

Competition in Virtual Worlds and Generative AI

FESI response to call for contribution

March 2024

A. Generative AI

1) What are the main components (i.e., inputs) necessary to build, train, deploy and distribute generative AI systems? Please explain the importance of these components

The main components are: data, models, algorithms, hardware, and platforms:

- Data: The quality, quantity, and diversity of data affect the performance and accuracy of generative AI systems.
- Models: The choice of models depends on the type and complexity of the data and the desired output.
- Algorithms: The choice of algorithms depends on the availability and quality of data and the objectives of the generative AI system.
- Hardware: The choice of hardware depends on the speed, efficiency, and scalability of the generative AI system.
- Platforms are the software tools or services that generative AI systems use to access, manage, and integrate the data, models, algorithms, and hardware. `

2) What are the main barriers to entry and expansion for the provision, distribution or integration of generative AI systems and/or components, including AI models? Please indicate to which components they relate.

For our members, the main barriers of integration are privacy /ethical concerns/risks of inaccuracy, missing willingness of providers to provide warranty and liability security on our members' data and IP, and providers wanting to use our members' data as part of the model training data or for further AI enhancements. Additionally, there is no unilateral enforcement framework for Right Holders if copyright or Trademarks are infringed. The legal framework is still to be determined as for example: who is responsible of the infringement and what are the articulations to correct the algorithm as well as the extracted work performed.

3) What are the main drivers of competition (i.e., the elements that make a company a successful player) for the provision, distribution or integration of generative AI systems and/or components, including AI models?

The main drivers of competition for the provision, distribution, or integration of generative AI systems and/or components, including AI models, are data quality (sharing large and high-quality data sets and models), algorithm efficiency, hardware performance, platform diversity and flexibility, as well as ethics. The misuse of AI by certain operators may drive unfair practices, unethical algorithms, and data usage as well as targeted IP infringement of copyright and trademarks.

4) Which competition issues will likely emerge for the provision, distribution, or integration of generative AI systems and/or components, including AI models? Please indicate to which components they relate.

To all components: vendor lock-ins with a few big players dominating all layers of a generated AI system stack (platform, hardware, model etc). Unfair and unethical practices may also be a deterrent over clean and fair competition.

5) How will generative AI systems and/or components, including AI models likely be monetised, and which components will likely capture most of this monetization?

Generative AI systems and/or components, including AI models, will likely be monetized through various business models, such as: by charging fees, selling licenses, or offering subscriptions for access or use.

The components that will likely capture most of this monetization are the ones that have the highest value, scarcity, or differentiation in the market. For example, data that is unique, diverse, and high-quality; models that are realistic, diverse, and novel; algorithms that are efficient, innovative, and adaptable; hardware that is fast, efficient, and scalable; and platforms that are compatible, flexible, and secure.

6) Do open-source generative AI systems and/or components, including AI models compete effectively with proprietary AI generative systems and/or components? Please elaborate on your answer.

Innovation is the aspect where open-source generative AI systems and/or components can compete effectively with proprietary generative AI systems and/or components by enabling faster, cheaper, and wider development and testing by leveraging the collective intelligence, creativity, and feedback of the open-source community.

Collaboration is the aspect where open-source generative AI systems and/or components can compete effectively with proprietary generative AI systems and/or components by facilitating easier, smoother, and broader integration, interoperability, and compatibility by following the common standards, specifications, or protocols of the open-source community.

Transparency is the aspect where open-source generative AI systems and/or components can compete effectively with proprietary generative AI systems and/or components by providing more, clearer, and better information, explanation, or justification of the data, models, algorithms, and hardware that generative AI systems and/or components use to learn from and generate new data or content, by adhering to the ethical, legal, or social norms of the open-source community.

However, open-source generative AI systems and/or components can also face some challenges or disadvantages compared to proprietary generative AI systems and/or components in some aspects, such as: quality (ie unreliable performance, accuracy or diversity due to lack of quality control), protection (ie vulnerabilities from unauthorized modifications etc. due to lack of IP protection), or monetization (no business model behind it).

7) What is the role of data and what are its relevant characteristics for the provision of generative AI systems and/or components, including AI models?

The role of data for the provision of generative AI systems and/or components is to serve as the raw material that generative AI systems use to learn from and generate new data or content. Data is essential for the provision of generative AI systems and/or components as it determines the performance, accuracy, and diversity of the generative AI systems and/or components. However, it is important to ensure an ethic usage of those data, as well as to create a correcting mechanism if needed.

8) What is the role of interoperability in the provision of generative AI systems and/or components, including AI models? Is the lack of interoperability between components a risk to effective competition?

The role of interoperability in the provision of generative AI systems and/or components is to enable the compatibility and integration of the data, models, algorithms, hardware, and platforms. Interoperability is important for the provision of generative AI systems and/or components as it facilitates the exchange, reuse, and combination of the generative AI systems and/or components among different entities, sectors, or domains.

The lack of interoperability between components is a risk to effective competition in the provision of generative AI systems and/or components as it can create barriers to entry and expansion, reduce innovation and collaboration, and increase dependency and dominance. Additionally, there are also massive issues over author right collection and redistribution: no operable contract between parties and even sub licensing or royalties contract, length of the contract (deadline of representation), payment terms agreement.

9) Do the vertically integrated companies, which provide several components along the value chain of generative AI systems (including user facing applications and plug-ins), enjoy an advantage compared to other companies? Please elaborate on your answer.

We do not believe that those companies enjoy an advantage compared to other companies, as the most value component is data source.

10) What is the rationale of the investments and/or acquisitions of large companies in small providers of generative AI systems and/or components, including AI models? How will they affect competition?

This is not different from the current dynamic of today's companies' acquisition in research and development. This is the reality of the normal business world nowadays and we do not see any special impact specifically on AI.

11) Do you expect the emergence of generative AI systems and/or components, including AI models to trigger the need to adapt EU legal antitrust concepts?

Yes.

12) Do you expect the emergence of generative AI systems to trigger the need to adapt EU antitrust investigation tools and practices?

Yes, in particular as the emergence of generative AI system raises lots of issues and loopholes in terms of users/consumers' protection. For example, consumers need to be warned that the tool they are using is AI based, that their data entered can be used within a study or further used intentionally further down the lifetime of the tool, that the results are not covered by copyright protection nor GDPR.

13) AOB:

Many vendors nowadays are claiming to offer AI-based tools, which sometimes appears not to be the case. In fact, some tools are simply based on algorithms and do not have effective machine learning capabilities. We would recommend the creation of an EU protocol, in which companies need to certify their AI-products before being able to advertise such tools as based on AI.

B. Virtual Worlds

1) What entry barriers or obstacles to growth do you observe or expect to materialise in Virtual World markets? Do they differ based on the maturity of the various markets?

From our perspective, the greatest barrier is the existence of different incompatible platforms. Interoperability is key and a unified standard for experience layers.

-Interoperability:

- Decentralized open space: we need to ensure the interoperability of environments.
- Standardization of platforms and networks to enable the seamless use of identities.

-Tech:

- Licensed entry pass to ensure a safe and open space for the experience layer.

-Commercialization:

- Define conditions for commercialization and restriction to it.
- Brands should be able to sell their products via stated license.

2) What are the main drivers of competition for Virtual World platforms, enabling technologies of Virtual Worlds and/or services based on Virtual Worlds (e.g. access to data, own hardware or infrastructure, IP rights, control over connectivity, vertical integration, platform and payment fees)? Do you expect that to change and, if so, how?

Virtual products and NFTs will be one source of competition as well as advertisement within the virtual worlds. Also (new) crypto currencies will be an issue. Regulation is needed in respect to the openness of systems and necessary standards for payments, access, and usability of virtual products.

3) What are the current key players for Virtual World platforms, enabling technologies of Virtual Worlds and/or services based on Virtual Worlds, which you consider or expect to have significant influence on the competitive dynamics of these markets?

Trademark and Copyright protection will be an issue. As stated in the Recent Digital Services Act Regulation, “What is illegal offline, should be illegal online”. But this is still not the case.

-Trademark Registration:

- At the moment, there is a lack of legal clarity if virtual goods and physical goods are treated equally.
- Evidence of genuine use of a trademark: Would the use of a trademark in the physical world qualify as genuine use of goods filed for the Metaverse environment? (Country based law versus the decentralized nature of the virtual worlds)

-Copyright Infringement:

- Monitoring virtual worlds for infringements is a major challenge: we strongly recommend EU policymakers - in close consultation with stakeholders - to develop standardized procedures to stop infringements.
- Brand owners could exercise some level of control as how their brands are being used in this environment following the sale of their NFTs

4) Do you expect existing market power to be translated into market power in Virtual World markets?

5) Do you expect potential new entrants in any Virtual World platforms, enabling technologies of Virtual Worlds and/or services based on Virtual Worlds in the next five to ten years and if yes, what products and services do you expect to be launched?

Yes.

6) Do you expect the technology incorporated into Virtual World platforms, enabling technologies of Virtual Worlds and services based on Virtual Worlds to be based mostly on open standards and/or

protocols agreed through standard-setting organisations, industry associations or groups of companies, or rather the use of proprietary technology?

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We expect and recommends that it is based on open standards. It is also recommended to have some consumer rights and corporate obligations to clarify:

- Who is responsible within the virtual world for processes normally subject to data protection legislation?
- Wallet-ID information: EU standard and regulation are required to specify on consumer information available for transactions / infringements of any CoC.
- In case of full anonymity: necessity to establish standards for dealing with misconduct.

7) Which data monetisation models do you expect to be most relevant for the development of Virtual World markets in the next five to ten years?

We expect Trading and Secondary Trading of NFTs plus product placement to be the most relevant.

Regarding Secondary Trading:

- Designed for eternal resale: No legal framework when it stops, if it stops, what happens if the company and/or recipient of royalties doesn't exist anymore, what happens in case of contract breaches.
- Smart Contracts: Regulations are required for automated transaction of royalties and revenues. At the moment, we need to request the transaction (monthly) to receive cash flow.

8) What potential competition issues are most likely to emerge in Virtual World markets?

9) Do you expect the emergence of new business models and technologies to trigger the need to adapt certain EU legal antitrust concepts?

Yes.

10) Do you expect the emergence of new business models and technologies to trigger the need to adapt EU antitrust investigation tools and practices?

Yes.

10) AOB comments

- We strongly encourage to ensure high interoperability between the different virtual environments.
- We welcome the European Commission's decision, in her recent Communication on "Web 4.0 and virtual worlds" to apply the same IP rights to real and virtual products.



- We ask the European Commission to provide clear guidance and regulations regarding the legal treatment (e.g., tax) of NFT transactions.
- We would like to also further ask the European Commission to provide standards for data protection of customers / users in the virtual worlds and clear guidance on how to act in cases of misconduct.
