domestic volume.

An overview of the availability of alternative roaming tariffs is shown in Table 1. 45 % of the providers offer tariffs which include a package of minutes, 22 % of the providers offer packages of SMS and 76 % of the providers offer packages of data traffic measured in megabytes (MB). A bit less than half of the roaming providers offer bundle packages including all three services (voice, SMS and data). More than a quarter of responding operators have at least one “RLAH-like” offer. These are mainly domestic offers including a certain number of minutes, SMS and/or Mb, so there is a limitation in terms of volume. (32 % of European operators). This trend must be partly due to the impact of political negotiations at European level to end roaming surcharges as of mid-2017.

	Existing tariffs	Percentage
Bundle of a number of voice minutes	63	45 %
Bundle of a number of SMS	30	22 %
Bundle of data services (a quantity of Mb)	111	76 %
Bundled voice + SMS	40	28 %
Bundled voice + data services	26	19 %
Bundled SMS + data services	12	9 %
Bundled Voice + SMS+ data services	63	45 %

Domestic rates	36	27 %
Connection fee + domestic rates	25	19 %
Certain number of minutes, SMS and/or Mb included at domestic rates	44	32 %

Table 1: Availability of alternative roaming offers

Most of these alternative tariffs include restricted usage or fair-use in terms of time. These limits are mainly set between one week and one month. For bundles of MB there is also a significant number of providers that restrict these tariffs for a period of one day. It should be noted that some offers include time limitations in excess of 30 days, especially RLAH-like offers.

	Existing tariffs	Bundle restricted to one day	Bundle restricted to more than one day and up to a week	Bundle restricted to more than one week and up to a month
Bundle of a number of voice minutes	63	11	10	49
Bundle of a number of SMS	30	5	4	26
Bundle of data services (a quantity of Mb)	111	66	46	69
Bundled voice + SMS	40	7	5	30
Bundled voice + data services	26	7	5	17
Bundled SMS + data services	12	3	3	10
Bundled Voice + SMS+ data services	63	22	10	41

Domestic rates	36	4	2	17
Connection fee + domestic rates	25	5	2	9
Certain number of minutes, SMS and/or Mb included at domestic rates	44	4	0	25

Table 2: Availability of bundles

Very few operators who provide alternative roaming offers restrict the use of them in terms of geographic scope, whether to the group footprint or to certain countries inside the EEA area. Moreover, these alternative offers also include also non-EEA countries. This is especially the case for bundles including voice, data or the three services.

	Existing tariffs	Available in non-EEA countries	Restriction to a limited number of EEA countries	Restriction to the use of the group footprint
Bundle of a number of voice minutes	63	33	17	9
Bundle of a number of SMS	30	20	9	5
Bundle of data services (a quantity of Mb)	111	74	17	13
Bundled voice + SMS	40	17	11	5
Bundled voice + data services	26	12	6	2
Bundled SMS + data services	12	6	3	1
Bundled Voice + SMS+ data services	63	34	11	5
Domestic rates	36	18	11	6
Connection fee + domestic rates	25	16	6	3

Certain number of minutes, SMS and/or Mb included at domestic rates	44	21	12	9
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Table 3: Characteristics of alternative offers in terms of geographic scope

Contrary to paying bundles, when a roaming volume is included in the domestic offers, customers could compare the offers more easily and take into account roaming services when they chose their domestic offer, i.e. the availability of domestic offers in roaming situations. Nevertheless, the variety of fair-use limitations, due to the variety of domestic offers complicates the choice process of the most suitable offer for the customer.

To sum up, comparing prices for roaming services is complicated by the wide range of possible usage patterns (frequent traveller versus occasional traveller) and the detailed variations in price levels and price structures (e.g. additional bundle tariffs, RLAH plans for a restricted time period, a restricted number of countries/networks etc.). On the other hand, the increase of approaches to “roam like at home” offers as per the default alternative tariffs could permit the customers to also consider roaming services when they purchase their bundle. In order to find the best deal customers would need to analyse their travel behaviour (how often they travel, inside or outside EEA) as well as their roaming consumption pattern (number of calls made and received, number of SMS and data services used), which is unfortunately quite difficult to anticipate, especially for data services.

Nevertheless, given the alternative tariffs, especially approaches to “roam like at home” offers, BEREC invites operators to be as transparent as possible in their fair-use limitations and also invites operators and customer associations to consider providing practical examples of roaming usage (including voice, SMS and data) which might illustrate when it might be advantageous to take up an alternative roaming offer from an existing provider in a similar way or another offer that includes per default roaming volume.

4.2 Availability of up-to-date information on existing tariffs

In many EU Member States, the variety of roaming services for customers is highly limited, and when there are alternative offers, it is not usually convenient for customers (particularly for light and moderate users) to compare international roaming tariffs and choose the right package from different providers. Roaming services are sold as additional services in a bundle which usually includes domestic mobile access. In the retail market, the focus of competition is on domestic services, due to customer preferences and the fact that the bulk of them spend far more on domestic services. All these different factors significantly influence customer

choices and the costs of services and can make any comparison difficult. In any case, availability of information comparing different tariffs at least for each provider is a first step to empower customers to take informed decisions on roaming offers.

Tables on providers' websites comparing tariffs available to customers

BEREC asked whether providers supply any table or tool on their websites that enables customers to compare the prices and terms and conditions of the tariffs available for intra-EU/EEA international roaming.

57 % of the providers reported supplying a table comparing international roaming tariffs, and almost all of them also provided a link to their website. A closer look at the links showed, however, that only a minority of the providers actually allow customers to compare tariffs at one glance, whereas most providers either present the different tariffs separately (thereby not allowing a comprehensive comparison of tariffs) or just publish their own tariffs for intra-EU international roaming. When it comes to providing customers with applications to help them in the selection of an adequate tariff, only 9 % reported doing so.

Tables and assessment from consumers associations and other organizations

BEREC asked NRAs if consumer associations or any other organizations provide tables, or any other information, that allows for the comparison of tariffs for international roaming offered by different operators, as well as access for customers to publicly available reports comparing international roaming tariffs.

Approximately 22 % of the responding NRAs are aware of such comparison tables. These NRAs kindly provided links from consumer associations. Unfortunately, it proved that the information supplied does not cover all of the possible tariff plans for all of the providers. The focus is mainly on general information about the Eurotariff and non-regular information on alternative tariffs for customers. Some websites also give recommendations on how to prevent bill shock. The number of consumer associations or other organizations providing applications for customers to decide on which type of tariff to select is quite restricted (about 8 %).

Only 8 % of the NRAs say that reports on the comparison of international roaming tariffs are provided by the consumer associations. Those reports compare tariffs for international roaming from different operators at a particular moment in time. BEREC believes that providing such a comprehensive tool would consume too many resources for those organizations as they would have to closely monitor a variety of tariff plans in real time in order to keep the information updated. Additionally, for most customers, international roaming is of interest only at certain times of the year (usually during holiday periods) compared to domestic

services where real time comparison tools are of interest throughout the year and are readily available.

Tables with tariffs on NRA websites

BEREC noticed that more and more NRAs are providing general recommendations for customers which may help them to select the most suitable international roaming tariff. This year, 16 of the responding NRAs reported that they publish such information (53 %), whereas in 2014, only 30 % of the responding NRAs reported to do so. However, a closer look at the links showed that a certain part of the information consisted of links to the websites of providers, general information, information on caps for international roaming tariffs and some advice on how to cope with data roaming usage (bill-shock and/or advice on how to switch off roaming). A few NRAs also mentioned they published a press release just before the summer holiday to inform consumers about roaming tariffs.

BEREC also wanted to know whether NRAs provide up-to-date information comparing tariffs for international roaming from different operators on their websites. 34 % of the responding NRAs actually provide such information and supplied a link, which was often the same link as the one that was leading the customers to the general recommendations. As was seen for operators in the previous section, it turned out that getting a comprehensive overview of all of the different tariff plans is also quite difficult for NRAs. NRAs supplied general information about the Roaming Regulation and the caps applied, and in some cases supplied links to the websites of providers where customers could find international roaming tariffs.

BEREC observes that, as with consumers associations, it is not easy for NRAs to provide a comprehensive comparison tool. In the case of NRAs, this is partly due to legal obstacles but also because this is not considered the responsibility of an NRA but rather the task of the market players. Additionally, as happens also with consumer associations, the burden of resources required for having up-to-date information on existing roaming tariffs is high and may inhibit initiatives in this area.

21 % of the NRAs have produced publicly available reports on the comparison of international roaming tariffs, where the comparison between the Eurotariff and alternative tariffs is an example of study. Mostly, this information was embedded in a broad report covering the prices in the mobile market in general. 17 % of NRAs provide applications available for customers to decide on which type of tariff to select based on an estimation of consumption for international roaming.

4.3 Tips for customers to estimate data traffic

In order to compare roaming tariffs, it is necessary for customers to estimate their usage of mobile data traffic. A customer may make an estimation based on for example usage patterns or the need for different services while travelling abroad. In order to be able to make an informed decision on the most suitable roaming tariff, a user would need to access this information in a clear and understandable way.

Although estimating consumption of voice and SMS is not straightforward, understanding the relation between the consumption of roaming call minutes or SMS and the price to be paid, is in general more clear compared to estimating the consumption of data services. In case of data, calculating the consumption is quite complex since, contrary to voice or SMS, each different data service or application may require a different amount of data consumption. For example, even if a user manages to forecast the number of emails expected to be received in a certain period, the amount of traffic may deviate from the estimation depending on for example the size of attachments in emails.

BEREC considers that the customers' ability to estimate the consumption of roaming traffic is vital in order to compare international roaming tariffs and select the most suitable tariff. Therefore, any tips for estimating data usage in advance provided by NRAs, operators, consumer associations and other organizations would help customers to select the best tariff corresponding to their usage patterns.

In order to review the users' access to the information necessary for making informed decisions, BEREC asked NRAs and providers whether they offered information, applications or other tools to estimate the consumption of services.

Around 10% of the responding NRAs reported having published applications to help customers to estimate the data traffic consumption of Internet services (e.g. web browsing, e-mails, specific applications etc). Around 7 % of the responding NRAs reported consumer associations or other organizations providing these applications in their Member State. Around 18% of the NRAs reported providing applications for customers to decide on what type of tariff to select based on an estimation of consumption. Those NRAs and consumer associations which have published information concerning international roaming tariffs usually provide general tips and information on the use of data roaming services and the tariffs of providers.

Around 35 % of the responding providers reported that they provide information or tools for estimating data consumption and around 9 % reported providing applications for selecting the most adequate tariffs based on consumption.

According to the responses there are two main types of solutions to provide tips for customers on estimating data traffic consumption in order to select the tariff. Some providers offer tools to estimate the data traffic for different types of services, such as the amount of MB required for receiving an email or video streaming, or downloading an application etc. Some of these tools may also be used for the estimate of data consumption in general.

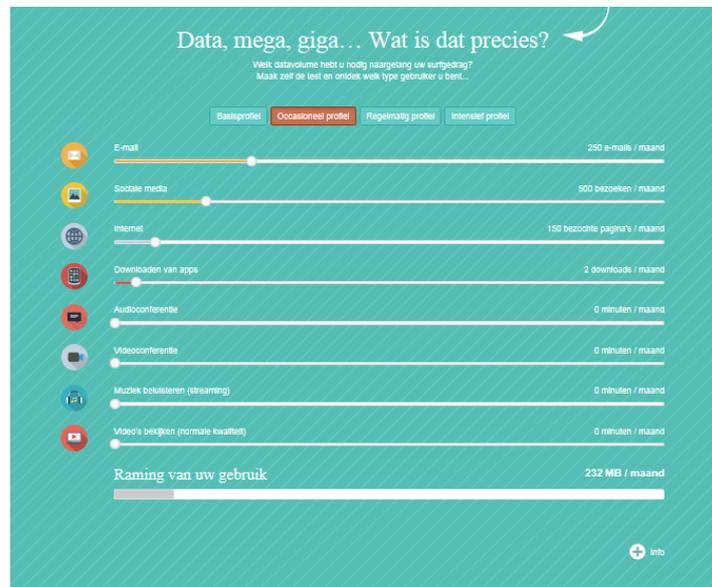


Figure 9: Example of application for estimating data traffic usage and different user profiles.⁵

In addition, some providers describe how different Internet services such as e-mail, web browsing, video streaming, the use of social networks etc. can be combined for each roaming tariff. In this case, the starting point may be providing information of different tariffs including information about the typical usage patterns connected to the tariffs plans.

⁵ The snapshot is from the website <http://www.surfmobiel.be/>

The image shows a comparison of four mobile service plans, each with a target audience at the top:

- Plan S:** Targeted at users who are rarely on the move. Price: €4.97 (€5.25 per month). Features: 100 min to and in Europe, 100 MB, unlimited messaging, and a 100-test app suite.
- Plan M:** Targeted at users who are occasionally on the move. Price: €9.97 (€10.25 per month). Features: 150 min to and in Europe, 500 MB, unlimited messaging, and a 200-test app suite.
- Plan L:** Targeted at users who are regularly on the move. Price: €14.97 (€15.25 per month). Features: 200 min to and in Europe, 1.5 GB, unlimited messaging, and a 300-test app suite.
- Plan XL:** Targeted at users who are often on the move. Price: €22.97 (€25.25 per month). Features: 400 min to and in Europe, 3 GB, unlimited messaging, and a 400-test app suite.

Each plan includes details on international roaming, messaging, data usage, and app suite options. A 'Subscribe' button is visible at the bottom of each plan card.

Figure 10: Example of information provided by an operator to allow for traffic estimation based on the use of different services.⁶

In conclusion, although some of the providers supply convenient tools and clear information on data consumption in order to help with choosing the most adequate roaming tariffs, such services and applications are not very common. However, all the tools, tips and other information allowing customers to estimate consumption of data traffic increase transparency and efficiency in the market as customers can make better informed decisions.

Although providers' websites are an adequate place for customers to access these types of tools, BEREC encourages NRAs, consumer associations and other organizations to also provide tools for users to estimate their mobile data consumption.

⁶ The snapshot is from the website <https://joinexperience.com/en-Lu/mobile>.

Annex 1: Questionnaire sent to NRAs

1.- Identification	
Name of the NRA:	<input type="text"/>
Country:	<input type="text"/>
Contact person for doubts in the questionnaire:	<input type="text"/>
e-mail contact person:	<input type="text"/>
2.- Questions on transparency	
2.1.- Complaints on transparency (received from July 2014)	
Have you received complaints from customers on transparency issues?	<input type="text" value="Yes/No"/>
If yes, please describe the issues most cited by customers as transparency issues	
<input type="text"/>	
Are you aware of any problems or issues relating to a) the clarity or b) the accessibility of information on International Roaming tariffs provided by any of your operators?	<input type="text" value="Yes/No"/>
If response to previous question is "yes", please provide details below:	
<input type="text"/>	

3.- Information available to customers in the NRA website facilitating comparison of tariffs made public from July 2014	
Is there updated information in your website comparing tariffs for international roaming from different operators?	Yes/No
If yes, provide the link	
Have you produced any publicly available report on comparison of international roaming tariffs?	Yes/No
If yes, provide the link	
Do you publish any set of general recommendations for customers in order to help them to select the most adequate international roaming tariff?	Yes/No
If yes, provide the link	
Is there any application provided by the NRA available for customers to decide on which type of tariff to select based on estimation of consumption for international roaming?	Yes/No
If yes, provide the link	
Do the NRA provide any application or information for customers to estimate data services consumption based on the estimated use of Internet Services as web browsing, e-mails, and specific applications as Google Maps or Whatsapp?	Yes/No
If yes, provide the link	

4.- Information available to customers provided by consumer associations or other organizations facilitating comparison of tariffs (made public from July 2014)	
	Yes/No
Do customers associations or any other organization provide tables or any other information comparing tariffs for international roaming from different operators?	<input type="checkbox"/>
If yes, provide the link/s	
	Yes/No
Have customer associations or any other organization produced any publicly available report on comparison of international roaming tariffs?	<input type="checkbox"/>
If yes, provide the link	
	Yes/No
Have consumer associations or any other organization publish any set of recommendations for customers in order to help them to select the most adequate international roaming tariff?	<input type="checkbox"/>
If yes, provide the link	
	Yes/No
any other organization available for customers to decide on which type of tariff to select based on estimation of consumption for international roaming?	<input type="checkbox"/>
If yes, provide the link	
	Yes/No
Do customer associations or any other organization provide any application or information for customers to estimate data services consumption based on the estimated use of Internet Services as web browsing, e-mails, and specific applications as Google Maps or Whatsapp?	<input type="checkbox"/>
If yes, provide the link	

5.- Any other input that can be considered useful by the NRA									
Please, include here any additional information that you consider that can be useful for the BEREK report on transparency and comparability of tariffs									

Annex 2: Questionnaire sent to Operators

<u>1.- Identification</u>							
Name of the provider	<input type="text"/>						
Country	<input type="text"/>						
Type of provider (mark with a cross in the corresponding cell)	<table border="1"><tr><td><input type="checkbox"/></td><td>MNO</td></tr><tr><td><input type="checkbox"/></td><td>Full MVNO (using own MNC)</td></tr><tr><td><input type="checkbox"/></td><td>Light MVNO/Reseller (no own MNC)</td></tr></table>	<input type="checkbox"/>	MNO	<input type="checkbox"/>	Full MVNO (using own MNC)	<input type="checkbox"/>	Light MVNO/Reseller (no own MNC)
<input type="checkbox"/>	MNO						
<input type="checkbox"/>	Full MVNO (using own MNC)						
<input type="checkbox"/>	Light MVNO/Reseller (no own MNC)						

2.- Structure of tariffs for international roaming (intra-EU) alternative to linear Eurotariffs

2.1.- Structure of alternative tariffs

Please, respond yes/no in the corresponding cells.

If there are several tariffs qualifying for any row, you can mark as yes several columns for that row if different tariffs have different time limits or conditions

	Existing tariff? (Yes, No, Not Applicable)	Time limit to use the bundle restricted to one day? (Yes, No, Not Applicable)	Time limit to use the bundle restricted to more than one day and up to a week? (Yes, No, Not Applicable)	Time limit to use the bundle restricted to more than one week and up to a month? (Yes, No, Not Applicable)	<u>Is this tariff available in non-EEA countries?</u> (Yes, No, Not Applicable)	Is this tariff restricted to a limited number of EEA countries (Yes, No, Not Applicable)	Is this tariff restricted to the use of the group footprint? (Yes, No, Not Applicable)
Bundle of a number of voice minutes							
Bundle of a number of SMS							
Bundle of data services (a quantity of Mb)							
Bundled voice + SMS							
Bundled voice + Data Services							
Bundled SMS + Data Services							
Bundled Voice + SMS+ Data Services							
Domestic rates							
Connection fee + Domestic rates							
Certain number of minutes, SMS and/or Mb included at domestic rates							
Other ¹							

¹In case that other tariffs exists, please, describe in the box below

3.2 Non linear tariffs

	Yes, No, N/A
Are there any activation charges applied when switching between any of the tariffs?	
Do you inform customers actively about the start and end of the tariff period for tariffs limited in time?	
tariffs/charges they have to pay for roaming services, when their alternative tariff period ends?	
Regarding bundles, do you inform customers using an alternative tariff (via SMS, website, etc.) about the charges applied for out of bundle consumption?	
Do you inform customers actively when they reach the limits included in the bundle ?	

Please, describe how do you inform customers about the issues addressed in the previous questions

3.3 Switching between tariffs

Where do you provide information concerning switching between tariffs ?

	Yes, No, N/A
Website	
Mobile terminal (e.g. via a short message)	
Call Center	
Point of Sales	
Any other mean (please specify)	

If "Any other mean" has been marked as "Yes", please describe

3.4. Information for customers about charges and consumption for intra-EU roaming

	Historical information (bill)		Real Time Information	
	Charges	Volumes	Charges	Volumes
Do you provide separate itemized information on International Roaming intra-EEA outgoing voice calls?				
Do you provide separate itemized information on International Roaming intra-EEA incoming calls?				
Do you provide separate itemized information on International Roaming intra-EEA SMS sending?				
Do you provide separate itemized information on International Roaming intra-EEA data services?				

In case you are providing information for charges and/or volumes consumption, please, identify how this information is provided to customers

	Historical	Real time
	Yes, No, N/A	Yes, No, N/A
Website		
Interaction via the mobile terminal (e.g. via a short message)		
Call Center		
Specific App available for installation in the terminal		
Any other mean (please specify)		

If "Any other mean" has been marked as "Yes", please describe

4. Information and tools to compare tariffs for intra-EEA International Roaming**4.1. Tables comparing all international roaming intra-EU tariffs**

	Yes, No, N/A
Is there available any table for customers comparing conditions and prices for all tariffs available for intra-EU international roaming in your website?	

If yes, please, supply the link

4.2. Tools for selecting the most adequate international roaming tariff based on estimation of consumptions

	Yes, No, N/A
Do you provide customers with any application to help in the selection of the most adequate tariff for his/her pattern of consumption?	

If yes, please, supply the link

4.3 Information for customers on estimating data traffic consumption

	Yes, No, N/A
Do you provide customers with information on how to estimate data services consumption based on the estimated use of Internet Services as web browsing, e-mails, and specific applications as Google Maps or Whatsapp?	

If yes, please, supply the link

Where the information about the billshock measures for alternative tariffs is available

5. Any other input that can be considered useful by the provider

Please, include here any additional information that you consider that can be useful for the BEREK report on transparency and comparability of tariffs

