

ERT response to European Commission calls for contributions on competition in generative AI and virtual worlds



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Generative AI

1. Executive Summary – currently no need for regulation:

- ERT expresses its appreciation for the European Commission's interest in understanding the possible impact of generative AI systems on competition and innovation in the digital economy. This initiative will allow the Commission to gather important market information to be able to react quickly with its existing tools in case competition issues materialise.
- Overall, ERT sees generative AI and virtual worlds as a huge opportunity for European companies to foster their competitiveness and to compete effectively in the global economy.
- ERT does currently not identify anticompetitive tendencies in the fast-evolving field of generative AI. However, the Commission should remain vigilant vis-à-vis any potential anticompetitive conduct that could be carried out by the entities which might have the incentives and ability to engage into such behaviour and also regarding M&A activities.
- The current EU competition rules as recently complemented by the Digital Markets Act (DMA) seem flexible and adaptable enough to cope with any potential anticompetitive conduct or market distortions arising from generative AI systems, without the need for new regulations or guidelines. This, however, only holds true if the duration of potential Art 102 proceedings meets the requirements to intervene adequately in fast evolving markets.
- Competition law is not the suitable tool to address wider societal or ethical concerns that may arise from the use of generative AI, such as misleading or biased content, intellectual property rights, or democratic values – this is a task e.g. for the recently agreed AI Act and Digital Services Act.
- ERT also considers that any premature or disproportionate regulatory interventions could impede the development and adoption of generative AI technologies in Europe and globally which will have a chilling effect on innovation and European competitiveness. The generative AI space with its high dynamism and innovative strength should not be unnecessarily limited by restrictive rules as long as non-discriminatory and non-exclusive access to essential tools is granted and transparency and traceability is ensured.
- Finally, we encourage the Commission to foster dialogue and cooperation with other jurisdictions and international organisations to ensure a coherent and consistent global framework for generative AI that supports innovation and competition, while respecting human rights and fundamental values.

2. Main components for Foundation Models and their competitive landscape:

ERT considers that the main components necessary to build, train and distribute generative AI systems (or Foundation Models - FMs) are data, compute capacity, and technical expertise. Competition may occur at various levels of the AI technology stack.

- Data: Data is needed at both stages of training: (i) pre-training, where data is used to build the FMs' knowledge; and (ii) fine-tuning, where the FMs' accuracy is improved through dedicated training. The most important factors are the scale, the availability and the quality of the data. Data can either be proprietary or open source.

- Compute Capacity:

Significant compute capacity and infrastructure is required to train FMs. Because of the size of the model and the amount of data used to train the model, FMs require a significant number of AI accelerator chips (such as graphic processing units – GPUs) installed in large data centres. The market for specialised GPUs for generative AI, is currently concentrated and NVIDIA is the leader in the production and supply of GPUs¹. Nevertheless, despite the leadership position of such company, AI accelerator chips is a field of increasing competition where several FM developers are currently developing their own AI accelerator chips or have supported other silicon suppliers to enter the market.

The necessary compute power can either be provided by traditional cloud providers or alternatives such as publicly owned supercomputers (e.g. LUMI in Finland, the supercomputing centre of the French National Centre for Scientific Research, and Leonardo, a high-performance computing cluster based in Italy which is open and available free of charge for industrial and scientific computing).

Entry for newcomers in the compute power field is very challenging due to the required financial resources and specific know-how. Therefore, the public funding and infrastructure building activities for supercomputers, such as through the EuroHPC JU, should be enlarged to build a competitive pan-European AI ecosystem, which also grants SMEs access to AI technologies.

- Technical Expertise: FM and application development also requires a combination of talent and technical expertise (domain know-how). This includes data scientists and engineers, machine learning skills, programming, mathematics and statistics. The skills and expertise needed may vary depending on the type and complexity of the FM.

3. Foundation Models and applications and their competitive landscape:

- Development and supply of FMs is still in its early stage and FM developers face increasing and strong competition from new entrants, including many start-ups. The pool of FM developers is constantly increasing, with a large variety of end products. The availability of FMs through APIs and open-source licenses enables new entrants to enter and scale quickly as long as they have the funding and non-discriminatory access to essential inputs or partner with relevant players. It is crucial that access to data and computing power are not leveraged by gatekeepers to foreclose the market. It is also important that M&A transactions of hyperscalers in this AI field receive the necessary review to ensure that this AI space remains open and competitive.

¹ See page 26 of the AdC Report “Competition and Generative Artificial Intelligence-Issues paper”, dated November 2023, [Issues Paper - Competition and Generative Artificial Intelligence.pdf \(concorrenca.pt\)](#)

- There is strong demand for new and different models reflecting customers' diverse requirements, e.g. models that work in industrial applications that require a high level of security and trustworthiness.
- The integration of SMEs and their requirements into this evolving landscape seems to be crucial for European competitiveness. Industrial applications for European companies should be fostered by building on domain know-how that identifies their customer needs and helps them easily build their applications onto domain-specific AI models.
- The downstream application layer encompasses applications that incorporate FMs. Customers can interact with FMs in many ways. Some FMs are deployed as standalone services such as chatbots and virtual assistants, others are integrated with existing services or are add-ons to existing applications and services. The development of downstream FM applications has been growing rapidly across a variety of industries.
- While these downstream FM services make use of similar technological inputs, competition occurs at the level of the individual application. There is strong competition between suppliers to innovate and differentiate their offerings. The dependencies of the application layer on the FMs must remain interoperable and non-discriminatory to prevent anticompetitive conduct.

4. Need for cooperation:

- To ERT's knowledge, there is hardly any player covering the whole AI stack including customer-facing AI applications, and no company controls all of these components. Many technology companies active in the generative AI field operate at different levels of the AI stack.
- All companies, even the technology companies, need to collaborate or enter partnerships with other parties to be able to successfully bring their products or services to the market.
- Investments or partnerships at open and fair terms between established technology companies, large and small companies enable or accelerate the latter's market entry into AI, thereby driving competition and creating customer benefits and efficiencies.

5. Currently no need for further regulation:

- The current EU competition rules as recently complemented by the DMA seem flexible and adaptable enough to cope with any potential anticompetitive conduct or market distortions arising from generative AI systems, without the need for new regulations or guidelines. However, the Commission should ensure it has the tools available to act quickly through, for example, the use of interim measures. If the market conditions change and anticompetitive problems arise, the necessity of amending the existing tool box should be revisited. Thereby, the fast evolving nature of the markets should be taken into account.
- ERT considers that access to data questions are among others addressed by the Data Act and complemented also by the traditional antitrust tool box.
- ERT further believes that potential competitive risks of cloud computing services are addressed by the DMA complemented by competition law. As pointed out, it would be important to accelerate the respective proceedings.
- Competition law is not the suitable tool to address wider societal or ethical concerns that may arise from the use of generative AI, such as misleading or biased content,

intellectual property rights, or democratic values – this is a task e.g. for the upcoming AI Act.

- ERT also considers that any premature or disproportionate regulatory interventions could impede the development and adoption of generative AI technologies in Europe and globally which will have a chilling effect on innovation and European competitiveness. The generative AI space with its high dynamism and innovative strength should be kept open and not unnecessarily limited by restrictive rules nor by conducts of entities which may hinder competition.
- Finally, we encourage the Commission to foster dialogue and cooperation with other jurisdictions and international organisations to ensure a coherent and consistent global framework for generative AI that supports innovation and competition, while respecting human rights and fundamental values.

Virtual Worlds

1. It is crucial to **differentiate the Industrial B2B Virtual Worlds from the B2C Virtual Worlds**. While B2C is consumer-focused (e.g. gaming, social media) and has its own dynamics and challenges (e.g. asymmetric negotiation power, protection of personal data), the B2B Virtual World for industrial applications is a new, dynamic area where a large number of players are active to experience and interact with a digital twin.
2. Industrial Virtual Worlds intend to **help companies to optimise their real-world assets and applications**. Industrial Virtual Worlds are an evolution that builds on an increasing technology convergence, which together with other developments such as the growth of computing capacities and communication infrastructure, access to machine data etc leads to huge opportunities and possibilities to **test, control, change and improve industrial processes and products by using photo-realistic, real-time industrial digital twins**.
3. Main success factors for an Industrial Virtual World will likely be: **real-time connectivity** including cybersecurity: **powerful communication infrastructure and computing capabilities** with latency and jitter that are fit for purpose for the high demands of industrial applications (5G/6G); **open APIs** that allow to connect assets, products and software from different vendors to the Virtual World and enable a seamless communication within the Virtual World; the **ability to use and interpret the data** through domain know-how, ease of user experience (plug & play); **and last but not least business models that create value for the customers**.
4. The Industrial Virtual World is an **emerging area** with a significant number of different players, many of which are **new entrants**. Important characteristics of this industry are **openness, interoperability and innovation**.
5. Investments and complementary knowledge are required in the Industrial Virtual World which is why new forms of partnerships and **(digital) ecosystems** play an important role. No one can build Industrial Virtual Worlds alone.
6. Obstacles to growth do not play any relevant role. Instead, we see a **huge opportunity for European industry, including small and medium sized companies**, to participate and grow with their domain know-how and innovation power in this very dynamic field and to significantly increase their competitiveness. Having said this, it is crucial that gatekeepers do not leverage their market power and enter into anticompetitive practices. Non-discriminatory access at fair terms to their essential input is required.
7. We do **not see a need to adapt the current EU legal antitrust concepts or investigation tools and practices**. We believe the current antitrust rules are sufficient to effectively ensure competition in the market. The current competition law rules also grant the European Commission far-reaching investigation powers. In addition, just recently this tool set has been even more broadened by the DMA, the Data and AI Act to address particular concerns of digital markets. **On the contrary**, restrictive rules would be more likely to hinder development and have a chilling effect on innovation and European competitiveness.



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This contribution has been prepared by the ERT's Competition Policy Working Group.

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