Body of European Regulators
for Electronic Communications
BEREC

BoR (18) 168

BEREC Public Consultation
on the data economy

4 October, 2018

Contents

INTRODUCTION AND OBJECTIVES

In recent years data has become a key resource for companies, civil society and governments. Advances in technologies, such as communications, computing, storage and software engineering, have allowed for cost reductions in data processing and storage, leading to the progressive incorporation of different economic actors into the data economy. This has also led to an exponential increase in data generated by consumers, private and public entities and, more recently, objects (the IoT).

The increasing availability of data and the development of tools to collect and analyse data is changing a large portion of the economy, enabling innovative business models, cost reductions, more informed decisions by consumers, institutions and firms, and increased economic growth. All societies, including Europe, should ensure that firms, institutions and citizens are ready to take advantage of the vast potential of this strategic asset.

Meanwhile, the EU Telecommunications Policy Package is expected to be replaced in January 2019 by the EU Directive on the European Electronic Communications Code (EECC). The amended definition of electronic communications services in the EECC includes Over-The-Top communications services (OTT-0 and OTT-1) in the scope of the Directive as "number independent interpersonal communications service", thus widening the definition significantly.

For questions regarding the use of personal data, the General Data Protection Regulation applies, unless overriding sector-specific data protection rules are applicable.

The sector-specific data protection rules in the telecommunications sector are currently included in the Privacy and Electronic Communications Directive (2002/58/EC). They will eventually be replaced by the EU e-Privacy Regulation, which will then apply directly in the member states and will not need to be transposed into national law.

The following figure depicts the services in the scope of the data economy in relation to the future competences of National Regulatory Authorities (NRAs) according to the EECC.
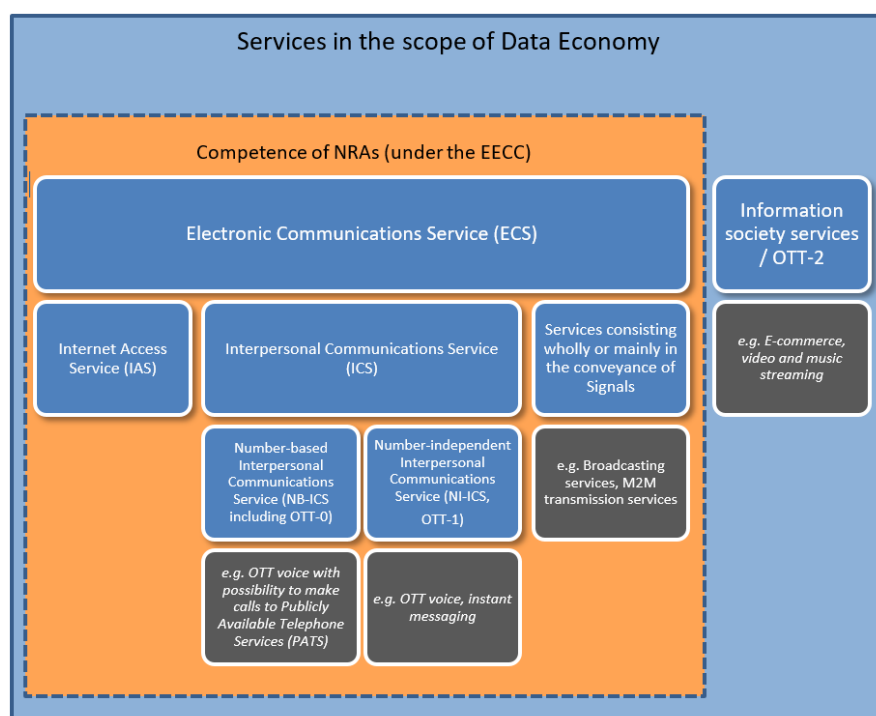
Taking this into account, BEREC considers that it is important to study the impact of the data economy on the electronic communications sector that is under its regulatory scope, as well as considering the role that NRAs could play in the context of the data economy. Essentially, BEREC is interested in deepening its knowledge of how the data economy could affect its traditional line of work (both in terms of reshaping Electronic Communications Markets and in terms of the tools that can be used by NRAs to conduct their regulation activity) and how BEREC could contribute to the development of the data economy.

With this aim, BEREC has carried out some preparatory meetings with academics and stakeholders, including a workshop in June 2018, at which NRAs' Heads and various relevant actors took part. Following on from this, BEREC will prepare a report to be published in mid-2019.

As part of the preparatory tasks, BEREC has prepared this call for input with the aim of getting insights from all types of actors (consumers, companies in the telecommunications sector, digital companies, other companies, institutions) on issues to be taken into account by NRAs in the context of the data economy, as well as ideas on where the experience of NRAs can be used, in collaboration with other regulatory bodies, to encourage the development of the data economy. Specifically, BEREC is interested in the following issues that are addressed in the different sections of the public consultation:

1. **General issues regarding the data economy to be taken into account by BEREC**. This comprises issues such as the definition of the data economy, a taxonomy for the data that is used and its general economic properties, as well as identifying bottlenecks for the development of the data economy.

2. **Electronic Communications Networks (ECNs) and Services (ECSs) as enablers for the data economy.** Telecommunications networks are the "base structure" which enables data flows and, as such, this infrastructure is key to facilitate the transition towards a data-driven economy in Europe. BEREC is interested in the characteristics and future evolution of ECSs, as provided for in the monitoring and review obligation stemming from article 114a of the draft EECC, but also in order to ensure that consumers, companies and institutions benefit from the opportunities associated with the data economy.

3. **Impact of the data economy on competition in ECS markets.** Like most sectors of the economy, the telecommunications sector is affected by the data economy, and the use of data could be an important factor affecting the dynamics of competition in ECS markets. Furthermore, the new EECC provides a wider definition of ECS that encompasses OTT-0 and OTT-1[1]. This broader scope includes actors who are in principle even more involved in the data economy: for example the business models of OTT-0 and OTT-1 service providers often involves commercialising data instead of billing users for their services. BEREC is interested in getting stakeholders' views on how the use of data in the provision of ECSs is changing competition in the communications sector. Furthermore, BEREC would also like to get an overview of the issues to be taken into account when performing market analysis on ECS markets that are linked to the development of the data economy.

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[1] As defined in the BEREC report on OTT services (BoR (16) 35, January 2016). Those are the OTT services that provide voice-over-IP services and/or instant messaging services.

4. **The data economy in NRAs' regulatory activity.** NRAs can also benefit from the tools developed in the context of the data economy in order to take well-informed regulatory decisions and they can also share part of their data with the public. BEREC is interested in proposals from stakeholders that can be applied within the scope of its regulatory activity, for instance relating to the sharing of data and the application of data analytics in order to enhance regulatory decisions and to help consumers, companies and other institutions to optimise their decisions in a more informed context, in line to what is expected from institutions in the 21st century.

5. **NRAs' regulatory experience applied to the data economy.** BEREC is also interested in getting feedback in relation to potential collaboration with other regulatory bodies (e.g. data protection authorities) that could be of help in the field of the data economy. In this regard, BEREC would like to know if the methodologies and experience developed by NRAs could be of use in the context of the data economy. In particular, BEREC is interested in knowing whether its experience could be of help in the context of the data economy regarding:
   - Monitoring the evolution of markets;
   - Assessment of market power and the potential need for regulation;
   - Application of ex-ante regulation (whether this is symmetrically applied to all actors or applied only to the dominant player);
   - Development of portability schemes that aim to reduce switching costs for consumers;
   - Supervision of standardisation for interoperability, with the aim of maximising network effects;
   - Promotion of the development of wholesale access markets.

Once BEREC has received all stakeholders' responses to this consultation, a report summarising their input will be published on the BEREC website. The contributions will be used in the preparation of the final report.

INSTRUCTIONS FOR SUBMITTING FEEDBACK

Timeline and target group of this consultation

This consultation runs from the 10th October 2018 to the 21st November 2018 (closing date). It is open to the wide range of public and private stakeholders involved in the data economy, as well as to their associations. We welcome contributions from all actors that are interested in the data economy, namely:

- Public organisations, including local, national, or international organisations (e.g. data protection authorities, competition authorities, government authorities, intergovernmental organisations, non-governmental organisations, etc.);

- Industry actors: online platforms, media and social media companies, online content providers, online advertisers, providers of Electronic Communications Networks (ECN) and providers of Electronic Communications Services (ECS, as defined in the EECC), operators that are active along the value chain of the Internet of Things (IoT), players active in data collection or data processing, software developers, producers of smart devices, and any other industry players active in the data economy;

- Industry associations and networks;

- Consumers and consumers' associations;

- Academics, specialised research centres, think tanks, etc.;

- Financial investors;

- Any other stakeholder or citizen(s) with expertise/interest in the data economy.

Instructions for submitting your response and transparency provisions

Please provide your answers preferably in English and in PDF and/or Word format. Respondents are not required to answer all sections and questions, although BEREC invites stakeholders to submit contributions that are as complete and detailed as possible.

All non-confidential contributions to the consultation will be published on the BEREC website shortly after the end of the consultation period. Please indicate if any part of your response should be treated as confidential. Alternatively, you can provide a non-confidential version of your response.

Responses should be addressed to PC_Data_Economy@berec.europa.eu by 14.00 (CET) on the closing date, 21/11/2018. Late responses will not be considered.

Please provide the name (and website, if available) of your organisation, as well as the contact information (name, e-mail and/or phone number) for a contact person. In the case of personal contributions, please provide your name, nationality and contact information.

Name of the organisation/person, website, nationality and contact information

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Please indicate the place(s) of operation of your organisation and the sector(s) in which your organisation mainly operates. Please explain how you are involved in the data economy.

Liberty Global (NASDAQ: LBTYA, LBTYB and LBTYK) is the world's largest international TV and broadband company, with operations in 10 European countries under the consumer brands Virgin Media, Unitymedia, Telenet and UPC. We invest in the infrastructure and digital platforms that empower our customers to make the most of the video, internet and communications revolution. Our substantial scale and commitment to innovation enable us to develop market-leading products delivered through next-generation networks that connect 21 million customers subscribing to 45 million TV, broadband internet and telephony services. We also serve 6 million mobile subscribers and offer WiFi service through 12 million access points across our footprint.*

In addition, Liberty Global owns 50% of VodafoneZiggo, a joint venture in the Netherlands with 4 million customers subscribing to 10 million fixed-line and 5 million mobile services, as well as significant investments in ITV, All3Media, ITI Neovision, Casa Systems, LionsGate, the Formula E racing series and several regional sports networks.

* The figures included in this paragraph include both our continuing and discontinued operations, adjusted for our July 31, 2018 sale of UPC Austria

1. GENERAL ISSUES

The collection and analysis of data is not, by any means, a new phenomenon, as it dates back to the development of statistics. However, the Internet offers immediate access to information that can put data into context. The ability to track a huge variety of events, with a high level of detail, generates raw data in an unprecedented way that can be collected and transformed into valuable information. More specifically, the combination of raw data and analytical tools can reveal patterns, provide key insights. The generation and collection of data and its analysis, as well as the exchange of newly generated information, may pave the way for creating new business opportunities.

Question 1.1:

The term 'Data Economy' tries to capture the increase in the availability of data, the related business opportunities and the (potential) social value of the insights that can be generated. According to the EC report "Building a European Data Economy"[2], the *"data economy measures the overall impacts of the data market – i.e. the marketplace where digital data is exchanged as products or services derived from raw data – on the economy as a whole. It involves the generation, collection, storage, processing, distribution, analysis, elaboration, delivery, and exploitation of data enabled by digital technologies".*

Do you agree on this general definition of the Data Economy? If you have an alternative definition or any comments on the proposed definition, please provide details below.

Answer to question 1.1

As further explained in our answer to question 5.4 below, in our view the term 'data market' is not accurate. We'd rather speak of multiple 'data-related markets', in which data is a relevant input.

The list of data related markets is increasing, as digitalization and data analytics enable data driven decisions in most of the markets.

So in the long term, all markets will be part of the 'data economy'.

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[2] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "Building a European Data Economy" {SWD(2017) 2 final. Brussels, 10.1.2017 COM(2017) 9 final

Question 1.2:

Data is an essential input to many newly emerging services. However, it is hard to assess the individual value of a single piece of data. It might be also considered that, in the context of the data economy, a single piece of data has a negligible value by itself and, therefore, data will start generating added value only when a significant amount of information is processed and structured in a meaningful manner. Insights derived from data, and thus its value, depend on the quality and reliability of data, as well as its ability to be combined with other data. Inherently, larger amounts of data tend to allow more far-reaching insights. The marginal cost of collecting digital data can also be particularly low (if not negligible); therefore, substantial economies of scale can be present. Moreover, the utilisation of data can lead to the provision of better services, and thereby increase the number of users, which in turn can generate even more data to be collected. Thus, the data economy is often associated with strong network effects, even sometimes leading to "winner–takes-all" situations.

Data has sometimes been referred to as the "new oil", but a key difference is that data is non-rivalrous in consumption. That is, the same data about a consumer can be made available to many different companies, rather than only being used once: e.g. data on date of birth, gender, home address, telephone number, credit card details, etc. Even though data is essentially non-rivalrous, it cannot be regarded as a pure public good in economic terms because people or companies may be excluded from using it. For example, some types of data may be specific to a particular platform and can also be made exclusive through commercial or technical means.

Data is not a homogenous good and there are different types of "data" (e.g. personal and non-personal). Different types of data will in turn have different values to different types of businesses, as the value of data depends on its context and is affected by four key characteristics: volume, velocity, variety and veracity. For instance, the volume of data may be important when looking to establish patterns in consumer behaviour in aggregate. Conversely, the velocity of data – how quickly its usefulness depreciates – is more relevant to services that promote products based on what users are currently searching for.

In your opinion, what are the most important characteristics of data to be taken into account when analysing its economic properties? Are there elements missing in the previous list?

Answer to question 1.2

Universality, Uniqueness and Trust are the key elements to be taken into account when assessing the economic properties of data. Universality means that two parties can have a common understanding about the same data taxonomy; Uniqueness means that the data is 1st party and therefore proprietary to that data controller; and Trust in that there is confidence that the data is collected only under the appropriate legal and consent mechanisms.

Question 1.3:

Different types of data can be distinguished and a taxonomy of data is useful to structure the analysis of the data economy. For example, one common distinction is that between personal and non-personal data. BEREC would be interested in respondents' input regarding more

detailed or alternative classifications that can be made, especially those that are more relevant in relation to the analysis to be done by BEREC.

What classification of data do you consider to be most relevant (in the context of BEREC work on the data economy)? Please elaborate below.

Answer to question 1.3

Agents: Extensions from Personal, to include Digital Assistants, Agents & Robotics could be considered as an additional taxonomy element.

Immutability: Voice, Genetic & Biometric data could be considered as an additional taxonomy element.

Groups: Vehicular, Household, Enterprise & City data could be considered as an additional taxonomy element.

Question 1.4:

The ability to access data may be important in terms of reinforcing existing network effects in certain circumstances. As a result, there may be concerns about the exercise of market power in online markets and the ability of firms with market power to foreclose or restrict competition. For instance, concerns could include:

- exclusive control of certain data that creates a significant barrier to entry;
- leverage of market power into adjacent markets;
- lack of competition over non-price features, e.g. privacy.

Which kind of competition concerns are likely to be of relevance in the data economy?

Answer to question 1.4

- **Entry barriers**: The exclusive control of data may be a barrier to entry some markets in the sense that, although data are not an exclusionary resource in themselves (the fact that one firm has access to them doesn't exclude other firms from replicating the dataset), a given firm might take disproportionate resources in times of technology and effort to do it compared to a firm that already has access to them. Having exclusive control over a specific dataset might could make that dataset an essential facility in markets where data are a critical input. critical to the services offered to customers.

- **Excessive data / unfair terms and conditions**: Abusive exploitation of consumer data by extracting excessive data from them in return of free services. Under GDPR, performance of contract is one of the legitimate basis for data processing. In services that are provided in return of data, the GDPR lawful ground is met. However, this 'data price' might be excessive compared to what amount of data is required for the use of such a free service.

- **Zero-price markets**: The lack of competition over privacy might be due to the low elasticity of demand when it comes to 'zero-price services', where data is used as currency and no monetary exchange takes place for the delivery of a given services. In such cases, consumers are not always aware of or sensitive about the impact of sharing their data on their privacy,

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which enables dominant positions in data related markets and makes abusive behaviours like the one described above easier.

- **Network effects in online markets**: the higher the volume of customers an online provider has, the higher market power it will have in terms of data. This will allow that provider to attract more funds in terms of advertising, which in turn will allow it to provide more 'free services' in return of data, will have more data, which will attract more advertising….etc.

Question 1.5:

Do you think that competition issues regarding the power of market data can be sufficiently addressed by current competition law and the upcoming regulatory framework (EECC, GDPR, e-Privacy Regulation, PSI Directive, etc.)?

Answer to question 1.5

- **Competition Law**: market power is not being measured in terms of data yet, but on the ability to raise prices or reduce quality of a product / service.

In competition law terms, the way data is being handled by a given firm can be an element of the quality of the service offered by that firm and therefore an element of competition (competition on privacy). Competition law can capture any consumer harm stemming from the anti-competitive use of data as a deterioration of quality, which is one of the indicators of consumer harm.

New appropriate mechanisms should be put in place in order to adapt market power assessments to the new data context. Furthermore power should not only be measured in terms of volume of data, but its value in terms of variety and quality.

Where access to user data is essential for the market position of a company, data and its handling by the company becomes an issue that is not only relevant for data protection authorities, but also for competition law. Cooperation between competition and data protection authorities will be important in order to appropriately identify any harm caused to consumers and /or rivals from the anti-competitive collection, use and exploitation of data. We believe competition law is flexible enough to be able to adapt to the challenges of capturing market power in today's data economy.

- **GDPR:** as mentioned before it's not tackling the abusive use of customer data, as they way contract performance and consent are being used enable the online service providers to have a legitimate legal ground for their processing of data, while it might be excessive and disproportionate.

- and ePrivacy Regulation: the proposal provides a reinforced framework that will not apply to online services unless they are communications. So an important part of their activity will not be covered by the new Regulation either.

2. ECS AS AN ENABLING FACTOR FOR THE DATA ECONOMY

Electronic communications services (ECS) are an enabling factor for the data economy, as they provide the infrastructure upon which the data economy is developing. For data to be collected and distributed everywhere, networks must be ubiquitous, reliable, interoperable, secured and offer high speed transmission. Therefore, the development of ECS should both directly and indirectly support the growth of the data economy.

ECS providers can also develop innovations and new services that will allow them to play a new role in the data economy, going further than being the infrastructure on which the data economy relies. Some telecommunications network providers already offer services such as cloud storage and analytics solutions, which actors in the data economy can use to develop their businesses, but telecommunications network providers can also directly participate in the data economy by developing data-based services of their own. For example, they may offer mobile network location-based services. Moreover, with the development of the Internet of Things (IoT), ECS providers are enabling connectivity to billions of devices that can collect data.

This creates an opportunity for ECS providers to play a major role in the collection and analysis of a large volume of data. With the following set of questions, BEREC intends to identify the services and innovations provided by ECS providers that contribute to the development of the data economy.

Question 2.1:

Services provided by network operators can be assessed based on various parameters (latency, bandwidth, reliability, security, ubiquity, etc.). Considering that the development of the data economy is supported among others by the electronic communication networks, which parameters are the most relevant for the development of the data economy in your view?

Answer to question 2.1

Bandwidth, ubiquity, security, convergence

Question 2.2:

What more can ECS providers do to help the development of the data economy? Conversely, do you identify any bottlenecks for the development of the data economy that are related to ECS providers and, if so, what, in your view, could be done to address this issue?

ECS providers can develop IoT, big data, analytics and advanced advertising services, relying on usage and location data. There is great potential for ECS providers to innovate and deliver significant value to society and to consumers using data and data analytics.

However, due to the fact that there's not a level playing field with OTTs, the latter players have an advantage to compete with a less strict regulation in terms of the lawful grounds on which they can process the data. (While ECS providers can only rely on consent)

Question 2.3:

What kind of evolution do you foresee regarding the role of ECS providers in the value chain? For example, with regard to the development of the Internet of Things or mobile network location-based services, could new revenue models for ECS providers emerge based on the data economy?

Answer to question 2.3:

Yes, mobile based services can emerge, although the regulation is different to the one applying to OTTs with GPS location services.

3. IMPACT OF THE DATA ECONOMY ON COMPETITION IN ECS MARKETS

The provision of electronic communication networks and services generates a significant amount of data that, in some cases, cannot be obtained by other sources. The availability of processing this data might create some opportunities for telecommunication operators. For instance, data can potentially be used to improve the services provided to the users, gain internal efficiencies, deliver innovative services, create new business models or, in the cases and conditions allowed by privacy regulation, commercialise this asset.

A distinction can be made between network or infrastructure data on the one hand and content or usage data on the other hand.

Data related to the network itself are of great relevance in optimising the network operations of telecommunications operators[3]. Analysis of this type of data can help to make network operations more efficient.

Telecommunications operators can also benefit from the analysis of usage data. For example, customer loyalty and churn can be examined with data analytics methodologies. The aim could be, for example, to identify the factors affecting churn and, based on these findings, take action to reduce it over time. Another area where data analytics could be of use is fraud detection. Consumers could also benefit from innovative products and services based on data collection and analysis. The development and implementation of smart home services, for example, could improve safety, energy efficiency and comfort.

The growing importance of data collection and analysis may also affect competition in the telecommunications sector. For example, ECS providers with a large number of customers could possibly benefit from economies of scale in terms of data collection and analysis.

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[3] For example, the analysis of topography data for planning network deployment can help increase the range and transmission capacity of mobile radio base stations.

Moreover, some ECS providers are vertically integrated across different levels of the value chain and might thus benefit from economies of scope, as they act both as network operators in the fixed or mobile network and as service providers at wholesale and retail level. A telecommunications company with a broad product portfolio, for instance encompassing fixed network services, mobile services, IPTV or even Smart Home services, can collect significantly more data than those providing just stand-alone services, which it can then use to better serve their customers and optimise their business operations while reducing costs. Overall, having access to a wide variety of data may facilitate innovation or optimisation when combined with data analytics techniques. ECS and data services (such as cloud computing) may also be combined to make new service proposals that could affect competition dynamics.

With regard to mobile services, it should be noted that network operators have exclusive access to additional network data compared to resellers or MVNOs. Therefore, a question may arise about whether network operators are able to extend their advantages from (exclusive) data collection and analysis to other areas.

Instant messaging services and voice over IP (VoIP) services have been widely adopted by consumers and are increasingly competing with traditional telecommunications services, such as SMS or voice telephony. The Privacy and Electronic Communications Directive (2002/58/EC) established ECS sector-specific data-protection rules. This Directive will be replaced by the EU e-Privacy Regulation, which will then apply directly in the member states and will not need to be transposed into national law.

Question 3.1:

What is the significance of data for the telecommunications value chain today? How would you expect this significance to change in the future?

> Data allow the provision of services with a better quality (in terms of network dimensioning), innovative applications and personalized services. Their significance in the telecommunications value chain is increasing together with the increase of innovative applications by ECSs.

Question 3.2:

How are ECS providers making use of (anonymised) data? Are they buying/selling it from/to third parties? Please elaborate.

> According to GDPR's recital 26, pseudonimyzation could have the same effect as a complete anonymization if the means reasonably likely to be used (taking into account all objective factors, such as the costs of and the amount of time required for identification and the available technology) make the persons unidentifiable.
>
> This provision allows developing big data services through analysing data throughout periods of time, and selling reports to third parties that predict population evolution, help business plan their best locations, or transport companies better plan their schedules and resources.
>
> Similar applications would also be feasible if compatible further processing of ECS metadata for statistical purposes were allowed under ePrivacy Directive

Question 3.3:

Are you aware of cross-sectoral initiatives carried out by ECS providers with regard to data analytics? Please provide examples of (big) data analytics projects/initiatives carried out by ECS providers[4].

Answer to question 3.3
Not aware

Question 3.4:

What is your view on how the use of data (including the combination of data services and ECS) may change the competition dynamics among ECS providers? Do you see any risk of leveraging market power, or conglomerate effects caused by the use of data in the telecommunications sector? If so, should the methodology to assess market power be reviewed to further consider access to data?

Answer to question 3.4
Market power in telecommunications relevant markets (both wholesale and retail) doesn't necessarily lead to a competitive advantage in data markets, unless a dominant player in a telecommunications relevant market can leverage its market power to a data related market. Telecommunications providers can reach the audience of their TV subscribers and may collect information that is of interest to advertisers (e.g. consumer viewing habits). However, leveraging theories of harm with regards to the advertising market are not likely to be a concern as online platforms (Google, Facebook, etc.) attract the vast majority of advertising revenues today and constitute a popular alternative to access a targeted audience. With the shift from traditional advertising to advertising on online platforms,   The market power in data related markets will be determined by an uncontested volume, variety and quality of data, which may be reached by players in markets different to the telecommunications services, like online platforms or applications.

Question 3.5:

Are there cases in which exclusive ownership of data or other potential hurdles related to data restrict competition or the development of new telecommunications business models? Please provide examples. Below are some specific examples of cases that may be of interest to BEREC:

- **Do you see any competitive differences with regard to data collection and analysis between MVNOs and MNOs?**
- **Do you see any competitive differences with regard to data collection and analysis between fixed line infrastructure operators and retailers that rely on wholesale access?**

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[4] As defined in the EECC, including providers of OTT-0 or OTT-1 services.

- **Do you see any competitive differences with regard to data collection and analysis between "traditional" ECS and OTT-0/OTT-1 providers?**

Answer to question 3.5

In the case of MVNOs, accessing traffic data from the host network may become a relevant feature to drive choices and may become part of the price. In wholesale markets where there is not enough price competition there will likely not be enough competition in terms of access to data either. Similar dynamics may be identified in the fixed-line infrastructure space.

The fact that traffic data are very regulated represents some imbalance between traditional ECS and OTT-0/OTT-1 providers.

Question 3.6:

What opportunities and/or risks do you see for consumers linked to an increase in data collection and analysis in the telecommunications sector?

Answer to question 3.6

GDPR provides for a robust framework to protect customer personal data.

Telecommunications service providers, in addition, have a history of protecting confidentiality of communications and securing their networks in order to prevent breaches.

Consumer data protection is guaranteed in the telecommunications sector.

Providers offering convergent services may add value by combining different usage datasets.

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4. NRAs' ECS REGULATORY ACTIVITY IN THE CONTEXT OF THE DATA ECONOMY

The emergence of the data economy is characterised not only by an increase in the quantity of data available, but also by the availability and use of data analysis tools (e.g. Apache Hadoop, SAP HANA, etc.) that are capable of analysing rapid real-time flows of data. These new data and tools can greatly influence how NRAs take regulatory decisions.

The use of data in increased quantity and quality by NRAs, combined with new analytical tools, may have the potential to significantly improve the quality of regulatory decisions in various aspects (e.g. consumer protection and empowerment, fostering competition and investment, monitoring the quality of services and network deployment/coverage and the assessment of market power).

Furthermore, in the context of an evolution towards an open government data ecosystem, defined by the re-use of public sector information (PSI) Directive[5], NRAs could have a significant role in contributing to the economic and social benefits that may be possible. In fact, the electronic communications sector alone is responsible for vast amounts of data being generated/collected and the nature of such information may allow for significant benefits beyond its use for strict regulatory purposes.

This section therefore addresses the dimensions of the relationship between NRAs and the data economy in the context of NRAs' duties and responsibilities, as established by the new European Electronic Communications Code (EECC) and the proposal for a revised BEREC Regulation.

In adapting to the data economy, NRAs should consider how to leverage data in order to enhance the quality of their work, their decisions and the accuracy of regulatory analysis (e.g. market definitions or market power assessments) as a step towards "data-driven" regulation (increased use of available relevant data).

With the increasing volumes of data generated by customers and operators, the quality of data used by NRAs – not only existing internal data but also data that can be collected from operators (respecting existing principles, such as proportionality) – can also be improved. Additionally, data collected and generated by NRAs (when not subject to confidentiality clauses and when their publication is allowed by national legislation), may also be useful for different actors in the digital economy.

Question 4.1:

What is your view on how NRAs can use data to better perform their duties (e.g. consumer protection, fostering competition, monitoring the quality of services and network deployment/coverage, the assessment of market power…)? Can the use of digital tools improve the capacity for action? If that is the case, please provide further explanation, as well as any proposals you may have.

Answer to question 4.1

Assessment of market power should be based on current and predicted market dynamics, ultimately taking into account the impact on consumer choice.

NRAs should avoid structural approaches relying only on the number of actors competing in a market, but actually look at market dynamics and trends. This implies analysing a variety of data and inferring trends, for which data analytics provide useful tools.

Question 4.2:

What kind of data, or which specific data, should NRAs collect and publish which could facilitate the development of the data economy?

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[5] Directive 2013/37/EU of the European Parliament and the Council of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information, as well as proposal for a directive of the European Parliament and of the Council on the re-use of public sector information (Brussels, 25.4.2018). COM(2018) 234 final 2018/0111 (COD)

Answer to question 4.2

Any dataset held by NRAs that doesn't conflict with third party rights (confidentiality and/or data protection) should be made publicly available, as combined with other datasets may enable enriched data analytics.

Question 4.3:

Under the new EECC (art. 22) NRAs shall conduct surveys on NGN deployment, including relevant information on operators' intentions to invest (planned network deployments, upgrades and extensions) and QoS parameters.

When this information is not available in the market, NRAs shall also make data from the geographical survey available and easily accessible to allow for its re-use (when not subject to confidentiality). Such data may be particularly useful for end-users as it can support their choices (e.g. allowing them to check for connectivity options in different areas).

Regarding this provision, which relevant data (and to what level of detail) should NRAs collect (e.g. as QoS metrics) and which techniques could be applied, both in collecting data and in making it available to end-users?

Answer to question 4.3

Any collection of data from operators may imply a need to normalize data sets, which requires investments and technological efforts.

Such obligations should only be imposed where a market failure has been identified, and there is no other less burdening measure.

Question 4.4:

The PSI Directive set the framework for the re-use of public sector information, as part of an open data policy, recognising it as a major opportunity to stimulate innovation, economic growth and social engagement, adding value to users and the society in general.

Along the same line, the draft reviewed BEREC Regulation[6] includes a mandate to BEREC to enforce an open data policy. According to this provision, 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.*"

Intensified by digitisation, the amount (and types) of public data has vastly increased. Both businesses and citizens now expect data within the scope of the PSI Directive to be online, readily available under non-restrictive conditions and easy to understand.

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[6] Article 2 of the 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).

How can NRAs and BEREC contribute to increasing the availability of data in the spirit of the PSI Directive and the reviewed Regulation? In your opinion, what specific data should NRAs and BEREC publish (e.g. QoS indicators, consumer complaints, coverage, usage statistics)?

Answer to question 4.4

Any dataset held by NRAs that doesn't conflict with third party rights (confidentiality and/or data protection) should be made publicly available, as combined with other datasets may enable enriched data analytics.

5. NRAs' EXPERIENCE APPLIED TO THE CASE OF THE DATA ECONOMY

The data economy is governed by different regulatory instruments that address various aspects, such as the protection of personal data (the General Data Protection Regulation), re-use of public sector information (the PSI Directive), guidance on private sector data sharing, the free flow of non-personal data and e-Privacy, among other issues.

However, the data economy and regulations on access to data are in general not in the regulatory scope of NRAs in the electronic communications sector. This does not necessarily imply that there is no role for NRAs with regard to issues in the data economy. As addressed in previous sections of this public consultation, many sectors are involved in the data economy. In this respect data economy concerns the economy as a whole. The impact of the data economy on competition dynamics for ECSs should be considered and ECSs are a key enabling factor for the data economy.

For their part, NRAs have gained considerable experience from monitoring ECS markets, analysing them and designing remedies to encourage competition and investment. Although different to data markets, there could nonetheless be synergies to be harnessed from NRAs' experience gained on ECS markets which may be useful in the context of encouraging competition and investment in the data economy.

In this context, BEREC is interested in areas where the experience of NRAs could be useful in addressing potential issues in the development of a data-based society in the future. As of today, powers on the data economy for NRAs are very limited as they are focused on ECS markets, however it can be useful for BEREC to envisage potential future areas where NRAs could share their experience to help the development of the data economy, such as:

- Monitoring the evolution of the data markets
- Encouraging the development of wholesale markets for access to data.
- Fostering interoperability obligations (to maximize network effects while weakening winner takes all effects) and data portability (e.g. oriented towards reducing consumers' switching costs when moving from one digital ecosystem to another)
- Fostering transparency and non-discrimination (concerning either just the dominant players or all players).

BEREC is therefore interested in collecting views from all actors on the potential need for the above mentioned tools in the context of the data economy. This could be in the short, medium and/or long-term, with the aim of addressing any potential bottlenecks for investment and competition that may not be sufficiently covered under ex-post competition law.

Question 5.1:

Do you consider the competitive conditions in data economy-related markets are optimal for the development of the data economy? For example, do you consider that there are efficient data-sharing mechanisms in place?

Answer to question 5.1

Data sharing mechanisms affecting personal data should only be in place if the appropriate customer permissions are in place.

Data sharing should be arranged on a commercial agreement basis and not regulated, unless a market failure has repeatedly been identified, and competition law rules have failed to remediate the failure.

In such case, ex ante access obligations to data and interoperability of datasets could be imposed. But account should always be taken of the data protection principles. So data should only be shared if aggregate or if the customers' appropriate permissions are in place.

Question 5.2:

If you consider that the competitive conditions in data economy-related markets could be improved, which of the potential tools measures (along the lines of the ones listed in the introduction to this section) would, in your view, be appropriate to foster the development of the data economy? Please also explain if you consider such tools to be ineffective or if you consider that they could even harm the data economy's development.

Answer to question 5.2

In cases where market power has repeatedly lead to the abusive data collection, ex ante transparency and proportionality obligations should be imposed to avoid excessive data gathering.

Although GDPR sets out transparency rules they leave a broad scope of interpretation. Ex ante regulation in these cases establishing appropriate wording, choices and ways to communicate how data are being gathered could prevent abusive consumer exploitation.

Question 5.3:

Do you see the need for closer cooperation between the NRAs (that have a regulatory focus on ECSs) and other regulatory bodies, such as data protection authorities,

competition law authorities (National Competition Authorities, which usually focus on ex-post regulation), consumer protection authorities or other bodies, on issues related to the data economy (such as data portability, market power assessments, merger control, rules on the treatment and sharing of data, etc.)? Please specify the area of potential collaboration, the roles that could be played by NRAs, within their competence, and which regulatory body or institution to collaborate with.

Answer to question 5.3

Closer cooperation between authorities is needed in order to guarantee an appropriate compliance of the transparency and customer empowering obligations arising from GDPR.

Consumer protection authorities should collaborate with Data Protection and Competition Authorities in assessing the way in which data are gathered by dominant players, in order to determine whether an abusive behaviour is being deployed in the shape of customers being directed to accept excessive data processing activities through misleading information.

As stated in answer 5.2, there might be cases that, despite having an appearance of compliance because all the GDPR information requirements are in theory met, the fact is that customers are not really aware of how using a specific service impacts their privacy.

For this purpose, the Unfair Commercial Practices framework relies on the concept of the "reasonably informed and circumspect consumer', which should also be applied to assess the legitimacy of data gathering practices by dominant actors, to ensure that data subjects are not directed to accept data processing activities because of the way the information has been framed or highlighted.

Question 5.4:

In relation to data markets, which are the key issues that should be taken into account when assessing competition dynamics? What should be the geographical scope for data markets (national/European/international/other) and what drivers should be taken into account?

Answer to question 5.4

In our view, the concept 'data market' is not accurate. We believe there are multiple markets in which data is a relevant input.

Data is an asset, a resource (like financial assets) that, depending on the markets, can enable market power in markets where such asset is essential or not easily replicated. In such cases, a player may have 'data power', which may be an element determining a significant market power for that specific market.

Hence, the geographical scope will be the one of each of the relevant markets in which data are used as an input.

Question 5.5:

In general, how can NRAs contribute to address competition/regulatory issues in order to foster the transition to a data economy?

Answer to question 5.5

NRAs should refrain from regulating ECS providers' data related activities, unless a market failure in a data-related market arising from an SMP position in an ECS market is repeatedly observed, and competition law proofs unable to solve it.

Question 5.6:

Is there any other issue in relation to the application of NRAs' experience to the data economy that you would like to add?

Answer to question 5.6

There are markets different to ECS where a dominant positon may exist, and it leverages to data-related markets (for example, in the online platform markets, in which dominant providers can leverage their market power to data-related markets, like advertising).

If abusive behaviours by dominant players in such markets are repeatedly observed, there might be a need for an ex-ante regulation to prevent practices like consumer exploitation in the form of excessive data gathering.

NRAs's experience in ECS markets, regulating user rights with sector specific obligations that adapt consumer protection principles to the singularities of ECS might be used as a valuable precedent.

6. OTHER ISSUES

This section covers any other issues that have not been addressed in previous sections/questions and which stakeholders consider to be of potential interest to NRAs in the context of the report that will be prepared by BEREC.

Question 6.1:

Is there any additional issue not included in previous questions that you would like to address? For the sake of classification, please, differentiate between:

> **1) Issues in relation to ECS regulation under the powers for NRAs in the new Electronic Communications Code;**

2) Areas where NRAs or BEREC could collaborate with other public bodies or organisations in the context of the data economy when applying existing regulation for the data economy; and

3) Any additional issue relevant for NRAs that is not addressed in the existing regulation applicable to ECSs and/or the data economy.

Answer to question 6.1