



## Public Consultation BoR (22) 87 on Draft BEREC Report on the Internet Ecosystem

### Microsoft Comments

22 July 2022

Microsoft welcomes BEREC's interest in looking at the internet ecosystem with a holistic approach, not only analyzing the situation and particularities of ECS and ECN services, but also overviewing how these services interact with other players and elements of the broader ecosystem. This exercise comes at a very timely moment, given the regulatory activity in Europe as well as the starting discussions around the contributions that various players in the ecosystem make to the deployment of connectivity infrastructure.

In this regard, we appreciate that BEREC acknowledges that companies like Microsoft have increasingly invested in connectivity infrastructure and in providing additional services related to ECN and ECS markets. This clearly underlines the crucial role that cloud providers, with their data centers, cloud computing capabilities, submarine cables, and content delivery networks (CDNs), play in ensuring robustness, resiliency, security and effectiveness of today's internet. It is important to stress that Microsoft aims to enhance the potential of ECN and ECS providers in their respective markets through Microsoft's technologies, particularly to "partner with the telecom industry by providing a large set of services such as virtualized core networks or edge computing" (p. 28). Microsoft does not seek to compete with telcos but rather partner with telcos to help them achieve greater success through adoption of cloud and AI technologies that increase capex efficiency, reduce opex spend and expand revenue streams.

Hereby Microsoft would like to share several comments and observations with regards to the statements and assumptions introduced in the draft report.

#### Look at the entirety of internet infrastructure

We commend BEREC for recognizing that *"the internet is composed of many interrelated elements that affect each other"* (p. 3) and that *"in recent years, [Big Tech companies] have invested increasingly in telecommunication infrastructures and have been providing additional services related to the network and ECS markets"*.

Indeed, the modern internet is more than just the traditional last-mile telco/ISP network infrastructure and one must look at the entirety of the internet infrastructure. We note that while the draft report outlines the different elements in the internet ecosystem and groups them into three categories - client side, internet infrastructure and server side -, we observe that while Internet Access Service (IAS) or IP interconnect are placed under internet infrastructure category, other important elements of the internet infrastructure such as cloud computing and CDN are placed under the category of the server side. While the report notes the role of distributed storage and CDNs in providing the means to deliver large amounts of data over the internet (pages 16-17), it would be more appropriate to also consider it as an integral part of the backbone of the internet infrastructure contributing beyond the storage and processing aspects.

Microsoft, along with other major cloud platforms and online service providers are key participants and major investors in many of these building blocks, especially those in the networking and hosting infrastructure pillars. As duly recognized by the BEREC report, these investments include the first mile

(e.g., cloud on-ramp, data center networks), international transit (e.g., subsea cables), the middle mile (e.g., SD-WAN, software-defined virtual wide-area networks), and content delivery networks (CDNs).

In its past reports from 2012 and 2017, BEREC has recognized the important roles and value of the infrastructure investments made by content providers, such as CDNs and effective peering agreements, in the overall effectiveness of market-driven IP interconnect practices and in the context of net neutrality. We commend BEREC for these past studies and recognition and urge BEREC to continue to advocate its conclusions and recommendations against unwarranted regulatory intervention

We consider that the current reality, where both cloud and network service providers make significant and complementary infrastructure investments, is also fully in line with the EU 2030 Digital Decade objectives. The fact that major technology companies “*are present across practically all of the elements in the internet ecosystem*” represents significant investments, innovation, and risk-taking that all contribute to the broader Digital Decade goals. Many of the online services are new categories and a net addition to the European economy, not mere replacement or competition of traditional industry segments. For Microsoft specifically, our presence across multiple elements in the internet ecosystem is both a reflection and a result of our significant investment (over \$12 Billion capital spending in Europe in the past two years alone) and our business model which focuses on partnerships and empowerment of the digital transformation of many vertical industry segments (including the telecom industry) and both large enterprises and small-medium businesses, all of which are essential to the European digital economy. We also recommend BEREC to share this observation and recognition with the European Commission.

### **Heterogeneity of business models**

The report contains a number of findings and assumptions on the business models of large providers in the internet ecosystem. However, in reality there are large variations between the different internet providers and their business models. We regret that the report does not analyze these models in a granular way and instead makes a number of generalizations and simplifications. For example, the reports states that internet providers’ business models mostly rely on data collection, analysis and monetization. We consider this statement to be too generalizing, because it does not take into account the different business models in the ecosystem. We would like to underline that cloud computing services as offered by Microsoft predominantly in the B2B segment derive their revenue from enabling customer success in digital transformation and productivity gains, rather than on data monetization. In our view, the report would benefit from additional granularity in this regard. Similarly, we observe that the statements of the draft report with regards to Number-Independent Interpersonal communication services (NI-ICS) portray these services with a ‘one-size fits all’ approach, not taking into consideration the very different nature of NI-ICS (e.g. there are large differences between B2C instant messaging apps and B2B productivity services), thus not capturing the different set of services they provide.

### **Microsoft commitments to an open ecosystem**

Despite outlining Microsoft’s various offerings and services in a factual manner, the section of the draft report dedicated to Microsoft does not represent the weight of these services and their importance in Microsoft’s business. Furthermore, we observe that the draft report portrays specific services, such as Microsoft Authenticator and Pay, whose importance we believe is currently largely overrated. We would like to underline that Microsoft has strong commitments to make many of its services more open and accessible. As part of this effort, we have [announced](#) a set of principles that

apply to our app store on Windows, including a commitment to treat apps equally in our store, not requiring developers to use our payment system to process in-app payments, or not requiring developers to provide more favorable terms in our app store than in other app stores. These, and other [commitments](#), meant that Microsoft does not favor the exclusivity that leads for market closure in the ecosystem. We believe that the draft report should follow a fact-based approach and reflect upon this accordingly in its final version.

### IP interconnection dynamics

The draft report notes that ***“other large players, such as CAPs, are increasingly entering the IP interconnection market, investing in dedicated capacity, when economies of scale and scope justify a “make” rather than “buy” strategy. Bypass transit providers will eventually affect competition”*** (p. 48). We hereby would like to note that the increase in CAPs involvement in the IP interconnect market through investments in dedicated capacity is another proof point that CAPs not only benefit from internet but also contribute to the expansion of the internet infrastructure.

The report additionally notes that ***“competition concerns may arise from restrictive peering policies that ISPs impose on small CAPs and hosting providers. To the extent that large ISP and CAP players are not present at internet exchanges (or only with low capacity), smaller players might end up being forced to use transit which leads to a lower control of data traffic and possibly a lower quality of service and experience, or to accept paid peering policies of ISPs instead of settlement free peering. As a result, the element could be getting more ‘closed’, making it harder for smaller CAPs to grow”***(p.48). We agree with BEREC’s observation that restrictive peering policies may be harmful to market participants, big or small. Microsoft wishes to encourage telcos and ISPs to open, as many as possible, peering locations, so as to bring the content closest to the end-users to deliver a better user experience while reducing the telco/ISPs middle-mile costs.

### Final Remarks

We commend BEREC for correctly pointing out that ECN/ECS providers can and often do offer OTT services of their own or as a sell-through channel for third party OTT services. It is notable that many telcos use OTT services as an attraction or even incentive to acquire and retain subscribers. Some operators went to the extent of offering zero-rated video streaming services as part of the subscription bundle. By encouraging adoption of these services, telcos are demonstrating that such services are not generating traffic volumes that endanger or overburden their networks. In fact, it is the consumer appetite for more high-quality content and the availability of such content (through content providers’ massive investment) that fuels the demand for the broadband infrastructure.

When assessing the role of internet and cloud providers, we believe that the key questions is ultimately, whether or not, such services lead to the augmentation of all of the “factors of production” needed for economic growth, by enabling customer success and digital transformation of vertical industry segments. Microsoft’s business model focuses on providing digital platforms that enable our customers to collect, analyze and monetize their own data instead of monetizing customers’ data. We thus believe that our services can usefully contribute to the European digital transformation by creating cloud and AI technologies that can be used by any European company, NGO or government as an input to augment every factor of production and help build and enhance its own products or services in the pursuit of growth and prosperity.

We thank BEREC for the opportunity to comment on its draft report and look forward to working with BEREC on these important topics.