Towards an EU first legal framework for Artificial Intelligence

A. Introduction

The EU-Commission has proposed the very first legal framework for AI and is paving the "European way" with the aim of proclaiming the "digital decade".

The European Commission presented its Draft Regulation on Artificial Intelligence (AI) on 21 April 2021. The new Draft Regulation is an outgrowth of the AI strategy that the EU has been pursuing for several years. In particular, the preliminary work of the High-Level Expert Commission on Artificial Intelligence and the White Paper on Artificial Intelligence, was decisive.

This article aims to provide a compact overview of the Draft Regulation. In preparing the Draft Regulation, the Commission has examined different policy options to ensure the smooth functioning of the internal market by creating the conditions for the development and use of trustworthy AI in the Union. To this end, four policy options have been considered, involving regulatory measures of varying degrees: Option 1: EU legislative instrument to establish a voluntary labelling scheme; Option 2: a sector-specific "ad hoc" approach; Option 3: a horizontal EU legislative instrument based on proportionality and a risk-based approach; Option 3+: a horizontal EU legislative instrument based on proportionality and a risk-based approach, complemented by a code of conduct for AI systems that do not pose a high risk; Option 4: a horizontal EU legislative instrument setting mandatory requirements for all AI systems, regardless of the risk they pose.

There was an assessment of each option in terms of its economic and social impact. In particular, special attention was paid to the impact on fundamental rights. As a result, Option 3+ was preferred to realize the goals of the proposal.

B. Subject of the Draft Regulation

The EU has set itself the goal of improving the domestic market through the development, marketing, and use of AI. The premise is that the Draft Regulation is consistent with the values of the Union.

The Draft Regulation aims to:

a) harmonized rules for the placing on the market, putting into service and use of AI systems in the Union;

b) prohibitions of certain practices in the field of artificial intelligence;

c) specific requirements for high-risk AI systems and obligations for operators of such systems;

d) harmonized transparency requirements for AI systems intended to interact with natural persons, AI systems used for emotion recognition and biometric categorization, and for AI systems used to create or manipulate image, sound, or video content; and

e) regulations to observe and monitor the market are to be established.

Globally, the Draft Regulation has three main goals: Building trust in AI, making AI competitive and protecting rights.

Trust and confidence in AI practices is to be strengthened, which can be achieved by ensuring that AI use complies with fundamental rights and values (Human dignity, Freedom, Democracy, Equality, Rule of law, Human rights).

Furthermore, the Union's competitive activity in the field of AI should be increased. In particular, the EU does not want to fall behind Chinese and US markets in the long term.

The Draft Regulation pursues various general interests, such as a high level of protection of health, safety, fundamental rights, and ensuring the free cross-border movement of AI-based goods and services. The Draft Regulation does not contain any provisions on civil liability.

The most relevant provisions are examined in more detail below. The most crucial aspects of AI systems are: the definition of AI, the prohibited AI practices, as well as the various potential dangers.

1. Definition of AI systems

The Draft Regulation furnishes a definition of AI systems, according to which AI systems means "software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with." (art. 3(1))

The expression of this definition is the autonomy of the system and to bring about changes in its behavioral patterns autonomously during operation.

For example, AI systems were used to combat the COVID 19 pandemic. The start-up company

"Exscienta" was the first company ever to use AI algorithm to develop a drug for human trials. The algorithm took 12 months to develop the drug molecule, which would have taken four to five years in traditional research.

2. Prohibited AI Practices

In light of the uncertainties and new challenges faced by the introduction of AI into society at large, clear threats to EU citizens will be banned. These threats range from regulatory

assessment of social behavior, to voice assistant toys that entice children to engage in risky behavior.

The prohibited AI practices are:

- Such practices that use or place on the market AI systems which, by means of subliminal techniques outside a person's awareness, substantially influence the behavior of a person in a way that causes or is likely to cause physical or psychological harm to that person or to another person; the same circumstance also applies to the exploitation of a weakness or vulnerability of a particular group of persons due to their age or physical or mental disability;

- The placing on the market, putting into service or use of AI systems by or on behalf of public authorities to assess or classify the trustworthiness of people based on their social behavior;

- The use of "real-time" remote recognition systems for biometric identification in publicly accessible spaces for the purpose of law enforcement. Nevertheless, there are numerous exceptions to this prohibition of AI practices, which did not go uncriticized. For instance, for law enforcement purposes like targeting specific potential victims of crime or missing children.

3. Risk Classifications

The Draft Regulation classifies AI systems according to various potential risks. These are classified as AI systems with minimal, limited, and high risk.

Especially the so-called "high-risk AI systems" are subject to high conditions and are subject to special requirements. The providers or users of such systems must also meet several requirements (Arts. 16-29), which include the transparency and information measures.

Accordingly, high-risk AI systems must be designed and developed in such a way that their operation is sufficiently transparent so that users can interpret and use the results of the system. This is very reminiscent of the transparency and information obligations enshrined in the General Data Protection Regulation. Another similarity concerns the territorial scope of application. The proposed regulation provides for the application of the regulation when AI systems are placed on the market, as well as when such systems are used or operated in the territorial area of the EU. A potential concern of this regulation is that the EU will be circumvented as a place of creation of AI systems.

Critically, it should be questioned to what degree the transparency and information obligations can also be managed. It seems that the more complex AI systems are designed, the more unclear the traceable chains of action become. However, this is an indispensable link when it comes to fulfilling those obligations and explaining processes of AI systems.

Difficulties could arise especially with "deep learning". So-called "deep learning" involves "artificial neural networks" modelled on biological nervous systems. The (software) levels networked in "neural nodes" are capable of learning and can be trained by data input and desired output values. Tracing back these processes appear to be an extremely difficult task.

C. Conclusion and outlook

The Draft Regulation is a good and innovative initiative to advance digitalization. The possibilities to use AI is far-reaching; from autonomous vehicles to the production of goods, such as 3D printing. The Spanish Government for example, has promoted the National Artificial Intelligence Plan for the period 2020-2025 with the aim of making Spain a leading country in its use and development. Investments of minimum 60 million euros into the National Strategy are necessary when it comes to the development and use of AI in a wide variety of areas (e.g., increase digital skills of the population, boosting the use of AI in small and medium-sized enterprises, promoting data repositories to feed AI and making data available and accessible, improving the efficiency and publicity of public services, and increasing public-private collaboration in AI).

It seems apparent that the Draft Regulation aims to always keep AI systems under the control of humans. This is at the expense of innovation and slows down the progress that has been set as a goal. Other countries such as China and the USA are discovering the possibilities of AI for themselves and are implementing them to stay competitive in the growing trend of global modernization. The EU's Draft Regulation on AI represents its fundamental values and abandoning these in favor of global competitiveness seems unjustifiable.

Therefore, EU citizens expect a realistic and honest approach to strengthening the domestic market and making it competitive.

Brussels does not dare to regulate civil law issues in the use of AI, it is precisely these issues that occupy practice when it comes to cases of damage, liability, attribution of declarations of intent, and creation of intellectual property.

It remains to be seen how the process will turn out after the legislative procedure is implemented and how actors in practice, like companies, will see the course.

AI systems are becoming increasingly important and if a binding legal framework is passed, it should create security and trust.