

GSMA RESPONSE TO DG COMPETITION CALL FOR CONTRIBUTIONS ON COMPETITION IN VIRTUAL WORLDS & GENERATIVE AI

The GSMA welcomes the opportunity to contribute to DG Competition's Call for contributions on competition in Virtual Worlds and Generative AI ("**GenAI**"). Given the important role these technologies will hold in the future of digital markets, it will be key to keep these markets open and contestable through regulation, if appropriate.

The primary barriers to entry in respect of the Virtual Worlds and GenAI are similar to the challenges that already exist in digital markets today. This includes technological challenges (in terms of access to technology, interoperability and to computational as well as innovative resources), access to the relevant data sets, and the need for specialized skills and personnel.

DG COMP may also be tasked with investigating novel issues, for example, the extent to which new barriers or abuses could arise in light of the claims made by GenAI. Any DG COMP guidance in this space would need to anticipate such novel abuses claims. These novel challenges could include:

- **Information asymmetry exists between these firms and their customers.** This is exacerbated by the fact that we still do not have sufficient transparency regarding how deep learning / AI systems make their decisions (the so-called "black box problem"). The Commission ("**EC**") will need to take steps to understand how acute the issues surrounding information asymmetry may be, and whether dominant firms should be required to adhere to certain transparency requirements.
- **"AI Hype" by already well-known firms may stifle competition.** Consumers may be more swayed by "AI Hype" emanating from well-known dominant firms with significant marketing resources. This could form part of deliberate strategy by dominant firms to discredit or stifle the emergence of actual or potential competition from smaller rivals with comparable or better products. One way this could materialize in respect of GenAI specifically, is where dominant companies claim that they have developed GenAI models (which may or may not be true) and denigrate smaller rivals with more task-specific models with scoped applications.

By way of analogy, DG COMP preliminarily found that Teva implemented a disparagement campaign targeted at healthcare professionals, casting doubts about the safety and efficacy of competing products, thereby breaching Article 102 of the TFEU.¹ A similar investigation has been opened into Vifor Pharma regarding potential abuses relating to exclusionary disparagement of competing products in the pharmaceutical industry.²

To understand this challenge, the EC will need to engage with a broader range of stakeholders to understand the emerging concerns relating to "AI Hype", early casualties (including firms

¹ See the EC's press release from 10 October 2022 entitled "Antitrust: Commission sends Statement of Objections to Teva over misuse of the patent system and disparagement of rival multiple sclerosis medicine". Available online here: https://ec.europa.eu/commission/presscorner/detail/en/IP_22_6062.

² See the EC's press release from 20 June 2022 entitled "Antitrust: Commission opens investigation into possible anticompetitive disparagement by Vifor Pharma of iron medicine". Available online here: https://ec.europa.eu/commission/presscorner/detail/sl/ip_22_3882.

In a collective dominance case involving Novartis, Roche, and Genentech. The French Competition Authority has found that Novartis led a "*well-organized communication campaign that tended to discredit the use of [the cheaper alternative] Avastin in favour of Lucentis.*" See the press release from the authority entitled "Treatment for AMD: the Autorité fines 3 laboratories for abusive practices". Available online here: <https://www.autoritedelaconcurrence.fr/en/press-release/treatment-amd-autorite-fines-3-laboratories-abusive-practices>. The decision was annulled by a decision of the Paris Court of Appeal dated 16 February 2023.

which have not been able to secure startup funding), and the impact this will have on emerging competition.

- **New technology will lead to consumer-led demand for data.** The emergence of both Virtual Worlds and GenAI will increase consumer-led demand for data-heavy services exponentially, with a corresponding increase in the traffic running over European telecom networks. Firms in certain sectors (including but not limited to the telecom sector) will be required to make significant, capital-intensive investments to meet both the demand for capacity and the related demand for quality (high-speeds and low latency)³. The EC should be cognizant of the obligations and requirements that the rise of Virtual Worlds and GenAI will have on firms adjacent to these markets and be mindful that the incentive and ability to invest in network capacity will become all the more important. Similarly, if dominant firms emerge in Virtual Worlds/GenAI markets, this will lead to an increase in asymmetry of bargaining power.
- **Regulatory asymmetry.** Certain firms (including vertically integrated telcos) tend to be more heavily regulated than other firms such as providers of cloud services. This level of regulatory asymmetry is untenable in a world where separate digital markets are converging (for example, through the virtualization and cloudification of network functions). Steps could be taken by the EC to ensure that either player in the Virtual Worlds and GenAI space is being effectively and robustly regulated if competition barriers are identified. For example, it is vital that providers of digital platforms and hardware cooperate in the provision and mapping of VR and AR applications to specific network slices. Similarly, companies, such as cloud providers, that offer network optimization services, such as local caching, peering, or content delivery, should be subject to an equivalent level of regulation as vertically integrated telecom providers, either through increased regulation of the former or deregulation of the latter.

Lastly, given the dynamism of the GenAI and Virtual Worlds markets, it is crucial that antitrust intervention is quick. This may entail the greater use of interim measures. Such interventions will need to integrate both traditional and novel antitrust considerations, including, for example, evolving environmental sustainability considerations (given the huge energy consumption required to sustain competing firms and models in Virtual Worlds and GenAI markets).

Virtual Worlds

Barriers to entry and expansion

The creation of realistic and immersive virtual environments requires significant resources and expertise which may limit the entry of new players. The market is, and may continue to be, concentrated to a few players as a result.

In addition, even if a new entrant has the capital to invest in Virtual Worlds products, their ability to successfully enter and expand in the market may be limited by issues regarding the regulation (or lack thereof) of interoperability, data portability, data privacy, security, or the market position of incumbent players in adjacent market sectors. Healthy competition from smaller players is also an important way in which these markets can increase the participation of, and contributions from, minority groups and ensure a variety of views.

With regards to Virtual Worlds, there are differences with regards to business-to-business (“**B2B**”) and business-to-consumer (“**B2C**”) markets. While B2C markets are easier to access due to limited requirements (e.g. computing power), they are more competitive. However, B2B markets are relatively concentrated, as only a few players have the capacity to create Virtual Worlds that are fit for B2B

³ GenAI is currently evolving into a multimodal system. However, it consists mainly of communication via synthetic text, image and voice. In the Virtual Worlds, it would also be important to include gestures, mimics, haptics, or olfaction. Visualization should be extended to 3D realistic avatars and/or holograms.

purposes. Therefore, DG COMP should oversee how these markets evolve to ensure effective competition and that no hurdles are imposed on new market entrants.

Drivers of competition

The main drivers of competition include access to quality content/experiences and the ability to provide a seamless and immersive user experience. Firms which can offer these are likely to have a larger and increasing user base, which will lead to greater technological innovation (e.g. haptics). As technology evolves, new drivers (such as advancements in AI, VR/AR hardware, etc.) could become increasingly important, widening the gap between firms that can invest and those that cannot. Open standards should also be promoted as appropriate to drive competition.

Lastly, data monetization models in the Virtual Worlds could include advertising, subscription-based services and virtual goods transactions (similar to how “in-app” purchases are offered as part of many mobile games today).

Potential concerns

Dominant players could restrict interoperability, control access to key technologies, or engage in anti-competitive practices that will slow down innovation (such as carrying out killer acquisitions or by restricting access to data sets or data analytics tools). With regards to the established ecosystems within the digital sector, anticompetitive leveraging (i.e. when a firm leverages its market power in one market to foreclose rivals in a separate but related market) seems to be particularly likely and must be the subject of close and strict scrutiny from competition authorities globally.

To avoid lock-in effects, users must be granted true ownership of their data. This ownership should include the right to freely move digital biographies across assistant providers (export, import of data), without compromising on privacy, security, and cross-market data flows within the same company.

GenAI

At the outset, it is important to be considered that GenAI is becoming an increasingly adopted tool by all industry and society sectors. Such increasingly critical role must imply more transparency by, and thorough scrutiny of, those who control its essential inputs and will therefore be able to influence each and every economic and social sector, habits and culture of society.

A huge amount of data (including personal data, plus the corresponding metadata) is required to build and train GenAI systems. The availability of data sets that can be used for building, training, deploying and distributing GenAI systems is important from a quantitative (i.e. whether sufficient amount of data is available) and from a qualitative perspective (i.e. whether data sets and corresponding metadata that are suitable for the given purposes are available). Therefore, the control over the relevant data sets must be considered from both standpoints. Firms without qualitative and quantitative access to these data sets will struggle to compete in GenAI markets. This includes access to data sets that are sufficiently diverse to avoid the mis- and under- representation of minority groups and the associated human rights impacts. The transparency of data sets might also become an important parameter of competition going forward, for example, data sets with better human rights credentials may be a differentiating factor considered by customers (e.g. recruitment, customer service, political campaigns, etc.).

In the same vein, the collection of data in the course of using the GenAI systems and/or components can also be important for many aspects, such as: (i) collecting data and inputs for fine-tuning AI models, (ii) collecting data that might be used for personalizing the service for the users, (iii) collecting data for product/service developments, and (iv) collecting data that might be used for the development of other products/services, etc.

GenAI foundational large language model (“LLM”) generation also requires big amount of data tagging, filtering, and metadata creation, which necessitates a huge amount of manual human labor. In this context, there is an inherent risk that, in a race to create the biggest models at the lowest price, ‘ultra-

low wage' workers will be exploited.⁴ The EC should ensure that it has the tools and legal tests that will be fit for purpose in the future to address these issues. For example, firms which do not vet their supply chain, or which rely on unfair practices, might argue that they can charge lower prices to consumers because they are not investing resources in compliance. The EC and other authorities will need to consider what tools they have to assess these arguments. An example might be the relevance of a "as-efficient-competitor" type test which will consider whether similar costs might be faced by more compliant or ethical rivals.

For companies with established user bases, technological infrastructure, and content/data libraries it is expected that existing market power will be translated into market power in Virtual Worlds or GenAI markets. This is because these companies tend to have access to high-quality data, appropriate computational resources and technologies, and/or the financial power to acquire such data sets and to innovate and develop GenAI models.

In order to be able to provide GenAI related products and services, integration with a number of essential components and access to different inputs will be necessary. If companies that have access to such key resources refuse to offer access or supply such elements, barriers for third-party providers to develop, distribute or integrate their GenAI systems/components can be created. Due to the potential high market power of the companies "owning" the mentioned inputs, they could have the ability and incentives to engage into conducts which could be contrary to competition law.

For instance, having your own distributed computing infrastructure (cloud) could be considered an essential input in order to build and provide GenAI services. This is also true for the models-as-a-service, which are very difficult to develop as they require an investment of billions to build an LLM. In addition, GPU (Graphics Processing Unit) are key for the provision of GenAI services to the extent they are needed for training and deploying models. These models, or at least access to them, could ultimately even be considered an essential facility if companies that control them (gatekeepers) refuse to grant such access to third parties or impose a high price for their use. As a result, for third parties to be able to compete in the market, access to the mentioned resources might need to be granted—at a reasonable price and non-discriminatory conditions.

A small number of companies active in the previous sectors have large market shares. Such market power or quasi-monopoly positions can serve as a means to distort competition by engaging in conduct which could be contrary to competition rules. In particular, such companies might leverage their dominant position from one market to an adjacent market (upstream or downstream) or might prevent the development of a new market. Examples of these conducts could be engaging into self-preferencing practices such as imposition of technical conditions in order to be able to integrate third parties' services with their own, or making payments subject to the condition that their customers exclusively install/use such dominant undertaking's services or imposing tying practices.

The possibility of infringing competition rules could be even higher if companies that have the key resources are vertically integrated. Such companies could have the incentives and ability to benefit their own GenAI services in a downstream market by giving preferential access to data or to other essential inputs to their own entities.

A mix of open standards and proprietary technology will most likely evolve. There is no doubt that standardization promotes interoperability, which must be balanced against the ability of firms to develop proprietary features to differentiate themselves, while protecting these features with Intellectual Property Rights. Open Source could be a solution for specific domains.

⁴ See for example a Times article entitled "Exclusive: OpenAI Used Kenyan Workers on Less Than \$2 Per Hour to Make ChatGPT Less Toxic". Available online here: <https://time.com/6247678/openai-chatgpt-kenya-workers/>. The article discussed how employees of an outsourcing partner in Kenya, called Sama, were tasked with reading and labelling harmful content for so that such content could be filtered out before it was made available to the public (similar to content moderators on social media).

Regulatory oversight

EU Merger Regulation reform

Acquisitions of start-ups in nascent and innovative markets with products concerning Virtual Worlds and GenAI must be considered. In particular, Article 14 of the Digital Markets Act requires gatekeepers to inform the EC of any merger in the digital sector. However, “gap cases” could emerge where transactions involving the VR and AI markets take place but where the relevant parties involved are not designated gatekeepers or in transactions that do not meet EU merger thresholds. The status of these transactions is unclear. To avoid competitive harm or legal uncertainty arising from such acquisitions, new rules need to be implemented (e.g. the potential reform of the EU Merger Regulation 139/2004 (“EUMR”)) so that: (i) there is sufficient legal certainty regarding whether these sorts of acquisitions will be captured by the EU merger thresholds if appropriate (considering that the new interpretation of Article 22 EUMR has proven to create great legal uncertainty for firms); and (ii) if these transactions are captured, they will be adequately assessed.

Regulator expertise and tools

Regulators in the EU and globally will need to upskill and develop expertise and tools so that they can robustly assess the state of competition in a timely manner within Virtual Worlds, GenAI and adjacent markets. This will be necessary both in the context of merger assessments, but also antitrust investigations to ensure that regulators remain effective in addressing potential anti-competitive behavior.

More broadly:

- DG COMP will need to ensure it has the necessary visibility of relationships in adjacent markets so that it can use existing tools to intervene. For example, Article 102 TFEU and related jurisprudence already contemplate that abuse of dominance and effects need not occur in the same market⁵. The key challenge for the EC, in the absence of complainants, will be to intervene in a timely manner to address harmful effects.
- DG COMP will also need to ensure that it has the tools to assess possible Article 101 TFEU abuses, (e.g. partnerships with two strong players)⁶ or situations where dominant upstream players enter into contracts with smaller downstream players with insufficient bargaining power.

Role of the DMA

The DMA is a potentially useful tool that could be used by the EC to regulate anticompetitive conduct in Virtual Worlds or GenAI markets. The DMA also provides a “steer” to firms which either are not designated Gatekeepers, or whose products do not fall within the scope of the DMA⁷.

However, the GSMA is concerned that the DMA may not necessarily apply to Virtual Worlds/GenAI tools that do not conform with any of the definitions of a “core platform service” under its Article 2. In these circumstances, the EC may not have the requisite tools to respond quickly and effectively to prevent competitive harm.

⁵ See for example paragraph 1344 of the Microsoft case, Case T-201/04, which states that: “First, as regards the gravity of the infringement, it must be borne in mind at the outset that the two abuses at issue form part of a leveraging infringement, consisting in Microsoft’s use of its dominant position on the client PC operating systems market to extend that dominant position to two adjacent markets, namely the market for work group server operating systems and the market for streaming media players”.

⁶ For example, the CMA is reviewing whether the partnership between Microsoft and Open AI results in a change of control. See the press release entitled “CMA seeks views on Microsoft’s partnership with OpenAI”. Available online here: <https://www.gov.uk/government/news/cma-seeks-views-on-microsofts-partnership-with-openai>.

⁷ See for example “Microsoft’s AI Access Principles: Our commitments to promote innovation and competition in the new AI economy”. Available online here: <https://blogs.microsoft.com/on-the-issues/2024/02/26/microsoft-ai-access-principles-responsible-mobile-world-congress/>.



About the GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events. We invite you to find out more at [gsma.com](https://www.gsma.com).