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Excellence in Business

Assessment of the cost of providing wholesale voice call termination services on fixed networks in the EU/EEA countries – SMART 2018/0014

DATA GATHERING MANUAL – *GENERAL INSTRUCTIONS*

Axon Partners Group

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Contents

1. Introduction

The European Commission (hereinafter "EC") commissioned Axon Partners Group Consulting S.L.U. (hereinafter "Axon Consulting" or "Axon") for the "Assessment of the cost of providing wholesale voice call termination services on fixed networks in the EU/EEA countries[1]" ('the Project').

As described during Workshop 1 held on 23 October 2018 at the EC's headquarters[2], the EC has deemed relevant to carry out a cost study to understand the costs of providing fixed termination voice services in EU/EEA countries.

The current phase of the Project involves gathering information regarding fixed telecommunication networks from the 31 EU/EEA countries. Therefore, we are issuing a Data Request Form (hereinafter, "the Form") attached to this document that should be returned to the EC with the requested information, following the instructions described in this document.

In order to anticipate this information request, we have divided the Form into two excel files, the first one delivered at an earlier date than the second one, as follows:

- 20181204 – Axon Consulting – Data Request Form for the EC's FTR cost model – 1st File.xlsx: Shared with stakeholders on 4th December 2018.
- 20181210 – Axon Consulting – Data Request Form for the EC's FTR cost model – 2nd File.xlsx: To be shared with stakeholders on 10th December 2018.

Please note that both excel files are complementary and independent. Therefore, stakeholders should start working on providing the information of the 1st File from the day it is delivered (rather than waiting until the 2nd file is delivered on 10 December 2018).

[1] SMART 2018/0014

[2] A video version of the workshop is available at:
https://webcast.ec.europa.eu/fixed-termination-rates-workshop-23-10-2018

Important Notes:

- The Data Request Form will be composed of two separate Excel Files shared with you on different dates: (i) 4th December and (ii) 10th December.

- As the two Excel files are independent, work to reply to each should start as soon as the EC/Axon team delivers each Data Request Form.

The main objectives of this document are to:

- Describe the data gathering process, the role of each party involved, the deadlines and the contact protocols (section 2).
- Describe the format of the Form Files and provide instructions to fill them in (section 3).

A separate manual ("Summary of the requested information") will be shared on 10th December 2018, providing thorough descriptions of the worksheets included in the Form, the information requested in each section of these worksheets and the explanations about how information should be calculated and provided. Please note that excel files are self-explanatory (with detailed comments and explanations) and, therefore, the manual should be viewed as simply complementary.

Important Note: We strongly recommend that sections 2 and 3 are read by any person in charge of filling in, providing and/or reviewing information requested in the Form. Additionally, the reader can refer to the "Summary of the requested information" for a more detailed description of the information requested in each worksheet.

In case you have questions regarding the information requests and/or the descriptions provided in the Form, we advise consulting the manuals prior to addressing any question to your national regulatory authority, in line with the approach described at our Workshop on 23 October 2018.

2. Description of the data gathering process

This section provides further details on the data gathering process and should be read by anyone involved in the process of providing information, reviewing information and/or filling in the Form. In the following subsections we outline:

- Process for submitting the information (Section 2.1).
- Deadline to submit information to the EC (Section 2.2).
- Clarification process (Section 2.3).
- Roles (Section 2.4).
- Treatment of confidential information (Section 2.5).

2.1. Process for submitting the information

The information requested should be delivered by NRAs to the EC using only one filled Form for each file. In this regard, the requested information should be representative of the entire market of the NRA's country.

In general, unless otherwise stated, the information reported by NRAs needs to refer to values representative of the entire market (such as market totals or market averages, depending on the specific parameter[3]). Consequently, if NRAs gather this information from operators, they are expected to go through the following process:

- NRAs will share each of the Form files with N number of operators, asking them the specific information they will need to provide.
- Operators will return their filled in Form files to the NRA (the NRA will receive N filled in Forms).
- NRAs will have to manage the information provided by operators through the N Form files to come up with a single value to be included in the Form to be submitted to the EC/Axon. The treatment NRAs should give to this information (i.e. whether they should sum up the different values, average them, etc.) is described in detail in the "Summary of the requested information" (separate manual) for each worksheet of the Form.

[3] Please note that specific indications are provided for each requirement in both the Form and the Manuals.

In the case where information provided by you may be limited to a fraction of your country's market (rather than being reflective of the entire country's market), this should be clearly indicated in the space provided for comments.

The above process has been stablished because it is considered to be the best option to:

- Maximise the quality of the information provided, taking advantage of NRAs' experience and sensitivity of their markets.
- Reduce the amount of confidential information submitted to EC/Axon, adding or averaging confidential numbers representative to specific operators when more than one operator is providing information.

Section 2.4 provides more details about the role of each party during the data gathering process.

The European Commission has created a private space named "Fixed Termination Cost Study_2020" on its CIRCABC platform to allow NRAs to upload their replies to the information request[4]. The Form files filled in by each NRA should be uploaded to your country folder in this private space, in particular, to the sub-folder named "Replies to info requests_4 Dec – 1 Feb", before 1 February 2018. Please note that operators may need to provide the information in the Form to their national regulatory authority prior to this date, on the date agreed with the national regulatory authority. For any issues regarding access to the CIRCABC platform, please get in touch with TUOVILA Tarja (CNECT): Tarja.TUOVILA@ec.europa.eu.

Important Notes:

- Filled-in forms should be submitted to the EC by NRAs.
- Any questions from operators should be addressed to their national regulatory authority (not to the EC or Axon).

2.2. Deadline to submit information to the EC

Final filled-in Forms have to be uploaded by NRAs to the EC's CIRCABC private space by **1 February 2019.**

[4] Click to access to the CIRCABC space.

2.3. Clarification process

We strongly suggest that parties involved in the data gathering process (providing information, reviewing information and/or filling in the Form files) read the manuals and perform a thorough review of the Form at the beginning of the data gathering process. This is important to identify potential questions as soon as possible and allow enough time for reaction.

We expect most of the potential questions to be clarified through the descriptions provided in the Form and the details provided in the corresponding part of Summary of the requested information.

However, if there are still any questions or doubts about the information requested or how to fill it in the Form, questions can be addressed to the EC through the NRAs. In order to streamline this process, we encourage NRAs, if possible, to send only one set of questions to the EC (including questions from their national operators) (refer to section 2.4 for indications on how to manage interactions between NRAs and operators).

When addressing questions, the EC/Axon team will share any clarifications with all NRAs through the contact network that has already been created with delegates from every NRA. In turn, NRAs will be able to share these clarifications with their national operators.

Important Notes:

- In your questions to NRAs/EC/Axon, please indicate whether any content on them should be treated as confidential and therefore should not be shared with other parties. Please note that any information that is not marked as confidential shall be considered non-confidential by the EC/Axon team.
- Operators/NRAs should seek for clarifications to their questions in the Summary of the requested information prior to addressing them to NRAs/EC/Axon.
- Operators should address their questions to NRAs (no questions should be sent directly from operators to the EC/Axon).
- The EC/Axon team will share any clarifications with all NRAs through the contact network that has already been created with delegates from every NRA and NRAs should share these clarifications with their national operators.

2.4. Roles

The following subsections describe the roles of the main parties (NRAs and operators) involved in this data gathering process and provide indications and suggestions on how to organise the work.

2.4.1 NRAs' role

As explained during the workshop 1, NRAs are expected to act as the interface between the EC and national operators and as operators' point of contact with the EC in this data gathering process.

In particular, NRAs are expected to conduct the following tasks:

- **Fill in the information already available within NRAs** (for instance from their market/statistic reports, BULRIC models – if updated -, etc). It is common for NRAs to collect demand information periodically (such as the number of users and traffic). This information could be sufficient to fill, for example, domestic traffic information in the "HISTORIC DEMAND" worksheet.
- **Request operators the information which is not available within NRAs**
- **Collect, review, combine and submit questions from operators to the EC** (see section 2.1).
- **Review information provided by operators**. NRAs' have been in charge of regulating national telecommunications markets, including fixed voice call termination services. Therefore, NRAs may have an interest in ensuring that the information provided by operators is consistent with that used in national regulatory proceedings. Furthermore, NRAs should ensure consistency between the information provided by their domestic operators in the context of national proceedings. For instance, when disaggregated traffic information is provided by operators, NRAs can check that total demand is aligned with the information they have (from market/statistics reports). We understand that NRAs may have no information or sensitivity to assess some of the information requested. In this case, such limitations should be stated in the space provided for comments in the applicable section of the Form files.
- **Request clarifications from the operators** if any inconsistency is found by the NRA while carrying out the previous task.
- **Deliver the final filled in Form files to the EC** (see section 3 about how to submit the information) **before the deadline** (see section 2.2).

In order to perform the above tasks, we suggest following the plan described below:

1. Identify information that is already available within the NRA and information that should be requested to operators. This activity could already be initiated on 31 October 2018 (date when the draft version of the Form and the manual was delivered). While materials circulated that date will be the draft versions submitted to public consultation with stakeholders, such versions already provided NRAs and operators an overview of the type of information that has to be filled in once they receive the final version of the data request (the two files shared on 4th and 10th December 2018).
2. Submit requests to the operators indicating the information that they have to fill in.
3. Collect any questions from operators, review and combine them with any question the NRA may have and submit them to the EC (see section 2.3).
4. Fill in the Form files with the information available within the NRA.
5. Gather and manage the information requested to operators.
6. Review the information provided by operators and request clarifications, if any.
7. Combine all information into one Form for each of the two files and submit it to EC.

We understand that each NRA may have its own procedures and timing limitations for communications with operators. Therefore, we suggest NRAs define clearly their own timing and deadlines for each of the above activities and tasks and explain them properly to the operators.

2.4.2 Operators' role

Operators are the owners of their information and, therefore, their contribution is crucial to maximise the accuracy of the Study. Even if some of the requested information may have already been provided to NRAs through other processes (see previous section), some elements relevant to this Study may need to be updated and provided by operators to their NRAs. Therefore, operators' main role will be to provide data.

In particular, operators are expected to conduct the following tasks:

- Review the requests received from NRAs and ask promptly any questions they may have on these to their NRAs (see section 2.3).

- Provide indications to NRAs during the consultation period on the draft information requests (from 1 November 2018 to 15 November 2018) about any information requested that they will not be able to provide.
- Provide indications to NRAs about any information requested that has already been provided to NRAs through other processes and that is already up to date.
- Fill in the information requested by NRAs. In the case that certain information is not available, operators should provide their best estimate, indicating the rationale followed to come up with that estimate in the space provided for comments.

2.5. Treatment of confidential information

The EC/Axon team has put in place all necessary mechanisms and tools to ensure the confidentiality of the information that NRAs and operators will provide to us. In particular:

- The Commission team has created a private space on its CIRCABC called "Fixed Termination Cost Study_2020" where you will find a folder for each country. In this folder each NRA will be able to upload all the data relating to this cost study. Only the delegates that NRAs have designated (as well as the EC/Axon team) can access a NRA's country folder.
- Axon is proposing that operators be able to indicate the level of confidentiality of the data that is provided in the Form files. The approach is described in the Form files and in this accompanying manual. This will give further assurances to NRAs and operators that no confidential information shall be distributed.
- Axon is requesting NRAs to combine information gathered from the operators, which provides an additional layer of confidentiality. EC/Axon expect to receive, in general, aggregated and/or averaged information which reduces the amount of confidential information shared.
- The Commission team has shared with NRAs the confidentiality agreement signed by Axon and the Commission in the contract for this study. This agreement will ensure that the information gathered in the context of this study shall not be used by Axon in other assignments.

Axon would also like to note that, if the cost model is published at any stage of the Project, all confidential figures will be averaged or anonymised[5] (see details about confidentiality levels later on in this section).

Additionally, the cost model is expected to be shared with NRAs in the consultation process. In this process, each NRA will receive a version of the model with the inputs associated to its country. Since NRAs are expected to share the model with the operators providing services in their country, any information related to only one specific operator (based on NRAs' indications, as described later on in this section) will be averaged and/or anonymised.

No information from one NRA is going to be shared with other NRAs without prior indication (as per the instructions below) or consent from the former and its operators, unless it is properly anonymised.

In order to indicate the level of confidentiality of each parameter provided, NRAs are requested to classify the data provided according to the following confidentiality levels:

- **Confidentiality Level 0 – Public Level:** This confidentiality level should be associated with information which is available in the public domain and could be directly shared with or used in other NRAs' models to fill any potential gaps. In order to associate this level 0 to a piece of information, the cell(s) should be left **unchanged** (i.e. leaving the background of the original Form. See section 3.1 about the colour code of the Form).
- **Confidentiality Level 1 – National Level:** This confidentiality level should be associated with information that cannot be disclosed to NRAs from other countries (unless it is anonymised or averaged with data from other NRAs). This information can, however, be disclosed to national stakeholders in the version of the model to be shared with the NRA. In order to associate this level 1 to a piece of information, the cell(s) should be coloured in **yellow** (RGB code: R255-G255-B000), as indicated below:

Exhibit 2.1: Example of cell background for Confidentiality Level 1 information

[5] Information anonymisation involves randomisation (application of a random modification of the confidential figure) and removal of any reference to the provider of the information (i.e. the source will be classified as "Anonymised information based on data provided by NRAs").

- **Confidentiality Level 2 – Operator Level:** This confidentiality level should be associated with information that cannot be disclosed to any party involved in the process (unless it is anonymised or averaged with data from other operators/countries). When the model is shared to public consultation, the inputs classified under this confidentiality level will not be shared with NRAs from other countries nor with the operators from the subject country. Therefore, this information will be anonymised or averaged before the model is shared. In order to associate this level 2 to a piece of information, the cell(s) should be coloured in **orange** (RGB code: R255-G192-B000), as indicated below:

Exhibit 2.2: Example of cell background for Confidentiality Level 2 information

We strongly recommend avoiding an over-classification of the confidentiality levels (e.g. marking information which is public as confidential), as it could limit stakeholders' capability to provide feedback in the consultation processes.

3. Overview of the Form Files and how to fill them in

This section describes the format used in the Form files and provides instructions on how to fill it in. This section should be read by anyone involved in the process of providing information, reviewing information and/or filling in the Form. The following subsections outline:

- Overview of the Form Files (Section 3.1).
- Instructions to fill in the Form Files (Section 3.2).

3.1. Overview of the Form Files

As previously described, the requested information should be provided in the attached Form Files in Microsoft Excel format.

The Form Files follow a pre-defined structure that should not be modified. Adding/removing/merging rows, columns or worksheets should be avoided, unless otherwise stated. The only cells that can be filled in are coloured appropriately, based on the colour code described later in this section.

The requests are divided based on two levels of priority, in order to help NRAs focus their efforts on the most critical information. In particular, the following priority levels are defined:

- **High priority information**: It refers to information that must be provided in the data request, as it is critical in the development of the cost Study. If high-priority information is not available, estimates should be provided, indicating that the figures are estimates in the space provided for comments and explaining how the estimations were obtained. High priority inputs are marked with cream background (RGB code: R255-G250-B277), as illustrated below:

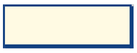

Exhibit 3.1: Example of cell background for High priority information

- **Medium priority information**: It refers to information that, even though it is not critical and/or can be extracted from, for instance, benchmarks, would help to improve the overall accuracy of the model for each specific country. Therefore, we strongly suggest that medium priority information is provided based on the best information available or, if it is not available, based on estimates. Medium priority inputs are marked with light blue background (RGB code: R164-G206-B236), as illustrated below:

Exhibit 3.2: Example of cell background for Medium priority information

In addition to the formats explained above with regards to inputs, the Form uses the following additional formats which **cannot be modified**:

- Section titles:

FIXED VOICE SERVICES

Exhibit 3.3: Illustrative example of the format used for section titles

- Table headings:

Services

Exhibit 3.4: Illustrative example of the format used for table headings

- Descriptions and explanations:

Please provide the average number of fixed telephony lines for the indicated period. By line we mean an unique access carrier reaching customer's premises. In the case of business solutions providing more than one voice channels (for instance Full ISDN including 30 voice channels), please account them as voice channels. Please, do not include lines that do not have voice services (e.g. broadband only lines).

The values provided should represent the average of each year. In the case that the information is available for each month, please calculate the average of all months. In the case that the information available represents figures at the end of the year, please provide the average between the beginning and the end of each year. Please explain the methodology you have applied in the space provided for comments in column H.

In the case that information for 2018 is not fully available (e.g. because of year closure processes), please provide your best estimation based on available data (e.g. information from first three quarters) and describe in column H the approach followed for the estimation and the sources of information used.

Please note that the figures reported should be representative of the entire country.

Exhibit 3.5: Illustrative example of the format used for descriptions and explanations

- Parameters names and measurement units:

Voice On-net	Minutes

Exhibit 3.6: Illustrative example of the format used for parameters names and measurement units

It is not possible to insert information/figures in unformatted cells.

Finally, please note that the following worksheets included in the Form files are informative and they do not include any request:

- Contents: this worksheet is the front-page of the Form and includes the title of the document, version number, status and an index of the worksheets with a brief description.
- General Considerations: it presents the main rules to fill in the Form and the colour code used.
- Nomenclature (only in 2nd file): Includes an illustrative diagram of the fixed network that will be modelled and a brief description of the abbreviations used to ensure a common alignment of the terminology used with the people filling in the Form.

3.2. Instructions to fill in the Form Files

All the information included in the Form should be representative of each national market as a whole. Thus, depending on each section/request, we foresee three main alternatives to fill in the information:

- **Sum of information associated to each operator**. For instance, this approach is used for demand data.
- **(Weighted) average of the operators' data**. For instance, this approach is used for market trends, which require a single, representative value of the market. The descriptions included in the Form and in the document "Summary of the requested information" provide clear indications on how to deal with these cases.
- **Individual values for each reporting operator**. For instance, approach is used for specific wholesale costs and core equipment costs. This data is expected to be used for statistical analyses to accurately depict the situation of each market. In these cases, separate tables/fields have been provided to include the information of each operator.

The information should represent, in general, all fixed operators. Exceptionally, NRAs may consider not to request information from small operators (e.g. less than 3% market share in terms of active voice lines) to avoid imposing an excessive burden on them. Please note that requests related to the total demand per year (worksheet "HISTORIC DEMAND") should represent the entire market or virtually the entire market (e.g. more than 90%).

The information reported in the Form files should be, in general, consistent in terms of the number of operators considered in each worksheet. Whenever this is not feasible due to lack of information from a given operator, please indicate this issue in the space left for comments in each section of the Form files.

In addition, unless otherwise indicated, information should be representative of the operational status in 2018. In the event that any information is not available for the required period, it should be provided for the latest period for which it is available. This situation should be properly described in the corresponding comments box, providing details about the reference date.

Whenever relevant, please provide information regarding the data sources used for the information provided, any manipulation done, date of the measurement (when required) and any other aspect you deem convenient. In doing so, please use the comment boxes provided in each worksheet/section of the Form.

In the table below, we provide the EC/Axon’s view on the expected sources of information (i.e. NRAs or stakeholders), together with indications on how to aggregate multiple datasets. Please note that our views on the expected sources of information are illustrative and each NRA is better positioned to understand the information it has available and the information it needs to request from operators. We strongly encourage NRAs to limit the information requested from operators to information they do not have available, instead of forwarding the whole Data Request form to them.

Worksheet	Table	Expected source of information	Indications on how to aggregate data
1st File (delivered on 4th December 2018)			
General Considerations	**General Considerations**	N/A	N/A
Contact	**Contact**	NRAs/operators	N/A
Market Players	**Market Players**	NRAs (e.g. through their quarterly/annual reports) or operators	To be reported at operator level
Historic Demand	**Fixed Lines**	NRAs (e.g. through their quarterly/annual reports) or operators.	Sum of all operators
	Fixed Voice Traffic	NRAs (e.g. through their quarterly/annual reports) or operators.	Sum of all operators
Demand Trends	**Fixed Lines**	NRAs (e.g. through their quarterly/annual reports) or operators.	Sum of all operators
	Fixed Voice Traffic	NRAs (e.g. through their quarterly/annual reports) or operators.	Weighted average by market share (except for voice transit and other services, for which sum of all operators is required).
Traffic Statistics	**Voice Call Statistics**	Operators	Weighted average by market share
	Hourly Traffic Distribution	Operators	Weighted average by market share
Fixed Asset Register	**Fixed Asset Register**	NRAs (e.g. through their internal databases) or operators.	This information should be provided in two different ways: ▶ All operators together (summed up) ▶ Each operator separately (in different tables)
Useful Lives	**Useful Lives**	▶ If there are approved useful lives (e.g. for Top-Down exercises), NRAs. ▶ Otherwise, operators.	Simple average
WACC	**WACC**	NRAs	N/A

Worksheet	Table	Expected source of information	Indications on how to aggregate data
2nd File (to be delivered on 10th December 2018)			
General Considerations	**General Considerations**	N/A	N/A
Contact	**Contact**	NRAs/operators	N/A
Nomenclature	**Network Map**	N/A	N/A
	Abbreviations	N/A	N/A
Market Players	**Market Players**	NRAs (e.g. through their quarterly/annual reports) or operators	To be reported at operator level
Core Nodes	**Network Core Equipment**	Operators	To be reported at operator level (one table for each operator)
	National Interconnection Points	NRAs (e.g. through their network databases) or operators.	To be reported at operator level (one row per operator)
	International Interconnection Points	NRAs (e.g. through their network databases) or operators.	To be reported at operator level (one row per operator)
Equipment Unit Costs	**Core Network Elements Unitary Costs**	Operators	To be reported at operator level (one table for each operator)
	Active Transmission Network Elements Costs	NRAs (% weight of active transmission elements in the FTR of the NRA's BULRIC Model)	Direct number
Wholesale specific costs	**Service Specific Costs – OpEx**	Operators	To be reported at operator level (one table for each operator)
	Service Specific Costs – CapEx	Operators	To be reported at operator level (one table for each operator)
	Revenues and Outpayments for Interconnection	Operators	To be reported at operator level (one table for each operator)

Table 3.1: Overview of Axon's expected sources of information and indications on how to aggregate data [Source: Axon Consulting]

MADRID (Headquarter)

Sagasta 18, 3º
28004 Madrid
Tel: +34 91 310 2894

BOGOTA (Colombia)

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