

Al Foundation Models: Summary



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Foundation models ('FMs') – large, machine learning models trained on vast amounts of data – have developed rapidly in recent years. The first public FM was released by OpenAI in 2018 and since then it is estimated that around 160 FMs have been developed and released. In the years ahead, FMs have the potential to transform a range of industries and how we live and work: **these changes may happen quickly and have a significant impact on competition and consumers**.

People and businesses stand to benefit significantly if the development and use of FMs works well – through new and better products and services, easier access to information, help with all kinds of tasks, both creative and administrative, potential scientific and health breakthroughs, often at lower prices. The impact of FMs could allow a wider range of firms to compete successfully, perhaps challenging current incumbents. And vibrant competition and innovation could benefit the economy as a whole through increased productivity and economic growth.

Competition is absolutely vital for people to see the full benefits that FMs have to offer. If competition is weak, people and businesses could be harmed, both immediately, and over the longer term. Immediately for consumers if they are exposed to significant levels of false information, AI-enabled fraud, or fake reviews; and over the longer term, if a handful of firms gain or entrench positions of market power and fail to offer the best products and services and/or charge high prices. It is essential that these outcomes do not arise.

We also recognise that effective competition alone is not sufficient to ensure good market outcomes. It is important to consider the role of effective competition alongside other considerations such as safety, data protection and intellectual property rights, for example.

To ensure that people, businesses, and the wider economy benefit from the innovation AI can bring, businesses must comply with existing consumer and competition law. Alongside this, to ensure that competition and consumer protection remains an effective driving force as the development and deployment of FMs evolves, we propose the following guiding principles:

MODEL DEVELOPMENT	ACCOUNTABILITY FM developers and deployers are accountable for outputs provided to consumers	ACCESS Ongoing ready access to key inputs	 Access to data, compute, expertise and capital without undue restrictions. Continuing effective challenge to early movers from new entrants. Successful FM developers do not gain an entrenched and disproportionate advantage by being the first to develop a FM, having economies of scale or benefitting from feedback loops. Powerful partnerships and integrated firms do not reduce others' ability to compete.
MODEL DE		DIVERSITY Sustained diversity of business models, including both open and closed	 Both open and closed source models push the frontier of new capabilities. Open-source models help reduce barriers to entry and expansion.
USE OF MODELS IN OTHER MARKETS		CHOICE Sufficient choice for businesses so they can decide how to use FMs	 A range of deployment options, including in-house FM development, partnerships, APIs or plug-ins.
		FLEXIBILITY Flexibility to switch or use multiple FMs according to need	 Interoperability to support firms mixing and matching or deploying multiple FMs. Consumers can switch and/or use multiple services easily and are not locked into one provider or ecosystem.
		FAIR DEALING No anti-competitive conduct, including anti-competitive self-preferencing, tying or bundling	 Confidence that the best products and services will win out. No anti-competitive conduct, including anti-competitive self-preferencing, tying or bundling, especially from vertical integration. Competition can counteract any data feedback or first mover effects.
USE OF MODELS BY CONSUMERS	FM develo	TRANSPARENCY Consumers and businesses are given information about the risks and limitations of FM- generated content so they can make informed choices	 People and businesses are informed of FMs' use and limitations. Developers give deployers the information to allow them to manage their responsibilities to consumers.

This initial review has been possible as a result of constructive and collaborative inputs from a wide range of people and businesses. We plan to continue the collaborative spirit of our work to date as we take it forward to the next stage. We have proposed this set of principles, but we do not see them as the finished article; instead, we plan to seek views both on report overall and on the principles themselves. This will help ensure that the principles can support the best outcomes for people, businesses and the economy, including through helping firms work to deliver them.

To that end we are now starting a significant programme of engagement, which will take place in the UK, US and elsewhere over the coming months.

We plan to speak to a wide range of people to seek their views, including:

- Consumer groups and civil society representatives
- Leading FM developers such as Google, Meta, OpenAI, Microsoft, NVIDIA and Anthropic
- Major deployers of FMs
- Innovators, challengers and new entrants

- Academics and other experts
- Government
- Fellow regulators, in the UK including via the Digital Regulators Cooperation Forum, and further afield with our international counterparts.

We will publish an update on our thinking on the principles, and how they have been received and adopted, in early 2024, also reflecting on further developments in the market.

We hope that our collaborative approach will help realise the maximum potential of this new technology, but we are ready to intervene where necessary.