

European Commission's call for contributions on competition in Generative AI

Background:

The European Commission (EC) launched on 9 January a call for contributions on competition in Generative AI. The purpose is to gather specific information and views from regulatory experts, academia, industry and consumer organizations. The contributions will influence the EC's thinking and potential policy recommendations at the end of 2024.

The EC provides [a list of questions](#) for orientation only to guide the input needed. Contributions can be a position paper replying to the topics raised by the questions. Contributions should be sent at COMP-GENERATIVE-AI@ec.europa.eu by 11 March 2024 in pdf format. The EC intends to publish the contributions and there is an option to submit confidential or non-confidential versions, or both.

Purpose:

The document provides input to feed a contribution on the following points:

- the potential of Generative AI to unlock innovation
- the competition dynamics in Generative AI
- the adequacy of competition rules to the AI context

1. The potential of Generative AI to unlock innovation is indisputable

While it is still early days, generative AI has the potential to be a transformative technology. The Foundation Models ("FMs") fueling Generative AI are numerous and evolving, and could be applied to a number of use cases. For example, they can be used in healthcare to create personalized treatment plans or to better analyze medical images; in finance, to generate smarter analysis and draw insights; in tech, to write code and reduce human-error bugs; in manufacturing, to design new products and optimize production processes; in architecture, to create prototypes and early-stage renderings.

2. Competition in Generative AI is rapidly evolving, with an increasing number of players in this space

With increasing access to high-quality data, the availability of highly scalable compute capacity, and the advancement of ML technologies over time, competition in Generative AI is rapidly evolving, with many innovative companies in this space, including Amazon, OpenAI, Microsoft, Meta, Google, NVIDIA, Anthropic, Cohere, Adept, Stability AI, Character.ai, Midjourney, AI21 Labs, Hugging Face, Model Zoo, Databricks, Mosaic, Runway, Jasper, and Inflection, and a wide range of others.

Many companies have been working on FMs for years, and there are already many different FMs available, big and small, open-source and proprietary, each with potential. No one knows which models will be the most successful. Rather than a “winner takes all” situation; we expect many -potentially thousands- of different models, both big and small, to succeed. There will not be one FM to rule them all and bigger may not necessarily be better. This is the case because different models work better for different use cases, or on different sets of data. Some models are great for summarization, others are great for reasoning and integration, and still others have great language support.

We can see a multiplicity of successful models coexisting already. Reasons for success are diverse and include higher quality data, better algorithms or the use of less data in a smarter way to be more cost-effective (e.g., Mistral).

Technological advances are also reducing the cost and time of building, training, and deploying large language models. For example, the ability to easily customize a pre-trained model through fine-tuning is accelerating the emergence of competitive models. AI providers, including start-ups, have also increased access to third party models and tools, customized go-to-market strategies, machine learning stack optimization, and more. For instance, Amazon Bedrock offers customers access to leading large-language models (LLMs) from third-party providers like Anthropic, Stability AI, Cohere and AI 21, as well as Amazon's own model, Titan. With this, customers don't need to train a model from scratch, and they can customize the models using their own data.

Competition is also fierce at other layers of the AI stack. For instance, customers today have myriad choices from which to source compute capacity. These include on-premises solutions, solutions deployed in a co-located environment, specialty ML cloud providers, online solutions provided by cloud services providers, or hybrid solutions combining these options. For example, cloud providers (e.g. AWS, Google, Microsoft, Oracle, OVH) are competing intensely; on-premises providers (HP, Dell, IBM) are reinventing their businesses to serve the AI space; and highly successful startups focusing on AI/ML training e.g., CoreWeave, Llama Labs, SF Compute, and Omnivia are also emerging to provide compute solutions. Model developers are using a variety of IT providers for their compute capacity needs. For example, Mistral AI's open-source models were trained on CoreWeave. Imbue, a startup based in San Francisco, is developing models on a cluster built by Dell¹. Adept AI and Character AI trained their models on Oracle. And Aleph Alpha, a German startup, is training models on HP servers.

Finally, private and public investments can also contribute to competition as they are an important tool in bringing together parties' complementary resources and capabilities to enable more rapid and effective innovation than either company could achieve on its own.

3. Competition rules are adequate to ensure innovation in the AI space

Competition in Generative AI is currently dynamic and rapidly evolving. It is generally working well to deliver value, service, and choice to all types of customers. Premature regulatory

¹ See [Imbue to Develop Next-Generation AI Models with \\$150 Million Dell High Performance Computing System](#) (11/28/23).

intervention to address perceived constraints could have unintended consequences. Potential competition concerns (such as tying, bundling, exclusive dealing, and anticompetitive M&A transactions) can be assessed and, if needed, addressed under existing competition rules.

However, to the extent that regulation is considered necessary, it should be proportionate and targeted to a specific concern with a AI/ML technology and related use cases to avoid distortion of competition. Overly burdensome regulation may make it unnecessarily difficult for competition and innovation to flourish, and at worst may lead to concentration and become a significant barrier to entry in its own right. We welcome the initiative of the European Commission to understand the Generative AI space and the opportunity to engage constructively on these important issues.