



Liberty Global response to the European Commission's White Paper on Artificial Intelligence - A European approach to excellence and trust

Liberty Global welcomes the opportunity to comment on the European Commission's *White Paper on Artificial Intelligence - A European approach to excellence and trust* (the White Paper).¹ Liberty Global strongly supports the European Commission's continued commitment to engage with stakeholders on issues that are relevant to them, particularly in the rapidly evolving and impactful domain covered by the EU's digital strategy. Liberty Global is convinced that such engagement will help further achieving a Europe fit for the digital age, by ensuring that this transformation will, indeed, work for both people and businesses.

This written submission accompanies Liberty Global's response to the European Commission's public consultation on this subject, a copy of which is provided in this document's Annex.² That annexed response covers the full breadth of the issues addressed by the European Commission's public consultation, whereas this written submission will focus more on the role of artificial intelligence (AI) in the electronic communications domain and the associated regulatory implications.

Introduction

Fostering a European approach to excellence and trust

With a view to launching a solid European approach to address the opportunities and challenges of AI, against a backdrop of fierce global competition, and to promote the development and deployment AI in line with European values, Liberty Global agrees with the European Commission that the EU must act as one. Therefore, Liberty Global commends the European Commission for its timely consultation of the relevant policy options to achieve the clear twin objectives identified in the White Paper.

Liberty Global agrees with the European Commission's position, as set out in the White Paper, that a *'regulatory and investment oriented approach with the twin objective of promoting the uptake of AI and of addressing the risks associated with certain uses of this new technology'* is the right approach. In Liberty Global's opinion, striking the right balance is key to achieving an optimal outcome, both as regards promoting investment – and innovation – and as regards addressing potential risks associated with certain uses of AI.

¹ European Commission, White Paper, On Artificial Intelligence – A European approach to excellence and trust, COM(2020) 65 final (White Paper).

² Consultation on the White Paper on Artificial Intelligence - A European Approach; available at <https://ec.europa.eu/eusurvey/runner/AIConsult2020?surveylanguage=EN>.



The importance of AI applications for next-generation networking (and vice versa)

Artificial intelligence and machine learning will transform the way networks operate

As one of the leading pan-European providers of electronic communications services and as the operator of a significant globe spanning network, Liberty Global is well positioned to speak to the importance of AI – and its derivatives, such as machine learning (ML) – for the operation of next-generation networks, including DOCSIS 3.1³ and 5G-based technologies, as well as the provision of new and innovative communications services.

Together with CableLabs, the cable industry's leading R&D consortium and membership organization, we are working on a broad spectrum of AI-related innovations, which will transform networks and services to the benefit of the millions of European end-users, who already have access to Gigabit speeds even today, as result of our continued commitment to innovation and investment.

As an example, the deployment of AI and ML applications will be critical for the deployment of next-generation networks, which will provide seamless connectivity to end-users by using a wide variety of access networks and technologies, frequency bands and cells. To ensure this seamless experience and to provide optimal connectivity for a particular communication or application, leveraging AI and ML will enable operators to:

- Forecast the peak traffic, resource utilization and application types
- Optimize and fine tune network parameters for capacity expansion
- Eliminate coverage holes by measuring the interference and using the inter-site distance information.⁴

Additionally, the deployment of AI and ML will be critical to the widespread deployment of, and provision of services based on, network slicing and virtualization of network functions. AI and ML will greatly enhance automation and adaptability, enabling efficient orchestration and dynamic provisioning of network slices to particular users or devices. In addition, ML and AI can process, in real time, the vast amounts of information required for such applications.

Lastly, ML applications such as pattern recognition are already critical in ensuring the integrity and security of today's networks, by rapidly processing vast amounts of data to detect novel attack vectors. In view of the digital transformation of Europe and the persistence of such cyber threats, the importance of such applications of AI will only be growing over the coming years.

³ A. Gaydashenko *et al.*, A Machine Learning Approach to Maximizing Broadband Capacity via Dynamic DOCSIS 3.1 Profile Management, IEEE 18th International Conference on Machine Learning and Applications (ICMLA), (2019); C. Leddy, Can AI Make Cable Smarter?, Light Reading (2017), available at: <https://www.lightreading.com/artificial-intelligence-machine-learning/can-ai-make-cable-smarter/a/d-id/739262>; CableLabs, A Different Future for Artificial Intelligence, (2018), available at: <https://www.cablelabs.com/different-future-for-artificial-intelligence>.

⁴ CableLabs, Leveraging Machine Learning and Artificial Intelligence for 5G, (2019) available at: <https://www.cablelabs.com/leveraging-machine-learning-and-artificial-intelligence-for-5g>.



Next-generation networks are key enablers for the uptake of AI in Europe As the European Commission correctly assessed on the first page of its White Paper, *‘a large share of tomorrow’s far more abundant data will come from industry, business and the public sector, and will be stored on a variety of systems, notably on computing devices working at the edge of the network. This opens up new opportunities for Europe, which has a strong position in digitised industry and business-to-business applications, but a relatively weak position in consumer platforms.’* To ensure the successful uptake of AI in Europe, particularly in a way in which it works for both people and (small) businesses, it will be important to ensure the democratization of this technology and its enablers in an early stage. Connectivity, data storage, as well as computing power are such key enablers.

Liberty Global will play a key part in this, by providing people and businesses with first-rate connectivity and value-added services. The advent of edge computing and data storage services will be a key amplifier in this respect, as it gives people and particularly small businesses immediate access to those core technological resources needed for the development and large-scale deployment of AI applications. Therefore, Liberty Global encourages the European Commission to foster investments in the digital domain, as these will be critical to the success of Europe’s AI uptake.

Liberty Global’s additional considerations as regards the White Paper

A risk-based approach is key to achieve the twin objectives of promoting a rapid uptake of AI and addressing potential risks

Further to its response to the European Commission’s consultation (annexed below), Liberty Global wishes to emphasize the urgency of pursuing such an approach. The cumulative criteria identified by the European Commission, as a threshold for the imposition of regulatory requirements, will – if adhered to by regulators and policymakers alike – serve as powerful indicator and therefore contribute significantly to regulatory clarity and predictability. Such clarity and predictability will, in turn, have a positive impact on innovation and investment in the relevant domains.

The merits of the European approach towards standardization

Liberty Global is of the opinion that the use of standardisation in the EU is a resounding success and that it is well-established that harmonized standards are of vital importance for the proper functioning of the internal market. One example is the use of harmonised standards in the (self-)declaration by manufacturers of the conformity of products with essential regulatory requirements, as laid down in applicable EU laws, such as, for example, the Radio Equipment Directive.

Standardisation boosts the competitiveness of undertakings in our sector – and others – by facilitating, in particular, the free movement of goods and services, stimulating (network) interoperability, and by supporting innovation. Moreover, through coordination with international standardisation bodies, such as the International Telecommunications Union, the EU is at a position to use standardisation processes to further the global competitiveness of European companies and to promote European values in the development of standards applicable to AI applications worldwide.



To facilitate the development of standards in the EU, the Standardisation Regulation provides an adequate legislative framework.⁵

The European Commission can issue standardisation requests to the official European Standards Development Organisations (SDOs). Liberty Global recommends the European Commission to closely work with the SDOs – and to engage them in a timely fashion – to ensure this powerful tool can be used to its full extent.

In the context of the White Paper, standardisation can be particularly valuable in supporting voluntary self-labelling/self-certification initiatives in those sectors which have thus far not been identified as high risk by the European Commission. The application of standards will, contrary to the involvement of notified bodies, have less impact on the time-to-market and development costs in such non-high risk domains and greatly facilitate market surveillance. Moreover, the application of standards will help ensure a level playing field and provide an adequate yardstick for regulators and market surveillance authorities tasked with ex-post regulatory oversight. In situations where ex ante authorisation will be required, standards can fulfil a similar role, by laying down objective criteria.

Closing remarks

Liberty Global's key recommendations for the European Commission

In closing, Liberty Global summarizes the crux of its contribution to the European Commission's consultation of its White Paper as follows:

- The European Commission is pursuing the right approach in this domain, with a regulatory and investment oriented approach with the twin objective of promoting the uptake of AI and of addressing the risks associated with its application in high-risk domains.
- Next-generating networking will be a key enable for AI applications and vice versa. Moreover, first-rate connectivity and associated services will contribute vastly to the democratization of technologies such as AI, by giving people and small businesses access to the necessary technological resources. Therefore, it is critical to promote investments in the digital domain.
- A risk-based approach, as foreseen by the White Paper, is the right way to promote these twin objectives and will contribute to the functioning of the internal market, if it is applied in a clear, consistent and harmonized way. Duplication of existing regulatory institutions and instruments should be avoided, as should – in particular – regulatory divergence between Member States.
- The use of standards will improve the quality and consistency both voluntary self-certification, as well as ex ante and ex post regulatory oversight, and should be preferred over the use of notified bodies designated by Member States. The use of standards will contribute vastly to

⁵ Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation OJ L 316/12 [2012].



the ecosystem of trust as foreseen by the European Commission, as it enables voluntary self-certification of quality products and services in non-high risk domains or applications, against the same criteria which are mandatory for high risk applications in high risk domains.

Next steps: ensure close cooperation with key stakeholders

Liberty Global agrees with the European Commission on the need for close involvement of all relevant stakeholders in the context of the development and implementation of the forthcoming European governance structure on AI. With this in mind, Liberty Global looks forward to engaging further with the European Commission and other public stakeholders in this domain in the near future.

About Liberty Global

Liberty Global (NASDAQ: LBTYA, LBTYB and LBTYK) is one of the world's leading converged video, broadband and communications companies, with operations in six European countries under the consumer brands Virgin Media, Telenet and UPC. We invest in the infrastructure and digital platforms that empower our customers to make the most of the digital revolution.

Our substantial scale and commitment to innovation enable us to develop market-leading products delivered through next generation networks that connect 11 million customers subscribing to 25 million TV, broadband internet and telephony services. We also serve 6 million mobile subscribers and offer WiFi service through millions of access points across our footprint.

In addition, Liberty Global owns 50% of VodafoneZiggo, a joint venture in the Netherlands with 4 million customers subscribing to 10 million fixed-line and 5 million mobile services, as well as significant investments in ITV, All3Media, ITI Neovision, LionsGate, the Formula E racing series and several regional sports networks.