

BEREC Report on the outcome of the public consultation on the data economy

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Contents

Introduction	2
1. Executive summary	2
2. Responses to “General Issues”	6
3. Responses to “ECS as an enabling factor for the data economy”	11
4. Responses to “Impact of the data economy on competition in ECS markets”	13
5. Responses to “NRAs’ ECS regulatory activity in the context of the data economy”	16
6. Responses to “NRAs’ experience applied to the case of the data economy”	18
7. Responses to “Other issues”	21
Annex	23
1. General issues	23
2. ECS as an enabling factor for the data economy	46
3. Impact of the data economy on competition in ECS markets	54
4. NRAs’ ECS regulatory activity in the context of the data economy	68
5. NRAs’ experience applied to the case of the data economy	75
6. Other issues	88

Introduction

This report summarises the responses sent by stakeholders to the public consultation on the data economy. The BEREC public consultation was open from 10th of October to 21st of November 2018 with the objective to get 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 National Regulatory Authorities (NRAs) in the context of the data economy, as well as ideas on where the experience of NRAs could be used, in collaboration with other regulatory bodies, to encourage the development of the data economy.

The present report summarizes the feedback received from stakeholders on the impact of the data economy on the electronic communications sector, as well as on the role that NRAs could play in the context of the data economy, as expressed by the stakeholders in their contributions.

In response to the consultation, BEREC received 19 contributions from the following stakeholders:

1. The American Chamber of Commerce to the EU (AmCham EU)
2. Article 19
3. BEUC
4. The Danish Chamber of Commerce (DCC)
5. Deutsche Telekom (DT)
6. DigitalEurope
7. ECTA
8. EDRi
9. ETNO
10. The European Automobile Manufacturers' Association (ACEA)
11. Facebook
12. Google
13. GSMA
14. The Law Society of Scotland (LSS)
15. Liberty Global
16. Microsoft Corporation (Microsoft)
17. Oracle Corporation (Oracle)
18. Telefonica
19. Confidential submission by a stakeholder

1. Executive summary

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 the data generated by consumers, private and public entities and, more recently, objects (the Internet of Things).

The increasing availability of data and the development of tools for collecting and analyzing data is changing a large portion of the economy, enabling innovative business models, cost reductions, more informed decisions by consumers, institutions and enterprises, 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.

In this vein, BEREC focused its public consultation on the highly relevant questions relating to data, structured as follows:

- a section on general issues - definition of data economy, data's most important characteristics, classification, potentially related competition concerns, the link between power of market data and the regulatory regimes under which various data-connected aspects are covered;
- a section on electronic communication services acting as an enabling factor for the data economy – relevant parameters of the electronic communication services (ECS, thereafter), ECS providers' contribution to data economy development, ECS providers' role in the value chain;
- a section on the impact of the data economy on competition in ECS markets – significance of data for the telecommunications value chain, potential uses of data by the ECS providers, cross-sectoral initiatives on data analytics, potential changes in the competition dynamics of the ECS providers stemming from the use of data, impact of exclusive ownership of data, consumers-related opportunities/risks determined by the increase in data collection and analysis;
- a section on NRAs' regulatory activities in the data economy context – potential for improving regulatory actions by the use of digital tools, data collection and publication, relevant data to be collected, analyzed and published with respect to next generation networks (NGN) deployment, enhancing data availability in the spirit of Directive 2003/98/EC of the European Parliament and of the Council on the re-use of public sector information, as amended by Directive 2013/37/EU¹ (in what follows, PSI Directive) and the European Electronic Communications Code² (EECC);

¹ The consolidated version in force is to be found at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02003L0098-20130717&from=EN>.

"In 2017, the European Commission launched a public online consultation on the review of Directive 2013/37/EU, fulfilling the periodic review obligation prescribed by the Directive. Building on the results of the consultation, together with an extensive evaluation of the Directive and an impact assessment, a proposal for a revision of the Directive was adopted by the European Commission on 25 April 2018. On 22 January 2019, negotiators from the European Parliament, the Council of the EU and the Commission reached an agreement on the revision proposed by the Commission. Once adopted, the Directive would be renamed as the Open Data and Public Sector Information Directive and will make public sector and publicly funded data re-usable" (extract from <https://ec.europa.eu/digital-single-market/en/european-legislation-reuse-public-sector-information>).

² Accessible at

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2018:321:FULL&from=EN>.

- a section on experience of NRAs applied to the data economy – competitive conditions in data economy-related markets, potential tools for their improvement, cooperation between various regulatory bodies, key competition parameters to be taken into account when assessing the competition dynamics, fostering transition to the data economy by the NRAs;
- a section on other potentially relevant issues.

The stakeholders welcomed the opportunity to provide input concerning the impact of data economy on the sector under BEREC's regulatory scope, as well as views on how NRAs could encourage the development of the data economy.

A general overview shows that some stakeholders agreed with the proposed definition for the data economy, recognizing, at the same time, the complexity of the concept, while others considered that it is not appropriate to be used as a legal definition. Some of the most important characteristics of data mentioned by the stakeholders were (non)-rivalrous, diminishing returns to scale, (non)-excludable, intangible, homogenous, universal, unique, implies trust. Also, it was mentioned that data can be regarded as an input/output or as a capital good/asset. Relevant categories of data which were mentioned by the stakeholders were geographical location data, personal and non-personal data, privately and publicly-held data, exclusive and non-exclusive data, customer and non-customer data, raw and processed data, portable and non-portable data etc. Various information asymmetries, entry barriers determined by timely access to data, abusive exploitation of consumer data, data being used as an exchange currency, uneven playing field between traditional ECS providers and over-the-top (OTT) players and the high concentration of the markets have been mentioned as some of the potentially disruptive forces of competition in the data economy markets. In terms of the legislative provisions fit to deal with the competitions problems identified in the data economy markets, some respondents consider the legal framework (sector-specific regulation, competition law, data privacy law etc.) to be broadly adequate, while others state that substantial changes need to be brought in order to adapt to the challenges determined by the data economy.

The development of the data economy can be broadly supported by the deployment of very high capacity networks and the adequate regulatory framework, creating the right incentives for innovation and investment to the benefit of consumers. In the same vein, from a regulatory standpoint, the level playing field between the ECS and OTT providers should be made even. In any event, expectations are that there will be a wider array of services available, better in quality, determined by the development of data economy. However, such developments might raise privacy and security related issues, technical data protection measures and safeguards being needed for the appropriate exploitation of the data.

Concerning the interdependence and cross-reference between the data economy and the electronic communications sector, some stakeholders see data as ancillary to the main services provided (which are still telecommunications services) and expect no change in this respect, while others think that data will become more and more relevant, potentially challenging the core services offered. In terms of data utilization, the ECS providers mentioned that they primarily use it for improvement of the services offered and for enhancing innovation. Nevertheless, the aggregated, anonymized data can be sold to any interested party in the form of reports or to their commercial partners, as bilaterally agreed under strict contractual

terms. With respect to the competition dynamics, some respondents are of the opinion that they will remain broadly unchanged, while others state that they will be affected by the rise of facile/privileged access to data by entities. At the other end, consumers find both opportunities – in terms of the possibility to acquire better, suited, innovative, higher quality services, as well as risks associated to the intensive use of data - privacy and security issues, use of unfair commercial practices and the like.

Making use of the data collected and processed, including with the help of various data analytics/tools, NRAs are expected to monitor better the markets, make more informed and timely decisions, intervene where and when necessary in a more efficient manner. Furthermore, given the new prerogatives under the EECC, the NRAs are able to collect data also from the OTT players included in the sphere of providers of interpersonal communication services. NRAs should also publish relevant data, stakeholders proposing indicators with respect to quality of service, coverage, consumer complaints, usage statistics, operators switching costs, number portability, to mention a few. Concerning the NGN deployment surveys, the NRAs should guard closely the balance between the need-to-know of consumers, third parties and the confidential information from the operators with respect, for instance, to their investment plans, strategic network deployments and so on.

In terms of making use of data in order to enhance competition in the electronic communications sector, some stakeholders emphasized that maximizing use of data does not necessarily enhance competition, while data-sharing should be left to the market forces (by bilateral agreements) if no systematic market failure is identified. Concerning the improvement of competitive conditions, skills and analytical capabilities, these should be invested in, standards and interoperability norms should be developed and the regulatory interventions should be more proactive and dynamic, according to the stakeholders' views. Furthermore, closer cooperation between the NRAs, competition authorities, data protection authorities and/or other regulatory bodies with relevant competences is seen sometimes as beneficial, other times as a must, bearing in mind that the stakeholders draw the attention towards the avoidance of overlapping jurisdictions and duplication of regulatory interventions.

The proposed approaches of the geographical scope of data markets were either case-by-case or broader than national – the European Economic Area (EEA), European or global.

Finally, the NRAs are called to clearly define their regulatory boundaries with relevance for the data economy, focus on the electronic communications sector, impose data-sharing mechanisms only where consistent and persistent market failures have been identified and, most importantly, create even regulatory conditions for traditional ECS operators and ECS providers. Other areas of implication for the NRAs mentioned by the stakeholders refer to the use of artificial intelligence (AI) technology, including a device neutrality perspective, technical knowledge base building and the potential delineation of machine-to-machine (M2M) integrated services from the electronic communications services under NRAs' regulatory scope.

Given the specific format of this public consultation and the fact that BEREC's experts aimed at getting in-depth insights into the functioning of data economy-related markets, the present document does not include a BEREC response to each question asked, but the considerations

expressed and argued for by the stakeholders are taken into account in the final version of the BEREC Report on the Data Economy to be published.

The following sections (2 to 7) summarize the comments, observations and recommendations expressed within the contributions submitted during the public consultation.

The annex includes a more detailed presentation on issues raised by the different stakeholders, organised by questions and the stakeholder raising the issue. Complete non-confidential responses from stakeholders can also be found on BEREC's website.

2. Responses to “General Issues”

Overall, the stakeholders are of the opinion that there should be a distinction between the data economy pertaining to the electronic communications sector and the data economy in the wider context. While the first one is under the regulatory scope of the NRAs and it could be enhanced/fostered by various regulatory actions/policies, the latter is much broader and beyond the scope/reach of telecommunications' regulatory bodies. The stakeholders that shared such a view were Telefonica, Microsoft, Article 19, GSMA and ECTA. Furthermore, the electronic communications services providers represent just a little share of the entities generating, analysing and making use of data, when compared to OTT providers, for instance (Telefonica, ETNO, implied by DT). Thus, BEREC and NRAs should be mindful about the aforementioned distinctions and take them into account in the judgements to be developed (Microsoft, DT, ECTA).

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”³, 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.

Generally speaking, a relevant part of the stakeholders agree with the definition proposed by BEREC, adding that it is highly difficult and not necessary to make use of a very specific definition for the data economy (DCC, partly BEUC and DT, Facebook, ACEA, DigitalEurope). On the other hand, there were also respondents that considered that the proposed definition is not sound from a legal standpoint (LSS, EDRI, ETNO, Article 19) and that it is unclear in certain respects (DCC, EDRI, Liberty Global, AmCham EU, Microsoft, Article 19, GSMA,

³ 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

ECTA). However, the trade-off between an accurate definition for a concept which widely covers all sectors of an economy and which is constantly changing/evolving, and a flexible, non-prescriptive definition has been broadly recognized by the stakeholders (LSS, implied by AmCham EU, Telefonica, ETNO).

Another point made by the stakeholders is that, irrespective of the definition used for the data economy, data flows in the economy should not be regarded/described as having an intrinsic economic value readily to be exploited by the different actors involved in the data economy. Google, for example, stands by this view.

Question 1.2:

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?

The most important characteristics of data from an economic standpoint, as presented by the contributors, are the following:

- data is a non-rivalrous asset, according to some respondents (such as Google, DCC, Facebook, AmCham EU, DigitalEurope), while it could be seen as rivalrous by others (like EDRi and Article 19, Telefonica);
- data feature diminishing marginal returns to scale (Facebook, Google);
- data is prone to be excludable state some of the contributors (DCC), while other are of the view that it is non-exclusive (Facebook, DigitalEurope);
- data is intangible (LSS, GSMA);
- data is non-homogenous (AmCham EU, DigitalEurope);
- data can be classified as direct personal data, inferred personal data, personal data connected to communications metadata and non-personal communications data (EDRi, partially BEUC and Article 19);
- data is universal, unique (GSMA) and its use implies trust (Liberty Global);
- data can be regarded as an input (factor of production) and as an output (final product) (BEUC, Telefonica, ETNO);
- data can be regarded as a special type of capital good/asset (implied by Telefonica, GSMA);
- data is ubiquitous, replicable, multi-dimensional, not always commercially useful (Microsoft, DigitalEurope);
- data's value is different depending on the purpose for which it is used (Telefonica, ETNO, Facebook, ACEA, GSMA, ECTA);
- data is difficult to replicate and knowledge base needs to be built in order to take full advantage of the data held (Article 19);
- data can be monetized/used as exchange currency (Telefonica, ETNO, DT);
- data is not implicitly substitutable (Telefonica);
- data can be combined through identifiers in order to apply large-scale analytics/digital tools (DT);
- data access can be closed, shared or open (i.e. public good).

Question 1.3:

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

The most important distinctions between various categories of data proposed by the stakeholders are presented in the list below:

- geographical location data and other type of data (DCC);
- personal (pseudo-anonymized data being of particular relevance) and non-personal data (Google, BEUC, AmCham EU, ACEA, DT), with the following sub-categories (non-exhaustive list): anonymized personal data, public sector information, commercial data, scientific data, environmental information etc. (LSS, partly overlapping characterization proposed by GSMA);
- publicly and privately-held data (BEUC, Facebook, GSMA);
- agents-related data (including digital assistants, agents and robotics), immutability data (voice, genetic and biometric data) and groups' data (vehicular, household, enterprise, city level data) (Liberty Global);
- exclusive and non-exclusive data (according to copyrights etc.) (Facebook);
- customer and non-customer data (Microsoft);
- electronic communications data (including both metadata and communications content) and other type of data (Microsoft);
- data as remuneration is emphasized as a particularly relevant category of data (ETNO, GSMA);
- vehicle-generated data and other type of data (ACEA);
- according to access rights determined by the inherent functionalities in the automotive industry – data pertaining to the intellectual property of the manufacturer, data stemming from safety-critical applications, telematics and infotainment applications (ACEA);
- raw/input data and processed/output data (GSMA, DigitalEurope);
- ported/portable data and data which consumers choose not to/cannot port from one data controller to the other (GSMA).

Finally, there is a general/widespread view according to which BEREC should not try to go very in depth in the classification of data, as it is not relevant for the purpose of the present report and, furthermore, it might lead to fragmentation and legal uncertainty (partially stressed by Facebook, AmCham EU, GSMA, DigitalEurope). There are also stakeholders (EDRi and Article 19, Telefonica) who consider that BEREC should not conduct data classification exercises.

Question 1.4:

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

With respect to competition-related issues in the data economy, there are certain stakeholders that are highly supportive of the idea that competition is developing efficiently by itself, and consider it to be dynamic, effective and open (Google, Facebook, Microsoft). Moreover, even if competitive failures were identified, competition law provisions would suffice in order to address and solve the potentially identified issues (AmCham EU, Telefonica, Microsoft, DigitalEurope, DT). However, there was an explicit identified need for closer cooperation and

coherence of regulatory actions between data protection authorities, competition law enforcement and BEREC (implied by AmCham EU, DigitalEurope).

Other stakeholders endorsed BEREC's examples/ideas presented in the public consultation document (DCC, EDRi and Article 19, ETNO partially), adding the following:

- presence of information and power asymmetries (DCC);
- mergers sometimes having the aim of gaining control over important datasets/databases (Article 19);
- existence of entry barriers determined by timely/exclusive access to certain data (Liberty Global, Oracle);
- abusive exploitation of consumer data by excessive data processing/unfair terms and conditions or even illegal practices for use (Liberty Global, Oracle);
- data being used as an exchange currency for the free of charge delivery of products/services (Liberty Global, ETNO);
- lower product choice or lack of innovative services, as a result of exclusive data control rights (BEUC);
- lack of regulation of the other digital players, which results in an uneven level playing field for the ECS providers (Telefonica, ETNO, GSMA);
- leveraging of multiple data sources to create data synergies and combining them in non-replicable, unique datasets (Oracle);
- the existence of synergic anti-competitive effects with respect to data collection – entities using their dominant position in a market to enforce more data collection, which, in turn, reinforces the market power and so on (GSMA, Oracle);
- high concentration in data-driven markets (DT, Oracle);
- strong economies of scale and direct and/or indirect network effects in data-driven markets (Liberty Global, ETNO, GSMA);
- high end-users switching costs and lock-in effects (BEUC, GSMA);
- central role of platforms exploiting consumers preferences and needs, based on significant amount of data collection (GSMA).

The fact that imposing regulation with respect to data access and sharing would enable free-riders, making it detrimental to the functioning of markets is also emphasized in some of the stakeholders' answers (Microsoft).

Overall, a holistic approach which covers all the relevant economic features and interactions related to data economy markets is being called for in order to account for potential reinforcing of individual anti-competitive effects (implied by BEUC, GSMA).

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.)?

As contributions to this question showed, there was a general agreement that in the data economy competition law means are sufficient to address competition-related problems with respect to the market power issues, if and when identified. Google, LSS, Liberty Global and Telefonica (partly), AmCham EU, Microsoft, ETNO, Article 19, ACEA, DigitalEurope, DT and

ECTA were the main supporters of this view. Broadly speaking, competition law provisions are principle-based in nature, granting regulators the necessary flexibility in dealing with the continuously evolving market circumstances (Liberty Global, implied by Microsoft, ETNO, Oracle). However, some stakeholders point to the arising need for other kinds of effective intervention, as competition-based remedies are adopted with a significant time delay in almost all instances, making the intervention less effective as if it would have been done in an early stage (a point shared by LSS). Sometimes, depending on the circumstances, the burden of proof for demonstrating an abuse under competition law could be too high for preventing competition problems derived from market power (BEUC).

One stakeholder considers that the current competition and regulatory approaches are not fit to deal with the potentially identified problems in data-driven markets, implying a need for substantial adaptation of the existing legislative tools – improving the monitoring and enforcement capabilities, incentivizing of private investments, adoption of consistent and coherent standards for data processing and utilization (GSMA). Also, Liberty Global considers that, even though competition law can capture the new perspectives related to data (for instance, the consumer harm determined by the anti-competitive use of data can be seen as a deterioration of the quality of service), new mechanisms should be put in place to tackle these issues⁴. In the same vein, Telefonica proposes that “a refreshed application of Competition Law is needed to address competition challenges emerged with the digital economy”, plus taking into account other factors⁵ than prices in conducting the competitive assessments.

Data protection regulation is believed to cover the pertinent aspects with regard to the responsible processing and preventive making use of the data (Google, Telefonica, Microsoft, ACEA, implicitly addressed also by GSMA). Nevertheless, there were also contributors that called for supplementary legislative action besides the competition and data protection laws (implied by Liberty Global) – such as legislation targeted at addressing lock-in effects, adaptation of the already existing legislation to the particularities of data (market definition and assessment of dominance with respect to data could be particularly difficult, plus it is not clear whether data can be considered as an indispensable input – in order to conclude that the refusal to deal constitutes an abuse), data portability obligations should refer also to non-personal data (BEUC).

Concerning the legislative perspectives provided for in the GDPR and e-Privacy Regulation, several stakeholders are of the opinion that their approaches need to be aligned, with the latter presenting the same underlying concepts and implied regulatory actions as the first one. Such a view is expressed by Telefonica, ETNO, GSMA and DT. There is also a contributor who, however, suggests that the upcoming e-Privacy Regulation should enhance the level of data protection (Oracle).

With respect to access to data, data sharing, interoperability and so on, several respondents state that the best approach is self-regulation through contract law, as any imposed regulation

⁴ For instance, market power should be judged upon in terms of variety and quality of data, not necessarily on its volume.

⁵ Such as quality, innovation or consumer choice.

in this respect would result in the adverse effects deterring the development of data economy (implied by Microsoft, ETNO, ACEA, GSMA, DT).

Lastly, other respondents (EDRi and Article 19) are of the opinion that it is too early to discuss about the so-called ‘power of market data’, but an immediate concrete concern with data markets relies on the lack of citizens’ trust in online services.

3. Responses to “ECS as an enabling factor for 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?

There is an overall agreement about the fact that, broadly speaking, the indicators which are fit to measure the networks’ capabilities with respect to the provision of the internet services are also fit to assess/monitor the development of the data economy (Google, Microsoft, ETNO). In this vein, the best means to foster the development of the data economy is to promote the deployment of very high capacity networks (GSMA, implied by DigitalEurope, ECTA). However, there were respondents that ranked the key parameters, considering, for instance, the ubiquity and security of networks highly relevant (DT), while latency and bandwidth relatively less important (AmCham EU). On the other hand, bandwidth was actually considered (among) the most important parameter by some other stakeholders (Liberty Global, ACEA).

Some respondents mentioned that human rights, privacy and freedom of expression considerations should be included in the assessment of the services provided by network operators (Article 19). Other relevant parameters considered in this respect were data access and control, security standards, data protection and privacy (BEUC, Microsoft).

The view that regulatory bodies should be focused on fostering competition, creating a proper environment for its development, innovation, stimulation of the investments and consumers’ empowering are actually key to a successful development of the data economy has also been put forward by the contributors (EDRi, Facebook, ETNO, GSMA, ECTA). In other words, their view is that the right regulatory environment is at the core of attaining the desired objective with respect to the data economy; then, market-driven forces will be the ones determining the right parameters for its development.

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?

In order to foster the development of the data economy, the ECS providers should continue deploying/investing in reliable, very high capacity networks (Google, implied by Facebook, Microsoft), continue innovation (including with respect to the IoT, big data, data analytics) (Liberty Global, Facebook, GSMA - stressing the appropriate regulatory environment), share data with interested third parties (i.e. consumer organizations, network-dependent service providers) (BEUC) and expand their activities in the data value chain (by offering their own data services, for instance) (Telefonica). Also, there was a proposal for BEREC to perform studies on data dynamics and behaviours in the electronic communications sector (Article 19).

As potential bottlenecks to the data economy development, some stakeholders (DCC, AmCham EU, Telefonica, ETNO, DigitalEurope, DT) stated/mentioned the rigidity of the rules of processing metadata (with geographical location data being of particular relevance) provided by the e-Privacy regulation⁶. Moreover, the main perceived risk by several contributors is related to the relatively weaker position in which ECS providers are put when competing with OTT operators in the data economy (Liberty Global, Telefonica, ETNO, DT). In any event, stakeholders have not identified bottlenecks related to the electronic communications sector and, should they be recognized in future, the regulatory framework is considered appropriate to address the potential arising issues. This perspective is taken by Facebook, implied by Telefonica, Microsoft, ETNO and ECTA.

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?

Overall, there is an expectation of continuous innovation and increase in diversity of services by the stakeholders (Google, Liberty Global, Facebook, AmCham EU, GSMA, DT). Also, new business models have already been put in place (Microsoft, DigitalEurope), but they are yet to be developed in the form of partnerships of entities activating in the various sectors of the economy (for instance, collaboration between public administrations and electronic network providers, the first using the data collected and analysed by the others to improve traffic management, resources planning etc. or between traditional ECS and OTT providers). This view is shared by DCC, Facebook, AmCham EU.

Another point made by some contributors is related to the privacy-related questions that are posed by the processing of big data (LSS, Telefonica, ETNO, GSMA, DT and DigitalEurope – stressing particularly the differences between the GDPR and e-Privacy regulation provisions), explicit consent of data subjects, technical data protection measures and safeguards being needed for the appropriate exploitation of the data (EDRi). In the same vein, some stakeholders call for moving away from the business models which imply the use of data as a currency exchange and towards respect of fundamental rights, data protection and privacy (BEUC).

⁶ Several stakeholders call for the introduction of the principle of “further compatible processing” of data in the e-Privacy Directive, aligning its provisions with the ones of the GDPR.

4. Responses to “Impact of the data economy on competition in ECS markets”

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?

Some respondents consider that data is to be regarded as an ancillary service to the telecommunications sector, the expectations being that the specific fundamentals for the telecommunication markets are not to be changed. This view is supported by Google and Telefonica. Other contributors consider that data-related significance is expected to grow in future (Liberty Global, Facebook, AmCham EU, ETNO, GSMA, DigitalEurope), especially with the shift to all-IP networks (Microsoft). Profiling of individuals, billing services, traffic management and urban planning, network planning, emergency and customer care services, targeted public health policies, improving risk management, decreasing operational costs, discerning trends and establishing forecasts, building predictive model for fraud detection and customer switching are just a few applications of data utilization that reflect its relative value (Telefonica, Microsoft, ETNO, GSMA, ECTA).

With respect to the future development of the telecommunications sector as shaped by the data economy, some stakeholders present the view according to which it is still uncertain, being highly dependent on the final form of the e-Privacy Regulation to be adopted (DigitalEurope, AmCham EU).

Another point made by several stakeholders refers to the fact that, due to the increased use of data (including its sharing from consumers as remuneration), end-user protection rules should be reinforced, consistent e-privacy rules need to be ensured, the concepts of access to and ownership of data by the consumers requiring careful guarding. These issues have been in part highlighted by LSS, EDRi and Article 19, ETNO, GSMA and DT.

Question 3.2:

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

Some of the purposes for which ECS providers use the collected data mentioned were:

- to improve the services they provide by, for instance, personalizing them (Telefonica, Microsoft);
- to develop and ameliorate business strategies, as well as (urban) planning (DCC, Liberty Global, Telefonica, Microsoft, GSMA, DT);
- to create new revenues (Liberty Global, Telefonica);
- to reduce risks and fraud (Telefonica).

In any event, with respect to buying/selling or sharing data with third parties, the stakeholders replied that ECS providers do not typically use such practices (Google, Telefonica, ETNO, GSMA) and, to improve the services offered, they sometimes exchange anonymized or pseudo-anonymized data with customers, based on contractual relationships (Telefonica).

Regarding the concept of anonymized data, some stakeholders express their drawbacks (EDRi and Article 19), stressing the possibility/risk of “reverse anonymization”.

Another important insight provided by some contributors is that they see a major value to be brought to the economy as a whole from (non-personal/anonymized) data buying/selling/exchanging due to the fact that such approaches would result in new and valuable uses of data (Liberty Global, Microsoft, GSMA, DT) – in the form of maximizing expertise, experience sharing, data synergies and relatively lower entry barriers, as well as social benefits by improvements in the administrative or health care systems/sectors.

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 providers⁷.

Overall, no specific cross-sectoral initiatives referring to data analytics carried out by ECS providers have been identified. However, the stakeholders brought forward several other welfare enhancing initiatives in the field of private-public partnership/collaboration, having as main purpose quick/timely responses to limit situations – infectious diseases, natural disasters, environmental impacts and, more broadly, attaining social good – ameliorating air pollution, climate change impact etc. For all these social welfare-enhancing initiatives, mobile operators and the data that they collect and process are of outmost/particular importance (GSMA). Also, several other initiatives of the EC have been mentioned by Telefonica.

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?

Some of the respondents are of the opinion that the competition dynamics among ECS providers are largely unchanged by the enhanced use of data in the markets (Google, Microsoft, ETNO, GSMA), while others consider that extensive data usage can create commercial advantages for the processing entities (LSS, Telefonica, GSMA and DT focusing on multi-sided digital intermediary platforms/players). A few of the examples of the problematic issues arising from data misuse comprise exploitative conducts, exclusionary behaviours, market power leveraging in adjacent markets (i.e. data-related markets) and increased market concentration (Article 19, GSMA). In any event, a close cooperation between the NRAs and the competition authorities is deemed necessary in order to guard the functioning of the telecommunications markets (EDRi and Article 19).

Another point of argumentation is that, if competition failures arise, they are to be considered in the wider context of the data economy, stemming mostly from online platforms and data-

⁷ As defined in the EECC, including providers of OTT-0 or OTT-1 services.

driven business distorting/changing the already-established competition in the ECS markets (implied by Liberty Global, Telefonica, Microsoft, ETNO, GSMA, DT).

The contributors do not identify a need for revision of the market power assessment procedures and methodology at this state of the discussion (Facebook, AmCham EU, Microsoft, DigitalEurope, ECTA).

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

Exclusive ownership of data is found to be an unsuitable concept in this context, given that data is considered to be non-rivalrous, while the value of data does not lie with its ownership, but with the innovative purposes/manners in which it is put at use, as Google explains. BEUC's argumentation follows the same lines.

Regarding potential competitive differences between network operators and service providers relying on wholesale access (be it in a fixed or mobile infrastructure environment), some respondents consider that there is (almost) no difference concerning data collection and processing between the two categories (Telefonica, Microsoft, ETNO, DT), while others are of the opinion that network operators benefit from competitive advantages compared to virtual operators determined by enhanced business opportunities, given their access to traffic data, for example (implied/partially expressed by Liberty Global).

Additionally, there is a general agreement among the stakeholders that there is an imbalanced regulatory treatment between the traditional ECS operators and the OTT-0/OTT-1 providers or digital players/platform operators (Liberty Global, BEUC, Telefonica, ETNO, GSMA, DT). Nevertheless, there have been respondents who held that there are no relevant competitive differences between the two categories (Microsoft). Moreover, such contributors took the view that traditional ECS providers are advantaged because they have also access to network-generated data (Facebook, somewhat supported also by Microsoft).

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?

There are two main forces at play from the consumers' perspective, the stakeholders explain. On the one hand, further and more detailed data collection and processing leads to innovation, improvement in service provision and also personalization of the offerings, to the benefit of the customers and to the society as a whole (LSS, BEUC, Facebook, AmCham EU, Telefonica, Microsoft, ETNO, DigitalEurope, DT). On the other hand, these issues bare the risks associated with data privacy and security issues, control loss of collected data, use of unfair commercial practices in this respect (LSS, BEUC, Telefonica, Microsoft, ETNO, DigitalEurope, implied by DT). The processing of electronic communications data without the consent of data subjects is another perceived risk by the contributors, which might ultimately lead to manipulation and discrimination (EDRi and Article 19). However, other stakeholders consider that GDPR provisions guarantee consumer data protection (Liberty Global, implied by Facebook, AmCham EU), while the proposed e-Privacy Regulation is unnecessary and needlessly restrictive (GSMA). Also, self-regulation is considered to achieve good results at least to some extent (Telefonica).

5. Responses to “NRAs’ ECS regulatory activity in the context of the data 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.

Overall, the stakeholders agree that the various data analytics tools are able to improve the capacity of NRAs to take more reasoned, fact-based, informed, timely regulatory decisions and that they should be promoted. This view is supported partially by LSS, Liberty Global, BEUC, Facebook, AmCham EU, Telefonica, Microsoft, ETNO, GSMA, DigitalEurope, DT and ECTA). Nevertheless, personal data collection should be limited to what is actually needed for reaching the regulatory targets, while the final information is to be presented in an aggregated and depersonalized manner (EDRi and Article 19). The application of the principle of proportionality should be guarded, while best practices with respect to data are advised to be shared between the NRAs (LSS, EDRi, Facebook, implied by AmCham EU, Microsoft, Article 19, GSMA, DigitalEurope). However, the stakeholders did not advance concrete proposals on actions to improve NRAs' actions by making use of data.

Additionally, the new prerogatives envisaged by the EECC are likely to determine an increase in the knowledge database with respect to OTT-0/OTT-1 business models, enhancing the monitoring abilities of NRAs (perspective mentioned by Telefonica, Microsoft, ETNO, GSMA, DigitalEurope, DT, ECTA).

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?

It is considered by some stakeholders that all data held by NRAs and whose publication would not contravene with third parties' legitimate interests should be published. Such a point of view is supported by Liberty Global and implied by ECTA. Other proposals for categories of data that could be made public were quality of service, coverage, consumer complaints and usage statistics (BEUC) or, for the industry as a whole, open data "to create new business models or to improve current models" (Facebook). As a particularly relevant category of data that should be made public according to some stakeholders, data meant to empower consumers has been identified – barriers to operators switching, emergency calling or number portability being just a few examples (Facebook, Microsoft). Also, data on the use of connected devices has been identified as a means to facilitate the development of the data economy (Microsoft).

However, there have also been contributors that were sceptic about such initiatives, since they would imply an undue burden on the electronic communications operators and they should be objectively justified by the proved lack of such readily available data, backed-up by a cost-benefit analysis from the operators' perspective (Telefonica, ETNO, GSMA).

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.

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?

On the one hand, there was the expressed view from telecommunication operators that collection of additional data from the operators generates costs, additional investments and technological efforts for them and, thus, such reporting obligations should follow as an identification of a market failure or for very concrete purposes (Liberty Global, ETNO, DT), while, on the other hand, some stakeholders considered highly relevant that at least part of the information with respect to the NGN deployments collected by NRAs is to be publicly available (implied by DigitalEurope). Such information could be presented in the form of broadband maps, interactive broadband availability, QoS information etc. (Microsoft). Taking the opposite stance, other contributors argued that no such information resulting from the network deployment surveys is to be published due to confidentiality-related reasons, as well as to the twisted effects that such an approach could have on network investments (Telefonica, ETNO, GSMA, DT).

With respect to the presentation, data meant for end-users should be depicted in an easy, comprehensible, comparable manner (BEUC, implied by Microsoft). Also, the information on actual coverage, for instance, is to be presented at a sufficient level of disaggregation (Telefonica) or on a voluntary basis (GSMA).

Question 4.4:

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)?

In the respondents' view, NRAs and BEREC should either publish all the data that they have unless it directly adversely affects third parties (Liberty Global, endorsed by Facebook, implied by ECTA) or publish significantly relevant data, such as consumer complaints, quality of services, usage and coverage data or geographical broadband availability statistics (BEUC, Microsoft, DigitalEurope). However, as expressed before, there are contributors that are against making more data available to the public, based on the defined regulatory scope, its characterization as private, commercial data or the potential that such publication would go against investment and developing plans of operators (GSMA, DT). Furthermore, it is considered that the market already provides enough relevant data relating to the telecom sector (for example, based on the broad publication requirements stemming from the Open Internet Regulation) (Telefonica, ETNO, DT).

Generally speaking, the aim would be to make public sector data available readily and free of charge and not to regulate public sector access to private data (GSMA).

6. Responses to “NRAs’ experience applied to the case of the data economy”

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?

As previously expressed, several stakeholders consider that the current conditions in the telecom sector contribute to the smooth development of the data economy (Google, AmCham EU, Microsoft, ACEA). Also, there are contributors that draw the attention to the fact that maximizing the use of data is not a means to encourage competition in markets and can create a false assumption that bares privacy and security risks (Google, EDRi and Article 19, implied by Facebook).

Another point made by a stakeholder is that competition between traditional ECS providers, data-driven business and platforms is not adequate because of the direct and indirect network effects which can lead to and reinforce market power, creating high entry barriers (GSMA).

Altogether, there is a widespread agreement that data-sharing should be left to the market, should no systematic failures be identified, as Liberty Global, Facebook, AmCham EU, Telefonica, Microsoft, ETNO, ACEA, DigitalEurope and DT stress. Moreover, the respondents argued that, where the market participants considered it worthwhile, well-functioning data-sharing mechanisms have already been implemented, through the bilaterally agreed conditions/clauses (ETNO, implied by ACEA, DT) or through common initiatives (GSMA, DT). On the other hand, a respondent considers that BEREC might play a role in monitoring business-to-business data sharing (ECTA).

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.

One of the views expressed by Google is that promoting investment in skills and analytical capabilities would be an incentivizing factor in understanding the data already available and how to make the best use of it. Another direction for improvement mentioned was the development of standards and interoperability norms, in such a way as to increase compatibility of various datasets (LSS). However, this is at odds with other stakeholders' reflected opinion that enhancing interoperability would result in counterproductive effects (Microsoft), specifically for the consumers (EDRi and Article 19). Also, when market power leads to abusive data collection and exploitation, Liberty Global considers that *ex ante* specific remedies⁸ could be imposed. Moreover, Article 19 makes the point that consumers should be better protected from the imposition of unfair commercial terms.

Wholesale data access regulation, imposed interoperability, additional data portability obligations are seen as unnecessary by several respondents, as long as no market failures distorting competition have been identified (Microsoft, ETNO, GSMA, implied by DigitalEurope, DT, implied by ECTA). Furthermore, the limited competences of BEREC in this field have been mentioned, as well. Such views have been expressed by Telefonica, ETNO, GSMA, DT.

Finally, a respondent proposes a series of measures for assessing the potential concerns stemming from the actions of the multi-sided platforms, such as more proactive and dynamic competition analysis, faster action/enforcement, taking a balanced view between *ex ante* and *ex post* interventions, stronger monitoring and enforcement.

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.

There is a general shared view that a closer, consistent and efficient cooperation between the regulators is beneficial for the development of the data economy (LSS, EDRi, Liberty Global, BEUC, Facebook, AmCham EU, partly Telefonica, Microsoft, ETNO, Article 19, ACEA, GSMA,

⁸ Establishing, for instance, "appropriate wording, choices and ways to communicate how data are being gathered."

DigitalEurope, DT, ECTA). Some of the stakeholders have in mind a formal, continuous form of cooperation/collaboration (in the form of a memorandum or through mandatory consultations, for instance) (Article 19).

The following areas of potential interest have been identified⁹: monitoring the utilization of personal data by the ECS and OTT providers, market share assessment based on data, identification of common infringements and best responses, adjusting consumer protection legislation to cover also the business models built around data as remuneration (BEUC, ETNO, GSMA, implied by DT) or the adoption and coherent application of technology-neutral standards (GSMA). However, attention is drawn by some of the contributors that NRAs interventions should not overlap with other jurisdictions (Google, AmCham EU, implied by Facebook, ACEA, DigitalEurope, implied by DT).

Another idea advanced by one respondent was the one connected to the creation of a super-regulator to merge and coordinate all the issues pertaining to the data economy, with broad regulatory powers across the digital markets.

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?

The stakeholders identified the need for a bit more clarity in this respect, as data represent an input for a wide range of markets and, as such, it is not straightforward to imply what exactly means a data market, which are its boundaries and what it includes or whether it is (not) too early to discuss about data markets (Liberty Global, AmCham EU, partly ETNO, Article 19, GSMA). In any event, the geographical scope proposed for data markets was either European or corresponding to the European Economic Area (BEUC) or global (Telefonica), none of the respondents mentioning the national level. However, according to several stakeholders, caution has to be exercised when defining a relevant market corresponding to data by following a case-by-case approach, depending on the (category of) data under consideration (proposed by EDRi¹⁰, Liberty Global, GSMA).

Another point made by the stakeholders was that there is a need to assess if persistent barriers to switching are created/determined by ECS providers' access to customer data (Microsoft).

Question 5.5:

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

With respect to NRAs' envisaged regulatory intervention that could foster the transition to a data economy, there were a series of responses conveying concerns for surpassing the

⁹ The list is not exhaustive.

¹⁰ The respondent differentiates between personal data, for which "the European scope has been defined for decades" and the non-personal data, for which no preference is expressed.

prerogatives on the regulators' side (AmCham EU). Therefore, it was considered that NRAs should clearly delimit their activities/responsibilities with respect to the data economy in their interaction with other regulatory bodies (Google, implied by Liberty Global), and, together with BEREC, focus on their primary aim – fostering competition, promoting innovation and investments, empowering and providing protection for end-users (EDRi and Article 19, Facebook, implied by ECTA).

Moreover, it was stressed that NRAs should not impose regulation in data-related markets unless there is an identified market failure which cannot be efficiently addressed by other means (Liberty Global), while, at the same time, their monitoring capacities should be improved, especially in the view of the new prerogatives with respect to data collection from the OTT providers, so as to improve the overall picture of the competitive situation in the markets (BEUC, implied by Microsoft).

NRAs should create a level playing field between the traditional ECS providers and the OTT players/data-driven businesses, but acting in such a way as to incentivize infrastructure investment and network deployment, as they are at the core of the data economy development (implied by Telefonica, ETNO, GSMA, ECTA).

Finally, the proposal to equally apply consumer standards to all business models, irrespective of the currency of exchange used (referring to situations in which data is used as such), was made by the stakeholders (ETNO, GSMA, DT).

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?

Broadly speaking, for those responding to this issue, the NRAs experiences with *ex ante* regulatory interventions were considered highly relevant for the courses of action they are to take in the data economy field (Liberty Global, AmCham EU). And, precisely as a consequence of the gained experience, NRAs should refrain from imposing additional regulation with respect to the data economy field, unless it is really deemed necessary. This view is supported by AmCham EU. Moreover, “translating any NRA experience in the field of telecoms regulation to the data economy more broadly” needs caution, as it might bare risks (i.e. with respect to interoperability), as DigitalEurope explains.

7. Responses to “Other issues”

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.

Regarding other issues not covered by the contributions to the previous questions, the stakeholders proposed BEREC to have a detailed look at AI technology, including in the interplay with various device neutrality policies (BEUC) and to build technical-related knowledge by taking part into specific fora, for instance (Article 19).

Also, stakeholders see a role for BEREC and NRAs to clarify, in the view of the provisions of the EECC, the delineation of integrated M2M services with reference to the electronic communications sphere, as well as for the harmonization of understanding and approaches across the EU (ACEA).

Finally, ECTA suggests that BEREC should be careful when approaching the issues related to fostering of the data economy development as presented in the public consultation document, since there seems to be no regulatory provision to mandate such lines of action.

There were also a few contributors who reiterated some ideas presented previously, in order to assign relatively more weight.

Annex

This annex provides a detailed, more in-depth description of the feedback received.

1. General issues

ECTA appreciates BEREC's initiative to analyse data economy-related implications, presents its stake and involvement in the data economy at various levels (including through its role as member of the European Automotive & Telecoms Alliance), considers that the consultation poses relevant questions and proposes follow-up activities on NRAs deeper implication in data economy-related issues.

Nevertheless, **ECTA** explains that there are two data-economy related concepts relevant for the discussion – the data economy of electronic communications and, respectively, the wider data economy. In this context, the respondent considers that it is important to clarify the scope of the data economy within the limits of the electronic communications legislation and therefore within the NRAs' performance of duties.

Furthermore, **ECTA** argues that the EECC does not fundamentally change the existing regulatory framework and does not bring data economy regulation under its scope¹¹. As a consequence, **ECTA** proposes to change the figure "Services in the scope of Data Economy" presented in the BEREC consultation to show that the revised electronic communications services (as defined by the EECC) represents a subcategory of the data economy. **ECTA** concludes that the primary scope of BEREC's research should be reduced to the mentioned subset of services pertaining to the overall data economy.

As a general introduction to its contribution, **a confidential contributor** explains that:

- Data is more and more relevant to the telecom value chain, but, compared to the overall economy data driven revenue models (OTTs), it represents just a tiny share. Thus, current regulatory approaches might prove unfit for the data-driven business as a whole;
- no competitive differences are seen between MVNOs and MNOs or fixed network operators and services (based on wholesale access) providers concerning the collection and processing of data;
- there are competitive differences between traditional ECS and OTT providers;
- multi-sided platforms, due to difficulty of applying the current provisions and tools, are challenging to regulate for competition authorities. NRAs should have a closer dialogue with other authorities in order to ensure a consistent approach.

Based on these major guiding lines, the following main ideas are detailed in the response of **the confidential contributor**:

¹¹ **ECTA** notes that there was also no debate on this topic in the process of the revision of the regulatory framework.

- any taxonomy of data should be based on the legal distinction between personal and non-personal data. Apart from that, additional categories would just create fragmentation and uncertainty;
- the current regulatory approach was not able to deliver a level playing field for among the traditional ECS providers (regulated) and the OTT players, who are significantly less regulated;
- even though data becomes more and more relevant for the telecom sector, the main revenue is generated by the commercialization of targeted telecommunications services, the core model being subscription based. This implies that data is seen as a by-product for the ECS providers (in contrast to the OTT providers' case, for which this might be the core business). Accordingly, BEREC has to take into account this aspect when providing data-economy related recommendations;
- BEREC should not stress issues relating to the competitive differences between MVNOs/MNOs and fixed ECN/ECS providers in the data economy in its report, since these differences are not to be seen;
- BEREC is encouraged to look deep into how data is used along the telecom value chain, taking account of the inclusion of number-independent interpersonal communication services (thereafter, referred to as NI-ICS) under the relevant regulatory provisions, also by cooperation/collaboration and increased dialogue with data protection and competition authorities;
- "More proactive and dynamic competition analysis, faster action/enforcement, balance between *ex ante* and *ex post* regulation, monitoring and enforcement" are the recommended courses of action for coping better with the competition challenges raised by multi-sided platforms;
- A consistent application of the rules for data economy implies the close dialogue between the regulatory authorities – including, but not limited to NRAs, "data protection authorities, competition authorities, consumer protection watchdogs and sectoral regulators in highly regulated sectors such as financial services, healthcare, transport and insurance".

Question 1.1. – Data Economy definition

Google highlights the fact that the term 'data economy', defined as proposed, inherently assumes an economic value which could be exploited for gains. However, in Google's view, raw, unprocessed data as such has no value. Data creates value when new products/services become available, innovation takes place and efficiency improves. The main function of data is to improve utility and, thus, any definition of the 'data economy' must not regard the flow of data as primarily for direct economic purposes.

DCC considers that the proposed definition seems to capture all the most important features seen in practice. However, it expresses some reserves concerning the aim of arriving at a "very specific definition". Moreover, in the respondent's view, the wording is confusing in that the data economy does not 'measure' the impact of data on the market, while the liaison of market place and exchange of data is found to be not so useful since exchange of data is mostly ancillary to the core business/main area of activity.

LSS believes that the proposed definition is sensible, but it is not adequate to be considered as a legal definition. However, **LSS** acknowledges the difficulties faced when trying to define a concept that is constantly changing/evolving.

EDRi and **Article 19** note that BEREC's view of the legal framework, its regulatory role in the context and of the 'data economy' as expressed by the proposed definition are not clear and make the following observations:

- from a legal perspective there is no single "data market" and no generally accepted definition of "data";
- there is no distinction between personal and non-personal data, which are legally covered by different legislative provisions – i.e. personal data are covered by the fundamental rights to privacy and data protection;
- the "raw data" concept is inconsistent with Directive 95/46/EC¹² and General Data Protection Regulation (GDPR, thereafter), as it assumes that recording of data is not processing of that data.

EDRi strongly believes that the overall objective of the EU's policies in the data economy field, including those promoted/supported by BEREC, should be aimed at preventing personal data from becoming a trade coin for services.

Article 19 states that data-driven markets are various, that not all of them being are under BEREC's regulatory competences. Accordingly, the proposed definition should be focused on the telecommunications sector.

Liberty Global explains that the term "data market" is found to be not accurate and the proposal is to refer to "data-related markets", the markets in which data is a relevant input. Ultimately, all markets will be incorporated in the 'data economy'.

BEUC agrees with the definition provided by BEREC, while it proposes to acknowledge that data has both qualitative and quantitative components, its use being directly dependent on various characteristics like format, accessibility and interoperability.

Facebook is of the opinion that the suggested definition is very broad, but fit for the complex concept it tries to capture. It also adds that any proposed definition of 'data economy' would be contestable.

AmCham EU is not sure if the proposed definition implies that data markets and the data economy are separate and questions the need for such a "strict" definition.

Microsoft expresses its concerns towards BEREC's intent to use such a wide definition for sector-specific circumstances. Moreover, given the broad context in which the Commission made use of the aforementioned definition, the respondent considers that it is not clear how it can be useful to address data targeted in the telecommunications sector. On the contrary, specific competition problems or regulatory concerns should first be identified and then particular solutions to address them should be sought, otherwise the data economy could be negatively impacted by such conducts.

¹² Directive 95/46/EC of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31995L0046&from=EN>

Telefonica points to the difficulties in providing an overall, comprehensive definition for the data economy, given the complex interactions it tries to capture. From this point of view, this contributor says that the proposed definition seems inaccurate, but it is also not easy to improve it since more insights into the data economy (as digitalization becomes more and more widespread) are needed. In any case, the role for telecommunication companies in the data economy is limited, the sector being significantly broader and involving significant more entities/actors. Moreover, the traditional roles are inverted – the incumbents are new entrants in the data economy markets, being constrained by regulation, while digital players are unconstrained, being disruptive for the provision of traditional ECS. They collect, process and analyse data that provide useful insights for a wide range of companies across the economy, develop data analytics to incorporate the information in services provision, competing either directly in the whole economy or reaching agreements with other companies in order to value their data input.

ETNO explains that using of a single definition for such a comprehensive concept is “constraining and incomplete”, not being necessary or adequate for regulatory purposes. Also, **ETNO** makes similar remarks to **Telefonica**, pointing to the limited role of telecommunications operators in the data economy.

DT generally agrees with the definition, but brings into discussion the fact that the proposed definition dose not aim to capture competition-related aspects.

ACEA and **DigitalEurope** agree with the proposed definition. Nevertheless, **DigitalEurope** holds that a specific data definition is not necessary since it is less and less relevant to distinguish the data economy from the overall economic space.

ECTA notes that the proposed definition is unable to capture a series of important business models differences, such as:

- the fact that all traded data are “exchanged as products or services” – in the respondent’s view, such a statement is not true since it would imply structured¹³ data being already products or services. However, raw data is also traded and becomes more relevant due to the correlations/inferences that it allows;
- the remuneration/monetization patterns underlying various businesses – that differ significantly between traditional ECS, OTT providers and third parties.

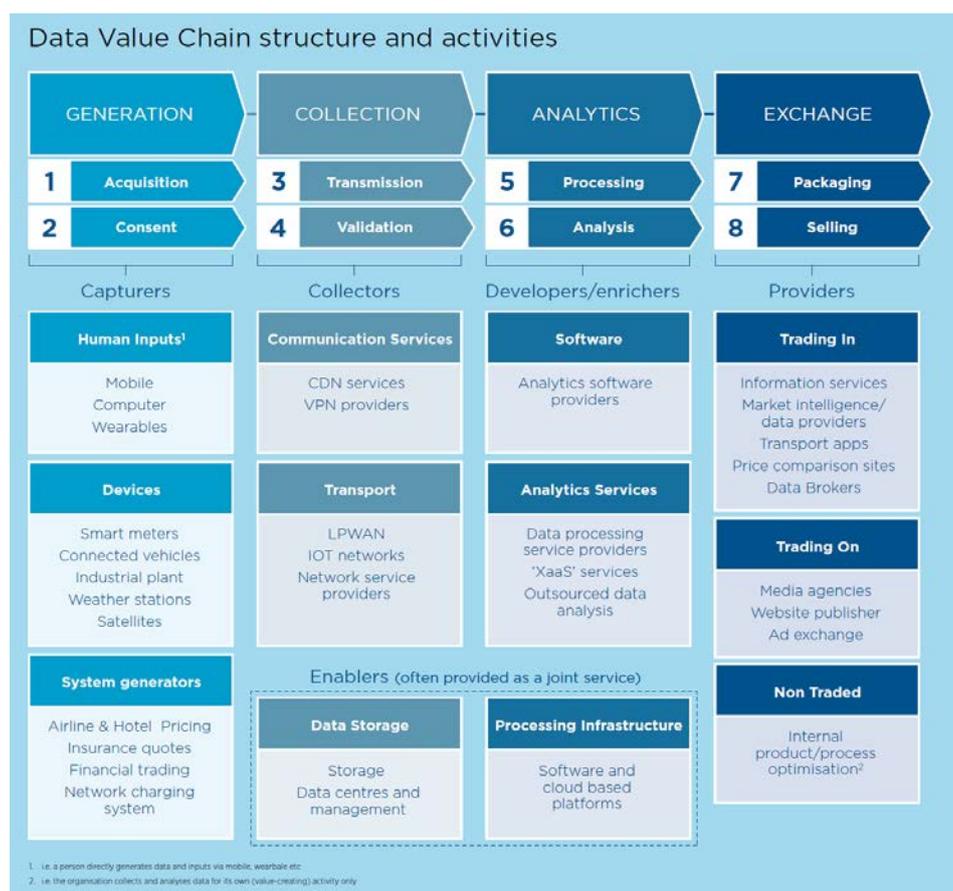
ECTA concludes that the electronic communications markets are not data markets according to the proposed definition and, thus, are not a part of the data economy.

GSMA considers that the purpose of defining such a concept is unclear and the opportunity judgment that is required from the stakeholders cannot be done without a direct implication of the specific purpose for which the definition is used. Nevertheless, the scope of the proposed definition is very broad and it can, by no means, represent the starting point for an appropriate assessment of the competitive conditions in the data-driven markets. It can, on the other hand, be useful to have a broader view of the data-driven products and services markets.

¹³ Which is a prerequisite of data gathering.

In this line of thought, **GSMA** presents in the figure below¹⁴ the result of applying a data value chain framework to the data economy and the related organisation of activities. All the depicted layers/considerations are horizontal, even though their relevance is different from one sector to the other - certain areas making intensive use of data collection and processing, which, in turn, shapes competition. Additionally, it is important to keep in mind that economies of scope determine that data gathered in a sector might be relevant at the analytics layer in a different sector. For instance, data gathering in online services markets enables digital players to enter banking and finance sectors.

Figure 1 – Data value chain structure and activities (GSMA)



A confidential contributor supports the definition of the European Commission's Communications, but notes that the context in which it was presented is far broader than the electronic communications sector. Thus, it might not be appropriate to be used for a detailed analysis of data-driven products and services.

This respondent also makes reference to GSMA's data value chain study and advises BEREC to include a detailed breakdown of the data value chain in its final report. According to the respondent's own assessments, data innovation is determined by a four step process – data

¹⁴ Source: The Data Value Chain, GSMA study, Figure 3, available following the link: <https://www.gsma.com/publicpolicy/the-data-value-chain>

management/generation (across sources and systems), data management/collection and collation (aggregation), processing (application of data analytics/tools), data products use and re-use (creation of new datasets, scaling new levels of intelligence and customization of data). When considering non-personal, machine generated data, it is worth mentioning that all the steps might take place in real time, with data being generated, collected, processed and used/re-used immediately or within seconds, or data might be stored for a while before going through these stages.

Question 1.2. – Key characteristics of data

Google considers that, even though an analysis of data's properties from a strictly economic perspective is partial, if only the economic properties of data were to be taken into account, data has two important characteristics: it is a **non-rivalrous asset** and it features **diminishing returns to scale** (the first observations/data collected are much more valuable in that they provide a deeper insight than the last pieces of data).

While acknowledging the fact that data is non-rivalrous, **DCC** believes that there are growing concerns of the fact that digital **data is prone to be excludable** – the data generated by large intermediaries are not immediately/readily available to all the companies/interested parties, potentially leading to “winner-takes -all” situations. This feature of data is particularly relevant since the companies who have immediate access to this data could provide targeted services and build business models based on the comparative advantage they have, given that the data cannot be duplicated/become available easily and timely.

LSS points to the **intangibility of data** and to the fact that data is typically stored in electronic format. As a consequence, data can easily and readily be made available to interested parties when compared to physical goods, but this poses security-related issues then.

EDRi and **Article 19** stress the fact that, from BEREC's standpoint, the impact of data on competition in the electronic communications markets is the most relevant aspect. In this vein, the respondents call on additional attention on BEREC's side so as to not surpass its legal prerogatives.

EDRi and **Article 19** propose to consider that data falls under the following categories - **directly personal data**¹⁵, **inferred personal data**¹⁶, **personal data connected to communications metadata** and **non-personal communications data**. Then, from an economic perspective, data is thought to have some particular characteristics that are difficult to be regulated under the traditional models.

Moreover, in the respondents' views, data could be taken as **rivalrous**, since it is becoming scarce as the ability/power to control, merge and infer grows larger/increases. Also, the analogy between data and the new oil misleads the idea which is to be transmitted, **EDRi** and **Article 19** noting that such an analogy would be appropriate in “a climate change disaster”, a

¹⁵ Such as name, IP address etc.

¹⁶ Such as log-on and log-off times from the computer, from which certain inferences about the behavior of the person can be made.

flood of data breaches and data exploitation. As such, because of the multiple ways in which personal data can be used in a detrimental manner for the individuals, BEREC needs to be careful in its approach and also clearly breakdown data in personal data and non-personal data.

Article 19 brings in the discussion the fact that two different bottlenecks in data-driven markets can be identified: one having to do with the huge amount of data that is needed by companies making use of machine learning (only few of them have such non-replicable resources, conferring a competitive advantage) and the second one concerning data processing capabilities and skills (which are not necessarily available). Competition law provisions have not been, up to now, applied as to properly address these bottlenecks¹⁷. BEREC is encouraged to work closely with competition and data protection authorities to complement their expertise, but being careful that it does not surpass its regulatory scope.

The key elements to be considered when talking about the economic properties of data, as presented by **Liberty Global**, are **universality**¹⁸, **uniqueness**¹⁹ and **trust**²⁰.

BEUC suggests the following classification of data: personal and non-personal data according to its nature and, according to its economic role, data as an **'input'** (to be incorporated in the production of goods/services) and data as an **'output'** (final product).

The classification of data by its nature is relevant because the first category is strictly regulated under GDPR, while the second category could and should be shared more broadly. Then, classification of data by its economic role is important because if one considers data as 'input', there is an incentive for the company that holds it to act in such a way as to foreclose competitors. This is not the case if we are to consider data as 'output'.

Facebook agrees that data is non-rivalrous and non-exclusive, while stressing that its value resides in its analysis, processing and inferencing properties for a well-determined purpose. Data also exhibits diminishing returns to scale, **Facebook** states (in agreement with the point made also by **Google**), which need to be taken into account by BEREC. Overall, **Facebook** advises BEREC to avoid using a "checkbox approach".

AmCham EU believes that, indeed, data is **non-rivalrous** and **non-homogenous**. Nevertheless, in the respondent's view, the statement according to which data economy might exhibit significant network effects is somewhat at odds with the non-rivalrous nature of data. "Winner-takes-all" situations are specific to non-replicable elements, which should not be that case if the data is non-rivalrous (i.e. replicable).

¹⁷ **Article 19** makes reference to Facebook - WhatsApp merger, where DG Comp failed to take into account a post-merger situation in which Facebook alters the data protection conditions of WhatsApp, to the detriment of end-users.

¹⁸ Universality implies that two parties have a common understanding about the same data taxonomy.

¹⁹ Uniqueness means that data is first party and proprietary to the controller.

²⁰ Trust in that there is confidence that the data is collected under the appropriate legal and consent mechanism.

Microsoft replies that the most important characteristic of data is its **ubiquity**. Unique, indispensable data inputs for which no reasonable substitutes are available and potentially create competition bottlenecks are rare. Other key features mentioned by the respondent are:

- **replicability** – data feature the so called “multi-homing”, as a consequence, bottlenecks’ presence being unlikely;
- **multi-dimensionality of data inputs** - it is not the increased volume of data that matters, but the correlation, assembling and inferences from various datasets that provide valuable insight and understanding, obtained with the help of sophisticated data analytics tools;
- **not all data is useful commercially** – it is not self-explaining that a certain dataset, considered individually, will generate better insights or inferences. It is only after a thorough study that this conclusion is to be reached. As a general rule, the better the structure, velocity, variety, density and volume of data are, the higher are the chances to make useful inferences. Nonetheless, no dataset has such individual importance as to “tip the market”.

On the network effects leading potentially to “winner takes all” situations, **Microsoft** puts forward the idea that strengthening the market position of one player can enhance its innovation abilities/provision of new services, challenging the incumbents²¹.

Telefonica and **ETNO** explain that other important characteristics besides the ones mentioned already need to be taken into account. The respondents make reference to:

- **data having different value**, depending on the provider, the purpose/aim for which is processed and the processing availability of the provider;
- the different value of data can be obtained (i) directly, from the expected revenues generated by selling data to third parties for advertising purposes, or (ii) indirectly, following the competitive advantage brought by incorporating data insights into new, innovative products/services, improvement QoS etc.;
- **data can be monetized** in the form of advertising gains for personal use or selling of data for the advertising benefits of third parties;
- data is used as **exchange currency**, in the so-called “free” provision of services;
- data calls for a case-by-case analysis, due to the fact that it can be input, output and price in the data economy;
- data is **not implicitly substitutable** – implies data portability/interoperability issues.

Additionally, **ETNO** stresses the importance of data as a means of remuneration, determining also the necessity of reasonable end-user data protection to be in place.

²¹ **Microsoft** seems to make reference of data economy enhancing the abilities of other smaller providers to challenge the positions of the already established operators (with reference, mainly, to incumbents).

DT points to the following main aspects:

- the volume of data processed (discussing of the “critical mass”);
- the ability to combine several datasets based on identifiers (taking into account that, for big data analytics, the use of personal data is more advantageous and pseudo-anonymization can be used to protect individuals);
- data can be used as **an alternative remuneration** (requires a reasonable transposition of end-use protection to data-based business models and comparable standards to be applied to businesses based on money or data).

ACEA notes that vehicles are increasingly connected having an immense potential to collect and exchange data (V2V – vehicle to vehicle, V2I – vehicle to (road) infrastructure, V2X – vehicle to everything (pedestrians, network)). The social value of such data exchanges ranges from vehicle and traffic safety to productivity and commerce. Furthermore, there are strong network effects in the vehicle communications scheme – the higher the number of participants, the more effective the system functioning²². Also, the economic value of data grows as it is qualified and enriched²³. The respondent highlights that an example of relevant regulatory framework is in the ITS Directive and Regulation 886/2013, available at: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32013R0886>.

DigitalEurope acknowledges the information on data presented by BEREC and adds for further consideration the following:

- many datasets are easily replicable and substitutable;
- in order to get valuable insights seeking and combining various data is needed and it is highly unlikely that one entity would be proprietary of all such data;
- not all data is commercially useful – data needs to be firstly collected, then processed and only then its predictive ability is becoming obvious/confirmed.

GSMA mentions that data is a unique economic good. Even though there is this general impression that data is abundant, this is false due to the fact that data is available in an enormous number of scarce/unique pieces (it is a question of variety).

Also data is intangible, sharing some characteristics with other capital goods, but embeds them in a specific, distinctive mix. For illustration purposes, **GSMA** presents the key dimensions which can be combined to determine the properties of datasets. Also, the fact that the business context in which data is used has a strong influence on the value of the respective data has to be kept in mind.

²² For more information, see: https://ec.europa.eu/transport/themes/its/c-its_en

²³ For instance, data on loss of wheel traction is valuable for road/traffic authorities – if such information is collected from several cars, then it leads to the conclusion of slippery road in a certain area. Then, this structured information is to be sent to the traffic participants' cars.

Figure 2 – Key dimensions and data types (GSMA)

Key dimensions and data types

Dimensions	Data Types		
Personal	Volunteered	Observed	Inferred
	Private		Public
	Identified		Pseudonymised
Non-Personal	Anonymous		Machine Data
Timeliness	Instant/Live		Historic
Format	Structured		Unstructured

Like **GSMA**, another stakeholder highlights that data is a unique economic good and, therefore, the simple analogy with a traditional economic good needs to be abandoned. Data might seem abundant, but its value stems from its heterogeneous, reusable, non-rivalrous nature. Data can be regarded as a capital good – for example, in the instances when providers offer services for free to end-user asking for their data in exchange and selling them to third parties for advertising purposes, then the only capital that is held by end-users is this data.

Yet another relevant qualification of data is the one connected to its openness – closed, share and open, with their different nuances. A relevant figure from Deloitte is presented below. It is worth mentioning that open data can be regarded as a public good.

Question 1.3. – Data classification

Google finds it difficult to provide a classification of data which would be the most relevant for BEREC, since they consider that the scope of the analysis seems unclear.

DCC notes that geographical location data should be treated in a spate category, as it could have a highly commercial potential, being particularly relevant for a wide range of applications.

LSS stresses that non-personal data comprises also personal data (data that refers to an identifiable individual²⁴) which has been successfully anonymised. However, this category of non-personal data still relates to certain particularities of individuals and its disclosure could have potential negative effects for the individuals concerned or provide potential advantages. Other sub-categories of non-personal data comprise public sector information, commercial data, scientific data, environmental information etc. Overall, **LSS** considers that the extent to which taxonomies of data are to be developed depends on the purpose/context.

²⁴ As defined in the GDPR.

EDRi and **Article 19** believe that it is not relevant, from BEREC's perspective, to classify data. As long as, in the regulatory activity of BEREC, it does not matter if communication is IP or PSTN, encrypted or not, voice or text, the underlying data should not matter as well.

Liberty Global considers that in the agents' category, besides personal data, digital assistants, agents and robotics could be included; the immutability category should include also voice, genetic and biometric data; the groups' category could also comprise of vehicular, household, enterprise and city data.

BEUC proposes that the most relevant classification for BEREC's activities is the one pertaining to personal and non-personal data, as well as public and privately-held data. For example, BEREC could promote the availability of non-personal data only if it's not privately held.

Facebook recognizes the difficulties faced when classifying data²⁵, while proposing using criteria such as whether the data is public or not, whether it's exclusive (because of copyrights, for instance), the complexity implied by collecting the data and other factors. However, **Facebook** urges BEREC to be careful not to draw general conclusions based solely on classifications, a case-by-case approach and analysis being needed.

AmCham EU agrees that the most important distinction of data is between personal and non-personal data, but considers that trying to find a more detailed taxonomy for data is not necessarily desirable and not sure what purpose it would attain. BEREC should focus on how data is used.

Microsoft acknowledges the importance of a clear, consistent taxonomy to be used for data. Besides the proposed distinction between personal and non-personal data, data can be divided as customer and non-customer data, driven by the distinctive protections rules applicable to customer data, for example.

Another category of data relevant for BEREC's activities is "electronic communications data", including both metadata²⁶ and communications/message content. As the respondent explains, electronic communications data can sometimes be regarded as outside the scope of GDPR. Also, communication/messaging content data can be regarded as a form of customer data and, by contrast, certain metadata included in the proposed category (for instance, non-personal operational data) is considered to be non-customer data.

Microsoft explains that the distinction of data falling under the electronic communications expanded definition (as provided in the EECC) and of data falling outside-the-definition data (such as information society services data) is further useful to reflect upon. These distinctions are further to be considered by NRAs, data protection authorities and EU legislators in the establishment of a common understanding/ground of assessment of electronic communications data. **Microsoft** stresses that of particular relevance, in the aforementioned context, is the interplay between metadata and content.

²⁵ Due to the ever changing environment and conditions.

²⁶ For instance, user location, message history etc.

Feeding to the opinion expressed above, **Microsoft** adds the fact that services sectors are converging as a consequence of the development of the data economy. For instance, according to **Microsoft**'s views the provisions of the EEC with respect to the proposed definition for electronic communications services alter the distinction between “electronic communications data” and “information society services data”. NRAs and BEREC should be mindful about these issues and regulating new areas under their scope “without acknowledging and factoring in the knock-on impacts on other adjoining areas of the modern data economy”, **Microsoft** says.

Telefonica does not understand what is the reasoning behind BEREC's interest in providing/making use of a data taxonomy in isolation from a broader, cross-sectoral perspective, given the fact that the telecommunications sector is just a tiny part of the data economy. Moreover, the respondent stresses that such a narrowly focused question (referring to the role of data in ECS providers competition) failing to account for the fact that, at retail level, ECS providers compete with “data-driven service providers”. **Telefonica** fears – the imposition of penalizing regulation on electronic communications operators just because they are under the regulatory scope of NRAs/BEREC, the rest of the participants in the market remaining unregulated, as they fall outside the sector-related provisions.

ETNO considers that, in the BEREC context, data as remunerations is of particular interest.

When qualifying data, **DT** replies that technical safeguards (pseudo-anonymization and encryption) need to be taken into account, since they provide the opportunity for business to make use of personal data in a suitable and flexible manner, protecting end-users at the same time. Pseudo-anonymization²⁷ is fit for purpose because it eliminates the direct link between the data and the data subject, but, at the same time, it keeps the identifiers, so that data synergies can be attained. Therefore, even if it is still personal data, pseudo-anonymized data deserves further attention.

ACEA endorses BEREC's point of view that the most important distinction of data is the one between personal and non-personal²⁸. Another important category of data in the connected vehicles domain is “vehicle-generated data²⁹” or “operating data”, which varies according to the manufacturer, vehicle type and equipment and can be used for: vehicle repair, maintenance, road safety and traffic management, fleet management, quality management and product development, and non-automotive usage, such as insurance, car rental and sharing etc.

²⁷ Also the Commission considers it appropriate, in its GDPR provisions. See: http://europa.eu/rapid/press-release_IP-15-6321_en.htm

²⁸ The European Commission Data Space package refers to various data taxonomies (Commission Communication “Towards a European Data Space”, 2 April 2018, available here: <https://ec.europa.eu/digital-single-market/en/news/communication-towards-common-european-data-space>).

²⁹ Data generated within the vehicle control units/electronics that ensures the operational safety of the vehicle, proper functioning, error correction and functional optimization. Vehicle-generated data also gathers information on certain events, such as component malfunction, airbag deployment, stability control and records relevant parameters, like speed, air temperature, acceleration, fuel level etc.

ACEA highlights that, according to the access rights determined by the functionalities, data categories should be formed differentiating between intellectual property of the manufacturer, safety-critical applications, telematics and infotainment applications³⁰.

On the data taxonomy issue, **DigitalEurope** agrees with having a consistent approach, but reminds that simplicity is likewise important in order to avoid overlapping and confusing categories within any such taxonomy. As expressed also by other respondents, the boundaries between ECS, 'minor ancillary services' and 'information society services' become blurred, implying the need for different sector regulators to closer work together in order to avoid overlapping and overregulation.

DigitalEurope proposes the differentiation between input/raw data and output/processed data³¹ for regulatory purposes discussions (including data sharing).

GSMA references to its answer to the previous question, which addresses also the question on data taxonomy. On top of the information provided thereof, the legal distinction between personal and non-personal data has to be underlying any proposed taxonomy. In this context, **GSMA** shares the opinion expressed by other stakeholders that, from an economic standpoint, data can be an input³², an output³³ or an exchange currency³⁴. Addition of other categories of data should be avoided in the respondent's view, as this could determine fragmentation and legal uncertainty. However, the distinction between ported/portable data from one data controller to another and data which the customers chose not to port is relevant.

A stakeholder replies that any taxonomy of data has to be centered on the legal distinction between personal and non-personal data. From a practical standpoint, any personal data could be anonymized to constitute non-personal data. Also pseudo-anonymization might be used to still keep the data identifiable (therefore, usable in some respects) but at the same time to diminish the risks of unauthorized use. Finally, new legal categories of data should not be created due to greater fragmentation and legal uncertainty.

Question 1.4. – Potential competition concerns in the data economy

Google is of the opinion that it is not appropriate to discuss the exercise of market power in online markets since competition is fierce, dynamic, with low entry barriers as a result of the existing tools - computational resources, technology, communication tools, data and knowledge - available at low costs/with low investments. The respondent considers that digital tools (which are highly flexible and can be used in a multitude of ways, some of them being

³⁰ For further reference, please see the data taxonomy in ACEA's position paper on third party access to vehicle generated data, to be found at

https://www.acea.be/uploads/publications/ACEA_Position_Paper_Access_to_vehicle_data_for_third-party_services.pdf

³¹ To which algorithmic analysis can be applied, for example.

³² By analogy a capital good/asset or intermediary good used in the production of digital services or in the production of other enriched data, as **GSMA** explains.

³³ Data being transformed and enriched through combination with other information and through software processing.

³⁴ For example, in the frame of two-sided intermediary platforms, when data is being transferred in exchange for zero-monetary price digital services.

open-source) level the playing field for all entities, irrespective of their size. Furthermore, even when an entity stays on top in its core activity, this has to be interpreted as a result of its ability to continuously invest and innovate.

DCC acknowledges the competition concerns identified by BEREC. Furthermore, information and power asymmetries easing the way of some companies to reap undeserved benefits (for instance, obtain most favoured nation clauses or successfully apply discriminatory practices) must be taken into account, should they extend into the data economy.

EDRi and **Article 19** note the key character of the competition concerns mentioned by BEREC and ranks them, in terms of importance, in a reverse order as presented. Furthermore, **Article 19** draws the attention that mergers which have the aim of gaining control over important datasets/databases have to be closely scrutinized, since they could create competitive concerns.

Liberty Global responds that the most important competition concerns are related to **entry barriers** (generated by the timely/exclusive access to a specific dataset which is critical for the supply of the products/services to consumers), **excessive data/unfair terms and conditions** (abusive exploitation of consumer data by excessive processing and extraction of data in return of free services), **zero-price markets** (there is a recognised lack of competition concerning privacy in the case of services offered for free, the personal data being used an exchange currency for the zero-priced delivery of products/services) and **network effects in online markets** (the higher the number of customers for a certain provider, the higher the market power it will have with respect to data³⁵).

BEUC explains that, if certain data which would lead to service development and innovation is controlled by a company, it is not only the company's potential rivals that suffer (that is to say, competition is harmed), but also the consumer since he/she faces a relatively lower product choice/lack of innovative services. This can be regarded as "refusal to deal or to supply", as a sub-category of a dominance abuse as provided under Article 102 TFEU³⁶.

Furthermore, the practice of some companies to impose unfair or even illegal contractual clauses³⁷ in order to get a variety of data from consumers is another problem which needs to be taken into account. Such practices can be considered potential breaches of the consumer law (i.e. unfair commercial practice), on the one hand, and, on the other hand, exploitative abuse within the meaning of Article 102 TFEU, if a dominant position is enjoyed by the respective company.

Facebook considers that the industry (the application services level) in which it operates is highly competitive, with low entry barriers. In such industries, products/services can be offered and adopted in a quicker and cheaper manner than tangible products, with low capital investment and infrastructure on the side of the app producer, while the switching costs are considered to be low and the potential market for similar services virtually unlimited. This is to

³⁵ The higher the number of customers, the more advertising funds will be attracted, the more free of charge services will be provided in return for data, the more data will be collected and so on.

³⁶ Treaty of Functioning of the European Union.

³⁷ In the form of broad permissions to collect data.

be seen in the high degree of innovation in the sector and the pressure that companies are faced with in attracting and retaining users.

If in those situations where specific non-replicable datasets determine competition concerns, it is **AmCham**'s view that the competition law provisions are enough to handle the issues. Nevertheless, since BEREC, competition, data protection and consumer protection act concomitantly in the data economy, the respondent urges the regulators to avoid effort duplication and keep in strict focus the data economy-related activities according to their competences. In this vein, BEREC should focus on telecommunication markets.

Making reference to the answers provided to the previous questions, **Microsoft** strengthens the opinion expressed also by other stakeholders that there should be a specific, narrowly-defined problem/concern in order for regulation to be desirable. Moreover, the nature of data itself (replicable, multi-homing and multi-dimensional) speaks against the possibility of reinforcing network effects and, as a consequence, imposing regulation. Even if the data is considered unique, a competition problem arises only if the controller can make use of the data to exclude competitors from the market, *ex post* remedies being fit to solve the problems³⁸.

Microsoft believes that competition is dynamic, collecting and making use of data for own competitive advantage being an economically efficient behaviour that drives innovation. Moreover, access and sharing regulation to data enables free-riders, which is definitely detrimental to the functioning of markets – innovations is dis-incentivised, the creation of new, better products/services is hampered etc. and might raise privacy concerns at the individual level of the consumers³⁹.

Telefonica states that competition concerns arising in the data economy are the ones related with market power of players that gives rise to competition foreclosure of and establishment of entry barriers for new providers. The ability to access data and its accumulation are premises for market power determination, but do not necessarily imply the ability to foreclose the market. In any case, any anti-competitive behaviour can be eliminated through competition law provisions.

Furthermore, as explained earlier, ECS providers are unlikely to hold any market power in data-driven markets, being under constraint by sectorial privacy and data protection rules, while the potential network effects are addressed by interoperability obligations imposed in the sector. As put by the respondent, “telcos are far away to become strong players in the Data Economy compared to big digital players”.

On the other hand, **Telefonica** expresses concerns related to the lack of regulation applicable to other digital players competing with (regulated) ECS providers in the data economy. The establishment of a level playing field in this respect is crucial.

In the same vein as **Telefonica**, **ETNO** advocates that there is no market power of telecom operators in data-driven markets, who are under sectorial regulation and horizontal data

³⁸ They are more targeted and reduce the risks associated with false positives.

³⁹ Microsoft provided similar reasoning in a contribution to the EC Consultation on Competition Policy in the era of Digitization, which is included as a copy with its contribution.

protection rules. The big (unregulated) digital players are susceptible to have market power stemming from direct or indirect network effects generated by their data-driven business models. Their ability to have a certain degree of exclusivity over data and to accumulate it can be considered as an indication for market power. Nevertheless, this does neither imply the intent to foreclose the market, nor market foreclosure itself. In any case, should any anticompetitive conducts appear, competition law is adequate to tackle the issues.

DT replies that it notices some risk of potentially abusive conduct brought about by the development of the data economy, but competition law provisions are appropriate to address these issues. *Ex ante* regulation (neither sector-specific, nor horizontal) is not proper to account for data use and processing concerns in the data economy (especially with regard to IoT and M2M services).

Making reference to its answer to question 1.2., **DigitalEurope** considers that, in general, competition concerns can be dealt with under competition law provisions. Data is simply a class of assets with different competitive significance attached, generating challenges for regulators in distinguishing the cases that warrant close scrutiny from the cases in which data control and usage are beneficial to the economy. To ensure a coherent approach of these issues, **DigitalEurope** calls for BEREC and NRAs' focus on the role of data and its impact on competition in telecom markets, while broader data market dynamics should stay under competition authorities monitoring.

Oracle mentions the following aspects that may jeopardise competition in the data economy:

- data barrier entries – there are market actors that make use of their important personal datasets (sometimes collected in breach of the applicable legislation) to secure/maintain dominant positions in several data related markets (such as online advertising, mobile operating systems, search engines, inventory of video content platforms) and exclude new entrants. A couple of anticompetitive conducts are the leveraging of multiple data sources to create data synergies and combine them in non-replicable unique datasets⁴⁰ and the identification of potential rivals by analyzing data and taking action on the information (either by acquiring the respective companies or by ending the collaboration with them);
- synergistic anti-competitive effects – the aforementioned entities use their dominant position in the markets to force end-users to provide more personal data than they want and realize, which, in turn, reinforces their market power.

As a result of these observed behaviours, **Oracle** stresses that markets where data is particularly relevant tend to be very concentrated (tendency towards monopolization), which is translated in consumer, competitors and customers harm.

In the view of the forthcoming collective effort of NRAs transposing the provisions of the EECC in their national legislation, **GSMA** suggests that, given the limited resources available, BEREC and NRAs should focus their efforts into the certainties of the future “before

⁴⁰ This can be the case of search engines or online advertising platforms.

considering any move on the new areas that could or should possibly fall under the scope of sector-specific regulation”.

GSMA notes that the overall economy is going through changes and, as a consequence, competition features in the digital markets are different than what regulators know today from the traditional markets. Particular aspects to be considered are listed below:

- economies of scale and strong direct and/or indirect network effects dominate;
- switching costs and lock-in effects on the users side are present;
- platforms have a central role, induced and enhanced by the multi-sided nature of the digital markets; also, because of this role, they are in an advantaged position to exploit different consumers preferences and needs based on the collected data;
- the presence of large scale data gathering and data analysis by the platforms with the aim to create and strengthen market power, leading to anti-competitive effects eventually;
- the need for tighter and increased collaboration/interactions between data protection rules and competition law enforcement⁴¹, determined by (i) data protection standards becoming a competition dimension, (ii) the exclusive control of data sources and analytics becoming a potential bottleneck and (iii) the presence of excessive/exploitative demand for consumers’ data for access and use of the dominant platforms.

As a consequence of the ongoing dramatic changes in the global economy, **GSMA** considers that the existing policies and regulatory approaches need revision to ensure appropriateness with the dynamism in the market and fitness to the market realities, creating a level playing field for all the active actors. Thus, a holistic approach is called for to embed all the relevant economic features and interactions that are likely to reinforce anti-competitive individual effects. **GSMA** also recommends BEREC “to monitor, and once it is published, analyze the upcoming DG Competition report on shaping competition policy in the era of digitization to which GSMA submitted a response”.

The individual contributor says that there is no competition problem which needs to be solved by regulation in the area under discussion and that, from own experience, contract law works fine with respect to regulating data collection and use in business relationships.

Concerning network effects and potentially exclusive control of certain data to reinforce network effects, the respondent explains that there are instances when legitimate concerns on the exercise of market power may appear, adding that this is particularly the case of large social media platforms. Moreover, competition concerns generated by such platforms are specifically connected to non-price features like privacy control for end-users.

⁴¹ “A 2015 speech by the EU Data Protection Supervisor at the joint ERA-EDPS seminar explores in some detail the interaction between EU competition law enforcement and protection of EU citizen’s personal data. The EDPS concludes that ‘antitrust regulators need to work with others to reach a common understanding of how to embrace the social benefits of powerful data crunching while avoiding harm to the individual and respecting the fundamental rights to privacy and to data protection’ “ **GSMA** shows.

Finally, the individual contributor argues that any *ex ante* regulatory intervention should be done following the same methodology as in the market review processes (i.e. when there is proven market failure and it cannot be addressed with competition law means).

Question 1.5. – Regulatory response to competition failures stemming from the power of market data

Google believes that, on the one hand, competition authorities have the appropriate means to assess the impact of data when reviewing mergers and acquisitions and, on the other hand, the data protection legal framework covers the need for responsible processing of data in a protective manner. As a consequence, it does not find it clear why communications regulators should duplicate tasks already done by data and competition authorities.

DCC is of the opinion that competition policy should be at the core of the responses taken by authorities to cope with the challenges of the rapid development of the data economy. However, all the relevant actors should have a deep understanding of the driving forces of the ecosystem of digital companies, of the business models leading to establishing and maintaining primacy in any given domain, as well as of the potential impact on inter-related domains and spill overs.

LSS considers that the EECC, GDPR and e-Privacy Regulation are meant to fulfil a different objective from competition law and, as such, they are not helpful to address competition-related issues. Some additional issues can be considered from a competition standpoint:

- the detail of comparing similar data from similar sources;
- algorithmic decision-making;
- price fixing;
- the emergence of intermediaries for data and questions around where transaction power lies from a competition perspective;
- behavior in online markets;
- the increasing overlap between providers or agents for providers.

Overall, competition law provisions are considered adequate as its principles-based nature grants enough flexibility to deal with the continuously changing markets. The main challenges are related to the quickly changing environment⁴², respectively to the fact that investigations under competition law auspices are based on past behaviour⁴³. Both the aforementioned aspects bring forward the timeliness of decision-making as an important consideration. Therefore, **LSS** believes that the powers to take intermediary measures would be a solution, with the aim of changing the balance of risk – competition law provisions should manage the changes, while there should be a mechanism in place for guarding against anti-competitive practices and protecting consumers.

⁴² Complex cases take time to be assessed and by the time an agreement/decision is reached, the market has moved on.

⁴³ Consequently a certain command will be eliminated/forbade only after it occurred.

EDRI and **Article 19** question the meaning of “the power of market data” and put forward the consideration that it is much too early to provide an answer to that question. Nevertheless, the most important competition-related issue to be considered is the lack of citizens’ trust in online services, which might be improved by a strong implementation of GDPR and e-Privacy Regulation. Also, **Article 19** calls for a more attentive case by case analysis in the view of the application of the EU data-related legislation, which is generally considered fit to guard competition in data-driven markets.

Liberty Global notes that, under competition law provisions, market power is measured as the ability to raise unrestrictedly prices or reduce the quality of the product/service and not in terms of data. As it currently stands, data can be considered an element of the quality of the service provided and, as a result, competition on privacy (data quality) is generated/determined. Thus, anti-competitive conduct stemming from the misuse of data (decreasing the quality of the service supplied) is captured by competition law. However, in the view of the development of data economy, new appropriate mechanisms have to be put in place in order to capture this shift of the economies. Nevertheless, in the respondent’s view, competition law is flexible enough to accommodate the new views and implications. Market power is to be measured not in terms of data volumes, but taking into account data variety and quality. Finally, **Liberty Global** stresses the need of close cooperation between the competition and the data protection authorities in identifying the implied consumer harm and the anti-competitive collection, use and exploitation of data and coordinating their actions.

On the other hand, GDPR’s provisions are not adequate to approach the abusive use of customer data. Essentially, GDPR says that if consent is explicitly given and contract performance motivates it, than processing of data, even if it’s excessive and disproportionate, is justified from a legal standpoint.

Concerning the e-Privacy Regulation, it will not apply to online services unless they fall under communication services. As a consequence, the reinforced framework will not cover a significant part of the data economy.

BEUC states that, if data as an input is considered, then the basis for addressing lock-in competitive effects relies with competition law. A refusal to provide access to data can be regarded as a “refusal to deal”, sub-category of abuse of dominance under Article 102 of TFEU, as previously mentioned. However, the factual application faces some challenges: an abuse is only sustainable if the data holder has a dominant position and the refusal to deal has to be an abuse. Thus, it can be considered that the burden of proof for the conditions which need to be met in these cases is very high under competition law.

Moreover, competition law provisions may fail to provide adequate solutions also in the field of restrictive agreements, as mentioned under Article 101 TFEU.

In the view of **BEUC**, data protection and privacy laws and GDPR contain certain relevant provisions such as the data portability right (regarding personal data), but they do not cover the lock-in effects.

Finally, **BEUC** calls for additional legislative action besides the competition and data protection laws.

Facebook states that competition law and privacy regulation have distinct/not overlapping provisions with different aims – one to handle competition harmful processes diminishing the economic efficiency, while the other to protect individual rights. Also, the forthcoming EECC provides a “flexible, balanced and proportionate” approach to potential competitive problems to arise in electronic communications markets.

AmCham EU answers that the challenges connected to the development of data economy can be successfully coped with the regulatory tools available.

Microsoft makes reference to its previous answer regarding the role of competition law. Also, the possibility by ECS operators to leverage their access to data in adjacent markets in an uncompetitive manner can be limited by imposing strict limits on the ECS providers’ use of electronic communications data.

Telefonica confirms that the regulation in place to deal with competition-related issues is enough to cover the potential competitive problems that might appear in the data economy. For example, GDPR provides horizontal data protection rules for the whole data economy sector, allowing for provision of innovative services based on insights provided by data analysis, while ensuring a high level of consumer data protection.

On the other hand, e-Privacy Regulation is deemed too restrictive, basing the processing of metadata either on explicit consent from the individuals or on full anonymization, with a few exceptions. In **Telefonica’s** view, the proposed regulation “breaks with the balanced approach between innovation and customer protection achieved in the GDPR and jeopardizes telecoms’ opportunity to develop and launch innovative services regarding Big Data and Data Driven Services”. GDPR and the proposed e-Privacy Regulation should be aligned, with the latter having the same underlying concepts/perspectives as the first.

Finally, competition law is sufficient to deal with potential market failures stemming from the rise of data markets, but the current proposed methodologies have to be transformed so that they are applicable to data⁴⁴ and the competition assessment should take into account other factors than price⁴⁵.

ETNO, in a similar manner to **Telefonica**, starts its answer by pointing out that the pieces of legislation mentioned by BEREC pertain to other areas of interest than competition (consumer protection, data protection, access to public information). Also, **ETNO** takes the same stand and expresses the same opinions as **Telefonica**.

Additionally, **ETNO** argues that regarding private data, the best way to “regulate it” is to let the market handle these issues by means of contractual autonomy and voluntariness. Should potential market failures arise, contract and competition law are appropriate to deal with such situations.

⁴⁴ Data regarded as a means of payment (eventually, some monetary measurement to be attached), two-sided markets, using more than the SSNIP test (which is based on prices) for market definition purposes etc.

⁴⁵ Such as quality, innovation, consumer choice etc.

DT joins the opinion that the proposal of the e-Privacy Regulation embeds a risk of deviating from a harmonized approach (already established by GDPR) “by establishing in parts an inconsistent and asymmetric data protection regime that needs to be re-balanced in the context of competitiveness of the European industry”. Its provisions should be aligned with GDPR in order to maintain the flexibility needed in handling data to compete effectively.

The Directive on the re-use of public sector information (PSI Directive) and its revision determine diminishing barriers for citizens’ access to public data. Nevertheless, care needs to be taken with respect to two antitrust issues, **DT** states. First, if there is a risk for PSI provisions to crowd-out private business and initiatives, state aid control principles should be applied in the assessment. Second, PSI provisions (access to public sector information) might raise issues associated with dominant firms – determine their engagement in anticompetitive conducts.

With respect to private (non-personal) data, a regulatory framework is not deemed necessary. Considering private personal data, contractual autonomy and voluntariness are the most important principles that should govern the business conduct. Thus, any legal provision forcing access to private data⁴⁶ would be detrimental and misleading. If market failures are proven, adapted competition law provisions can be used to protect consumers.

About the EECC, **DT** notes that it barely addresses issues connected to the challenges brought about by the data-economy. However, it increases the NRAs powers to collect data, by expanding the scope of the definition of the ECS. But even so, the electronic communications sector represents a little share of the overall data economy and any regulatory action undertaken should be part of a cross-sector consistent approach. Otherwise, applying regulation just to ECS providers would be counter-productive.

ACEA replies that the data economy is booming without the need for additional regulatory intervention and its value is increasing year by year, also as a consequence of the responsible data sharing clauses included in the contracts. **ACEA** supports the flow of data in the internal market, but draws the attention on the approach concerning third party access to machine generated data (that becomes more and more interesting for various actors in the market who would like to exploit such data without restrictions). Unrestricted third-party data access would create a series of negative effects and, as a consequence, such data handling calls for careful management⁴⁷.

ACEA considers that (self)-regulation through contract law is the right approach to share data, adapting the data needs to the particular requests and providing the freedom/flexibility to protect own machine-generated data and obtain a fair return on investment. Since no persistence of market failures has been identified in the field, any *ex ante* regulatory measures would be premature and disproportionate. Should certain competition concerns arise, competition law provisions are deemed sufficient to address them successfully. Furthermore,

⁴⁶ They would result in deterring market entry, investments, innovation and endanger the future development of the data economy.

⁴⁷ For example, installing non-native software in a vehicle could create a series of failures, endangering the safety and integrity of the vehicle’s passengers.

ACEA reminds that data access regulation in the automotive sector (as cybersecurity, as well) is characterised by a significant level of regulatory intervention⁴⁸.

To conclude, **ACEA** argues that the overall EU regulatory framework is adequate in ensuring well-functioning markets, effective data access and robust protection to business and consumers on the usage of their data. Thus, no additional regulatory intervention is currently needed⁴⁹.

DigitalEurope makes reference to its answer to question 1.4. above. The respondent believes that data protection and privacy legislation should not be used to address competition-related aspects⁵⁰, all these issues being under the auspices of competition law.

Taking into account the already explained differences ruled by business models and practices that go far beyond the electronic communications regulatory framework, **ECTA** believes that there is no need to change/adapt/transform the market reviews methodology.

However, there are certain data access questions raised within the existing regulatory framework and the relevant provisions applicable to electronic communications. One of them which is particularly important is the availability of network data for roaming purposes to service providers, explains **ECTA**. More details on this issue are provided in the answer to question 2.2. below.

On the current competition law, **Oracle** considers it adequate to tackle competition issues related to the market power of data on two conditions. First, the intervention needs to be timely and efficient (so that anti-competitive behaviours do not lead to irreversible damage before a decision is reached) and, second, that due account is taken of the specificities of the data economy, such as the existence of network effects and the fact that data can be used as a source of market power.

Concerning the upcoming regulatory framework, **Oracle** states that it is important that the rules/provisions are clear and applicable to all the market players alike. Its appropriate functioning will be determined, on the one hand, by the strictness of the data protection rules,

⁴⁸ “As indicated in the Commission’s communication, access to and re-use of vehicle data have been subject to intensive discussion and a substantial regulatory framework has already been set-up. The e-Call Regulation 758/2015 provides for the deployment of the e-Call in-vehicle system, and access to repair and maintenance information is regulated by Regulation 715/2007 and its implementing regulations (Regulation 692/2008 and 566/2011) for light motor vehicles and Regulation 595/2009 for heavy duty vehicles”. This list needs to be completed with “the body of regulations on Intelligence Transport Services, amongst which Directive 2010/40 on the deployment of ITS, the delegated regulation 886/2013 on data and procedures for the provision of road safety-related traffic information, and the forthcoming delegated regulation on C-ITS”, explains **ACEA**.

⁴⁹ “**ACEA** and its members greatly appreciate the Commission’s decision to publish a set of principles regarding private sector data sharing in business-to-business contexts in its Communication “Towards a common European Data space”. These principles, to which **ACEA**’s members fully subscribe, are immensely valuable to ensure fair and competitive markets for the IoT objects and for products and services that rely on non-personal machine-generated data created by such objects, including, crucially, vehicle generated data”.

⁵⁰ Given that the objectives are different, related to the protection of individuals’ fundamental rights.

which should be kept and enhanced (particularly by the e-Privacy Regulation) and, on the other hand, by the capabilities to enforce these rules in practice⁵¹ (through GDPR provisions).

As expressed before, it is **GSMA's** opinion that the current competition and regulatory approaches are not adequate to address competition issues in the data-driven markets. There should be a series of major guiding lines in adapting the existing frameworks to the new needs: building of closer monitoring and enforcement capabilities, the data value chain warrants special attention as driver of economic growth and social progress, private investments should be incentivised, consistent, alike, rules/standards for personal data processing and use have to be established. These are just some directions which need particular attention in **GSMA's** view.

Concerning GDPR, its provisions establish general, consistent, technology neutral rules, representing a significant step in the right direction, **GSMA** says. The proposed e-Privacy Regulation is also generally consistent with the presented goals and approaches, but is more restrictive in nature. In order to avoid unwanted, twisted side effects of adopting pieces of legislation which are not aligned, **GSMA** joins other stakeholders' standpoint that the e-Privacy Regulation must incorporate the same tools as GDPR (such as pseudo-anonymization of metadata) to enable data analytics to be used under fair and consistent cross-sectoral rules, in a coherent legal environment.

With respect to access to data, data sharing, interoperability etc. competition related issues (regarding particularly IoT and M2M services), **GSMA** does not see any evidence of structural and persistent market failures that calls for *ex ante* regulatory intervention. The best approach to be followed in this respect is following the contract law, an imposed intervention resulting in deterring market entry, investments and innovation and endangering data economy development. Should market failures be documented, **GSMA** proposes a more flexible and swift policy approach to be applied on a case-by-case basis⁵², based, in principle, on the least intrusive remedies to be imposed.

Finally, **GSMA** refers to its answer to question 4.1.

The confidential stakeholder explains that, first, it is important to examine how fit is the current regulatory framework to tackle the unique characteristics of data-driven businesses. An example would be valuating privacy in the relation between customers and service providers.

The respondent also joins the other stakeholders' view that the EU regulatory framework failed to ensure a level playing field between traditional ECS and OTT providers so far. To overcome these issues, the e-Privacy Regulation needs to be aligned with the GDPR, incorporating the further compatible processing mechanism and pseudo-anonymization of metadata.

⁵¹ **Oracle** argues that regardless of the Data Protection Directive's provisions on the privacy rights protection and competition fostering (data minimization, transparency), the absence of enforcement determined unlawful anti-privacy and anticompetitive strategies to be developed.

⁵² "For instance, assuming that private data of public interest are subject to under-provision due to antitrust issues or coordination failures. In such a case, obligatory access might – inter alia - be a conceivable remedy", explains **GSMA**.

Concerning the PSI Directive, the respondent fully supports the initiative, but explains that the regulatory aim has to be to make public data freely available, not to impose access to private sector data to the public sector. Thus, there is no regulatory scope in this respect. Also, BEREC is encouraged to further look in the flow of public sector data and prioritization in sharing and use of public sector data.

2. ECS as an enabling factor for the data economy

Question 2.1. – Key parameters for the development of the data economy

Google considers that the same parameters used for measuring the general internet traffic are relevant in the context of the ‘data economy’, since it is impossible to distinguish between the two. The best means to develop the ‘data economy’ is by promoting the “universal availability of abundant bandwidth”.

DCC agrees with the relevancy of the parameters proposed by BEREC and believes that the late 5G deployment in Europe can create a potential barrier to the EU data economy development.

EDRi and **Article 19** believe that more control over the personal data conferred to the individuals can enhance competition (especially in handset markets), being translated in better control and transparency for citizens/end-users.

In general, **Article 19** calls for the inclusion of human rights considerations, privacy and freedom of expression in the assessment of services provided by network operators, with the benefits of enhancing competition in quality and innovation.

Liberty Global notes bandwidth, ubiquity, security and convergence to be the most relevant parameters in the development of data economy.

From a consumer perspective, **BEUC** highlights the following relevant parameters: data access and control (unlocking data by consumers by granting access to third parties), security (standards and rules have to be in place to prevent data breaches), data protection and privacy (sharing of data has to follow the legal requirements and consumers are to exercise their data-related rights without any kind of restriction).

In telecommunications markets where there is competition, market-driven forces will determine which parameters are more relevant for the development of data economy, taking into account the heterogeneity of consumer demand, **Facebook** holds. The regulatory bodies should focus on competition creation, stimulation of innovation and investments and empowering customers, so that they can select the fitting parameters and services.

AmCham EU is of the opinion that ubiquity and security of networks are highly important parameters, whereas latency and bandwidth are relatively less important, depending on the applications. In any case, the main aim of telecom networks should be to support the data economy.

Microsoft agrees to the importance of the parameters considered by BEREC, but reminds that bandwidth connectivity is at the core of data economy development – without it, no gains from the data can be realised. Another important/crucial characteristic is related to the security of communications networks. From an end-user’s perspective, his/her acceptance and take-up of online services depends on his/her trust in the integrity of the communications channel, encryption etc. and regulation should not limit such conducts of providers.

Telefonica takes the stand that the answer to this question cannot be provided with limited view to the telecommunications sector, but that it has to encompass an assessment of all the layers, not just the connectivity one. Moreover, the connectivity layer is highly regulated, with other layers not. Nevertheless, ECS providers could focus on participating at different levels of the data economy development – not only providing connectivity, but also data generation and analytics services, boosting the data economy development, should a level playing field be established.

ETNO argues that the most important (potentially the only) aspect relevant for the development of the data economy is the right regulatory environment⁵³, leading to investments in electronic communication networks. In the context of the data economy, such (sunk) investments needed for the development of networks also raise questions concerning monetization and value creation (in the form of data and the insights it generates). **ETNO** also considers that telecom operators are put at competitive disadvantage by the applicable regulation and that there is a significant difference between “companies that are born digital” and the ones that need to face the “digital transformation” in terms of resources allocation. This is precisely where regulators should intervene and give the right incentives for development of ECS providers.

DT mentions ubiquity, quality, reliability and security as the most infrastructure-relevant parameters. The weight attached to the assessment of each parameter will be dependent on the intended application. Security of data integrity is fundamental to the equation.

ACEA states that the most important parameters are latency, bandwidth and reliability.

DigitalEurope acknowledges the importance of all the mentioned parameters. From the network ownership perspective, given that not all operators own and operate an electronic communications network, but all of them contribute to the development of data economy, the considered parameters might need adjustment.

GSMA confirms that the characteristics mentioned by BEREC are extremely relevant and highlights that the considered parameters should reflect the Commission’s definition for very high capacity networks (VHC networks, thereafter). Since the future development of the data economy is interlinked with building of very high capacity infrastructures, **GSMA** states that investment in VHC networks is a key parameter.

Another point made by **GSMA** is that the key parameters should be relevant for consumers’ experience and expressed in an easy to understand manner⁵⁴. Although more like a side

⁵³ Visible, stable, capable to provide a long-term outlook for the return on investment.

⁵⁴ “Latency, for example, means nothing to the majority of consumers – consumers care about how long they have to wait until they get a response from the person they are calling”, explains **GSMA**.

comment and not necessarily in NRAs powers to address this factor, **GSMA** notes that consumers nowadays typically have issues (problems in using/understanding certain features, anxieties) with application and platforms interactions. Nevertheless, BEREC is encouraged to analyse data usage methods across the value chain of the ECS (considering the inclusion of NI-ICS in the definition), by cooperation/collaboration with relevant regulatory bodies with competences in the domain – primarily, data protection and competition authorities.

The confidential stakeholder considers that the parameters which NRAs typically use to monitor the electronic communications markets are enough to sustain the development of the data economy. The recommendation is not to consider additional parameters. Also, BEREC is encouraged to look deeper into how the inclusion of NI-ICS impacts on the data used across the value chain, including by regulatory dialogue with other authorities.

Question 2.2. – ECS providers impact on the development of the data economy

Google thinks that there is the need for “an abundance of fast, reliable networks” and the ECS providers should incentivise networks’ growth.

DCC identifies as a potential bottleneck for the development of data economy the rigid rules of processing metadata (especially with respect to location data) proposed by the Commission in the draft e-Privacy Regulation.

EDRi mentions that this question does not seem to fall within the competences of BEREC.

Article 19 explains that BEREC could conduct studies on data-related dynamics and behaviours, given that the effects of data on the telecommunications are not yet clear.

Liberty Global believes that ECS providers can deliver significant opportunities and value for society by developing IoT, big data, analytics and advanced advertising services by making use of the location data they have. However, the level playing field should be evened with over-the-top players (OTTs, thereafter) which do not fall under the stricter regulation, as ECS providers do.

ECS providers could share their available data with consumer organizations with the aim to develop public-interest oriented services states **BEUC**.

Facebook is mindful that it is not clear from the question if the term ECS is used under the current regulation or prospectively, including also the NI-ICS. The main difference would be that ECS, as they are currently defined, provide the connectivity services (support) for the development of data economy, while, if the new definition is considered, ECS foster the development of data economy by innovation. **Facebook** adds that it does not see any bottleneck as of now, but, should the situation arise, the telecom legislation in place, the net neutrality guidelines, as well competition law provisions would be enough to handle the potential issues.

AmCham EU considers that the most significant impeding factor on the ECS providers’ side in supporting the development of the data economy would be the adoption of the e-Privacy regulation in the proposed form because it would create a barrier in using data analytics in

part of the data economy value chain in order to improve networks and services and innovate. On the contrary, GDPR is adequate for the development of data economy⁵⁵ and the two pieces of legislation should be definitely brought inline.

Microsoft states that BEREC's guidance following the adoption of the EECC will be crucial in enabling NRAs to promote investment in fibre networks and upcoming technologies like 5G. Concerning interoperability between newly introduced NI-ICS and switching issues, **Microsoft** proposes the "wait-and-see" approach.

Telefonica explains that, even though ECNs offer the backbone of the development of data economy, they cannot (fully) reap the benefits stemming from their contribution, a fact that is also visible in the reported decrease in revenues reported by telecom operators and their relative performance in the stock markets. As a natural consequence, this affects also their foreseen capacity to invest steadily in networks at the same pace as before. These issues can be addressed by NRAs/BEREC by:

- deregulation of the electronic communications operators, recognizing the competitive pressure exerted on them by the big digital players;
- not intervening in the case of ECS providers collaborating for the improvement of networks – for instance, big data players have to benefit from improved communications networks, being ready to finance network upgrades and tailor the respective upgrades into differential ECS offered to them. Therefore, the regulators should be mindful about the aforementioned when imposing Net Neutrality rules.

Telefonica mentions that ECS could enhance the development of the data economy by expanding in the data value chain, innovation and provision of own data services. Nevertheless, ECS operators are in a relatively weaker position when it comes to data collection for the following reasons:

- the same data/information that they can collect is also available upstream in the data value chain and, as a consequence, it is not exclusive;
- operating systems and applications developers bypass the electronic communications networks (ECS providers are not aware of the information sent over their networks);
- ECS providers are able to collect data just from their customers (have a relatively small base, compared to various "digital players");
- the connectivity market is less concentrated than the market for operating systems, application stores or search engines, as the graph on the digital market openness index presented in the respondent's contribution shows.

Taking all the factors mentioned about into account, **Telefonica** does not see any bottleneck in the data economy which could warrant a regulatory intervention, at this stage. The main perceived risk has to do with competing in an uneven playing field, as explained in several instances already before.

⁵⁵ Processing of data should be allowed in order to create value from it, when data has been collected for the purpose stated and by the rules, while minding proper safeguards in place in terms of data protection and privacy.

ETNO stresses that the main identified bottleneck is the one connected to the regulatory gaps (which cannot be attributed to ECS providers) between traditional ECS providers, on the one hand, and OTT-0/OTT-1 and OTT-2, on the other hand⁵⁶.

ETNO calls for the introduction of “the principle of compatible further processing”⁵⁷ in the e-Privacy legislative proposal in order to hit the right balance between the flexibility needed for innovation and ensuring a high level of data protection/privacy of data.

DT also proposes the harmonization of the provisions of the e-Privacy Regulation with the GDPR by ways of introducing the concept of ‘**further compatible processing**’⁵⁸ of data. In such a way, a level playing field can be created between traditional ECS and advantaged OTT/platform providers, avoiding bottlenecks in the development of the data economy. **DT** joins **ETNO** in giving as example the GPS-driven service which is exempted from the provisions of the e-Privacy Regulation and, in turn, lighter regulated under GDPR, resulting in an advantage of OTT/platform providers over ECS providers. These provisions represent an impediment to the fair development of competition in the data economy. Moreover, the respondent highlights that the results might be twisted – “in-app GPS location data is accurate to within a 3-4 meter range of an individual’s location whereas network generated location data is accurate up to several kilometers (for rural areas) or 50 meter range (for urban areas)”. The conclusion is that the same type of data should be treated alike, irrespective of the technology used/types of services that generated it etc. The introduction of the concept of further compatible processing of metadata in the e-Privacy Regulation would even the identified issues.

DigitalEurope considers that, overall, the adoption of the e-Privacy Regulation will enable all ECS providers (both traditional and OTT players) to contribute to the development of data economy. Nevertheless, in its current form, the e-Privacy Regulation imposes significant restrictions/limitations on the ability of ECS providers to make full use of the data they hold (both metadata and content data) in order to improve services, drive insights and innovation, while ensuring protection of the fundamental rights at the same time.

Other initiatives to contribute to the data economy development could include an assessment of the unique datasets that network-dependent ECS providers collect and hold and of the added value related to sharing this information.

As a general remark, **DigitalEurope** comments that data generated by all participants⁵⁹ in the market have to be considered in discussions.

On the availability of network data to service operators offering roaming solutions, **ECTA** shows that MVNOs and MVNEs may need access to such data not only for billing purposes,

⁵⁶ For example, the e-Privacy rules for metadata should be aligned with the risk-based GDPR approach. Also, services like Gmail, WhatsApp, Skype are covered by the proposal of the e-Privacy Regulation, but GPS-driven service is not, since it does not fall under ECS. Nevertheless, GPS-driven data is more accurate than data available to telecom operators by other means.

⁵⁷ In line with the provisions of Article 6(4) of the GDPR.

⁵⁸ For reference, see: 12336/18, AT Presidency Text on interinstitutional file 2017/0003(COD) from 20 September 2018.

⁵⁹ From network operators to network-independent service providers, to information society services and platforms.

but also for network performance assessment, claims on service level guarantees and future sourcing options, finding themselves in a disadvantaged position without access to the mentioned information. Similar considerations are relevant for services providers' activities in the domestic market, as well. These issues could be addressed by BEREC and its members.

GSMA is of the opinion that, as previously explained, ECS providers should be the subjects of flexible rules, allowing them the possibility to innovate, accommodating in the same manner all the actors active in the markets that supply similar services or process similar data⁶⁰. With such an approach, ECS providers can develop and adapt their services to accommodate consumers' wishes and needs, being able to develop freely their services. **GSMA** refers to its answer to question 1.4., as well.

ECS providers are already doing a lot to enhance the development of the data economy, on the one hand, and, on the other hand, to maximise the data associated value in their operational activities, **a stakeholder** explains. Moreover, it provides a series of examples from its activity. Therefore, no bottlenecks for the development of the data economy related to the ECS providers were identified.

Lastly, the respondent mentions that machine-generated, non-personal vertical data sharing (across supply chains) determines some of the greatest benefits, but faces legal and security obstacles. External data sharing might face yet additional constraints/commercial impediments like the fear of losing the competitive advantage.

Question 2.3. – The role of ECS providers in the value chain; new revenue models for ECS providers emerging based on the data economy

Google expects constant innovation and growing diversity.

DCC considers that partnership-type models are developing between various actors (for example, but not limited to traffic planners, retailers' human resources personnel, tourism industry) in the data economy, including ECS providers.

LSS draws the attention that any kind of newly developed revenue model is prone to serious privacy-related issues, as, with 'big-data', the outcome of processing is not certain, identification of the purpose following the action itself.

EDRi stresses that mobile ECS providers process a highly important data resource – location data, which ultimately allows to build very precise profiles of individuals lives. Nevertheless, only under explicit consent of data subjects, technical data protection measures and safeguards (such as pseudo-anonymization), the benefits of location-based services (as value-added services) can outweigh the threats to the fundamental rights and freedoms of the data subjects.

⁶⁰ **GSMA** joins the wider expressed opinion that the processing of location data should be subject to the same regulatory restrictions for all digital players, as expressed also in its answer to question 2.3.

Liberty Global is of the opinion that, based on the data economy, mobile network location-based services can emerge. However, the applicable regulation to mobile network location-based services is different to the one applicable to OTTs with respect to global positioning system (thereafter, GPS) location services.

As seen by **BEUC**, ECS providers play a decisive role in ensuring the necessary parameters and quality for sustaining the development IoT and of the digital economy. Regarding, the new revenue models, “internet currently relies on the constant monitoring of consumers’ activities and monetization of their personal data”. In this context, **BEUC** urges the ECS providers to move away from such revenue models and promote respect towards fundamental rights, data protection and privacy.

Facebook presumes that new revenues models will appear as a natural consequence of the rise of new technologies like 5G and IoT. Nevertheless, connectivity is the crucial element, the traditional ECS/ECN providers being in the best position to deliver it. OTT providers, on the other hand, are faced with unsurmountable barriers if they would try to provide connectivity services.

AmCham EU sees a high potential of emerging of new revenue and business models as the new technologies are able to provide deeper insights into data than the ones currently available and also generation of new data. There is a variety of data uses that regulation should incentivise, including⁶¹:

- the use of body sensors for the livestock – farmers are notified about their animals’ health before some disease spreads;
- logistics related data analytics that keep track of inventories, provide faster and cheaper transportation routes and reduce various disruptions;
- efficient data-based transportation and mobility solutions that can sustain the development of cities.

Overall, **AmCham EU** concludes that productivity and prosperity are to be increased by IoT and Artificial Intelligence (AI, thereafter) solutions.

Microsoft reminds that new revenue and business models based on the analysis of data exist already for the ECS providers. As a general remark, **Microsoft** adds that BEREC seems to promote a separation between ECS providers and ‘other digital players’ which is going to disappear if future as communications will become integrated in “broader-purpose digital services and applications that are information society services.” In this setting, the main role of ECS providers will stay with the provision of high quality connectivity to sustain the ongoing developments (including IoT and connected devices).

Bearing in mind **Telefonica’s** main concern relating to the regulatory risk to which telecom operators are exposed when compared to other digital players, it mentions that they would

⁶¹ According to the International Chamber of Commerce’s Policy Statement on Artificial Intelligence (October 31, 2018).

have to face a significant drawback in not being able to introduce various services with great social benefits⁶².

Following the same idea of uneven regulatory field in place and forthcoming, **ETNO** explains that mobile location-based data cannot be properly made use of for developing/improving/innovating mobile location-based services. Referring to revenues, the expected returns on investments are unclear, “given the regulatory constraints”.

The development of mobile location-based services is hindered, as explained in the previous answer, holds **DT**. With respect to IoT, since industrial, non-personal data will be generated at a large scale, new opportunities for business to share and reuse data will arise, the markets for data becoming more important⁶³.

DigitalEurope considers that new revenue and business models based on data economy are already present in the markets. For the future, ECS providers will have the opportunity to use data more extensively in a variety of fields (IoT being an example), but it is reminded that the actual text of e-Privacy proposal is to restrict this opportunity significantly.

GSMA explains that demand for data-driven services grows steadily, determining action on the side of suppliers in order to meet the high demand, which, in turn, relies on a more intensive use of end-users’ personal data in a wider array of contexts. As said before, the regulatory context⁶⁴ is crucial in not hindering the development of the data economy. Moreover, the ECS providers will continue to invest in their networks to increase capacities only if they are able to reap the full benefits of their contributions, extracting full value of the data while abiding the rules.

Another issue worth mentioning is the transmission of encrypted communications which, on the one hand increases security, but, on the other, might reinforce platform effects by moving the market from a situation when network performance data was accessible to intermediaries (for legitimate purposes) to one in which only platform players can access it, potentially free of charge.

As far as IoT services are concerned, **GSMA** reminds that they are at an incipient state of development and highly dependent on connectivity, even though this is not directly observable in the corresponding revenue pertaining to the IoT value chain⁶⁵. On top of that, the

⁶² Such as: cybersecurity, fraud prevention, data process for anonymization, sharing pseudo-anonymous data for training data models (for example, credit scoring algorithms), processing pseudo-anonymous data for research and innovation projects and statistical/aggregated inferences, business intelligence analytics, sharing data between companies of the same group.

⁶³ **DT** has created the data intelligence hub for such purposes - <https://iot.telekom.com/en/products/telekom-data-intelligence-hub/>

⁶⁴ When compared to the proposed e-Privacy Regulation, GDPR provisions (Article 5.1 (b) and recital 50) allow for flexibility in processing location data, for example (under a legitimate interest and the principle of further processing of data), while under e-PR “certain location analyses could still be made by app providers working with GPS location data while the same analyses will not be possible for telecom operators using network generated location data and this notwithstanding the fact that in-app GPS location data is much more accurate than network generated location data”, **GSMA** holds.

⁶⁵ This point of view was expressed by BEREC in its report “Enabling the Internet of Things”, pg 11. For the full report, see: https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/5755-berec-report-on-enabling-the-internet-of-things

connectivity means used for the provision of IoT services can take various forms: fixed, mobile, satellite, licensed or unlicensed low power wide areas, short range connections (such as by Bluetooth), depending on several relevant factors on the providers' side (scale, geographical footprint, type of application, device lifetime, bandwidth requirements etc.). Taking all these aspects into account, **GSMA** advises BEREC to recognize the incipient development stage of IoT services, ensure equal treatment for all ECS providers offering connectivity services for IoT, ensure the application of technology neutrality principle and rely on competition as the main driver.

As a conclusive general remark, **GSMA** says that “policy makers should recognize the central, enabling role that ECS play in the data-driven economy, at the level of connectivity, (networks) and also at the level of digital services. This role will be even more crucial in the 5G economy”.

A respondent mentions that ECS providers are currently exploring possibilities to use data for new business opportunities and revenue streams identification, and confirms that businesses are already sharing IoT data among themselves, which, of course, will continue also in future. A few examples of how companies are able to generate, analyze and utilize valuable data by connecting to IoT platforms are: the generation of real-time anonymous traffic data from navigation devices, non-invasive, tail mounted sensors on cows which gather various pieces of data informing farmers of impeding labor and device diagnostics and data from robotic exoskeletons to improve the mobility of stroke and spinal cord injury patients.

3. Impact of the data economy on competition in ECS markets

Question 3.1. – Actual and future significance of data for the telecommunications value chain

In **Google's** opinion, data is ancillary to the telecommunications value chain, whose fundamentals are going to remain unchanged.

LSS highlights that the concepts of access to and ownership of own data on the consumers/customers side is becoming more accepted by the actors of the digital economy – legislators, regulators and industries. In this way, data transfer from one entity to the other and interoperability are eased/enhanced. According to the respondent, the main aim of these rights and privileges is linked with the fact that the incumbent operators have been benefitting from privileged access to their customers' data and, by removing such advantages, the markets are opened up for competition.

Moreover, **LSS** considers that extending the concept of data ownership in such a way as to lead to the data being openly available to all interested parties/companies in order to foster competition at various levels in the value chain would help. However, care has to be taken with privacy and security issues.

EDRi and **Article 19** believe that the question is too complex to be dealt with in such an answer. However, the jurisprudence principles and safeguards have to be taken into account for personal data, while non-personal data is outside the scope of the respondent's activities.

Liberty Global notes that the use of data determines the supply of better quality⁶⁶ and personalized services and innovative applications, while their significance in the value chain is expected to increase in future.

Applications and content services are the driving forces of consumer demand, being the fuel for high capacity networks deployments (both fixed and mobile), **Facebook** states.

AmCham EU stresses again that data economy's potential realization depends on the form of the e-privacy Regulation that is to be adopted. Also, the respondent reminds that BEREC and NRAs should take account of the nature of various players in the telecommunications value chain, of their ability to access data and, consequently, of their privacy policies (end-to-end encryption, for instance).

Microsoft shows that data's significance in the telecommunications value chain is expected to grow with the shift to all-IP networks, presenting a couple of relevant examples. Furthermore, ECS-related data is becoming key for new types of communication services, relying more and more on AI, which, in turn, will rely on data that ECS providers have access to. Also, the user location data collected by mobile operators will gain in significance – from the offering of new types of commercial services to benefits in urban planning, traffic management and smart cities initiatives.

Telefonica and **ETNO** are of the opinion that data is not at the core of the business case for telecom operators and, currently, collection and processing of data does not give the ECS providers a significant competitive advantage. Considering the telecommunications value chain, data might be able to improve certain aspects⁶⁷ for the network operators and also for customers benefiting from “better, simple and helpful services”.

ETNO makes the point that a sectorial approach is not appropriate, given the significance of data for the economy as a whole, a horizontal approach being sought.

Additionally, the respondent draws the attention on the phenomenon of data being used as remuneration for services provision, in some cases. According to **ETNO**, an adequate end-user protection is to be applied irrespective of the type of services provided or the type of remuneration received, in such a way as to discourage the monetization of data instead of charging a price to own benefit.

Besides the limitations of analysing mobile customer location data, as explained previously, **DT** mentions that, due to the more and more widespread practice of using data as a means of remuneration, end-user protection rules should be translated/made applicable to data-business models in order to avoid incentivising the practice of various undertakings of rather relying on data than charging a price for certain services.

⁶⁶ In terms of network dimensioning.

⁶⁷ **Telefonica** mentions “increase sales, reduce churn and fraud, improve risk management, decrease operational cost, improve visibility into core operations, internal processes and market conditions, discern trends and establish forecasts, cross-sell/up-sell products and service plans, analyze customer loyalty and wallet share, or build predictive models for fraud detection and customer exits”.

DigitalEurope sees a general rise in significance of data, irrespective of the industry or the level of the value chain. As mentioned/explained before, the positive use of data along the value chain will be impacted by the adoption of the e-Privacy Regulation and the consequent application of e-Privacy rules, both to electronic communications data and to the terminal-equipment data.

On the other hand, collection and processing rules for personal data are already regulated by GDPR and the same is aimed for non-personal data by the Regulation on a framework for the free flow of non-personal data.

Last, the work of the European Commission in the form of its recent⁶⁸ initiative “Towards a common European Data Space” is likely to have an impact on the significance of data in the view of data-sharing possibilities and mind-sets of businesses and governments, **DigitalEurope** states.

ECTA replies that value added could have been brought to the document if the distinct role of data analytics and its various uses were clearly emphasized. Profiling of individuals, billing services, traffic management, network planning, emergency and customer care services are just a few applications of data use that show the different goals/value attached to data, depending on the analytical context.

However, one of the main concerns of **ECTA** and its members is that their access to some of the uses of data are unavailable under the current law provisions, while third parties can make unrestricted use of data. Also, public authorities might need access to electronic communications data for service delivery and statistical purposes, as some of the policy initiatives⁶⁹ imply. While all of these aspects provide food for thought in the data economy related field, impacting on the ECS providers actions in the markets, **ECTA** considers that it is not BEREC's/NRAs' role to address these issues.

GSMA refers to its answer to question 2.3. where the views on how the existing rules on data affect ECS providers have been explained. Telecom providers act at different chains in the data value chain (they provide the underlying support – connectivity, but also end-user services) becoming highly significant for the data economy and data industry.

Several examples of notable impact of enhanced data access and use of aggregated location information (helping to understand movement patterns over time and space) mentioned by **GSMA** are in urban planning – improvement of public transportation, congestion of traffic – smart cities, energy production efficiencies, targeted public health policies. Given that for the functioning of these applications, typically, pseudo-anonymised data is needed, providers/operators can still respect the privacy standards while maximising the data potential.

Yet another point made by **GSMA** on data being used as a remuneration for the provision of digital services leads to the overall operators' agreement that customer protection rules have to apply in the same manner, irrespective of the means of exchange (data, money etc.).

⁶⁸ As of April 2018.

⁶⁹ SWD(2018) 125, Guidance on sharing private sector data in the European data economy, 25.4.2018, p 13.

Another stakeholder agrees with the general importance of data in the telecommunications chain, determining better customer experience, improved internal effectiveness, increased productivity, new revenue streams and purpose-led innovation. Nevertheless, the respondent explains that the main source of revenue in the telecom sector is still the provision of targeted telecommunication services offered based on a subscription. Data is used for optimization/refinement purposes, but the overall value-added of data is still considered marginal. BEREC should bear in mind these issues when analysing the impact of data in the telecom sector.

Question 3.2. – ECS providers’ utilization of (anonymized) data

Google believes that it is not in its competency to answer this question adequately, but that it does not sell data to third parties.

DCC notes that ECS providers are developing new services for tourist organizations and urban planners that enable a better resource allocation and the offering of targeted services to the end-users.

EDRi and **Article 19** recall the limitations of the concept of ‘anonymized data’, which should be duly taken into account, by making reference to the academic research literature. Also, **Article 19** notes the risk associated to the reversion of data anonymization, which can result in privacy and confidentiality violation.

According to **Liberty Global’s** view, the anonymization or pseudo-anonymization⁷⁰ of data allows for development of big data services by analysing datasets across time and selling reports to third parties which help them to improve their business strategies and planning.

Microsoft refers to its answer to the previous question.

Telefonica uses the data it has access to for the following purposes: create new revenue, reduce risks and fraud⁷¹, monetize its own data⁷² and use of big data for a targeted/direct relationship to the customers. The respondent does not sell or give access to its data to third parties, but uses it to improve the services provided. Moreover, there is no intention of data-sharing with other entities, unless customers’ agreement is in place. Also, aggregated anonymized data is shared with its customers, based on contractual relationships.

ETNO replies that ECS providers make use of the data they have abiding all the rules, especially the ones related to privacy and data protection.

⁷⁰ It could have the same effect as anonymization if the methods used render the persons unidentifiable.

⁷¹ (i) Predicting customer churn; (ii) detection of possible cases of fraud.

⁷² (i) Services that offer business insights to companies based on consumption of telecom services; (ii) services describing the customer behaviour in a certain space; (iii) services that report the mobility and location of foreign customers; (iv) verification service of users through their telephones.

DT notes that ECS providers have a good collaboration with governments (B2G) in the field of infrastructure planning, for instance – they provide valuable insights based on aggregated location data, traffic movements etc.

DigitalEurope says that BEREC should account for the nature of the different actors in telecoms value chain, their technical ability to access data that is transmitted over their networks⁷³/embedded in their services and the manner in which these aspects are captured in their private policies, when assessing the ECS providers behaviour towards data.

ECTA mentions that aspects implied by this question (i.e. buying/selling of data to third parties) does not fall within the regulatory scope of the NRAs.

GSMA explains that they do not collect information on the members' commercial strategies, including if and how they make use of (anonymised) data in a systematic manner. What is sure, though, is that ECS providers are using data more and more intensively in numerous ways, being innovative in this respect⁷⁴.

A respondent argues that the buying/selling of data (even non-personal) could bring enormous value to the economy, as it brings new and valuable uses of data. He also provides some monetary estimates in certain sectors, based on a study commissioned to a third party consultant company.

The main reasons for which it is beneficial to the economy to use and re-use machine generated, non-personal data are:

- maximizing expertise – data analysis/processing specialists may not be the same as data holders and, as a consequence, giving access to data to the ones who are in the best position to grasp as much in-depth insights into it can determine increased labour productivity and efficiency;
- experience sharing – entities active in different sectors might face the same problems and be able to overcome them with the help of using and re-using non-personal data from other sectors. Also, new insights or perspectives on the same data could be brought by organizations in another field of activity;
- data synergies – combination of personal and non-personal data might lead to larger benefits than analysing data sets in isolation, leading to more complex and comprehensive analysis;
- lower entry barriers – wider access to non-personal data enhances entry for third parties that could potentially enable innovative uses of data, ultimately stimulating market entry and competition.

⁷³ If end-to-end encryption of communications is used, then these data is irrelevant for the network operator that carries the information.

⁷⁴ Some forefront examples include solutions to help municipal authorities to manage water infrastructures efficiently, Remote Patient Monitoring Systems. For additional information, please see **GSMA's** initial response.

Question 3.3. – Data analytics cross-sectoral initiatives carried out by ECS providers

Article 19, EDRI, Liberty Global and Microsoft mention that they are not aware of any such initiative.

Nevertheless, **Microsoft** states that ECS providers are using data to develop new features for their services. A couple of examples would be **Microsoft's** real-time translation application (Skype Translator) and text-to-speech/speech recognition capabilities designed for the disabled users. Also, protection against spam, fraudulent email, account credentials fraud and phishing attacks are ancillary services that can be provided with the help of the analysis of communications content and metadata (anonymised or pseudo-anonymised) from OTT players.

Telefonica mentions a series of cross-sectoral initiatives coordinated by the European Commission (EC):

- Free flow of non-personal data regulation – EC facilitates self-regulation and encourages providers to develop own conduct codes regarding users' data portability between cloud services providers. The two related work streams are cloud switching/porting data (SWIPO) and cloud security certification;
- The review of the Directive on the reuse of PSI – complements the European Open Data Portal⁷⁵ and Open Data Portal⁷⁶ initiatives;
- Business-to-government data sharing guidelines – an expert body to discuss B2G data-sharing principles and to provide advice has already been established;
- Business-to-business data sharing guidelines - a code of conduct by the industry is expected.

GSMA explains that big data is used by the mobile industry to ease public agencies' and non-governmental organizations actions with respect to various aspects, including infectious diseases, disasters, environmental impacts and climate change, where timely communication is of utmost importance. For an effective, targeted response in such limit situations, the location of the affected people, together with their moves and environmental changes are crucial to be known. These type of information can be easily provided by mobile operators, safeguarding personal data, at the same time⁷⁷. In this vein, through close collaboration with an Advisory Panel of United Nations agencies and partners, operators are developing sustainable approaches to make use of big data for the overall social good/attaining the overall social development goals, **GSMA** says. According to the respondent, "the scope of the projects has increased from aiming to support the assessment of air pollution⁷⁸, to new

⁷⁵ Facilitates the use of public sector data across borders and languages.

⁷⁶ Provides access to EU institutions and bodies.

⁷⁷ **GSMA** represents such a forum for establishing a common framework for analyzing such aggregated and anonymized data for the greater social good.

⁷⁸ Telefónica Brazil (Vivo) is working with the municipalities of São Paulo to harness anonymised mobile network data to help combat the adverse health impact of air pollution. See case study at: https://www.gsma.com/betterfuture/wp-content/uploads/2018/05/BDSG_TelefonicaBrazil_v9.pdf

applications including tackling key health epidemics such as Tuberculosis⁷⁹ and multi-drug resistant Malaria, alongside an extension into disaster preparedness and climate impact”.

Furthermore, **GSMA** points that another relevant outcome of the collaboration between operators and advisory panel members was the resulting synergies between big data (collected by mobile operators) and contextual datasets (on weather, population etc.) enabling the provision of better solutions to the citizens’ problems.

The individual respondent also says that the mobile sector works for attaining public social benefits in relation to data analysis. Improvements can be brought in a variety of areas such as urban studies, population studies, agriculture, energy, public health, transport, responses to natural disasters and humanitarian crisis.

Some concrete examples of such initiatives include GSMA’s “Big data for social good”⁸⁰, location insight programmes (a sophisticated way to count people and journeys derived from pseudo-anonymised location data sourced from the mobile networks with direct application on city and transport infrastructure policies) and more general anonymized mobile data to better inform policy makers in various sectors, including transport, population, industrial strategies, emergency services and public health.

Question 3.4. – Competition dynamics change among ECS providers due to the use of data

Google believes that the competition dynamics among ECS providers are likely to remain unchanged.

DCC responds that ECS are already competing with internet browser providers when it comes to services provided based on data location.

LSS is of the opinion that large volumes of data can provide commercial advantages, with a potential impact on the competition dynamics in the ECS markets. This has to be correlated with the market power assessment.

EDRi and **Article 19** note that any work undertaken by BEREC in the direction implied by the question has to be conducted in close cooperation with the competition authorities, while the most prominent issues to be addressed are the failure of competition in markets where there is reliance on exploitation of personal data and the specific market dynamics generated by merging of datasets.

Article 19 further explains that the crucial aspects which need analysis are:

⁷⁹ Bharti Airtel (Airtel) and Be He@lthy, Be Mobile (a joint initiative between WHO and the International Telecommunications Union), together with the GSMA, developed a proof of concept (PoC) in the Indian states of Uttar Pradesh and Gujarat, which uses anonymised mobile network data to help pinpoint geographical locations at risk of increasing TB incidence. See case study at: https://www.gsma.com/betterfuture/wp-content/uploads/2018/09/Helping_end_Tuberculosis_in_India_by_2025.pdf

⁸⁰ Further details are available at the following link: <https://www.gsma.com/betterfuture/bd4sg>

- exploitative conducts – such as excessive pricing to industrial consumers (access to databases as an essential facility), exploitation of end-users' personal data, price discrimination towards consumers, unfair contractual terms towards consumers;
- exclusionary conducts – market foreclosure and raising entry barriers created by concentration of datasets;
- leverage of market power in adjacent markets;
- impact of market concentration on innovation.

Finally, **Article 19** calls on BEREC to closely collaborate with competition authorities in order to ensure that the specificities and dynamism of the telecommunications sector is taken into account in competition law assessments.

Liberty Global considers that a competitive advantage in data markets by an operator with market power in relevant telecommunications markets is generated by the leveraging of market power from the telecom market to the data-related market. Given this, Liberty Global says that “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 and applications.”

Facebook stresses that the fact that electronic communications providers have/deal with data cannot constitute a risk in itself, while the market power assessment needs to be based on the particulars of the markets analysed, case by case. **Facebook** finds the current methodology and approach for market reviews still fit for purpose in the context of the emerging data economy.

AmCham EU believes that policy and regulation should primarily ensure a level playing field for all the players in the data economy, irrespective of their business models or at the level of the value chain in which they perform, in such a way as to be able to innovate by making use of data, being able to combine, for instance, ECS services with non-ECS/data services offers. Moreover, it seems too early for assessing or adapting the market assessment procedure, **AmCham EU** state.

As **Microsoft** explained in its previous answers, enhanced access to data is unlikely to create competition concerns – i.e. in the form of market power that can be leveraged in other markets in order to restrict competition. Data usage by ECS providers will intensify competition through innovation, offering of personalized services at lower costs etc. In general terms, **Microsoft** believes that the essentials of competition dynamics among ECS providers is unchanged and, therefore, no review of the methodology of market power assessment is needed. The respondent draws the attention that competition in individual data markets is tricky to tackle, taking into account the difficulty to define such markets and the fact that other providers than ECS providers are participants in these markets (the scope is beyond the regulatory powers of the NRAs).

Telefonica points out to two main mechanisms in place – on the one hand, collaboration between ECS providers and digital players is established with the aim of improving the end-user services and, on the other, ECS providers might be displaced by the digital players that have a competitive advantage as far as data is concerned, making competition stronger. Additionally, digital players, in contrast to traditional operators, are not necessarily financed

solely by end-users, being able even to provide services to the retail market free of charge⁸¹. Therefore, one can notice that the business models of the two categories considered (traditional ECS providers and digital players) are diverging, as it currently stands.

In any case, data can be regarded as a potential source of market power of the digital players, given the significant economies of scope that they enjoy and the conglomerate effects that they can induce. Overall, “to assess market power, the dependencies along the value chain of the telecommunications have to be taken into account and regulation must be trans-sectoral to promote competition dynamics”, considers **Telefonica**.

ETNO argues that there is no visible change in the telecoms’ sector competition dynamics, while the aforementioned bottlenecks have been identified with respect to the wider/broader data economy market. Also, data used as an exchange ‘currency’/remuneration needs to be considered by BEREC in its regulatory decisions because otherwise, given the different applicable conditions, incentives to use data instead of money might appear. Overall, **ETNO** sustains its point made previously that data access should be analysed in the broader context of the whole economy⁸².

DT replies that it does not see a change in the competition dynamics in the telecom sector itself and it makes reference to its previous answers regarding the regulatory bottlenecks identified with respect to the treatment of location data, for example, and calls for a better alignment in regulatory provisions of GDPR and e-Privacy Regulation.

Even if these risks were mitigated, given the size and power of the digital players, **DT** considers that there is no competition risks for MVNO, OTT providers etc. stemming from electronic communications providers. In the respondent’s view, the concerns follow from the opposite direction - an increased engagement of online platforms and data-driven business in infrastructure deployment might result in distortions of competition on the ECS markets.

Also, **DT** explains that *ex ante* regulation is too rigid to tackle these issues and, therefore, a “modified competition policy approach” is better suited.

Finally, **DT** brings again in discussion the business models (particularly of the NI-ICS providers) which use data as currency exchange and, since most end-user rights are applied in connection with the price paid, business models based on money face higher compliance costs.

DigitalEurope reminds that, as answered previously, ECS providers making use of data are likely to improve competition through innovative offers. Therefore, any initiative of imposing or adapting regulation is considered premature and unnecessary.

Considering the aspects regarding the proposed definition of the data economy and its relation to the electronic communications data economy stressed by **ECTA** previously (in its answer to question 1.1), the assessment of market power leveraging between data and electronic communication markets has to be conducted taking account of these conceptual differences.

⁸¹ Consider WhatsApp as an example.

⁸² Alongside, **ETNO** raises questions about market power of global internet players.

Also, the bundling/integration of connectivity services into other products/services raises the question of the extent to which integrators can be considered ECS providers, **ECTA** stresses. However, this is a complex issue to address, especially in instances when the borderline interpersonal dimension of the communications lacks (objects communicate among themselves⁸³). In this vein, **ECTA** considers very important that BEREC/NRAs provide clear guidance on instances when integrators are considered ECS providers⁸⁴, with a direct impact on the distribution of the compliance costs and on the role that ECS providers can play in the data economy.

GSMA highlights that, according to their studies, the companies that dominate the data economy are the ones able to combine low/zero cost access to personal data that can be used without restrictions, with the analytical capabilities that turn data into consumer behaviours' insights, and sell it to advertisers. Most of these companies are 'multi-sided digital intermediary platforms' whose business models comprise of gathering personal consumer data (typically by offering services free of charge) and selling it to various businesses (B2B markets). In this way, data-driven economies tend to be highly concentrated, which, nevertheless, in the respondent's opinion, is a market result compatible with the principles of efficiency and welfare maximization. However, market power can be leveraged to other markets or can be enforced by the acquisition of maverick players, resulting in weakening competition. BEREC is called upon to analyse all these issues and assess the extent to which big data confers market power. In any case, data should be included in all the relevant competitive assessments done in the various economic sectors by the relevant authorities, **GSMA** explains.

GSMA joins the other stakeholders' opinions that data does not represent a competition concern *per se*, its impact on market power being determined by the way in which data is actually used and calling for a case-by-case judgement. Economic and technical replicability of data are key elements to judge upon.

With respect to the foreseen changes in the competition dynamics of the telecom sector due to the extensive use of data, **GSMA** mentions that it does not expect changes since ECS providers do not hold market power over their raw data (more accurate data is available from alternative sources), their data is less accurate and precise than other data in the market and they are under regulatory constraints when making use of this data. Also, it has to be kept in mind that data is not the core business on ECS operators. In the broader context, the question is too restrictive to analyze the effects of the data economy.

Another point made by **GSMA** and expressed previously is that there might be incentives of providers using data as a means of exchange instead of money, if there are no rules limiting such a behavior.

Finally, reference to **GSMA's** answer to question 1.4. is made.

The individual stakeholder says that the use of data is not the dominant feature of ECS business models and, as it currently stands, the competition dynamics between the sector

⁸³ Vehicles, sports equipment would be just some examples.

⁸⁴ **ECTA** also mentions that providers are already facing requests for access to data from integrators.

actors has not been changed substantially by data use. As a consequence, no inherent risk of market power leveraging or conglomerate effects could be identified in relation to data use within the telecom sector. In this vein, BEREC's attention is drawn with respect to market conducts outside its regulatory boundaries, while collaboration with other regulatory bodies might be needed.

Question 3.5. – Exclusive ownership of data or other potential hurdles restricting competition or the development of new telecommunications business models

Google believes that it is not appropriate to use the concept of “exclusive ownership” when referring to data due to the fact that data is non-rivalrous, as well as to the fact that the value of data resides in its application, not in its ownership.

Concerning MVNOs, **Liberty Global** is of the opinion that having traffic data from the MNOs who host them on their networks could enhance their business opportunities, becoming part of the price paid. Also, the respondent takes it that in wholesale markets where price competition is not effective, it is likely that there will not be enough competition with respect to access to data either. The same reasoning is to be applied in the fixed-line infrastructures context.

There is some obvious imbalance in regulatory terms of traffic data collected/processed by traditional ECS and OTT-0/OTT-1 providers.

BEUC believes that the reference to ‘exclusive ownership of data’ is not suitable. Also, it draws attention to the fact that different regulatory conditions are applicable for ECS and OTT providers. The way forward in solving this problem is enlarging the scope of regulation in such a way as to include OTT providers as well.

Facebook provides a response just connected to the third sub-question. In this context, it considers that there are no major competitive differences between traditional ECS and OTT-0/OTT-1 providers besides the fact that traditional providers have access to more data than the latter (technical network data, for example).

Microsoft says that there are little competitive differences in favour of OTT providers, when compared to ECS providers. The two category of providers is distinguished by the fact that traditional ECS providers own and operate a network, having access to all network-generated data, while OTT providers do not. However, OTTs might have similar data, based on other sources.

Telefonica stresses that ECS providers are put at disadvantage (because they have access to non-exclusive, replicable data and they are under regulatory purposes) when compared to the big digital players, like big internet companies (that have access to significantly more detailed data, being able to determine data synergies, and are not regulated). A level playing field from the regulatory perspective needs to be established, taking into account that data transmission capacities/enhanced technologies are the results of investments done by traditional players in the electronic communications sector. Moreover, **Telefonica** reminds about the evidenced processes of replacement of traditional ECS by OTT services (SMS by

various instant messaging applications, voice by apps like Skype or Whatsapp and so on), which support even further the necessity for harmonization of the regulatory framework.

ETNO does not see any kind of competitive differences between MNOs and MVNOs concerning data collection and processing, given the long period of market functioning based on wholesale access. ECS providers have non-exclusive access to end-user data, while these data are replicable. Furthermore, OTT players are advantaged in the process of data collection and processing since they are not regulated, being able to reap more benefits from the data they hold through data synergies, merging different datasets etc. “This imposes further constraints on the opportunities of value creation and ultimately on the competitiveness of the data-driven economy”, **ETNO** concludes.

DT makes reference to its detailed answer to question 2.2.

GSMA refers to its answer to the previous question (3.4). The main idea conveyed in that response is that there are significant competitive differences between traditional ECS operators and platform providers/providers of communication services and functionalities.

The individual respondent outlines that no competition issue related to data which calls for regulatory intervention has been identified, while access to data can and is established bilaterally through contracts. Moreover, personal and other types of data are subject to the already established legal provisions – copyrights, database rights, data protection laws.

On the potential competitive differences between various players, this respondent shares the already expressed views that there are none between MNOs and MVNOs or fixed network operators and fixed services providers, there are significant differences between traditional ECS and OTT providers, while policymakers need to remove the restrictions from the relatively regulated players to create a competitive, efficient and fair marketplace.

Question 3.6. – Consumers’ related opportunities and/or risks linked to the increase in data collection and analysis in the telecommunications sector

LSS notes that, from the consumers’ perspective, there might be benefits from data processing if this leads to targeted offerings or general improvement of services provided. However, consumers themselves might have a negative perception when being presented/advertised with all these tailored offers.

On the same note, behavioural advertising could lead to potential benefits in terms of market structure⁸⁵, as well as risks, in the case when data analysis renders some offers less profitable and, as a consequence, they are eliminated from the market.

LSS also mentions the existence of risks associated with data privacy and security. They have to be mitigated, for example, through an articulate “requirement for robust data protection impact assessments”.

⁸⁵ For example, facilitating market entry and enabling the unbundling of services.

The most important risk mentioned by **EDRI**, and also referred to by **Article 19**, is connected to the processing of electronic communications data without the consent of the data subjects, for purposes not directly linked to the provision of the services themselves. This type of processing is invariably done for the sole benefit of the entities who do the processing, even to the detriment of data subjects.

Article 19 adds that the increasing collection and processing of personal data, together with the use of AI tools, results in enhanced profiling and targeting, exposing the end-users to manipulation and discrimination (excluding the non-targeted persons from the informational loop).

Liberty Global takes the stand that GDPR represents a robust framework for the protection of end-users' personal data. Moreover, consumer protection is guaranteed in the telecommunications sector as well due to the confidentiality policies and secured networks. Also, added value for the customers can be generated by combining different data sets for the supply of coregent services.

The positive effects generated by collection and processing of data are reflected in the creation of new, innovative products/services for the consumers, while the risks associated can be related to increase monitoring and consumers' activities tracking, control loss of collected data, use of unfair commercial practices⁸⁶ and growing data breaches situations **BEUC** considers.

Facebook sees positive effects for consumers due to growing data collection and processing – increased competition, introduction of new, innovative services, keeping in mind that data is protected according to the data protection regulation in place.

AmCham EU considers that consumers, as well as business users, are to benefit from the development of the data economy in the form of new, improved and highly customized services, which needs to be achieved in “inclusiveness, trust and transparency.” These market-driven processes need to happen abiding the GDPR and/or the updated e-privacy Regulation⁸⁷.

On the opportunities' side, **Microsoft** mentions the chance to increase the capabilities of existing services, the provision of customized services and introduce new ones in the market⁸⁸, while, on the risks' side, privacy and confidentiality-related issues have to be monitored thoroughly⁸⁹.

In terms of opportunities determined by data collection and analysis, **Telefonica** and **ETNO** identify better capacities and coverage of networks for the consumers' benefits and targeted commercial offers fitting better to the consumers' needs and wishes. On the risks' side, the privacy concerns were identified. Nevertheless, since data issues are sensitive, the

⁸⁶ Forcing consumers to share data in take-or-leave scenarios.

⁸⁷ Here, **AmCham EU** reiterates its concerns about the currently proposed form of the e-Privacy Regulation.

⁸⁸ Such as digital assistants, smart home services, connected car features, location-sharing capabilities, new productivity tools.

⁸⁹ For example, particularly mobile operators have access to data on location of individuals, being able to create new revenue streams from it, independent of the services which the customers have actually bought.

companies handling data have an incentive to abide the rules so as to preserve consumers' brand trust/loyalty, self-regulation being functional up to a certain extent, **Telefonica** states.

Looking forward, the best manner to address end user-related concerns is to let consumers be in charge of their own data (decide on how data is used, how much data is appropriate to be given, get information of which benefits data processes brings to them etc.), **Telefonica's** opinion shows⁹⁰.

ETNO advocates for a horizontal approach to consumer-protection standards, stressing the fact that consumers should, in any case, be aware of the trade currency for their data⁹¹.

The consumer benefits determined by the development of data economy are significant. **DT** mentions a few examples, like: smart parking applications⁹², traffic movement and flow analysis⁹³, improving urban planning and the overall quality of life in cities. For such benefits to materialise (meaningful and valuable results to be achieved by the processing of data), large amounts of data are needed and, as a consequence, appropriate technical safeguards to mitigate the privacy risks for consumers need to be in place.

Moreover, the relevant consumer protection standards need to be applicable to the data-based business models, irrespective of whether the services are offered in exchange of money or of data, **DT** says. Transparency and consumer awareness are essential in this respect – every end-user should be fully aware of the details of his/her personal data processing and analysis and of the data-related rights that he/she holds. “This in principle requires a horizontal approach, beyond ECS”, **DT** concludes.

The development of new, innovative and better-tailored services provision are named as consumers-related opportunities in the data economy by **DigitalEurope**, while consumer empowerment and better control of their own data, together with trust relationships with their services providers are mentioned as associated risks.

GSMA wishes for a regulatory environment that balances the need for protecting end-users' individual rights with the possibilities of technological development and increased investments. Accordingly, the foreseen impact of adopting the proposed e-Privacy Regulation on future products and services (including IoT and 5G) is to be thoroughly considered⁹⁴. “Data processing guided by robust privacy principles and underpinned by privacy by design, data protection impact assessments, and technical safeguards such as pseudo-anonymization and encryption will enable innovation while protecting consumer privacy and should be recognised in the e-Privacy Regulation”, concludes **GSMA**.

⁹⁰ **Telefonica** is developing a range of partnerships to allow people to put their data to work for them.

⁹¹ With focus on the “free of charge” services, which actually use personal data resources as remuneration.

⁹² Built-in parking places sensors, combined with data from the mobile communications networks, can be used to calculate the probability of parking spaces becoming vacant in a city.

⁹³ The need to introduce more buses on one line or different (new) lines might become obvious from such data.

⁹⁴ As expressed several times before, this legislation is considered overly restrictive and it should be aligned with GDPR, which is considered reasonable.

The individual respondent considers that data collection and analysis in the telecom sector will not lead to consumer harm due to the severe regulation imposed on them with respect to the ways in which they can make use of the data they hold.

4. NRAs' ECS regulatory activity in the context of the data economy

Question 4.1. – Data and digital tools utilization for better performance of NRAs' duties

LSS considers that NRAs and competition authorities should analyse the opportunities to develop best practices in such a way as to ensure the needed capabilities to cope with the ever growing data economy are attained, including the use of machine learning or AI capabilities.

EDRi and **Article 19** believe that caution needs to be exercised in the data collection process – personal data collection has to be limited to what is actually needed, all personal data should be aggregated and depersonalized as much as its technically feasible, effective cooperation has to be ensured among the NRAs, competition and data protection authorities.

Considering the fact that NRAs have to base their assessment of market power on the dynamics and trends in the markets, current and predicted, **Liberty Global** is of the opinion that the various data analytics tools are useful to enhance the capability of regulators to take reasoned decisions.

BEUC advises that BEREC could develop tools to better monitor the internet access quality of service, for example, or ease the exercise of consumers' rights under TSM.

Data collection for regulatory purposes is justified, but it should be proportionate, **Facebook** argues. NRAs could further use analytical tools to make more efficient use of the data they collect, while coordination/harmonization and sharing of best practices between the NRAs should be encouraged.

AmCham EU recognises that evidence-based regulation is supported by making use of the digital tools, getting more data and insights into it. However, the better understanding of data in performing the NRAs' duties needs to be done in a proportionate manner, considering the resources that the providers need to allocate to report the requested data, taking into account the privacy policies in place and the potential technical barriers (encryption practices, for example). Data collection processes should be harmonised and unified, avoiding requests overlapping and duplication of efforts, especially in the case of cross-border providers.

Taking into account the provisions of the EECC, **Microsoft** stresses that NRAs will be able to collect data also from OTTs, which should enhance the NRAs abilities to monitor the electronic communications markets, to derive more-informed decisions in the regulatory field and focus on better identification of bottlenecks and consumer harm as the basis for regulatory action, when acting judicious and proportionate. Nevertheless, the smaller market players might face

significant costs associated with the fulfilment of data reporting to the NRAs and, therefore, the data requests have to be focused and specific.

Microsoft urges the NRAs to use digital tools to improve their data analysis capacities. Such tools would be particularly relevant in processing of complaints or of network deployment data, the respondent says.

Telefonica sees an opportunity for regulators to rely more on factual data/empirical evidence in their analysis (as data analytics and tools are developed) and to act in a timely manner (regulatory results would be better if competition dynamics were faster incorporated in regulatory decisions). Furthermore, the respondent urges BEREC/NRAs to incorporate data analysis in the assessment of post-implementation of regulatory measures/the impact of the measures imposed on the market.

Moreover, even though the legal powers are limited with respect to certain OTT players, BEREC/NRAs are requested to overcome the difficulties and collect relevant data from players in the digital environment in such a way as to improve their decision-making capacities and gain insights into the functioning of the overall data markets (of which telecommunications services are just a part). However, care should be taken not to impose an undue burden on operators.

ETNO is of the opinion that increased data-collection power determined by the new regulatory framework should be smartly used to increase the NRAs market monitoring capabilities and regulatory potential⁹⁵. Overall, the quality of regulation (both *ex ante* and *ex post*) can be improved by the use of data. Moreover, consumers might be empowered by NRAs developing, internally or with external help, different quality measurement tools/indicators with respect to telecommunication services.

DT believes that, first of all, given the new NRAs' prerogatives under Article 22 of the EECC, they should be bound to make use of such updated data in their market reviews, in SMP designation and imposing of remedies.

Secondly, BEREC should stimulate NRAs to build insights into the data-based business models of OTT providers (given the new data collection prerogatives under the EECC), as it is highly relevant for the appropriate monitoring and regulation of the telecom markets⁹⁶.

DigitalEurope encourages NRAs to make better use of the data collection powers granted under the regulatory regime and maximise the use of the data they handle for more informed decisions to be taken. Also, data request should target specific/well-determined (regulatory) goals. On the other hand, they should guard the proportionality of the requests and take into account the costs of generating and processing of data borne by the operators, as well as to recognize the technical barriers, should it be the case.

⁹⁵ BEREC mentioned the lack of competencies to collect data from ICS as an impediment to an exhaustive market review in its assessment of the intra-EU call market.

⁹⁶ **DT** makes reference also to the upcoming review of end-user rights chapter in the EECC.

Given the already expressed necessity for access to network data by services providers, together with the legislative provisions⁹⁷ requiring access takers to report information based on network data, **ECTA** considers that BEREC and its members have a wide range of issues to think about with direct impact on the functioning and development of the electronic communications markets. Nevertheless, **ECTA** mentions that the solutions can be tailored based on the existing framework – through reference offer specifications, for instance.

GSMA answers that they see no practical examples on how NRAs could improve fulfilling of their duties by using data besides generally making use of any (digital) tool to improve regulation (more efficient and less costly, several options – regulate/deregulate etc.), monitoring compliance with existing obligations, guarding the application of the proportionality principle, revisiting on a regular basis the market reviews and their conclusions. Furthermore, **GSMA** stresses that NRAs should increase their knowledge of the OTT-0/OTT-1 business models, given the enhanced powers to collect data that the EECC provides, this aspect being particularly relevant for the upcoming review of the end-user chapter of the Code. Also, based on the powers under Article 22, more refined products and geographical market definitions can be sought for fixed broadband services.

The individual respondent shows support for consumer empowerment by making use of data – present relevant and easy to understand and the right amount of information for better/right choices to be made. A close cooperation between ECS providers and NRAs should be in place for implementing data driven solutions over traditional, less responsive/active traditional regulation.

Question 4.2. – Data collection and publication to facilitate the development of data economy by NRAs

EDRi and **Article 19** refer to their answer to the previous question.

Liberty Global advises that all the data that NRAs hold and whose publication would not conflict with third parties' privacy and data protection rights should be published⁹⁸.

BEUC proposes that NRAs collect and publish data related to the quality of service, coverage, consumer complaints and usage statistics.

Facebook says that, on the one hand, NRAs should collect data for market reviews, markets monitoring purposes and potentially for enforcement of regulation and, on the other hand, they should focus on publishing data meant to empower consumers⁹⁹ and open data for industries, in order to create value for them.

Microsoft answers that information on the usage of ECS should be collected and published. This would help NRAs to fulfil better their tasks under the EECC, "particularly regarding the

⁹⁷ COM(2018) 225, Proposal for a Regulation on European Production and Preservation Orders for electronic evidence in criminal matters, 17.4.2018.

⁹⁸ Combined of various datasets from different such sources might lead to enriched data analytics.

⁹⁹ Coverage maps, speeds of provided internet services etc.

potential application of consumer protection requirements to new forms of ECS". Special areas of interest would be barriers to providers' switching, emergency calling and number portability.

Another category of highly relevant data pertains to the use of IoT and connected devices¹⁰⁰, **Microsoft** thinks.

Telefonica expresses reserves towards the initiative of publishing data collected for monitoring purposes of a competitive sector because it would represent an undue burden on the telecom operators (a risk of reliance on telecom operators as a data source for the use of other agents), especially in the context in which alternative data sources are available, and because the value of data is significantly determined by the purpose of collection, its classification and organization, while an external entity imposing it could reduce significantly the value of the generated data.

ETNO draws the attention that such kind of initiatives of the NRAs should be restricted to the data collected in the context of the regulatory obligation in place, should not be burdensome for the operators, unevenly distributed, and respect property rights and trade secrets.

DigitalEurope makes reference to its previous answer here.

GSMA points out to its difficulties to answer the question without having in mind a specific regulatory objective pursued by BEREC. As general guidelines, an analysis of the situation of the data available publicly (its usefulness), a consideration of the costs and benefits stemming from making available new operational and commercial data and a thorough assessment such actions' impact on the operators have to be the steps foregoing the decisions of NRAs to collect/publish more data. Furthermore, the costs of data collections ought to be borne by the NRAs. Finally, **GSMA** reminds that no data collection exercise (for market analysis) is needed unless there is a concretely identified competition problem at retail level in telecom markets. No such problems with regard to access to data have been identified so far.

GSMA refers also to its answer to question 1.4.

Question 4.3. – Relevant data collection under the provisions of Article 22 of the EEC – geographical surveys of network deployments

Liberty Global is of the opinion that collection of any data from operators might imply additional investments and technological efforts due to the need to normalize datasets. As a consequence, the corresponding report obligations should be imposed when a market failure was previously identified, should there be no other less burdensome measure.

BEUC stressed that data for end-users have to be comparable and understandable. For example, market conditions insights could be presented by consumer organizations being able to compare various data from different sources.

¹⁰⁰ Such information helps the development of data economy and gives a dimension to the growth of connected devices and applications.

Microsoft agrees that access to data on broadband network deployment is relevant for the development of data economy and considers that the survey to be conducted under the provisions of Article 22 of the EECC is to be made public. Also, NRAs should use state-of-art data analytics tools to assist their tasks of “organizing large amounts of network infrastructure data on a neighbourhood-by-neighbourhood basis in order to analyse connectivity patterns and highlight broadband white spots”, presenting the results in form of broadband maps, interactive broadband availability and QoS information. **Microsoft** also provides some examples of presentation manners of relevant data.

Telefonica states clearly that no information on detailed coverage forecasts collected under the provisions of Article 22 of the EECC should be published. This is reasoned by its confidential character, the fact that it could mislead consumers or that it could ease collusion, not leading to better outcomes in terms of competition.

On the actual coverage data, it should be made publicly available at a sufficient level of disaggregation in order not to introduce biases towards one operator or the other.

ETNO and **DT** draw the attention that, given the new reporting obligations under Article 22 of the EECC, it is extremely important that the data collection terms, its purpose, usage and access conditions are clearly established through a public consultation process beforehand. Investment plans are strictly confidential and should, by no means, be published, **ETNO** and **DT** hold. In the joint view of **ETNO** and **DT**, access to such kind of data is not compatible with the basics of infrastructure competition. Furthermore, given the burden¹⁰¹ put on operators as a consequence of the data collection process by the NRAs, “the concrete usage of data has to be justified by the collecting authority by explicitly naming concrete benefits” and the data requests proportionate. Otherwise, **DT** considers that the NRAs should fulfil their duties with readily available data for various other purposes.

DT adds that it is questionable if the collection of such sensitive data is appropriate to be done, from a legal standpoint, based on the provisions of Article 22 of the EECC. However, “the potential conclusion that data on investment plans collected by public authorities on this (legal) basis no longer constitutes confidential data and can thus be made accessible to third parties, is inadmissible and should be prevented” states **DT**.

Taking into account that broadband deployment is at the core of the data economy development, it is **DigitalEurope’s** view that the newest data analytics software and tools are to be used by NRAs in order to reach in-depth insights into the markets functioning.

GSMA expresses its considerations on the high sensitivity of the network deployment plans, on their dynamism (depending on the market evolutions, on competition) and on the unwanted effect that making such information public would result in less investment. Should it be the case, this information is to be shared by the operators on a voluntary basis.

Overall, **GSMA** believes that any information on NGN deployment to be published should be in relation to existing networks and confirmed plans, but not forward-looking plans. On the

¹⁰¹ On the operators’ side, the data requests from NRAs imply additional analysis, preparing the datasets for the reporting purpose etc.

other hand, data on consumer complaints and service usage is considered confidential and should not be published, such an approach being questionable. In any case, “it is of utmost importance that before any data collection, its purpose, usage and access conditions are clearly defined and properly justified”, says **GSMA**.

Question 4.4. – Increasing availability of data in the spirit of the PSI Directive and the reviewed Regulation determined by NRAs and BEREC’s actions

EDRi and **Article 19** make reference to comments submitted in March 2017, to be found at the following link

<https://epicenter.works/sites/default/files/berecstakeholdermeeting2017-03.pdf>.

Liberty Global reiterates the answer it gave to question 4.2. – i.e. all data should be published unless there is a recognized conflict with third party rights.

Publishing of consumer complaints data¹⁰² is deemed highly relevant by **BEUC**, with the view to identify market failures and tailor the necessary measures. Other relevant data cover quality of service, usage and coverage statistics.

Facebook fully supports NRAs’ and BEREC’s initiative to publish more of the data it collects and processes with the aim to incentivise innovation in the data-driven economy.

Microsoft agrees with BEREC’s policy on open data and encourages NRAs to publish particularly geographical broadband availability data and consumer complaint data. The datasets to be published should be accessed online, in user-friendly, widespread used formats and even easy-to-understand conclusions and inferences on the data should be made available.

On the other hand, a public-private cooperation between NRAs/BEREC and network operators to create a public database for electronic communications location metadata¹⁰³ would be welcomed by the industry, **Microsoft** says. Such information should be accessible in an anonymised manner.

Telefonica reiterates the idea that the data that NRAs should publish are to be directly related to their regulatory roles and not go beyond. From this standpoint, NRAs are already publishing the necessary data and there is no proved reasoning for more.

ETNO questions the improvement role that publishing such data (with special focus on users complaints’ information) would have on the development of the data economy. Moreover, certain categories of data mentioned by BEREC are already published – QoS related indicators¹⁰⁴, coverage maps etc.

¹⁰² Data held by alternative dispute resolution bodies.

¹⁰³ This data could be used for urban development planning purposes, traffic congestion management, connected cars deployment etc.

¹⁰⁴ As requested by the Open Internet Regulation and the EECC.

DT makes a reference to its answer to the question above (4.3.), adding that publication of data on consumer complaints and usage¹⁰⁵ or coverage is unjustified from the standpoint of enhancing the development of the data economy. Additionally, **DT** reminds the already present publication requirements of QoS indicators with respect of the internet access services that needs to be taken into account and, also, the coverage maps published voluntarily by some operators.

BEREC's open data policy adoption¹⁰⁶ together with the latest proposed reform of the PSI Directive are welcomed by **DigitalEurope**. Publishing the data proposed by BEREC in its question could be useful to increase the benefits of data collection across the industry.

ECTA suggests¹⁰⁷ BEREC and NRAs can contribute to the development of the data economy by:

- publishing/sharing of the data that they already hold (including historical data repositories);
- applying data analytics in order to take informed regulatory decisions, based on rigorous factual and causal analyses;
- ensuring that regulatory decision are based in the most reliable and clearly specified data, including, for instance documentation of data gaps between traditional ECS providers and OTTs.

It is of utmost importance that competition problems are not missed/overlooked, especially in a changing market environment, as a result of lack of data availability¹⁰⁸. In this vein, **ECTA** proposes that BEREC should address the issue of data requirements for market analyses purposes and related challenges in a future report, to be discussed also with the stakeholders. Also, **ECTA** is interested in an objective evaluation of NRAs' powers to request data, transparency about the use of data, with the aim to assess the regulatory capacity to address data gaps and to identify "remaining deficiencies under the new legislative framework."

GSMA underlines that, on the one hand, data collection and publication is a method to address specific market failures (including transparency related) and, on the other, the PSI Directive is meant to incentivise the reuse of public sector information, while the categories of data mentioned by BEREC relate to private, commercial data¹⁰⁹. A few categories of data that would fall under PSI Directive's regulatory umbrella would be statistics on the budgets, employees, projects developed by NRAs etc.

Then, **GSMA** reiterates the ideas expressed already before that there is no justification for making private companies data public (unless they do it on a voluntary basis), going against their investment and development plans and against the principle of re-use of public sector information. In this vein, it is the respondent's view that property rights of data/data ownership

¹⁰⁵ These data are considered partially confidential and extremely sensitive.

¹⁰⁶ As set in the BEREC Regulation.

¹⁰⁷ Based on its experience under Article 7/7a provisions.

¹⁰⁸ This remains a feature observed by the European Commission.

¹⁰⁹ Which can be processed and published, as mentioned, only for specific regulatory purposes.

should be regarded as capital assets of the companies and should not be made subject to particular regulatory regimes other than the protection and safety rules already in place.

A respondent agrees with the goal of building a data-driven EU-wide economy, but highlights that the focus should be on making publicly sector data available free of charge and not on regulating public sector access to private data (since there are no grounds such a decisions to be based on). Data is shared bilaterally where there are good reasons to, in a legally compliant, socially acceptable and economically viable manner.

5. NRAs' experience applied to the case of the data economy

Question 5.1. – Whether competitive conditions in the data economy-related markets are optimal for the development of the data economy

Google strongly supports the idea that the competitive conditions prevailing in markets are adequate for optimal and efficient development of the data economy.

EDRi and **Article 19** draw the attention that this question is based on the false assumption that the maximization of data use is the best way in which to encourage competition in markets and to weaken the “winner takes it all” effects. For example, when considering personal data, maximization of its use creates privacy and security risks, while precisely the excessive use of personal data undermines market forces, trust and innovation, according to the respondent. In this view, BEREC is urged to carefully approach data-sharing mechanisms and to ensure collaboration and coordination with data protection authorities.

Liberty Global stresses the fact that personal data-sharing mechanisms should be in place only in circumstances in which the rules governing such sharing are in place – i.e. customers' consent rules etc. Nevertheless, data sharing should be left to the market (in the form of commercial agreements) if no market failure has been systematically identified and competition law failed to remediate the issues.

Facebook acknowledges the importance of data portability and tries to contribute to the development of necessary tools to enhance interoperability of data, but, at the same time, recognises that data-sharing might raise privacy and security related risks.

Facebook urges BEREC not to “foster interoperability obligations” as such, but to assess thoroughly if it is necessary to impose new obligations, particularly with respect to innovations, which is the development engine of the data economy. The EECC defines clear rules with respect to interoperability and BEREC should follow the same line.

In its answer, **AmCham EU** makes a reference to the answers it provided for the questions in section 1. Additionally, it believes that data economy can develop without mandated access to data and that, due to the specificities/particulars of the cases, access and sharing issues are to be dealt bilaterally in contracts.

As explained in its previous answers, **Microsoft** sees no competitive concerns in the development of data economy, the current and foreseen regulatory framework for electronic

communications being fit for purpose. The EU rules referring to access to proprietary assets should be applied to data as well, while imposed data-sharing mechanisms should be the last reasonable solution to be applied.

Given the variety of sectors, and implicitly players, acting in the data economy, **Telefonica** explains that the competitive conditions are complex to assess, with telecommunications being just a part of the broader puzzle. In this context, regulatory bodies such as NRAs/BEREC might not be in the best position to deal with such complicated issues which go far beyond their specific competences. Furthermore, imposed data-sharing mechanisms work only in very limited circumstances, holds the respondent¹¹⁰.

ETNO explains that data-sharing mechanisms of global players are under close monitoring of the competition authorities. For business-to-business related conducts, the data-sharing mechanisms are established on contractual basis, the flexible, decentralized approach being the right manner to (self-)regulate it. Any attempt to impose regulation on access to personal data would be “misguided and detrimental”.

DT also considers that the data-sharing mechanisms for B2B (through contract law) are sufficient for the optimal functioning of the data economy, explaining that any attempt to impose regulation on these issues would result in deterring market entry, less investments and innovation, undermining the development of the economy. Furthermore, the respondent argues that there are already cost efficient, effective data-sharing initiatives/solutions in place between non-governmental entities¹¹¹.

ACEA endorses its response to question 1.5. above, joining the industry’s view that no further regulation is necessary for improving the competitive conditions in the data-economy related markets, the mechanisms in place are functioning well, providing the right incentives for data-sharing and access, while, at the same time, abiding the data protection and security rules.

DigitalEurope makes reference to its answers in section 1. Compulsory data-sharing mechanisms in the private sector should be regarded cautiously “for impact and effectiveness”. In this respect, Commissions’ approach in the “Towards a Common European Data Space” communication is welcomed by the respondent.

Oracle stresses that the competitive in the data-economy related markets are not optimal, as described in its answer to question 1.4.

GSMA explains that, in order to analyse the competitive conditions in a data-related market, the task should be specific and the market clearly identified¹¹². **GSMA** also quotes a paragraph from their report on data value chain¹¹³ and endorses its answer to question 2.3. With respect to data-sharing and IoT, **GSMA** considers that industry-driven initiatives are particularly

¹¹⁰ (i) Third party generated data might be difficult to incorporate in the own systems/processes; (ii) data-sharing should be based on industry-insights; (iii) over-regulation could disincentive innovation.

¹¹¹ See **DT**’s answer to question 2.3., on Deutsche Telekom’s Data Intelligence Hub.

¹¹² As conditions differ on the type of data, the implied value chain etc.

¹¹³ Which can be consulted in their answer and in the GSMA Data Value Chain study, page 56, to be found at <https://www.gsma.com/publicpolicy/the-data-value-chain>.

important for defining standardized approaches. Some examples in the field of IoT and big data promoted by the respondent¹¹⁴, include:

- a technical framework architecture blueprint for delivery of big data & AI services;
- promotion of application programming interfaces (APIs) standards for generic data-sharing;
- development of harmonized data models for publishing and consuming of data (for common types of data – in the field of air quality, weather observations and forecasts, drones, roads, public services fleets, agriculture, smart buildings etc.);
- development of approaches for machine learning application in air quality forecasting, agriculture-related issues and so on.

GSMA's answer to question 1.4. is also of relevance here.

The individual stakeholder believes, that, besides a supportive regulatory framework, there is a need for a generalized, broader understanding of the benefits of data sharing. The Commission (in its communication in April 2018) proposes a series of approaches on data sharing – open data approach, data market approach, data exchanged through a closed platform and provides examples. Also, there are a series of sharing models at hand which can be further analysed in close relation to the institutional context in the market/sector concerned.

The institutional context might include:

- sectors that are typically competitive, but where data is concentrated in one part of the supply chain (for example, some markets for manufactured goods) – the 'extended vehicle and neutral server models' used in the automotive industry might be fit; the aim of the authorities should be to enable such sharing and not to impose it;
- sectors in which the principal customer is the public sector – several models include donation (as a form of corporate social responsibility), public sector prizes for solutions to specific social challenges, mutually-beneficial partnerships and creation of intermediaries to overcome the lack of trust; policy makers could add also sharing requirements in the commercial terms (in a procurement relationship, for instance);
- sectors in which data collection depends upon drawing public goods (collection of data in public spaces) – authorities can mandate that the data collected is to be shared in order to allow the gathering process to take place in a public space.

Question 5.2. – Appropriate tools to foster the development of the data economy

In its answer, **Google** quotes a statement from the European Commission¹¹⁵ who took the view that, "at this stage of the development of the data economy, the existing regulatory framework is fit for purpose...". **Google** considers that data is actually a resource available to many entities, but they do not fully take advantage of the benefits it generates, so it would be helpful to promote the investment in skills needed to understand the available data and how

¹¹⁴ The promotion is done in full transparency.

¹¹⁵ Communication "Towards a common European data space" – April 25, 2018.

to make use of it. Moreover, public institutions should be encouraged to open up their databases.

According to the **LSS**, interoperability becomes more important, together with the need to develop standards to enhance the competitive conditions in a market. Otherwise, even in the presence of open data, lack of interoperability and standards create barriers to entry.

EDRi and **Article 19** consider that any focus on generating and sharing more personal data, making it more interoperable etc. will give rise to counterproductive effects. As an example, the respondent says that it's extremely important that NRAs and regulatory bodies understand the anti-competitive and anti-consumer effects generated by mergers/acquisitions such as was the case with Facebook and WhatsApp.

Furthermore, **Article 19** urges NRAs to pay more attention to the consumer-related behaviours of dominant players, for instance imposing unfair contractual terms¹¹⁶.

Ex ante transparency and proportionality obligations can be imposed as a result of identified market power that systematically leads to abusive/excessive data collection, **Liberty Global** states.

Microsoft replies that wholesale data access regulation and imposed interoperability of data should only be deemed 'a must' when proved barriers to competition are to be noticed, for all the reasons mentioned in the previous answers. Moreover, regulatory remedies for ECS markets are difficult and tricky to be transferred as such to data markets.

Also, **Microsoft** explains that new data portability obligations are unnecessary, as GDPR already provides for data portability and online providers started implementing these provisions¹¹⁷.

Telefonica believes that there is no need for regulatory intervention in the data economy-related markets, since it is too early to assess its development on competition conditions. Moreover, the scope for telecom regulators intervention is highly limited to a small part of the actors involved in the data economy, such intervention being considered detrimental.

ETNO sees no need of any regulatory intervention on BEREC's side in the data economy firstly, because there is no documented market failure related to data in the telecom sector and secondly, because it has limited competences in the broader data economy picture.

DT argues that none of the (*ex ante*) regulatory bodies (neither sector-specific, nor horizontal) is in an adequate position to address potential competitive issues arising in the data economy¹¹⁸ and access to and reuse of data, data sharing, interoperability etc. regulation should be left to the market, based on contractual freedom and negotiation. If market failure

¹¹⁶ In the end, consumers are facing a binary take-it-or-leave-it choice, being obliged to accept far more data collection and processing than what would be reasonable for the supply of the bought services or their freedom of expression is severely impaired.

¹¹⁷ For instance, Microsoft, Facebook, Google and Twitter have announced the Data Transfer Project (<https://datatransferproject.dev/>) to allow consumers to move their data between service providers.

¹¹⁸ As explained before, such statement is particularly relevant for IoT and M2M services.

is identified, competition law provisions should apply. Any alternative conduct than the one proposed on the side of the NRAs would result in competition harm and less innovation.

According to **DT**, the proposed P2B¹¹⁹ regulation, which is meant to increase transparency and ease correction possibilities for end-users, is an important first step in the right direction and regulators should not go beyond this. More importantly, at a later stage, an adequate adapted competition policy should be set.

DigitalEurope is of the opinion that there is no need to improve the competition conditions in data economy-related markets. Even in future, cautiousness has to be exercised with respect to applying remedies from the electronic communications sectors as such to data markets.

GSMA says that it cannot provide a reasoning on the application of the current regulatory instruments and tools to the data economy unless a specific motivation is given and the problem at hand is mentioned. As such, from a general standpoint, regulatory bodies are not considered adequate to address data-economy related competition issues (**GSMA** stressed specifically the case of IoT and M2M markets). Should definite competition issues arise, competition policy rules (that could be eventually adapted) would be enough to approach them. **GSMA** also says that BEREC should mind the fact that the EECC “fails to provide the broad scope required to properly consider the interplay of data-driven businesses at large and ECS providers”, **GSMA** says. Answer to question 1.4.

The individual stakeholder mentions firstly that competition law was not quick enough to adapt to the competition challenges posed by the large digital platforms, despite the efforts in that direction. In order to assess the concerns posed by multi-sided platforms, the respondent proposes the potential tools and measures:

- more proactive and dynamic competition analysis - competition authorities should be able to analyze a broad range of evidence and anti-competitive practices such as excluding/blocking competitors, the impact of big data and network effects etc.;
- faster action/enforcement – intermediary/interim measures might be a solution to speed up the *ex post* process and prevent/limit ongoing or future harm; “authorities should review the timeframes to ensure there is an appropriate balance between the speed of competition proceedings and the quality of the investigation;
- a balanced view between *ex ante* and *ex post* regulation – since *ex post* measures cannot address fairness as a principle, *ex ante* measures need to fill the gap and the proposed Platform to business Regulation and New Deal for Consumers seem to be good starting points in this respect; another advantage of EU-wide *ex ante* regulation is that it would bring a harmonized approach to the currently fragmented national laws that address these issues;
- monitoring and enforcement – for a proper assessment, NCAs must be able to request and analyze data on a permanent basis – through sector inquiries or market reviews of the platform sector, addressing the imbalance in bargaining power/unfair trading practices via *ex ante* regulation through the collected information on request.

¹¹⁹ Platform-to-Business.

Question 5.3. – The necessity of closer cooperation between the NRAs and other regulatory bodies

Google responds that the main concern is that the NRAs should slowly overtake roles not fit for purpose in the context of data economy and should guard on potential overlapping with other regulatory bodies.

Since regulators are aiming at protecting the same consumers and have similar objectives, sometimes even approaching/analysing the same topics, **LSS** considers that coordination of efforts and a collaborative approach would bring benefits to the whole process.

Due to the unclear reference to collaboration (formal, informal) and its goals, **EDRi** and **Article 19** cannot provide an adequate answer.

Article 19 suggest firstly that the mentioned cooperation should be formalised (including mandatory consultations and opinion provisions) and, secondly, the cooperation should not be related solely to certain cases, but be driven on a regular basis – in market studies, sectors inquiries etc.

In **Liberty Global's** view, a closer cooperation is needed with the aim to guard the transparency and customer empowerment obligations compliance under GDPR. Then, consumer protection authorities, data protection and competition authorities have to work together to identify abusive behaviour on the side of major players with respect to data collected and processed based on mislead/false information provided to customers¹²⁰.

BEUC believes that enhanced, closer cooperation is needed between the regulatory authorities since digital economy business practices are to be approached by the provisions of several areas of the EU law. As areas of interest, the respondent mentions: the monitoring of personal data use by ECS and OTT providers, market share assessment of both ECS and OTT providers calculated based on the individual data they hold, identification of common infringements and best course of action/remedies, insights of data sharing and use between smart devices etc.

Besides a general statement about the interplay between the regulatory regimes, **Facebook** strongly advises for a consistent approach across countries taken by the regulators, at the EU level, as far as data economy is concerned.

AmCham EU takes the stand that all the regulators should collaborate and cooperate, especially since the different parts of the digital value chain and of the data economy market-related issues become interrelated and difficult to limit strictly. The respondent urges regulators to establish that NRAs competences in the field of data economy and related

¹²⁰ The unfair commercial practices framework relies on the concept of “reasonably informed and circumspect consumer” in order to capture situations in which consumers give their consent for collection and/or processing of data without actually realizing the privacy implications involved because of the way the information is presented to them.

competition are limited to the telecommunications markets, not overlapping with other regulators' competences.

Microsoft considers that there is an obvious need for closer cooperation between competition law and data protection authorities and NRAs, taking into account also the blurring border lines between ECS and information society services. Concerning e-Privacy Regulation, its forthcoming adoption will imply the necessity of closer collaboration of NRAs and data protection authorities in the interpretation of e-privacy and data protection rules regarding, for instance, the processing of subscriber data and electronic communications data by ECS providers.

Telefonica is positive about the need for further and closer cooperation among sectorial regulators, competition, data protection and consumer protection authorities, given that a holistic approach should be used, should any competition concerns arise in future. Nevertheless, telecom regulators could raise the awareness of the problems which operators face, as expressed in the answers above.

ETNO notes that regulatory competences/responsibilities in the field of data protection and privacy might be established involving or not NRAs. In any case, given that many services (especially NI-ICS) are based on commercial exploitation of data, various authorities (data protection, consumer authorities etc.) need to collaborate/align their views in the fields of consumer protection provisions, data protection and contract law, for instance.

DT states that, in terms of data protection and privacy regulation, data protection authorities are clearly responsible under GDPR, while, with respect to the proposed e-Privacy Regulation, it is not yet clear which authority will have competences. However, the respondent stresses that it is highly important that companies are regulated by a single competent authority that incorporates all the relevant provisions from the various fields in one common position.

Concerning data portability, under GDPR, there have been discussions on whether data automatically generated by the integrated operators' systems (for instance, mobile traffic data) falls under the obligation to port data "provided by" the data subject (Article 20 of the GDPR). Such an interpretation of the legislative provisions collides with the existing obligations (namely, to make telecommunications metadata anonymous) under the e-Privacy Directive, **DT** warns. In this specific context, closer cooperation between NRAs and data protection authorities would be highly appreciated/needed. The draft regulation on platform-to-business relations and the consumer deal might also ultimately include provisions on personal and non-personal data portability. In any case, a harmonised, consistent approach has to be followed in the regulatory process.

Last, given that many services are based on the commercial exploitation of data, **DT** believes that consumer authorities, NRAs and DPAs¹²¹ should harmonize their conducts on data protection and contract law.

ACEA mentions that close collaboration and cooperation is beneficial and information sharing between the mentioned regulatory authorities should be enhanced, given the broader

¹²¹ Data Protection Authorities.

overview of the data economy. Nevertheless, given the specific competences and areas of expertise of the regulatory bodies, overlapping of NRAs interventions with other jurisdictions should be avoided.

DigitalEurope agrees that closer cooperation between NRAs, data protection and competition law authorities is more and more relevant, but draws the attention that such closer collaborations should not result in overlapping regulations, each authority focusing specifically on its core competences.

ECTA replies that the most important issue for BEREC and NRAs is to ensure “healthy, well-functioning and durable competition in the electronic communications markets” that support the data economy. With this ultimate goal in mind, BEREC and its members should closely collaborate in order to effectively identify and remediate any anticompetitive conducts in these markets.

Another role for BEREC and NRAs and collaboration with the other regulatory bodies would be to monitor B-2-B data sharing and competition law practices, **ECTA** explains.

On the other hand, **ECTA** sees no need for inter institutional cooperation on data portability related issues, but believes that a close dialogue with data and consumer protection authorities can be beneficial in order to ensure effective and consistent application of the specific rules in the electronic communications sector.

GSMA responds that cooperation and coordination between regulatory bodies/authorities and policy makers is of utmost importance for the development of data economy. Experience sharing and expertise, close cooperation in shaping policies and alike are called for a motivating economic environment where data plays a major role¹²². One of the results of such a conduct could be a greater acceptance of the principle of technological neutrality, **GSMA** exemplifies. Furthermore, some of the technical challenges ahead are presented in the respondent’s answer.

Another point which is worth reiterating has to do with preventing the commercial exploitation of consumer personal data. Since NI-ICS services were newly introduced under the direct regulatory scope of the NRAs, they, consumer authorities, data protection authorities need to align their approaches.

In principle, **the individual respondent** supports the application of horizontal rules in the data economy with the aim to promote fairness and competition. Nevertheless, the quick growth of the online platform economy surpassed the regulatory capacity and, as a consequence, dominant platforms are benefitting from the rules applicable to the information society services long after these exceptions are no longer justified on grounds of enabling innovation.

From the NRAs’ regulatory perspective, it is significantly difficult to tackle these issues and also level the playing field due to the fact that ISS services are outside their regulatory scope. Therefore, it is a must that the telecom regulatory bodies establish close dialogues with data protection, competition, consumer protection authorities and sectoral regulators such as financial services, healthcare, transport, insurance etc. or other relevant entities, should it be

¹²² Some examples include automotive and smart transport, energy, utilities and smart cities.

the case. These dialogues could be materialized under a Memorandum of (common) Understanding concluded between the NRAs and all the aforementioned neighboring regulators, setting the cooperation parameters, as well as the governance structure, with the mandate to promote greater competition and fairness in the digital economy.

Concretely, NRAs could share experience on monitoring market evolutions, assessment of market power and the appropriateness of imposing remedies, application of *ex ante* regulation, creation of portability schemes to reduce switching costs for end-users, supervision of standardization for interoperability, promotion of the development of wholesale access markets.

In this vein, in order for coordination to be efficient, BEREC, the NRAs and other regulatory bodies should collaborate to identify areas of shared or overlapping competencies across Europe, with concrete suggested actions for cooperation in each case.

Another potential idea in order to resolve the lack of coordination with respect to data economy regulation would be to create a super-regulator (an umbrella organization) by merging or consolidating a number of regulatory bodies, with broad regulatory powers across the digital economy. For example, a recently published report in the UK – “Regulating for responsible Technology”¹²³ proposes the creation of a new, independent regulatory authority with three responsibilities – to give regulators the capacity to hold technology to account, to inform the public and policymakers with robust evidence on the impacts of technology and to help the people to redress from technology-driven harms.

Finally, the **individual respondent** considers that the aforementioned debate is crucial for “ensuring consistent applications of the rules governing competition, online harms and consumer protection across the digital ecosystem”.

Question 5.4. – Key issues to be taken into account when assessing competition dynamics

Google expresses a strong opinion according to which, when a data market is identified, the specific capacity to process data should not automatically imply the existence of market power, as data can be cheaply collected or acquired from the data brokers by small entities. Overall, one should conclude that entry-barriers are low in the digital economy markets.

EDRi has no opinion concerning non-personal data, while, in the case of personal data, it notes that the European scope has already been defined since a long time.

Article 19 is not clear on what data markets mean and, therefore, it cannot provide an answer.

As previously mentioned, **Liberty Global** takes the stand that the concept of “data market” is inaccurate, given that there is a verity of markets for which data is a relevant input. As such, data can be regarded as an asset that could enhance market power in markets where it is

¹²³ For further information, please see: <https://doteveryone.org.uk/project/regulating-for-responsible-technology/> and the document itself under <http://doteveryone.org.uk/wp-content/uploads/2018/10/Doteveryone-Regulating-for-Responsible-Tech-Report.pdf>

essential or not readily replicable. As a consequence of the aforementioned, the geographical scope of each relevant market will be determined by the specific market in which data is used as an input.

In its answer, **BEUC** makes reference to the European Economic Area (thereafter, EEA).

Facebook reiterates the statement that in the online world of data there are no barriers to entry or expansion.

AmCham EU draws the attention that the presented question seems to imply the necessity of a separate definition for data markets, similar to the ones existent in telecom markets, which is premature. Existing regulatory concepts should not be transferred as such to “the wider data economy”, **AmCham EU** strongly advises.

Microsoft considers that consumers switching possibilities is crucial and, therefore, in order to assess the potential competitive barriers, the question of access to customer data creating persistent switching barriers has to be addressed. However, since consumers data can be accessed and used at the same time by several providers (consumers can chose to provide their data at the same time to more than one OTT provider, through the apps they use), it is unlikely that data access determines barriers to switching as it is the case of numbering resources implemented in a certain network, for which data portability had to be imposed.

The competitive dynamics of data markets should be assessed from a broad perspective, outside the scope of BEREC/NRAs’ competences, **Telefonica** and **ETNO** stress. **Telefonica** thinks that the geographical scope of the data markets should be global, while **ETNO** considers that the European dimension is the minimum geographical area which is appropriate.

ETNO suggests that NRAs could foster the development of the data economy by reducing the regulatory burden on the telecom operators.

DT makes references to its answers above concerning the existing competition bottlenecks and disadvantages mentioned previously.

GSMA makes two points here. Firstly, it comes back to the idea that data has to be regarded as a company asset and analyse the specific markets from such a perspective. Secondly, the geographical scope of the market is highly dependent on the types of data under consideration, following a case-by-case approach consistent with the governing principles of market reviews methodology¹²⁴. Answer to question 1.4. by GSMA is also relevant.

An individual contributor reminds that data markets are both innovative (create more choice for consumers, allow businesses to address much more consumers without significant infrastructure investments) and disruptive (are concentrated and can tip, competition in the market becoming competition for the market). The imbalance between the market strength of

¹²⁴ For example, the EC found in the review of the proposed Microsoft/LinkedIn merger that the product market in question was limited to professional social networks (PSNs) and that the scope was national, on account of language-specific substitutes in at least some of the main European markets.

a small number of large platforms and the multitude of business (big and small) that rely on the former to reach their customers raised new issues:

- the bigger the platform, the more successful it becomes as a consequence of the network effects (direct and indirect);
- businesses using platforms start to lose direct contact to their customers and are unable to improve and personalise products/services to meet consumers' needs¹²⁵;
- digital first entrants create their own interoperability standards with own ecosystem, creating barriers to switching (for example, the acquisition of a certain handset with a particular operating system determines the subsequent use of the compatible applications);
- platforms can collect, use and analyse large amounts of data to improve the service and experience of each customer, which can have the detrimental effect of reinforcing the already existing market power if there is not sufficient competition;
- digital players already holding market power are able to leverage it into new areas and services, which, in turn, reduces the new entrants' abilities to innovate and disrupts existing businesses; these new services are often financed from the core business of the platforms (advertising, for example) and offered below cost or in exchange for data.

Question 5.5. – NRAs' actions to address competition/regulatory issues in order to foster the transition to a data economy

Google considers that NRAs can establish clearly the boundaries/limits of their activity with respect to the data economy in their interactions with other regulatory bodies in the domain (competition authorities and data protection authorities).

EDRI and **Article 19** stress again the important distinction between infrastructure data, non-personal data and personal data (particularly relevant being the subset of inferred personal data), which needs to be at the core of the regulatory bodies decisions. BEREC should focus on its main mandate – fostering competition and providing empowerment and protection for end-users – and not promote markets that are unsustainable, such as potential “markets” generated by the “rapacious, short-sighted and anticompetitive data collection” by traditional telecom operators¹²⁶.

Article 19 concludes that BEREC is to focus on guarding competition for the benefit of consumers, protecting markets' long-term sustainability and respecting consumers' rights and freedoms.

Liberty Global is of the opinion that the activities of ECS providers related to data should not be regulated if no data-related market failure has been repeatedly identified as a consequence

¹²⁵ This issue is even more serious when the platform offers own products/services that compete with the products/services of the businesses using the platform.

¹²⁶ The respondent makes this secondary reference with respect to the telecom operators since they fall within the regulatory powers of BEREC, but the main reference is made to data brokers and internet giants.

of the SMP position in a telecommunications market and it was not possible to solve it under competition law provisions.

BEUC believes that NRAs can improve their monitoring capacities with respect to both ECS and OTT providers' activities and are to gather the necessary data in order to get a real picture of the market characteristics and dynamics. Also, they are to collaborate with other entities (both authorities and consumer organizations) in fulfilling their mandate.

Facebook is of the opinion that regulatory barriers should be minimised, while focusing on fostering investments.

AmCham EU refers to its answer to the previous question. In any case, should market failures be identified with respect to concrete issues pertaining to telecom regulation, NRAs most likely have already the powers to address these issues and a cautious approach needs to be taken with respect to enlarging the scope of regulation prematurely and unneeded.

Microsoft makes reference to its answers to the previous questions in this section.

NRAs should create a level playing field for the actors in the data market economy¹²⁷, **Telefonica** proposes as main contribution.

ETNO advises on ensuring a level playing field with respect to end-user protection standards applicable to ECS providers. Additional explanations on this answer, can be found in **ETNO's** answers 3.1. and 3.5.

DT makes reference to its answers to questions 3.1. and 3.5. "on data-business models that require a reasonable translation of consumer protection standards".

In **ECTA's** view, generally, the best way in which BEREC/NRAs can contribute to the development of the data economy is by guarding the effective and transparent application of the rules to the electronic communications markets, ensuring the long-term competitiveness of the sector. Furthermore, in such a way, a predictable and confident business environment can be created, enhancing operators' opportunities in the data economy context.

Since electronic communications infrastructure is the basis/support for data flows, it is of utmost importance that regulatory attention is focused on infrastructure in order to avoid potential failures, **ECTA** notes. Additionally, **ECTA** "would support BEREC and its members if, when integrating a data dimension into their work, including in future Work Programmes, they would focus on increasing regulatory transparency and improving enforcement, notably of SMP obligations, through data use."

To conclude, **ECTA** draws the attention that competition law provisions should not and are not intended to preclude the application of sector-specific regulation based on SMP. Being aware of the discussions that competition law tools are not adequate to analyze/address concerns related to data generated by mergers/acquisitions¹²⁸, **ECTA** believes that the tools for SMP

¹²⁷ By reducing sector-specific regulation, taking digital players more into account in their analyses, raising the awareness of the existing unlevelled playing field in favor of the digital players, helping to identify other bottlenecks in the digital value chain.

¹²⁸ A point also expressed by **EDRi** and **Article 19**.

assessment are well established and relevant¹²⁹. Moreover, in the transition process to very high capacity networks/connectivity, market regulation needs to be adapted and, naturally, the issues pertaining to data economy with relevant market impact will be considered in the process.

It is **GSMA**'s view that NRAs should act under their competences to ensure that there is a level playing field for competition between traditional ECS providers and data-driven platforms and businesses. More details on these issues have been provided in the answers to questions 2.2. and 2.3.

The individual respondent makes reference to its answer to question 5.2.

Question 5.6. – Other issues related to the NRAs' experiences to the data economy

Liberty Global believes that NRAs experiences represent valuable knowledge in the context of potential existence of leveraging of market power from markets different from telecommunications markets (like online platform markets) to data-related markets (like advertising). In these cases, even if beyond the regulatory scope of NRAs, their experience is valuable in dealing with prevention of practices like consumer exploitation and abusive behaviour.

AmCham EU strongly considers that, given the NRAs experience and expertise, they should enhance the possibilities of ECS operators to participate in the data economy, not impose regulation in such a way as to determine a competitive disadvantage for them, especially from the perspectives of privacy regulation. Also, the extension of the currently-used concepts in telecom to the data economy might create barriers.

Microsoft has no additional comments on NRAs' experiences in the data economy topic.

DigitalEurope reiterates the idea that NRAs need to be careful in applying (without thorough assessment) their experience from the telecom sector as such to data economy more broadly, since there are associated risks¹³⁰ to such a conduct.

¹²⁹ **ECTA** mentions that the SMP guidelines have been recently reviewed and no discussion pertaining to the data economy context has been brought forward in that context. Therefore, it is not appropriate to open the premises for a new discussion on cross-market interplay.

¹³⁰ As example, **DigitalEurope** mentions interoperability – while number interoperability is in place for the telecom sector since quite a while, data has different features which would make a similar approach inappropriate.

6. Other issues

Question 6.1. – Other issues

BEUC advises BEREC to tackle also issues connected to the AI technology – development and take-up, while considering the interplay with potential device neutrality policies.

Article 19 reminds that, given the highly technological characteristic/component of electronic communications markets, BEREC (and maybe also NRAs) should follow closely the relevant fora of technical and standards-related discussions.

ACEA notes that, within the provisions of the EECC, there are three main categories of services being qualified as ECS – internet access services (IAS), interpersonal communications services (ICS) and “services consisting wholly or mainly of the conveyance of signals such as transmission services used for the provision of machine-to-machine services and for broadcasting”. Given these definitions, it is not clear to what extent V2X/X2V communications fall within the scope of the EECC, since they may contain M2M aspects. It is the respondent’s understanding that the transmission services for delivery of M2M services fall within the Code’s scope, but not the M2M services itself since the delimiting border is the services which mainly or wholly consist of signals’ conveyance. Nevertheless, such a distinction is difficult to be applied for integrated services that combine “connectivity and other services requiring signal processing (such as M2M services)”. Moreover, the qualification of “mainly” will be open to various interpretations of the regulatory bodies, leading them to treat differently the same services in different countries. In this vein, there is a risk that M2M services are considered to fall within the scope of the Code and regulated as such in some of the countries. Therefore, a lack of harmonization of the regulatory approaches across the EU will create legal uncertainty, resulting in disproportionate and potentially arbitrary rules.

Furthermore, **ACEA** stresses that, should M2M services be deemed ECS, the providers could not fulfil their obligations under the electronic communications regulatory regime if the information is technically transmitted via a third-party network, beyond the providers’ control. Such an undesired impact will deter and disincentive the development of M2M services.

ACEA also recalls that the transmission services are already subject to horizontal consumer protection rules¹³¹, determining a structural disproportionality with respect to these services, delivering little end-user added value. In this context, the sub-categories of ECS need to be clearly defined and obligations imposed exclusively and specifically so that overlapping or divergent regulatory requirements are avoided.

To conclude, **ACEA** states “that additional efforts must be made to clarify the scope of application of the Code to ensure that electronic communications service providers and M2M service providers can engage in the development of intelligent transport solutions and promote EU leadership in this domain without either side being subject to inappropriate and disproportionate regulatory obligations. [.....] policy-makers must ensure that the combination

¹³¹ Under the provisions of Consumer Rights Directive and the Unfair Commercial Practices Directive.

of transmission services with other services does not prejudice business opportunities for ECS providers or providers of other services, by creating confusion or unjustifiably imposing obligations”.

DigitalEurope expresses its appreciation of BEREC’s initiatives in the data economy, stressing again the need for coordination as to avoid overlapping rules and to follow a coherent policy and regulatory intervention. Economies typically benefit of data by driving innovation and increased competition. Also, should regulatory intervention be needed, competition law provisions are still considered fit for purpose.

In its final remarks, **ECTA** advises that BEREC should be cautious in encouraging the data economy as it is presented in the public consultation document since neither the existing, nor the forthcoming regulatory framework mandate such an approach. A clearer statement on why and how active promotion of the data economy is connected to the sector-specific regulatory objectives and related activities would be welcomed by **ECTA**. As it seems, the sector specific regulatory objectives and the achievements so far could be endangered by potential goal conflicts and interference with other bodies’ attributions.