

BEREC Open Data Policy

4 October 2018

Contents

Executive Summary	2
1. Introduction	3
2. Purpose of the BEREC Open Data Policy	5
2.1. Definitions and scope	6
2.2. Goals and benefits	7
3. Principles of the BEREC Open Data Policy.....	8
3.1. Standards	9
3.2. Exceptions	10
3.3. Roles and responsibilities	10
3.3.1. Board of Regulators.....	11
3.3.2. BEREC Office.....	11
3.3.3. Expert Working Group co-chairs	11
3.3.4. National Regulatory Authorities experts.....	12
Annex – BEREC open data validation process.....	13

Executive Summary

In early 2018, BEREC conducted an internal assessment with respect to the feasibility of developing an Open Data Platform. In light of that assessment, it was agreed that no Open Data Platform be developed by BEREC at this time. However, it was also agreed that BEREC should develop its own Open Data Policy.

This document sets out the definition of Open Data that BEREC will use, what the purpose of BEREC's Open Data Policy is, and what are its principles, with respect to open data. In summary, BEREC's goals and motivations for developing an open data policy are:

- To promote openness and transparency;
- To facilitate the development of innovative applications based on its open data;
- Minimise potential requests for information to be handled by the BEREC Office and NRAs;
- Make working with published data easier;
- Align with the European Union Public Sector Information Directive with respect to open data.

The principles of open data set out in more detail in this document are:

1. Openness
2. Completeness
3. Timeliness
4. Metadata
5. Accessibility
6. Non-discrimination
7. Open use
8. Review

BEREC commits to evaluate, whenever a report is prepared to be published, if data could be released as open data, and to publish such data in an open format where appropriate.

BEREC's Open Data Policy, and the open data validation process set out in the Annex to this document should be adhered to by all responsible parties (Board of Regulators, BEREC Office, Expert Working Group co-chairs, NRA experts working across Expert Working Groups) from the date of its publication.

1. Introduction

In its Work Programme 2018¹, BEREC committed to an internal assessment on the feasibility of developing a BEREC Open Data Platform. The first step in that internal assessment was an internal report², which recommended the next steps for BEREC to follow during 2018 with respect to open data.

While BEREC's initial assessment was to not pursue the full-scale development of an Open Data Platform at this time, BEREC did propose to develop a BEREC Open Data Policy. The current document, then, is the second step in BEREC's process towards making its data more publically accessible, leading to the wider use of such data, enhancing BEREC's openness and transparency.

The initial assessment and review of BEREC's data highlighted:

- i. The significant amount of statistical data that BEREC collects on a regular basis;
- ii. The sensitivity and confidentiality of much of the data collected from operators; and
- iii. The fact that not all of the data, which BEREC collects, can be made publically available.

Nevertheless, BEREC is committed to making data available to the public for reuse where appropriate. Therefore, this document outlines the principles, roles and responsibilities related to BEREC's efforts to facilitate the public reuse of its data. Of the recommendations made in BEREC's initial internal assessment, the following are central to this document:

- Develop a BEREC Open Data Policy;
- Further assess BEREC's data; and
- Publish datasets in an open format on BEREC's website.

BEREC uses the European Union Open Data Portal³ definition of open data, i.e. open data is 'data that anyone can access, use and share', and this document further elaborates BEREC's purpose with respect to making its data available to the public, businesses, and institutions. BEREC will not make open datasets which contain confidential, proprietary and/or personal information. By making datasets publically available, BEREC supports unfiltered access, where appropriate, to its information.

¹ https://berec.europa.eu/eng/document_register/subject_matter/berec/annual_work_programmes/7528-berec-work-programme-2018

² https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8017-internal-report-on-the-feasibility-of-a-berec-open-data-platform

³ The European Union Open Data Portal (<https://www.europeandataportal.eu/>) is a website which the Publications Office of the European Union maintains to enhance public access to information about its initiatives and European Union policies in general. In addition, this definition is also used by the Open Data Institute (<https://theodi.org/>).

In the BEREC Strategy 2018-2020⁴, BEREC indicated that it would continue to further improve its working methods by assessing “periodically the results of its working methods, which may include monitoring” BEREC’s outputs, and ensuring “transparency through regular updates to the market... about current BEREC activities at all working levels”. By adopting this document as BEREC’s Open Data Policy, it is clear that BEREC is working to achieve the strategic priorities as set out in the BEREC Strategy 2018-2020. This initiative by BEREC is important with respect to its efforts to constantly improve communication and cooperation with all stakeholders.

The proposal for a revised BEREC Regulation⁵ also includes a reference to open data. BEREC shall “promote the modernisation, coordination and standardisation of the collection of data by NRAs. Without prejudice to intellectual property rights, personal data protection rules and the required level of confidentiality, this data shall be made available to the public in an open, reusable and machine-readable format on the BEREC website and the European data portal.” While the current document does not yet fully put the draft Regulation into practice, it aims at facilitating the reuse of BEREC data significantly from the date of its publication. When the new BEREC Regulation enters into force, this Open Data Policy document will be adapted accordingly.

The second chapter of this BEREC Open Data Policy document covers the purpose of the policy, including its definition and scope, and also its goals and benefits. The third chapter focuses on the principles of the policy in detail, covering also the roles and responsibilities regarding open data across the BEREC structure.

⁴ http://berec.europa.eu/eng/document_register/subject_matter/berec/annual_work_programmes/7310-berec-strategy-2018-2020

⁵ Proposal for a Regulation of the European Parliament and of the Council establishing the Body of European Regulators for Electronic Communications. Inter-institutional File: 2016/0286 (COD).

2. Purpose of the BEREC Open Data Policy

The purpose of BEREC's Open Data Policy is to set the rules by which its data is made available to the public as valuable, machine-readable⁶ datasets. As defined above, open data is data that anyone can access, use and share. Open data improves transparency, creates direct economic value⁷ and can facilitate participation and engagement. To make sure that data is truly open, there are some basic principles to consider⁸, as follows:

- No limitations: Anyone should be free to use, modify⁹ (or process), combine and share the data in any way they want, even commercially¹⁰;
- No cost: Open data must be free to use; and
- Reuse: Once the user has the data, they are free to use, reuse and redistribute it, even commercially, without fear of restrictions from copyright or other such controls.

Open data is especially good if it can be linked to from elsewhere, is available in a standard, structured, machine-readable format, has guaranteed availability and consistency over time and is traceable, through any processing, right back to where the data originates¹¹.

EU institutions and Member States are working towards making their data more and more open, supported by a comprehensive legal framework (such as the Communication on Open Data¹², the PSI Directive¹³, the Adoption of the DSM Strategy as well as the European Electronic Communications Code¹⁴), national open data portals, as well as the European Data Portal.

A growing number of public and private sector organisations have already drafted, or are drafting, open data policies that outline how they currently, or how they intend to, openly publish data.

An open data policy clearly defines the commitment of the organisation to publishing, sharing and consuming data. It is also used by internal stakeholders to help identify and prioritise

⁶ Machine-readable data means data that, in order to be understood, must be translated by a computer or other type of equipment. Portable document format (PDF) is not machine-readable.

⁷ According to the study supporting the impact assessment carried out to provide input to the review of the PSI Directive, the total direct economic value of Public Sector Information (PSI) is expected to increase from a baseline of EUR 52 billion in 2018 for the EU28, to EUR 194 billion in 2030. <https://ec.europa.eu/digital-single-market/en/news/impact-assessment-support-study-revision-public-sector-information-directive>

⁸ <https://www.europeandataportal.eu/elearning/en/module1/#/id/co-01>

⁹ In order for the word 'modify' not to be misinterpreted, what is meant here is that while data can be reused or used to create derivatives, it should not specifically be changed.

¹⁰ It should be noted that BEREC is not responsible for the results of the data. National Regulatory Authorities provide BEREC with information, typically which has come from operators.

¹¹ <https://theodi.org/guides/what-open-data>

¹² COM (2011) 882 final. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Open data: An engine for innovation, growth and transparent governance.

¹³ Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information.

¹⁴ <http://www.consilium.europa.eu/en/press/press-releases/2018/06/29/telecoms-reform-to-bolster-better-and-faster-connectivity-across-eu-approved-by-member-states/>

release of open data, and by external stakeholders to understand how an organisation will be releasing its data and ways in which they can be involved¹⁵.

While BEREC collects a significant amount of statistical data and frequently publishes data in its documents, e.g. as tables or graphs, the data published is not easily machine-readable and reusable – i.e. not open. In light of the internal assessment carried out in early 2018, BEREC decided not to develop a full-scale open data platform at this time.

However, BEREC aims to increase the openness and accessibility of data and offer stakeholders better access to its non-confidential data.

Therefore, BEREC's Open Data Policy sets out the principles and rules (see chapter 3) of how BEREC's efforts to make its data more open are put into practise. BEREC's Open Data Policy can be used by internal stakeholders to help decide which data to make open, and by external stakeholders to understand how BEREC will release its data.

While BEREC's default position with respect to data is to make all data open, due to the sensitivity and confidentiality of some of the data BEREC collects and works with, it is practically impossible to make all data publically available.

However, BEREC commits to evaluate, whenever a report is prepared to be published, if data could be released as open data, and to publish such data in an open format where appropriate. Given the variation and broadness of the datasets that BEREC collects, the onus for this validation rests with the relevant Expert Working Groups and the National Regulatory Authorities providing data to any given BEREC report¹⁶. As an example, consider a situation where BEREC intends to publish open data for a given report, though only some NRAs indicate that such data can be published in an open format. As BEREC seeks to be transparent and open with respect to this policy, the default position should always be to publish data and the onus should be on the relevant NRAs to indicate confidentiality issues to the relevant Expert Working Group.

2.1. Definitions and scope

While data can be defined very broadly, for the purposes of this document, "data" refers to statistical (quantitative) information collected by BEREC's Expert Working Groups (EWGs), unless otherwise noted.

The term "dataset" refers to a collection of data usually presented in tabular form.

The definition of open data used in this document, as set out above, is data that anyone can access, use and share.

BEREC respects the data confidentiality principles set out by individual NRAs and agreed with operators in individual Member States, and will preserve such confidentiality as directed by NRAs.

¹⁵ <https://theodi.org/guides/writing-a-good-open-data-policy>

BEREC's Open Data Policy does not cover historical datasets, i.e. data from reports made available to the public before the publication of this document.

The policy applies to all BEREC reports, data, and datasets produced after the publication of this document. The policy applies to all BEREC Expert Working Groups. However, due to confidentiality issues, not all of the data which BEREC collects can be made publically available. Thus, BEREC's Open Data Policy only covers data that is not confidential.

An outline of the general declaration of principles that will guide the release and reuse of BEREC's open data are set out in chapter 3 of this document.

Target audiences for BEREC's Open Data Policy include telecom operators and other relevant industry players, NRAs, NGOs, academia, and members of the public who are interested in or have a specific use for BEREC data.

2.2. Goals and benefits

The more that data is opened, the more it can be used, reused, repurposed and built on in combination with other data, for everyone's benefit. An open data policy clearly defines the commitment of the organisation to publishing, sharing and consuming data.

It is also used by internal stakeholders to help identify and prioritise data releases, and by external stakeholders to understand how an organisation will be releasing its data and ways in which they can be involved¹⁷.

For BEREC, the goals and motivations for developing its Open Data Policy and for publishing data in an open format can be summarised as follows:

- To promote openness and transparency;
- To promote innovative applications based on its open data;
- Minimise potential requests for information to be handled by the BEREC Office and NRAs;
- Make working with published data easier;
- Follow the European Union policy with respect to open data.

BEREC's Open Data Policy will allow for the possibility of BEREC data to be combined with data from other sources, potentially creating new analysis and adding value, and it will increase BEREC's transparency, which helps to foster a better relationship with stakeholders.

¹⁷ <https://theodi.org/guides/writing-a-good-open-data-policy>

3. Principles of the BEREC Open Data Policy

In its initial assessment of the feasibility of a BEREC Open Data Platform, BEREC set out some basic guidelines to be considered when making sure that data is truly open. Those guidelines were:

- No limitations: Anyone should be free to use, modify¹⁸ (or process), combine and share the data in any way they want, even commercially¹⁹;
- No cost: Open data must be free to use;
- Reuse: Once the user has the data, they are free to use, reuse and redistribute it, even commercially, without fear of restrictions from copyright or other such controls.

As BEREC commits to facilitate the reuse of data by making its data more open, a clear set of principles are required in order to ensure that BEREC's Expert Working Groups and its constituent National Regulatory Authorities (NRAs) can work together to identify and prioritise data for release.

To achieve this, BEREC will respect the following principles:

1. **Openness:** Data is open by default. BEREC starts from a position of data openness, with the prerogative in favour of data release, unless there is a specific, overriding reason for data not to be released. Even where a dataset is incomplete, releasing the dataset is not restricted, provided sufficient context and metadata is included to notify the user of any limitations or gaps in the dataset.
2. **Completeness:** Datasets will be as complete as possible, with the finest possible level of granularity that is practicable and permitted, while safeguarding confidential information. Metadata that defines and explains the raw data should be included as well, along with formulas and explanations for how derived data was calculated. Doing so will permit users to understand the scope of information available and examine each data item at the greatest possible level of detail.
3. **Timeliness:** Datasets will be made available in a timely fashion to maintain the value of the data. Whenever feasible, such data collected by BEREC should be released as quickly as is practical.
4. **Metadata:** Datasets will be described so that users have sufficient information to understand their strengths and limitations, with data collection methods documented.
5. **Accessibility:** Datasets will be made available in convenient, modifiable, machine-readable formats that can be retrieved, downloaded, indexed, and searched.

¹⁸ In order for the word 'modify' not to be misinterpreted, to be clear, what is meant here is that while data can be re-used or used to create derivatives, it should not specifically be changed.

¹⁹ It should be noted that BEREC is not responsible for the results of the data. National Regulatory Authorities provide BEREC with information, typically which has come from operators.

Accessibility can be supported by providing datasets in multiple formats to suit different users' needs.

6. **Non-discrimination:** Datasets will be available to anyone, with no requirement for registration.
7. **Open use:** Datasets will be made available at no cost, allowing for reuse by the public, including businesses, researchers and individuals. Reproduction of BEREC data is authorized, provided that the source is acknowledged²⁰.
8. **Review:** BEREC's Open Data Policy is subject to review every two years, or as deemed appropriate by the BEREC Board of Regulators²¹.

These principles describe what open data looks like when it meets best practice requirements.

These principles will not all be fully implemented for every dataset – instead they provide guidance for the BEREC Board of Regulators, the BEREC Office, the co-chairs of Expert Working Groups, and for experts of National Regulatory Authorities who will work together to implement this BEREC Open Data Policy.

3.1. Standards

Complying with best practice data quality standards helps facilitate data openness, and many open data principles draw on data quality precepts. Ensuring the quality of data, from when it is first generated or collected, can result in a lower resource impact when related datasets are published. Data quality considerations should include the views of stakeholders who have an interest in the data.

Data should be made available with a statement regarding its quality, as this will allow potential users to determine whether the data is suitable for their requirements. Data quality issues should not unduly delay the publishing of datasets. Factors to consider when measuring the quality of statistical data include relevance, timeliness, accuracy, coherence, interoperability and accessibility.

The format of an open data set refers to the way in which the data is structured and made available. To maximise the reuse of the data, open data should be made available to the widest range of users for the widest range of purposes. This can be supported by providing the data in multiple formats to suit different users' needs. Ideally, these formats should be non-proprietary, publicly available, and no restrictions should be placed upon their use. Taking this

²⁰ https://bereg.europa.eu/eng/important_legal_notices/

²¹ See the draft BEREC Regulation: "promote the modernisation, coordination and standardisation of the collection of data by NRAs. Without prejudice to intellectual property rights, personal data protection rules and the required level of confidentiality, this data shall be made available to the public in an open, reusable and machine-readable format on the BEREC website and the European data portal;" <http://www.consilium.europa.eu/media/36055/bereg-text.pdf>

into consideration, BEREC will publish its datasets on the BEREC website in both CSV²² format and in Excel²³ format.

3.2. Exceptions

BEREC will follow the standards and guidelines set out in this Open Data Policy relating to the release of data and the accountability for that release. Context and metadata will be provided to inform users of any gaps or limitations in the data. Such gaps or limitations, with respect to BEREC's data, were highlighted in BEREC's initial assessment of the feasibility of a BEREC Open Data Platform.

A detailed review of the data that BEREC collects was conducted in BEREC's initial internal assessment. Many of the datasets that BEREC collects data for contain data that are either partially confidential (in terms of specific indicators or countries) or indeed completely confidential (for example, one dataset contains commercially sensitive data (provided by operators) which National Regulatory Authorities would not be prepared to make available in an open data format).

Despite its default position being that data is made open, BEREC recognises that not all data that it collects and works with can be made open, due to the sensitivity and confidentiality of this data.

Therefore, data may be exempted from BEREC's Open Data Policy if required for reasons of privacy, confidentiality, public safety, security and law enforcement, or compliance with the law. Only data owned by BEREC or its constituent NRAs will be released under this policy.

Related to this is the potential for BEREC to consider the publication of datasets beyond the data that actually appears in any given report. It may be more valuable for the underlying data, used to arrive at the commentary or decisions included in any such report. BEREC will consult with the relevant Expert Working Group, responsible for the delivery of any given report, to see whether it is fit to publish datasets beyond the data that actually appears in the report.

Nevertheless, BEREC is committed to evaluate, whenever a report is prepared to be adopted and published, if data could be released as open data, and to publish such data in an open format where appropriate.

3.3. Roles and responsibilities

Given BEREC's structure, there is no specific unit or team responsible for the complete management of its open data; the responsibility is shared across the Board of Regulators, the

²² A comma (or character) separated values (CSV) file simply consists of lines of data, with each data point separated from the next by a comma (or, in some cases, another delimiter). It is an open, machine-readable format and the 'lowest common denominator' for open data.

²³ Since some end users may still have difficulties reading CSV files (i.e. importing them in applications like Excel) BEREC will also publish datasets as Excel files. Those files can maintain formatting, graphs (if necessary), and thus make it more accessible to those users who are less well-versed in data handling.

BEREC Office, the co-chairs of Expert Working Groups, and the experts assigned to work on such Expert Working Groups by the constituent National Regulatory Authorities of BEREC.

The potential risk of making available confidential information needs to be addressed, which is why the roles and responsibilities of responsible parties are set out below. The purpose of the outline of the process in the Annex is to mitigate this risk. However, in terms of accountability, while NRA experts must ensure that they manage the risk by validating their own country data, the BEREC Board of Regulators is ultimately responsible for the content of reports and datasets released by BEREC subsequent to adoption.

The review and potential update, when appropriate, of BEREC's Open Data Policy document will be assigned, by the Board of Regulators, to the relevant Expert Working Group.

3.3.1. Board of Regulators

BEREC's Board of Regulators is responsible, in its role of adopting all BEREC documents submitted to Plenary and for electronic clearance, to provide final approval for the release of datasets for publication.

3.3.2. BEREC Office

The BEREC Office, working with the co-chairs of Expert Working Groups after approval of the Board of Regulators, is responsible for the upload of datasets in the required open data format to the BEREC website. The BEREC Office will also be the initial point of contact, and, in close cooperation with the co-chairs of the Expert Working Groups, deal with external requests, regarding BEREC data published in an open format on the BEREC website. However, it must be noted that the release is subject to the approval of the Board of Regulators.

3.3.3. Expert Working Group co-chairs

The role of the individual Expert Working Group co-chairs is perhaps the most important when it comes to BEREC's open data. The co-chairs have involvement with all other levels in the structure as follows:

- Agreement on final data to be released in an open format – working closely with experts of National Regulatory Authorities.
- As part of submission of any individual report to Plenary for adoption, a final dataset in open format should also be proposed – seeking agreement for publication from the Board of Regulators.
- Regarding the upload of open data to the BEREC website and dealing with external queries on datasets – liaising with the BEREC Office.

3.3.4. National Regulatory Authorities experts

Individual experts of National Regulatory Authorities have responsibility for initially providing data, in response to any questionnaire issued by the co-chairs of an Expert Working Group. Any issues of confidentiality or sensitivity should be noted at this initial stage. Subsequently, experts of National Regulatory Authorities will have a final approval role to play before a dataset is submitted to the Board of Regulators. More information on data validation is provided in the Annex to this document.

Annex – BEREC open data validation process

In order to ensure that BEREC only publishes such data considered and agreed to be non-confidential (i.e. not considered commercially sensitive by either operators or NRAs) across its structure (for the purpose of open data, the Board of Regulators, the BEREC Office, the Expert Working Group co-chairs, and the experts of National Regulatory Authorities), the following open data validation process for the release of all statistical quantitative information collected by BEREC's Expert Working Groups should be adhered to from the date of publication of this Open Data Policy.

Steps of data validation process

1. Submission of response to project questionnaire (NRA experts to include commentary on confidentiality or commercial sensitivity of data where appropriate).
2. Expert Working Group drafters (and BEREC Office representative) review all submissions, liaising with NRA experts to validate submitted data.
3. EWG co-chairs and drafters prepare report and dataset in open format.
4. Report and dataset in draft format circulated back to NRA experts for final commentary and review (particularly with respect to the data being published in open format; included here is the Contact Network comments round).
5. EWG co-chairs submit report and open dataset for adoption and publication by the Board of Regulators.
6. Board of Regulators adopt report and open dataset for publication; BEREC Office, working with EWG co-chairs publish the dataset to the BEREC website.

