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Google comments on <u>BEREC's report</u> on the entry of large CAPs into the markets for electronic communications networks and services

Context and introduction

Google welcomes the opportunity to provide BEREC with feedback on its draft report on the entry of CAPs into the markets for ECN/Ss.

We thank BEREC for their interest in the wider digital ecosystem, and how it interacts with the electronic communications services sub-sector. The relationship between CAPs and electronic communications services is more accurately described as symbiotic rather than convergent. While they share a mutually beneficial relationship, their roles within the value chain remain distinct.

In fact, we note that the report covers such ground that rather than describing the limited phenomenon of how certain content and application providers may diversify their business by offering certain services which may qualify as 'electronic communications', the report in fact covers a range of interactions across the various layers of applications and services of the Internet ecosystem writ large.

In this sense, the report as presented in its draft form is arguably less about the '<u>entry</u>' of CAPs into the ECS market, but rather the <u>'interaction</u>' between ECS and different other subsectors, markets and application layers along the digital value chain.

A starting point in observing this value chain is that these relations are overwhelmingly positive, mutually supportive, and ultimately beneficial to the economy and to consumers. As we have explained in input to BEREC's work before, Google continues to develop closer partnerships with telecom operators across Europe and beyond, supporting them in their ambitions to grow core revenue, enhance the efficiency of their technology and operations, and expand into new business areas. Through these partnerships, telecom operators are increasing revenue, reducing churn, growing subscriber satisfaction, and exploring new business opportunities. In short, the CAP and ISP relationship is mutually beneficial, across all CAPs large and small.

We note that the report also touches on issues related to possible competition issues in other parts of the value chain. Whilst it is our view that elements of the draft report are presumptive and not based on observation of actual or imminent harm, we also note that the Digital Markets Act has been designed to deal with the sort of perceived issues and competition concerns that BEREC raises in this draft report. We consider that it would be appropriate to let that legislation take its course. For our views on these issues, we refer BEREC to our submission to the European Council.¹

Comments

Chapters 1 and 2 (Introduction and Overview of large CAPs)

• On CAPs investing in infrastructure

Google invests in different layers of the ecosystem..where there is a gap or a business need or to help the consumer experience. This investment in infrastructure is complementary rather than duplicative of investment by the telecom operators. In some cases, like for submarine connectivity, that investment is done jointly with telecom operators.

Over the years, in order to optimise the quality of experience enjoyed by end-users, many content providers have ensured that their content was situated as close as possible to the users, through the use of content delivery network (CDN) platforms and so-called 'caches', that we and other content providers offer free of charge to telecoms operators.

One of our aims is to bring data closer to the people that want to consume it: This enables a better user experience and helps reduce costs and network configuration complexity for telcos. A user in Milan gets the most popular YouTube videos through their ISP from our cache in Milan, rather than ISPs having to fetch it all the way from servers on the other side of the planet.

According to <u>research by Analysys Mason</u>, the complementary investments by us and other content providers save telecom operators over 6 billion euros per year in network costs. This is a win-win situation, where ISPs get to deliver content faster and more cheaply to their subscribers who requested access to it, while CAPs help to provide a great quality of experience for their users' enjoyment.

An added benefit of this symbiotic relationship is to ensure a level-playing field in the telecom sector itself, because locating content close to the user benefits the competitive dynamic in the telecom sector: by having access to much of the content that's popular with users close to

¹ Please see

https://storage.googleapis.com/gweb-uniblog-publish-prod/documents/Googles_submission_on_the_Digit al_Services_Act_package_1.pdf. Part III of the response addresses issues around 'gatekeepers' and 'digital platforms'.

or at their premises, smaller competitive telecom operators are enabled to offer very high quality of experience to their end-users, similar to what larger incumbent operators can provide. Without the efforts and complementary investments by Internet content and application providers to make their content available close to them, smaller telecom operators would be at a disadvantage, with seemingly slower services to access Internet content and applications compared to their larger rivals. Altering - as some are suggesting- this current positive dynamic achieved thanks to CAPs' constructive actions would likely harm healthy competition in the telecom sector.

• The business models of cloud service providers are not homogenous

Whilst BEREC somewhat distinguishes between how CAPs operate and their business model, the report in its current form largely portrays CAPs as homogenous. However, there are many different categories of Content and Applications generally available on the Internet. Conversely, there are very few examples of CAPs diversifying their businesses by launching new lines of business offering telecom-like services, apart from a handful of, for instance, Enterprise VoIP service providers.

When it comes to the cloud specifically, Google Cloud offers a suite of largely enterprise-focused services that allow customers across a broad range of industries and sectors to digitally transform with leading-edge solutions for infrastructure, application development, data analytics and databases, security, and collaboration.

Organizations can operate their business using the same reliable, cost-efficient, planet-scale infrastructure that powers many of Google's globally-used products. We work with global companies in every industry to support their digitization journeys, including Auto & transportation; Media & entertainment; Healthcare & life sciences; Energy & manufacturing; Financial services; Retail; and Gaming.

Even concerning the provision of cloud applications designed for the telecommunications sector specifically, there are many variants. Taken altogether, it would be fair to say that overwhelmingly, cloud services are offered to the telecom sector primarily as applications and hardware that support telecom operators and their networks, rather than replace or compete with them.

This is where, beside investing in complementary infrastructure, technology companies from Google Cloud to France's OVH and others help the telecom sector because their services can support telcos in managing their networks more effectively, and more cheaply - to reduce network costs and improve performance.

For example, our partnership with Vodafone and Cardinality has enabled a centralised "data ocean" to provide a unified, shareable cloud data layer to generate insights which allows Vodafone to update its network faster, more dynamically, and more efficiently. It gives

Vodafone eight billion data points per day that improves network-related decisions, and enables use of smart planning for cheaper, more effective network rollouts.

With our partnership with Vodafone and Nokia, an Anomaly Detection Service product is being rolled out across Vodafone's pan-European network. This quickly detects and troubleshoots irregularities, such as mobile site congestion and interference, and unexpected latency, that can impact customer service quality.

Looking ahead, <u>we see the future</u> of the telecom ecosystem and its relation with cloud providers and CAPs generally being about "<u>Unlocking the Al-enabled Telco</u>": it will be about telecom operators benefiting from innovation by technology companies like Google to manage their networks, and their businesses, better. As ECS/ECNs harness the full potential of gen Al to drive value across their organizations, gen Al assistants will play critical roles, augmenting human capabilities with powerful data analysis, pattern recognition, and recommendations, helping to streamline processes and transform customer and employee experiences. Gen Al agents have a critical role to play to support telecom operators in several key areas: Automating network operations (where networks can self-optimize, self-heal, and proactively adapt to changing conditions, delivering new levels of reliability and efficiency for telecom providers); Accelerating field services to maintain network quality and boost preventive maintenance; Improving customer care by using Al in contact centers, as well as in sales and marketing.

In sum, the long term evolution of the telecom value chain is about CAPs including cloud increasingly bringing innovative applications to <u>support</u> telecom operators, not compete with them. It is a symbiotic ecosystem, which BEREC regulators, policymakers and other stakeholders should welcome and encourage.

• <u>Some CAPs have diversified into other businesses and ancillary services that are</u> regulated under the telecom regulatory framework

In the field of submarine cable connectivity, BEREC rightly notes that CAPs companies such as Google largely use cables to interconnect our own data centers to ensure the efficient flow of data and content, ultimately to benefit quality of experience for our users. In some cases, we may provide capacity on submarine cables to telecommunication companies who then integrate that capacity into wholesale and retail offerings for their customers (including retail internet access services). If this happens, the provision of those services by telecommunication companies to their customers would be regulated under the relevant national law.

In parallel, there are a few CAPs or cloud providers that have diversified into new, ancillary businesses, for instance in satellite communications. These services would be duly regulable under the telecom regulatory framework: the trigger for considering regulation being what type of service is being provided to end-consumers, and whether there is a public policy need

to do so - usually around consumer expectations and safety, or market competition. It does not appear to be the case here, especially as the existing regulatory framework should appropriately capture any offerings which are effectively providing telecommunications services to end-consumers.

• Telco and CAP markets and its players as distinct

BEREC rightly notes that whilst CAPs have very good reasons to invest in network infrastructure that is complementary to that of ISPs', there are market forces that have also led to traditional telcos and ISPs to want to become digital service providers. These are market driven decisions and demonstrates that the signals work well. We should be careful to not introduce harmful regulation that would stifle innovation and should instead encourage market players to react to consumer needs, demands and trends.

It is important to note here that regulatory attention may be warranted not so much in relation to CAPs' entry into the telecom market, but in the other direction. Indeed, there has been significant movement over the past decade whereby ECS / ECNs, i.e. telecom operators, have been investing and diversifying their business into the provision of cloud services.

Here lies a certain <u>risk, identified by BEREC previously</u> but not in this report: ISPs have a natural 'termination monopoly' in the market for serving Internet data requested by end-users. It is conceivable that the termination monopoly over Internet access could be exploited by certain telecom market actors in order to serve their interests in the adjacent market of cloud services if (as) they too were active in that market: there would be an unhealthy incentive for them to somehow advantage their own services, or disadvantage those of competing cloud providers, for example with lower speed delivery of data packets or the unwarranted imposition of costs such as network usage fees (as has been mooted in another adjacent market, that of streaming video, in which a number of telecom operators have also developed parallel business offerings bundled with their Internet access service).

While to our knowledge, harm has not been evidenced in this area, the risks posed by the existing termination monopoly over Internet access and the adjacent market for cloud service provision would seem to deserve more attention from BEREC.

Chapter 3 (Dynamics between large CAPs an ECS operators)

• CAPs' entry into the access market

As mentioned above in relation to certain CAPs' ancillary activities, it is accurate that certain CAPs have entered the ECS/ECN market - in the sense that some have expanded their activities into parallel sub markets and services, and supported by infrastructure such as CDNs and investment in submarine cables. While such services may compete directly with transit

providers at the international wholesale layer of the ecosystem, ISPs have also been one of the largest beneficiaries since the content and the handover of traffic will be closer to their retail customers. These services do not compete with the provision of ECS to the end user, but are higher in the value chain / distribution and routing framework.

• Online advertising competition

The online advertising market has been the subject of intense scrutiny and now benefits from its own targeted set of regulations such as the DMA, where competition authorities now have substantial powers. There are additional rules in the DSA on consumer protection and competition as it relates to this market - which ISPs would also be covered by as / if they added online advertising to their business offering alongside their existing provision of ECS (such as through the Utiq initiative (JV ad tech company) by certain telecom operators, mentioned in the draft report).

Chapter 5: Submarine cables

• Entry of certain CAPs in the submarine cable market

The draft report states that before large CAPs entered this market, large telcos invested in these cables and sold capacity to third parties (leased lines/circuits) which apparently accounted for a 'substantial portion' of their revenue.

However as the paper recognises, CAPs have largely invested in submarine cables to interconnect their data centers and regional PoPs to their global data centers. This strengthens their self-reliance and operational efficiency.

Crucially, CAPs did this largely for their own private use, and rather than 'taking money away' from ISPs, this additional pool of investors enabled telcos to remain active in the submarine cables, providing additional connectivity and resiliency, whereas the sector had started dis-investing or not investing substantially in this type of infrastructure, leaving Governments, among others, to foot the bill for increasing international connectivity. Instead CAPs provided a major public benefit by investing in submarine cables, contributing substantial funding when others wouldn't anymore, and countering the digital divide between the more and less connected nations.

<u>Network resilience and submarine cable investments</u>

We would wholeheartedly agree with BEREC's conclusion that "large CAPs' (and other actors') investments in submarine cables tend to have a positive impact on engineering innovations and to push the boundaries for technical efficiency, contributing to lower latency and improved bandwidth and reliability".

The draft report also notes that due to the geographic location of many CAPs (often the USA), the large focus has been on transatlantic connections.

We would underscore that Google continues to provide routes and to invest across continents, for instance recently linking Europe and Africa with the Equiano cable, and French Polynesia with North and South America, Australia and then onto Asia (<u>Pacific Connect</u>).

What is needed to ensure diversity and resilience in submarine cable connectivity is a predictable and investment-friendly legislative regime: the threat of additional, unwarranted legislation (or fees / payments) thrust upon the submarine cable sector - as may be feared from some of the language, arguments and scenarios discussed in the current debates around the future of digital networks in Europe - would be deeply harmful to investment in subsea cables.

Chapter 6: Internet relay services

• The market for VPNs

The market for VPN applications works well and there are a large number of well functioning providers that differentiate their offerings and enhance the user experience, responding notably to security and data protection needs of organisations and individuals alike.

Many of them being developed and operated in-house by corporate entities for their own use as the draft report notes, VPN applications tweak their offerings to match consumer needs. This can range from the locations of the servers, to the type of applications offered (security, streaming, etc). This results in a dynamic and very wide set of VPN offerings being openly available to the consumer to choose from according to their very particular needs, at different price points starting from free (usually ad based).

Conclusion

Google would be pleased to engage in further discussions with BEREC on any of the points made in this report. As BEREC continues to monitor the electronic communications sector and adjacent markets, we believe it is crucial to keep in mind the clear and helpful explanation of the technical principles of the layered Internet expressed in its 2022 report on the Internet ecosystem, and the multi-layered and mutually beneficial partnerships between telecoms operators and CAPs.

While this ecosystem continues to evolve fast, talk of the blurring of boundaries between certain service categories like cloud and ECS, even of convergence, are at best premature, and in our view, largely unfounded. This is certainly the case when considering harm, where no

market failure has been observed so far, that would warrant regulatory scrutiny and concerns. What is generally happening is the ongoing development of a series of interactions between the infrastructure and application layers, with a number of parallel sub-markets *interdependent* of each other, but not *competing* with each other.

Throughout this mutually beneficial evolution and appearance of new business models and solutions, the Internet has remained a highly distributed, hence resilient, 'network of networks', supported by several layers of infrastructure and applications, characterised by constant innovation secured thanks to the open character of the Internet. Ultimately, this ecosystem delivers ever-better services with enhanced experience for users - consumers - citizens.

There are only a handful of ancillary services akin to telecommunications which are becoming offered by companies that happen to also operate CAPs: this is not an industry-wide trend, and these ancillary services would normally be regulated under the existing electronic communications framework.

What we see instead is a natural evolution of the symbiotic ecosystem that exists between CAPs and ECS, with technology companies which have traditionally produced content and applications having developed know-how such as AI and cloud data analytics, that is now increasingly being used to supply and support the telecom industry.

If harnessed positively, these developments could see the telecom industry manage its networks better and more cheaply; offer enhanced customer service; and develop new business models and revenue. The policy and regulatory community should welcome the ongoing win-win, symbiotic relation that exists between CAPs and ECS/ECNs, and foster its continuation by ensuring the respect of the open character of the Internet, which underpins the dynamism of the ecosystem.