November 20, 2018

BoR PC07 (18) 07

COMMENTS FROM FACEBOOK

BEREC Public Consultation on the data economy

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

Name of the organisation/person, website, nationality and contact information	
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Please indicate the place(s) of operation of your organisation and the sector(s) in which your organisation mainly operates. Please explain how you are involved in the data economy.

Place of operation, sector(s), involvement in the data economy	
Place of operations	Dublin, Ireland
Involvement	Facebook provides a broad range of products and applications in the digital economy that enable users to connect with friends, family and wider communities and discover meaningful content.

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0. GENERAL REMARKS BY FACEBOOK

We welcome BEREC's consultation on the data economy, consideration of the issues and contribution to the debate on the data economy. Facebook is aware that the BEREC consultation is likely to feed into the Commission's Communication on Building a European Data Economy as well as DG Competition's and individual member states' ongoing reflection of the interplay between data and competition policy. BEREC should therefore work closely with the Commission (in the context of its work on Building a European Data Economy) and DG Competition (in the context of its work on reviewing the European competition policy framework in the face of increased digitization).

It is very important to ensure a consistent approach to the questions of whether 'data' should be 'regulated' and, if so, how 'data' should be 'regulated' in the EU. For consistency reasons, we share with BEREC our response (dated September 30, 2018) to DG Competition's consultation (attached as Annex 1) which should be regarded by BEREC as integral input to this consultation.

We would encourage that any possible future regulatory action by BEREC be innovation- and investment-friendly, maintain the ability of companies to compete globally, and foster the creation of new businesses models. Data is important for many business models these days, and companies ('traditional' as well as 'new') use data to develop new products, find innovative solutions and provide a better experience to end-users. We will be happy to provide additional information and discuss this with BEREC.

If BEREC is minded to consider (advising on) intervention, we urge BEREC to assess whether intervening ex-ante is really necessary and to take into account the potential unintended consequences that regulating the 'data economy' could create. Regulatory interventions should be put in place only in cases of demonstrable failures that cannot be dealt with by competition law and/or other existing laws. Intervention outside of that framework would risk jeopardizing the functioning of the Digital Single Market.

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1. GENERAL ISSUES

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

Question 1.1:

The term 'Data Economy' tries to capture the increase in the availability of data, the related business opportunities and the (potential) social value of the insights that can be generated. According to the EC report "Building a European Data Economy"[1], the *"data economy measures the overall impacts of the data market – i.e. the marketplace where digital data is exchanged as products or services derived from raw data – on the economy as a whole. It involves the generation, collection, storage, processing, distribution, analysis, elaboration, delivery, and exploitation of data enabled by digital technologies"*.

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

Answer to question 1.1

Any definition of the 'data economy' is contestable, and the suggested definition by BEREC is very general, which we believe makes sense for the complex ecosystem 'the data economy' is. Also, most businesses will soon be 'data' businesses. Car companies are increasingly data businesses and so are home appliance manufacturers[2].

Question 1.2:

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

[1] 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

[2] https://www2.deloitte.com/uk/en/pages/technology-media-and-telecommunications/articles/the-data-landscape.html

to "winner–takes-all" situations.

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

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

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

Answer to question 1.2

We agree with the characterization of data being non-rivalrous and non-exclusive. This is an important consideration when assessing competition in data economy. And while it is true that data is becoming a valuable element in the digital economy, the value is not created by the collection of data itself but on how it is analyzed, enriched and exploited in order to respond to a specific goal[3]. Gathering data does not necessarily confer a competitive advantage or create value. Value is created when the relevant data is analyzed in order to bring about a desired result. Successful business models are built on a mix of quantity, quality of data in combination with intelligent and innovative processing. There are also diminishing returns of scale that must also be taken into consideration. We encourage BEREC to carefully consider this complexity and to avoid using a checkbox approach for the characterization of data. We refer to our submission at Annex 1 for a more in-depth perspective.

Question 1.3:

Different types of data can be distinguished, and a taxonomy of data is useful to structure the analysis of the data economy. For example, one common distinction is that between personal and non-personal data. BEREC would be interested in respondents' input regarding more detailed or alternative classifications that can be made, especially those that are more relevant in relation to the analysis to be done by BEREC.

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

Answer to question 1.3

Classifying data is very hard given boundaries are constantly evolving, this is all a very fluid environment and very different data sets can be used to achieve the same goal or end product. If BEREC would consider

[3] https://hbr.org/2016/07/the-4-mistakes-most-managers-make-with-analytics

classifying data, they could consider criteria such as whether the data are public, whether it is exclusive (for example, because of copyrights), how hard it is to collect the data, and other factors, but as stated before, this could only be a starting point for more in-depth analysis. BEREC should be careful drawing general conclusions from a taxonomy only, though we agree that a pre-defined taxonomy can help facilitating (case-by-case) analyses.

Question 1.4:

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

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

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

Answer to question 1.4

Any general answer to this question would be a simplification of the actual assessment of a specific case. Focusing on Facebook, we believe we operate in an industry which is highly competitive. The nature of Facebook's services, with Facebook operating at the application services level (and having no control over the underlying network), means that there are low barriers of entry. In the online ecosystem, the products offered are typically software-based, which means that they can be rolled out, adopted, and built upon much more quickly and cheaply than tangible products. A new mobile app requires minimal staff, capital investment, and infrastructure. Also, the prevalence of multi-homing and the low/zero-rated pricing implies that there are no or hardly any switching costs, and services generally co-exist next to a (potentially unlimited) amount of similar services. The sector is, as a result, very innovative, innovation being the main source of competition in the pressure to attract and retain users.

Question 1.5:

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

Answer to question 1.5

Competition and privacy regulation are important but separate; they pursue different goals and should not be confused. Competition regulation and agencies protect the *competitive process*. Privacy regulation and privacy regulators protect individual *privacy rights*. As with all government regulation, the type of harm should guide the choice of law. The application of antitrust law is appropriate only where the actual or potential harm (be it related to a specific allegation of abuse or anti-competitive behavior, or to a potential merger) is grounded in the actual or potential diminution of economic efficiency.

In addition, the EU institutions have - during the negotiations of the EECC - considered and discussed a

future-proof ex-ante framework and we believe that the agreement (a.o. with the ECS-concept and new obligations on NI-ICS) is flexible, balanced and proportionate. Facebook is - as BEREC knows - continuously engaging with policymakers and regulators to talk about potential issues in the different markets and we will be happy to talk about the data economy with BEREC more in-depth at any future occasion.

2. ECS AS AN ENABLING FACTOR FOR THE DATA ECONOMY

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

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

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

Question 2.1:

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

Answer to question 2.1

We agree that connectivity is essential to support the development of the data economy and in turn content and digital services play a critical role in driving demand for connectivity. It is important to have the high-quality infrastructure to meet the growing consumer and business demand for connectivity (both fixed and mobile). The investments in these networks should ideally be market driven, and in markets where there is competition between ECNs the market will determine what the crucial parameters are since customer demand is heterogeneous. The role of BEREC and NRAs should be aimed at the creation of competitive markets, stimulating innovation and investments (5G, fiber, etc.), empowering consumers and businesses so they can choose the services and parameters they need.

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?

Answer to question 2.2

It is not clear from the question if BEREC means ECS in the current definition or the new definition from the EECC (which includes NI-ICS). As we stated earlier, the data economy is extremely diverse, and therefore it is very hard to give a specific answer. ECS (as defined under the current framework) are the services providing the necessary connectivity for the development of the data economy and their relationship with the digital services is symbiotic. ECS (under the EECC, and in particular NI-ICS) are 'helping' the development of the data economy by creating new and innovative services in a competitive environment. ECS are the services pushing demand and stimulating investments in high-speed networks (fixed and wireless). We currently don't see bottlenecks related to ECS (old and new) providers, and if these would come up in the future, we believe that these can be dealt with by the EC framework (current and EECC), the NN regulation/guidelines and competition law.

Question 2.3:

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

Answer to question 2.3:

Of course, it is common for new revenue models to emerge with the advent of new technologies such as 5G and IoT. One thing remains crucial, connectivity, and traditional ECS, ECN providers are best suited to deliver connectivity. Also, many ECS providers are already active in the data economy and have become an OTT-player (in addition to their 'traditional' services) or started partnerships with OTT-players. Note that it is harder/impossible the other way around, since OTT-players face huge entry barriers if they would like to become a 'traditional' ECS.

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

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

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

Data related to the network itself are of great relevance in optimising the network operations of telecommunications operators[4]. Analysis of this type of data can help to make network operations more

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

efficient.

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

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

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

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

Question 3.1:

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

Answer to question 3.1

Content services and applications are the main drivers for consumer demand and therefore for the deployment of fiber networks and 5G and ultimately for reaching the DSM targets of the European Commission.

Question 3.2:

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

Answer to question 3.2

N.a.

Question 3.3:

Are you aware of cross-sectoral initiatives carried out by ECS providers with regard to data analytics? Please provide examples of (big) data analytics projects/initiatives carried out by ECS providers[5].

Answer to question 3.3

N.a.

Question 3.4:

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

Answer to question 3.4

For broader context of the dynamics of the data economy we refer to Annex 1. The mere fact of having data cannot be deemed a competition risk per se, whether by application providers or by traditional ECS providers. Any assessment of market definition and market power must be based on the characteristics of the market being analyzed. A case-by-case approach is essential. We believe that the methodology to assess market power (either by competition authorities as well as by NRAs, now and under the EECC, when doing their market analyses) is still fit for purpose.

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?**

Answer to question 3.5

With respect to the third bullet, other than the fact that 'traditional' ECS providers might have access to

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

(technical) data that OTT-x providers don't have, we don't see competitive differences between companies because of the fact that they belong to either to an ECS or an OTT-x category.

Question 3.6:

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

Answer to question 3.6

Vibrant competition and potential to introduce new and innovative services for the benefit of consumers are opportunities linked to data collection and analysis, together with protection afforded by data protection regulation.

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

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

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

Furthermore, in the context of an evolution towards an open government data ecosystem, defined by the re-use of public sector information (PSI) Directive[6], NRAs could have a significant role in contributing to the economic and social benefits that may be possible. In fact, the electronic communications sector alone is responsible for vast amounts of data being generated/collected and the nature of such information may allow for significant benefits beyond its use for strict regulatory purposes.

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

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

With the increasing volumes of data generated by customers and operators, the quality of data used by NRAs – not only existing internal data but also data that can be collected from operators (respecting existing principles, such as proportionality) – can also be improved. Additionally, data collected and

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

generated by NRAs (when not subject to confidentiality clauses and when their publication is allowed by national legislation), may also be useful for different actors in the digital economy.

Question 4.1:

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

Answer to question 4.1

Collection of data by NRAs is important to enable them to work in accordance with their statutory duties and powers, but data collection should never be a goal in itself. It should always be justified and proportionate. Analytical tools can be useful for NRAs in order to make maximum use of their own and collected data. Facebook also encourages harmonization between NRAs and the use of best-practices in this field.

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?

Answer to question 4.2

With respect to the collection of data one can think of data for market analysis procedures, for monitoring of markets and for (potential) enforcement practices. For publication, data for consumer transparency/empowerment, e.g. coverage maps, ISP's internet speeds, etc., and for the industry, open data to create new business models or to improve current models.

Question 4.3:

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

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

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

Answer to question 4.3

N.a.

Question 4.4:

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

Along the same line, the draft reviewed BEREC Regulation[7] includes a mandate to BEREC to enforce an open data policy. According to this provision, BEREC shall "*promote the modernisation, coordination and standardisation of the collection of data by NRAs. Without prejudice to intellectual property rights, personal data protection rules and the required level of confidentiality, this data shall be made available to the public in an open, reusable and machine-readable format on the BEREC website and the European data portal.*"

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

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

Answer to question 4.4

We support NRAs' and BEREC's publication of data (subject to confidentiality and privacy safeguards) in order to help innovation in the data-driven industry.

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

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

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

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

[7] Article 2 of the Proposal for a Regulation of the European Parliament and of the Council establishing the Body of European Regulators for Electronic Communications. Inter-institutional File: 2016/0286 (COD).

may be useful in the context of encouraging competition and investment in the data economy.

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

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

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

Question 5.1:

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

Answer to question 5.1

Facebook recognizes the importance of portability, which is why we joined several other tech companies in launching the Data Transfer Project. The Project is dedicated to identifying technical solutions and best practices for offering portability solutions, recognizing that data sharing can also raise privacy and security concerns.

With respect to the examples listed above we urge BEREC and NRAs to be mindful before advocating for new obligations/remedies ('fostering') without having done a thorough analysis of impact, especially on innovation which is key to the development of the digital economy. E.g. "fostering interoperability obligations" should not be a goal in itself by NRAs or BEREC. The EECC has defined clear rules about interoperability and individual NRAs and/or BEREC should work with these rules in mind.

Question 5.2:

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

Answer to question 5.2

N.a.

Question 5.3:

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

Answer to question 5.3

Facebook believes that BEREC and NRAs have a lot of experience with regulation and competition which they can use in the wider debate about the data economy. On the other hand, there are good reasons to have separate regimes for regulation, competition and data protection, and though collaboration is important, different authorities should bear this distinction in mind.

From a geographical perspective, consistency in the approach to the data economy by regulators is essential at the EU level, and Facebook strongly supports a harmonized approach across countries.

Question 5.4:

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

Answer to question 5.4

Data are widely available, and in the online world data is not a barrier to entry and/or for expansion. We refer to Annex 1 for a more in-depth analysis.

Question 5.5:

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

Answer to question 5.5

There is already a vibrant digital economy and it is growing. SMBs and startups see tremendous value in using data to start and grow their businesses (and have entered without possessing large amounts of data at the outset), so we should ensure that regulatory barriers are minimal. NRAs could focus on the stimulation of investments and should be mindful before intervening at the application/services level.

Question 5.6:

Is there any other issue in relation to the application of NRAs' experience to the data economy

that you would like to add?

Answer to question 5.6
No.

6. OTHER ISSUES

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

Question 6.1:

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

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

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

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

Answer to question 6.1
No.

ANNEX 1

Introduction

Facebook's observations are based on its experience and view of the competitive dynamics in the digital economy.

1. Facebook is part of a fast-paced and dynamic industry characterized by disruption and innovation

Competition in digital and online spaces is fast-paced, multi-faceted, and continuously evolving, with low barriers to entry and where multi-homing is commonplace across a range of digital products and apps. Existing competitors - some of which began as disruptors themselves - operate under constant threat that a new entrant with an innovative idea will win over at least some of their users.

These competitive dynamics constantly push companies to innovate and experiment with new ideas and approaches, and it has consistently yielded new business strategies and models that have disrupted established incumbents to the benefit of consumers.

In the past 15 years alone, new startups with innovative ideas have disrupted the sectors in which they compete, and fundamentally changed the landscape in which consumers use their apps. Spotify, Deezer, Uber, Airbnb, Zalando, Deliveroo, Netflix, YouTube, and Skyscanner to name just a few, have disrupted traditional industries such as transportation, e-commerce, food, music, travel, retail and entertainment. The growth and success of each of these companies is evidence of the value of digital applications to consumers.

Facebook is an example of an online platform that has provided considerable value to consumers by offering a broad range of innovative applications that enable people to connect, communicate, and share with their friends, families and wider communities, and discover meaningful and relevant content. All of this is free of charge to consumers.

Facebook's core value to consumers comes from the highly personalized experience it provides. Unlike a magazine one buys, a store one visits, or a website or app that shows the same things to everyone, the experience on Facebook is tailored specifically for each person. Each time someone visits the Facebook website or opens the app, Facebook tries to show that person things that may be most interesting and relevant to them based on their interests and actions.

Facebook constantly invests in improving the user experience to stay relevant. If Facebook did not, users would leave and go elsewhere to one of the numerous online and offline alternatives that people use to connect, share, communicate, and discover. The key dimension of this competition for user engagement is typically not price, but rather service, quality, and innovation.

Facebook is able to stay free to users because its offerings are supported by the sale of advertising. Facebook makes it possible for businesses of all sizes to connect with customers locally, nationally, and globally, through advertising and that advertising service has enabled a whole new generation of

entrepreneurs and small and medium-sized businesses, who might previously have struggled to afford newspaper or TV ads, to reach a national or even global audience affordably. Worldwide, over five million businesses, the vast majority of which are small businesses, now advertise with Facebook regularly.

2. Facebook competes vigorously to attract people and advertisers to the platform

As a multi-sided platform, Facebook competes on multiple axes. On one side, Facebook competes with a wide variety of apps and service providers to provide consumers with products and applications that allow them to connect, share, communicate, and discover. On another side, Facebook competes with many of these same companies and numerous other online and offline channels for advertising revenue.

That dynamic is important for competition analyses because the economic principles governing how firms compete in single-sided markets differ in important ways from the principles that govern multi-sided platforms. First, multi-sided platforms connect distinct groups that interact with each other through the platform. Second, interactions between the distinct groups can create cross-platform effects, whereby the actions of participants on any side of the platform, or of the platform itself, affect participants on one or more of the other sides of the platform (or the functioning of the platform itself).[8] These differences must be taken into account when applying competition law to markets involving multi-sided platforms.

The cross-platform dynamics can be positive or negative. A positive effect occurs when "*the value that a customer on one side realizes from the platform increases with the number of customers on the other side.*"[9] A negative effect reflects the inverse - when the multi-sided platform becomes less popular to all sides because membership on one side decreases. Unlike single-sided firms, a multi-sided platform must balance the interdependent demands of all its distinct customers.[10]

In more practical terms, a strategy designed to increase short-term revenue at the expense of consumer engagement / satisfaction might risk triggering a negative feedback loop that could have serious consequences for a platform in the long term. Critically, this tends to align the interests of the platform with the interests of the people using the platform. This risk of alienating users and seeing cascading losses is real and when it happens, there is no shortage of rivals poised to take advantage of such missteps. Myspace, for example, was perceived as bombarding its user base with advertisements in pursuit of short-term profits. This perception made Myspace less popular for users, and subsequently less popular for advertisers.

Those platform dynamics are not necessarily accounted for by certain economic tools that regulators have traditionally used to define the markets within which to examine competition and conduct.[11] For example, the Significant Non-Transitory Increase in Prices test looks to the loss in sales that would make a small price increase unprofitable and for a single-sided firm, this test only needs to account for losses from one group

[8] See, Secretariat, *Executive Summary*, *in* POLICY ROUNDTABLES: TWO-SIDED MARKETS 11, 11 (Organisation for Economic Co-operation and Development Competition Committee, 2009) (OECD Paper); see also, e.g., David S. Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, 3 COMPETITION POL'Y INT'L 151, 152 (2007).
[9] See, David Evans, *Background Note*, *in* POLICY ROUNDTABLES: TWO-SIDED MARKETS 23, 29 (Organisation for Economic Co-operation and Development Competition Committee, 2009)
[10] The different sides of a platform are interdependent to the extent their decisions affect each other, even indirectly. See, e.g., Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J. ECON. 668 (2006).
[11] See, David S. Evans & Michael Noel, *Defining Antitrust Markets When Firms Operate Two-Sided Platforms*, 2005 Colum. Bus. L. Rev. 667, 699-700 (2005).

of customers (*e.g.*, Side A). However, on a multi-sided platform, a shift in pricing strategy on Side A of the platform runs the risk that participants on that side of the platform disengaged and that may, in turn, impact the second side (Side B) of the platform.[12] The impact on Side B can loop back and increase the negative impact on Side A. Such a negative feedback loop results in losses to all sides of the multi-sided platform, even if the magnitude of these losses are asymmetric in their strength.[13] Accordingly, understanding the multi-sided nature of the competition faced by a platform is critical to understanding not only the competitive constraints that it faces but also to analysing the conduct (if any) that may be under scrutiny.[14]

In terms of the multi-sided nature of competition, Facebook faces strong competition for both users and advertisers as described, in turn, below.

A. Fierce competition to provide products that users want to engage with

Facebook is just one of the ways Europeans connect with friends, family, and the world around them. The ever-decreasing cost of high-speed Internet connectivity, processing power, the often zero price nature of the apps and storage space on devices means that people do not need to be selective - they can easily switch between products, add new ones, or combine them to perform identical or similar functions.

The ease with which people can move between different apps creates strong competitive pressure on every product Facebook offers - as well as pressure to develop new functions to attract and retain users.

Online platforms seek to engage users in different ways, offering numerous features and products that are constantly evolving and that defy simple categorisation. For example, YouTube started as the video dating site with the slogan, "*Tune In Hook Up*" but quickly pivoted and expanded as it became the product that it is today.[15] Similarly, Flickr, started as "*Game Neverending*," which was a multiplayer online roleplaying.[16] Each commands the time and engagement of users and competes with us.

In addition, multi-homing between these apps is commonplace. For example, Pew Research recently found that 87 percent of Americans on Facebook also use YouTube, over a third also use Pinterest (37 percent) and Snap (35 percent) and just under a third also use LinkedIn (33 percent) and Twitter (32 percent).[17] Due to multi-homing and the widespread use of mobile devices that allow for easy download of and switching between apps, people can easily spread their limited time across more platforms than ever before. So irrespective of whether a particular platform's products and features may (or may not) be identical to any of those offered by another platform, the two may well compete by seeking to draw users (or a portion of user engagement) away from each other and that dynamic has implications for the approach of competition policy to fundamental questions such as market definition and competitive effects

[12] See, *id.*, at 700.
[13] See, *id.*
[14] The threat of triggering a negative feedback loop constrains how multi-sided platforms operate, a constraint not present for single-sided firms. Evans & Noel, *supra* note 4, 671 (2005) (stating that feedback loops in multi-sided platforms "may provide an economically important constraint" with respect to market definition).
[15] See, Stuart Dredge, *YouTube was meant to be a video-dating website*, The Guardian (16 March 2016), available at: https://www.theguardian.com/technology/2016/mar/16/youtube-past-video-dating-website
[16] See, Kaden , *Fun Fact: Flickr and Slack Started as "A Game that Never Ends"*, Jumpstart (21 September 2017), available at: https://jumpstartmag.com/fun-fact-flickr-and-slack-started-as-a-game-that-never-ends/
[17] See, Pew Research Center, *Social Media Use in 2018* (1 March 2018), *available at* http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/.

analysis.[18]

Any platform that competes in this space knows that if it ceases to provide a product that users find valuable, people will leave or disengage. If that platform does not adapt continuously to people's demands and expectations - both with regard to the user experience and in terms of security, and other factors - people will migrate to other applications.

B. Fierce competition for advertising revenues

All advertising is based on having an engaged audience. For an ad to be effective, people have to see or hear it. This is true across all forms of advertising.

Companies, big and small, have more options than ever before when it comes to advertising—from billboards, print and broadcast, to newer digital platforms like Facebook, Amazon, Google, Twitter, YouTube, Snap, Bol, Zalando or Skyscanner. Unlike 40 years ago, when companies were largely limited to print, TV, radio or billboards, today there are numerous different advertising channels and platforms, and hundreds of companies offering each of them, all competing for people's engagement and advertisers' budgets. And the data shows that advertisers do spread their budgets across multiple outlets and channels[19] which means that in 2017 Facebook represented approximately 6% of this diverse and expanding global advertising ecosystem.[20]

This sector is incredibly dynamic, with advertisers constantly reallocating budgets to platforms where people choose to spend their time. Amazon is estimated, for example, to have more than doubled its ad revenues last year,[21] while broadcasters and publishers are increasingly adopting more effective targeting.[22] Similarly, Rakuten has just announced the launch of its advertising platform in France and expects to treble its advertising revenues there next year.[23] All of this illustrates that companies with different user-facing value propositions nonetheless compete fiercely for the same advertising revenues.

3. Low barriers to entry allow new entrants to compete effectively with established competitors

The online space is a fiercely competitive environment characterized by innovation, frequent entry and explosive growth. Competition from established digital platforms and new entrants forces all players to innovate continuously and provide new and better products and applications.

Constant new entry is a feature of the online space because the barriers to entry for apps are low. The

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[18] See, e.g., David S. Evans, *Attention Rivalry Among Online Platforms*, 9 J. COMPETITION L. & ECON. 313, 314 (2013) ("*Antitrust analysis should . . . focus on competition for securing and delivering attention in considering market definition, market power, and competitive effects. Focusing on competition between specific products and services, rather than attention, could result in competition authorities and courts making either false-negative or false-positive errors in their decisions.*").

[19] According to one estimate, an average $100 of advertising spend is divided up between a range of different advertising mediums, with $35 spent on television, $12 on print, $6 outdoor, $6 on radio, $6 on ad networks (like Criteo, Taboola, Oath, Facebook or Google), $24 on "digital properties" (like Facebook, Google, Buzzfeed or Amazon), and $11 on agencies or third parties. See Matt Schruers, Disruptive Competition Project, *Infographic: How Ad Dollars Are Spent* (16 January 2018), available at http://www.project-disco.org/media/011618-how-ad-dollars-are-spent/#.WsPIM9Pwa9Y.

[20] Based on International Data Corporation statistics.

[21] See, Martin Sorrell, *How Amazon will crash Google and Facebook's advertising duopoly*, Wired Magazine (2 January 2018), *available at* http://www.wired.co.uk/article/amazon-advertising-threaten-google-facebook; Aurore Dermagne, *La pub en ligne, nouvel eldorado d'Amazon*, Le Figaro (24 July 2018), available at: http://www.lefigaro.fr/medias/2018/07/24/20004-20180724ARTFIG00226-la-pub-en-ligne-nouvel-eldorado-d-amazon.php

[22] See, *C4 invests in European Broadcaster Exchange as exclusive UK partner* (13 November 2017), available at: http://www.channel4.com/info/press/news/c4-invests-in-european-broadcaster-exchange-as-exclusive-uk-partner

[23] See, Stéphanie Marius, *Rakuten lance sa régie publicitaire en France*, ecommercemag.fr (17 September 2018), available at: http://www.ecommercemag.fr/Thematique/marketing-1221/Breves/Rakuten-lance-propre-regie-publicitaire-333749.htm#wIHj2KyJMmWO2dYf.97

products offered are typically software-based, which means they can be rolled out, adopted, and built upon much more quickly (and cheaply) than industrial products. A new mobile app requires minimal staff, capital investment, and infrastructure. The rise of cloud-computing platforms hosted by Amazon Web Services, Microsoft Azure, Google Cloud Engine, and others has dramatically decreased the time and capital necessary to start and scale an online service. Moreover, app stores run by Google, Apple, Microsoft, and Amazon (among others) provide pre-existing distribution platforms for applications to reach users and scale quickly.

On the consumer side, the ease of multi-homing and low or zero pricing enable people to try out and adopt new apps quickly and easily. And these factors all make it easier for new applications to compete with established products on the merits, and to do so quickly. This constant competition has led to a high rate of churn among the most popular online applications.[24]

Low barriers to entry mean that new competitors can quickly challenge established players. Snap, for example, has grown into a significant player that competes with longer-established online platforms.

These low barriers to entry also mean that online platforms must innovate constantly, and it underscores that online platforms are not insulated from competition because of network effects.[25] In today's digital economy, "[*t*]*he underlying technology, and business models, facilitate entry and enable firms, with the right formula, to attain global scale quickly, and to challenge incumbent platforms in one or more dimensions.*"[26] As a result, "*all online platforms, no matter how secure they may seem,* [*are forced*] *to keep innovating and providing value to users. And each needs to worry about other successful platforms in addition to the proverbial inventor in the garage.*"[27]

4. Data does not create barriers to entry

Despite the influx and success of new startups, some commentators have speculated that access to or control of data - whether specific types of data or large amounts of it - may provide established companies with sustainable competitive advantages and/or inhibit the ability of new competitors to enter the industry.[28]

There is good reason to doubt this overly simplistic narrative however. In fact, as numerous examples show, the non-exclusive and non-rivalrous nature of data means that new competitors can and do enter the market without possessing large amount of data at the outset or even prior to actually entering.

A. Data is widely available and non-exclusive

As a society, we are producing more data, about more activities, from more devices than ever before, with

[24] See, David S Evans, Attention Rivalry Among Online Platforms, 9 J. Competition L. & Econ. 313, 318-21 (2013).
[25] See, e.g., David S. Evans, *Why the Dynamics of Competition for Online Platforms Leads to Sleepless Nights, but Not Sleepy Monopolies* (last revised 25 August 2017), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3009438
[26] *Id*. at 37.
[27] *Id*.
[28] Anja Lambrecht & Catherine E. Tucker, *Can Big Data Protect a Firm from Competition?*, 4 (2015), available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2705530;

Deloitte estimating that the amount of data we produce will increase tenfold by 2025.[29]

In that context, if a new entrant wants additional data to launch or develop its offering, it has many options, for example by collecting data from users through offering innovative and engaging services or licensing data from widely available data sources.

After all, data is non-rivalrous; the fact that one party possesses some data does not render that same data unavailable to others.[30] An online platform that engages users through an attractive user experience can quickly gather a large audience and information about their activities and interests, even if its competitors have been and are doing the same thing. Recent examples include the rapid rise and success of applications like Twitter, Pinterest, Uber, Lyft, Airbnb, and many others. It is common for online companies to collect data on how users engage with their applications. This is true for both established and emerging companies, and across mobile and desktop platforms. There are no structural or technological barriers preventing other digital platforms - or other companies - from collecting any of the data that another firm may also collect.[31]

And, as noted above, companies do not need identical datasets to compete. Amazon, Google, Twitter, Microsoft, Oath, Facebook, and others each collect different data, but are direct competitors for providing products which people wish to engage with and advertising revenue.

B. Possession of large amounts of data, in and of itself, provides limited returns

Data does not, in and of itself, confer a competitive advantage. Value is created when the relevant data is analyzed in order to bring about a desired result (*e.g.*, making predictions about what product would be popular or which users may be interested in certain advertisements). And although the predictive power of data analysis can increase with the amount and quality of available data, there are diminishing returns to scale that must also be considered.[32] As professors Anja Lambrecht of the London Business School and Catherine Tucker of MIT have found, "*by itself, big data is unlikely to be valuable. It is only when combined with managerial, engineering, and analytic skill in determining the experiment or algorithm to apply to such data that it proves valuable to firms.*"[33] A start-up with a sophisticated data algorithm can draw out more useful conclusions from data than a pre-existing competitor with larger amounts of data.

C. Given data is widely available, it is important to have strong privacy protections

Facebook agrees with lawmakers and other stakeholders across Europe that data protection is important. The General Data Protection Regulation (the "GDPR"), which entered into force on 25 May 2018, has put in place strong enforcement measures that hold companies accountable.

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[29] See, *The data landscape*, Deloitte report (November 2017). Available at: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/technology-media-telecommunications/deloitte-uk-tmt-the-data-landscape.pdf

[30] See, Lambrecht & Catherine E. Tucker, *supra note* 21, at 5.

[31] See, Steve LeVine, *How Old Tech could roar back*, Axios (26 Ferbruary 2018), *available at*https://www.axios.com/big-tech-new-rivals-old-tech-ibm-uber-facebook-1519609801-80daea23-cee2-44bf-ad54-f65336a996c2.html (discussing study by IBM and Oxford Economics that shows that "*incumbents like Unilever, Procter & Gamble, Bank of America and the UK's Santander own about 80% of the world's data*").

[32] See, *id.*at 10-11 ("For example, it has been shown that to predict preferences for movies, ten movie ratings alone are more helpful than extensive metadata."); *see also* Patrick Bajari *et al.*, *The Impact of Big Data on Firm Performance: An Empirical Investigation*, National Bureau of Economic Research, Working Paper 24334 (February 2018), *available at* http://www.nber.org/papers/w24334.

[33] See, Lambrecht & Tucker, *supra* note 21, at 11.

Recently, there has been some debate as to the extent of the overlap between data protection laws and regulation and competition laws. While both frameworks are very important, they ultimately pursue very different aims and should not be treated as substitutes.[34] The GDPR, for instance, applies to everyone across Europe because people deserve to have their data protected, regardless of the size of the company they're dealing with. If data protection laws were to be viewed through the prism of competition law concepts such as market power, there is a risk that privacy protections would be inconsistently applied and unevenly available. Having different requirements for large and small companies, for example, would undermine the protection that policymakers intended when they created the GDPR.

5. Conclusion

The rapid pace of innovation and technological change over the past two decades has changed how people communicate, discover and share, how businesses connect with their customers, and how advertisers promote their brands and products. Today there is more reason than ever to believe that constantly accelerating technological changes - such as the advent of the Internet of Things, virtual reality and the increasing prevalence of digital assistants - will present dramatically different challenges and opportunities for companies and start-ups.

This kind of dynamism is attracting significant investment from a wide range of actors, including venture capital funds. As a sign of the confidence in the growth and innovation in the tech sector, it attracts approximately 35% of global venture capital investments and is among the deepest and amongst the fastest growing sectors in terms of venture capital investment.[35] In fact, access to funding for tech start-ups has never been easier with companies such as Delivery Hero – a Berlin-based online food delivery service – receiving over USD2.6 billion in funding over 15 rounds being just one notable example.[36] That level of financial investment is rooted in a strong belief that there are further new entrants expected and stands as further evidence of the dynamism of the industry.

The dynamic nature of competition in the digital and online space has created significant challenges for some incumbents but has also delivered substantial opportunities and benefits for consumers and businesses alike. These benefits will continue as companies across the digital landscape respond to changing consumer demands by innovating and improving the products and applications that they offer.

In such a landscape, competition law has a role to play if there is specific and serious evidence about likely or actual harm to competition. However, authorities should be careful that any interventions are necessary, evidence-based and do not harm a highly dynamic industry which generates considerable efficiencies and consumer benefits.

[34] See, *CPI Talks...with Thomas Kramler*, CPI Antitrust Chronicle (August 2018), available at: https://www.competitionpolicyinternational.com/wp-content/uploads/2018/09/CPI-Talks-Kramler.pdf
[35] See, *Assessing The Impact Of Big Tech On Venture Investment*, Oliver Wyman (July 2018), available at: https://www.oliverwyman.com/our-expertise/insights/2018/jul/assessing-the-impact-of-big-tech-on-venture-investment.html
[36] See, *Delivery Hero overview*, Crunchbase, available at: https://www.crunchbase.com/organization/delivery-hero#section-overview