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EU Council Artificial Intelligence



"How can we frame the development and use (of artificial intelligence) in the European Union, in order to maximize economic and social benefits while guaranteeing the respect for fundamental rights, the safety of all citizens and full transparency of these new Artificial Intelligence systems? "

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SUMMARY:

I) Introduction	p.3
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II) Challenges of Artificial Intelligence......p.4

- A. To what extent should we regulate and limit the development of AI ?
- B. Contribution to scientific research
- C. Al in the military sector and national security
- D. How AI will affect the labour market
- E. Influence on energy consumption and Climate change
- F. Geopolitical issues

G. How AI manages personal data and how AI recognition systems could be improved

H. The eventual EU fund to be established

- A. Contextualization
- B. Position of Member States:
 - 1. Traditionally Al-friendly
 - 2. Favorable but with more measured approaches
 - 3. Less committed states that show greater restraint towards AI
- C. Position of EU enterprises and corporations
 - 1. Introduction
 - 2. SAP and Artefact: 2 big European AI-specialized companies:

IV) Objectives of EU regulation of Artificial Intelligence...... p.14

V) Bibliography...... p.15

INTRODUCTION:

"How can we frame the development and use (of artificial intelligence) in the European Union, in order to maximize economic and social benefits while guaranteeing the respect for fundamental rights, the safety of all citizens and full transparency of these new Artificial Intelligences? "

Artificial intelligence refers to machines capable of imitating or replacing human behaviours, such as reasoning, planning, or the exploration of creativity. More than simply automating a repetitive task, artificial intelligence is designed to mimic human thought processes to make rapid decisions. Technologies using artificial intelligence look to make systems as autonomous as possible in order to facilitate or improve tasks and their results. Artificial intelligence systems achieve this by learning from data and recognising its patterns, relying on machine learning and neural networks, as well as advanced methodologies like deep learning and natural language processing.

Earlier AI models used to rely primarily on machine learning algorithms, which meant computers made decisions or predictions without explicit programming, depending on a human to select the information they used. However, in the last few decades, a new type of AI has emerged, principally using deep learning programs to function. These programs are a subset of machine learning that use artificial neural networks modeled after the structure of the human brain. This means that it can automatically learn from raw data, without needing human intervention in order to function. Even though this can be seen as a great innovation, it can learn to reprogram itself by learning from its experiences, occasionally surpassing human understanding and control, sparking fear and concerns among the public. This is why a commission is needed in the European Union in order to address its regulation and control its development. Particularly as some of the more prominent AI technologies do not stem from a European context, and may not align with EU standards, facilitating their development, but potentially undermining their users' rights.

Nevertheless, some regulations are already in place in the EU regarding data protection which among other things affects AI. A great example of this is the General Data Protection Regulation (GDPR) (2018). Indeed, AI needs a large database in order to develop and learn, however, this regulation strictly protects users' personal data. In addition, it ensures transparency, which means that every decision that AI makes with users' data must be directly addressed to the latter so that in the end, the decision is made by a human. Also, the EU's High-Level Expert Group on AI developed an Ethics Guidelines for Trustworthy AI (2019), which provides an ethical framework for AI developers and users, emphasizing principles such as accountability, transparency, non-discrimination, or human agency. Finally, the EU AI Act, approved the first of August of last year, establishing an agenda from 2025 up to 2030, is a project to create the first comprehensive AI law in the world by taking a risk-based approach, aiming to foster responsible artificial intelligence development and deployment. This act provides clear requirements and obligations to the users and developers of AI.

Our committee will therefore aim to deepen and update the legislation already in place due to the rapid development of AI and thus create the basis for a new EU agenda for 2030. We will therefore address the sectors in which Artificial Intelligence is the most used or essential, and balance the risks and assets that it has. Some of these areas are, for instance, health and research: AI tools with machine learning have access to large amounts of data, resulting in better and more reliable results; agriculture by designing for example AI tools that can reach peak productivity, in order to reduce food insecurity in the EU; tourism: How can AI help with logistics and control of migrations?; or education: How can we teach students to use AI responsibly as a tool, instead of a substitution? How can the EU ensure technological sovereignty in AI development, particularly in sectors essential for security, and avoid an over-reliance on foreign AI technologies?

II) CHALLENGES OF ARTIFICIAL INTELLIGENCE:

A. To what extent should we regulate and limit the development of AI?

As one of the most influential continents in the world, Europe cannot afford to fall behind in this new digital revolution, especially in light of the United States' latest approach on these technologies. The US heavily emphasizes deregulation and substantial funding for key projects such as the Stargate initiative now valued at \$500 billion. This infrastructure project, developed in collaboration with leading companies in AI such as Open AI, Softbank and Oracle. This initiative aims to drive research in medical fields, create over 100,000 jobs, and achieve much more. In the face of this fierce new competition, the European Union must strike a balance between innovation and responsibility. While maintaining opportunity for progress, the EU must also ensure the responsible and ethical use of AI. Through proper regulation, it aims to guarantee accountability, outline penalties for misuse, and promote proper AI education across Europe as well as maintaining our position as a competitor in this sector. Artificial Intelligence can only operate with strict human supervision.

B. Its contribution to scientific research:

Al offers numerous benefits to society, particularly as a valuable asset in research. It has the potential to lead our society towards many significant discoveries. Al could provide breakthroughs in solving pressing issues like environmental challenges and public health crises. Furthermore, task automation could enhance productivity in various sectors such as agriculture contributing to the economic growth of the European Union. A clear example of this is the "LaserWeeder", a machine created by Carbon Robotics, which utilizes computer vision and Al deep learning models to identify weeds and crops in real-time, eliminating the weeds with high-powered lasers. Laser weeding reduces farming costs, increases crop yield, and improves soil health while avoiding hand labor, chemical herbicides, or mechanical soil disruption.

Al's ability to continuously collect and analyze data—facilitated by deep learning—allows for rapid advancements. It is continuously learning at a faster rhythm than humans could ever even imagine. Data development with Al doesn't depend on the disponibility of humans, leading to accelerated development in fields reliant on data processing. For instance, AlphaFold, an Al developed by DeepMind, provides open access to over 200 million protein structure predictions, accelerating scientific research.

C. The use of AI in the military sector:

Al raises numerous ethical concerns, particularly regarding its use in military and security contexts. It has been utilized in international conflicts for years. As noted in an article by <u>Ouest France</u>, Al plays a significant role across various actors, including armed forces, intelligence agencies, insurgent groups and terrorist organizations. Its capabilities make Al a critical debate subject, especially regarding investments in this sector.

Al has a wide range of applications. It can be used as a weapon, such as drones programmed to identify and track specific targets. Depending on the model, these drones can launch missiles with remarkable precision. However, the final decision to deploy missiles remains in human hands, as fully autonomous weapons are not yet in use. Al can enhance defensive measures and protect civilians. For instance, the Israeli IRON DOME system analyzes potential threats and intercepts incoming missiles with remarkable speed and accuracy.

Al also plays a role in identifying and documenting evidence of war crimes. For example, in Syria, this technology helped collect evidence of strikes on civilian infrastructure. This same technology could be used to identify violations of human rights, such as forced displacement or destruction, which could be presented before international courts.

Despite these potential benefits, the lack of international regulation for military AI use remains a critical concern. Without oversight, its use could become dangerously impersonal, disregarding the ethical principles that form the foundation of the European Union.

Beyond national defense, AI could also aid international security. States with advanced AI capabilities are gaining a strategic advantage. For example, cybersecurity experts increasingly rely on AI for protection against cyberattacks, which is a growing area of concern. AI can also be deployed in surveillance to detect and prevent crime, espionage, and terrorism. However, its use must be carefully reviewed and regulated to ensure compliance with civil rights and privacy laws upheld within the European Union.

D. How AI will affect the labour market:

Al is poised to create a huge revolution in the labor market. Automation of some tasks will inevitably lead to the disappearance of numerous jobs. Historically, industrial revolutions like the Industrial Revolution have led to new job creation, so we know that logically new jobs will eventually be created. However, the transition must be carefully managed to avoid mass unemployment across Europe which could potentially trigger an economic crisis. Al being relatively new, many corporations will need time to adapt, whereas others have already mastered this new technology, leading to major concentrations of economic power and full control of the market. This threatens competition and innovation which is fundamental in Europe (as well as being a major threat to our democracies). Here are some specific examples of how Al could change and has changed the labour market:

14% of jobs across the European Union risk being displaced by computer algorithms. However, task automation has the potential to significantly boost productivity across various industries. While there is growing concern that automation could trigger waves of job loss, some research has suggested that AI has the potential to automate up to 40% of an average workday. For instance, the adoption of generative AI in marketing has been linked to substantial productivity gains. This dual impact creates a complex dilemma.

Valoir conducted a global survey which revealed that automation is already transforming workplaces, with employees stating that it has automated an average of 20% of previously manual tasks. Additionally, it also found that more than 50% of workers have used generative AI tools, underscoring its emerging role as an essential resource. However, the study also highlighted apprehension, with workers predicting that automation could replace 48% of their colleagues within two years.

Despite its advantages, the rapid adoption of AI necessitates regulatory measures to guide its implementation. For AI to be correctly implemented and ethically integrated, companies must prioritize reliable data sources and establish safeguards to protect security, privacy, and ethical standards.

It is also crucial to recognize that the impact of AI will vary by sector. Employees in the financial services, high tech, and education are at a higher risk of displacement compared to those in consumer goods, aerospace, and media where automation poses less of a threat. Addressing these disparities will be key to ensuring a balanced and equitable transition into an AI-enhanced economy.



Share of EU workers at very high risk of automation, by industry:

E. Its influence on energy consumption and Climate change:

While AI could help solve ecological challenges, it also presents significant environmental risks.

Data centers, which power AI, consume an extensive amount of largely non-renewable energy, due to the cooling down of data centers. This has sparked an ongoing debate about the optimal energy sources for powering data centers. While renewable energies have a lighter impact on the environment, storage capacities remain limited, and are too fluctuant depending on the weather conditions. That is why some AI companies, such as Google, are proposing to create small-scale nuclear reactors by 2035, in order to ensure a private, reliable source of energy. This can be controversial from a safety and environmental point of view.

Additionally, AI consumes large amounts of water. For example, Microsoft reported using approximately 6.4 million cubic meters of water in 2022, a 34% increase from the previous year, primarily due to the demands of generative AI workloads. Similarly, Google consumed 19.5 million cubic meters of water in 2022, marking a 20% year-over-year increase. The water is used mainly to cool high-density server racks required for AI operations, especially in warmer climates or areas where natural cooling methods are insufficient.

If Europe prioritizes AI, we must also change the conditions surrounding these data centers to minimize our ecological footprint and meet our sustainability goals.



Nevertheless, the release of Deep seek very recently has introduced a more environmentally friendly alternative to traditional AI models. Indeed, with a product quality similar to other existing american codes, Deepseek demands less water resources and has a lower energy consumption. Additionally, the training cost of its algorithm is only about 5,5 millions of dollars, around half of its main current competitor, ChatGPT.

F. Geopolitical issues:

Artificial intelligence, as a transformative technology, has rapidly become a critical focus in international relations. Its role as a driver of economic growth, security, and scientific advancement significantly influences global power dynamics. The RAND Corporation, a key advisory body to the US military, stated that "Nations across the globe could see their power rise or fall depending on how they harness and manage the development of AI." This underscores the notion that AI supremacy is a focal point of global competition. While such competition often breeds innovation, it is vital to uphold shared values, ensuring progress is balanced with respect for citizens' rights and fostering fair and ethical rivalry.

Al also plays an important role in international trade and business where its advantages have both strengthened and stoked tensions. Many countries are adopting protectionist policies to maintain a competitive edge, often resorting to sanctions or trade restrictions. For instance, there have been heavy restrictions on exports of advanced Al chips and semiconductor technology, particularly in the West, where reliance on foreign technology is viewed as a strategic vulnerability in the face of potential adversaries.

However, all of the points stated above could easily be choked by the recent release of Deep seek, an alternative AI algorithm released by China. Their open models are available for free and can be modified by their developers, which means that Deepseek's techniques could be copied by European companies.

In this context, the need for European collaboration on AI has never been greater. By pooling resources and expertise, Europe could address pressing challenges and compete effectively on the global stage. Achieving this, however, requires setting aside political and economic rivalries in favor of shared objectives and unified action.

G. Personal data and how AI recognition systems could be improved:

There are also serious debates around the use and protection of personal data by AI. One of the many capabilities of AI as we know, is the creation of "DeepFakes" where a person's likeness is convincingly replicated without their consent, often leading to legal and social repercussions. This has been used in the context of presidential elections in many countries in order to discredit the presidential candidates or members of each political party. This poses a big problem as it could heavily affect the country's public opinion and disturb the election's results. AI being data-inspired, constantly collects data, which makes it incredibly hard to control what information it collects or what it's used for.

Another critical issue is the flawed use of AI in recognition and predictive technologies. AI-powered predictive tools, such as those used by companies to screen job applicants have demonstrated biases that undermine fairness. For example, Amazon's AI hiring tool was revealed to be biased against female candidates because it was trained on data from a predominantly male workforce, reinforcing the existing gender disparities. Similarly, facial recognition systems have faced significant criticism for their inaccuracy, particularly when identifying individuals of color. These inaccuracies stem from biased training datasets that do not adequately represent diverse populations. Research has consistently shown that facial recognition technologies perform poorly on individuals with darker skin tones, leading to higher rates of false positives and misidentification.

These examples underscore the pressing need for rigorous oversight and more representative data in AI development to prevent discriminatory outcomes and ensure equitable applications of these powerful tools that could be of great use to our nations.

III) CONTEXTUALIZATION AND POSITIONS OF THE MEMBER STATES + ENTERPRISES AND CORPORATIONS:

A. Contextualization:

A short video by EuroNews for a bit of context: <u>https://www.youtube.com/watch?v=uhavY9So23k</u>

Artificial intelligence (AI) has been expanding rapidly for the past decade and has stimulated profound economic, technological, and societal transformations.

Today, the global AI market is largely dominated by the United States and China who are in a kind of cold war over AI :

- The United States, with giants (GAFAM) that have a massive capacity for innovation due to their mature technological ecosystem and significant financial resource. They Seemed to have gained the upper hand over the rest of the world, including China, with the release of Chat gpt and other generative AIs since 2022
- China is also a key actor, with companies such as Baidu, Tencent, and Alibaba. The Chinese government has launched an ambitious plan to become a global leader in Al by 2030, fostering both domestic innovation and international partnerships. China is more present than ever in the race to develop Al and is catching up with the US little by little; in particular with the release of Deep seek very recently which has turned the Tech and Al community world upside down.

The EU is leading the way in regulating digital technologies and is looking to frame AI while promoting its adoption in key sectors. However, EU member states are still behind their American and Chinese peers in terms of investment and technological development.

In this context, the European Union already has regulations in place on AI: The General Data Protection Regulation (GDPR), adopted in 2018, ensures that AI systems, among others, comply with strict standards on data protection and privacy. In 2021, the European Commission proposed the Artificial Intelligence Regulation (EU AI Act), which seeks to establish a framework for classifying AI systems according to their level of risk (from low to unacceptable)

and imposes stricter requirements for high-risk applications, such as those used in health, justice or security. All these initiatives are in line with the EU's objective to promote ethical and responsible AI.

Although it isn't a European organization, the Forum on Democracy and Information (<u>Link to their website here</u>) is an international organization that aims to bring democratic guarantees concerning digital sectors. 25 European members are part of this organization, excluding Hungary and Poland. They have also published many articles concerning AI such as: <u>AI as a Public Good: Ensuring Democratic Control of AI in the Information Space</u> which includes more than 200 recommendations to assure democratic control of AI addressing itself to the States and AI enterprises.

B. Position of member states:



Percentage of enterprises that use at least one of the AI technologies, classified by country, <u>Eurostat</u> (24/09/2024)

1. Traditionally Al-friendly:

Germany: Germany is a leader in AI within the EU, emphasizing industrial applications, innovation, and ethical standards. Its "AI Made in Germany" strategy highlights its strong commitment.

Germany AI Strategy Report - European Commission

France: France invests heavily in AI under its national strategy, focusing on research and

ethical AI principles while aiming to position itself as a global leader in the sector. <u>France AI Strategy Report - European Commission</u>

Sweden: Sweden actively promotes AI innovation, especially in sectors like healthcare and industry, with government funding and robust support for private AI development. <u>https://ai-watch.ec.europa.eu/countries/sweden/sweden-ai-strategy-report_en</u>

Netherlands: Known for its collaborative AI ecosystem, the Netherlands is an AI-friendly state, emphasizing innovation while ensuring ethical AI usage.

Netherlands AI Strategy Report - European Commission

2. Favorable but with more measured approaches:

Belgium: Belgium supports AI development but focuses on ethical considerations, regulatory alignment with the EU, and careful integration into public services. Belgium AI Strategy Report - European Commission

Finland: Finland prioritizes AI education and innovation, particularly in societal applications, but ensures careful regulatory oversight for ethical concerns. <u>Finland AI Strategy Report - European Commission</u>

Denmark: Denmark embraces AI for societal and economic growth but takes a cautious stance on ensuring transparency and ethics in AI applications.

Denmark AI Strategy Report - European Commission

Spain: Spain invests in AI to enhance public services and industry but follows the EU's cautious and regulation-oriented approach.

Spain AI Strategy Report - European Commission

Ireland: Ireland encourages AI innovation and tech-sector growth but emphasizes responsible AI through ethical frameworks.

Ireland AI Strategy Report - European Commission

Italy: Italy is supportive of AI adoption across sectors but takes a measured approach by aligning with EU ethical standards and investing cautiously.

Italy AI Strategy Report - European Commission

Portugal: Portugal sees AI as a tool for modernization but applies careful planning to its integration into society, emphasizing ethical AI.

Portugal AI Strategy Report - European Commission

Poland: Poland supports AI research and industrial applications but remains cautious, prioritizing national security and ethical considerations.

Poland AI Strategy Report - European Commission

Hungary: Hungary has shown interest in AI development and regional leadership but aligns

closely with the EU's cautious stance on ethics and safety. Hungary AI Strategy Report - European Commission

Slovakia: Slovakia supports AI initiatives but has a relatively slow, cautious adoption process compared to leading EU states.

Slovakia AI Strategy Report - European Commission

Czech Republic: The Czech Republic recognizes Al's potential but advances cautiously, ensuring alignment with EU regulatory standards.

Czech Republic AI Strategy Report - European Commission

Luxembourg: While AI-friendly, Luxembourg takes a cautious stance by emphasizing trust and ethical considerations in digital innovations.

Luxembourg AI Strategy Report - European Commission

3. Less committed states that show greater restraint towards AI:

Austria: Austria takes a modest approach to AI development, with limited investments compared to other EU states and a focus on ethical concerns.

Austria AI Strategy Report - European Commission

Greece: Greece is slowly adopting AI, focusing on addressing societal challenges but with less urgency or investment in the sector.

Greece AI Strategy Report - European Commission

Croatia and Slovenia: Both countries recognize Al's potential but have limited resources and smaller Al ecosystems, making their approach more cautious. Croatia Al Strategy Report - European Commission

Bulgaria and Romania: These states have limited AI activity, mainly focusing on EU-backed projects, with weaker infrastructure and cautious approaches.

Bulgaria AI Strategy Report - European Commission

Cyprusand Malta: With their small economies, these countries have a limited focus on AI and primarily engage in niche or EU-aligned projects.

Malta AI Strategy Report - European Commission

Baltic States (Estonia, Latvia, Lithuania): The Baltic states support AI, especially Estonia, but their resources and smaller markets keep them in a cautious, incremental adoption phase. <u>Estonia AI Strategy Report - European Commission</u>

Most member states are in favor of AI, but degrees of support vary. Countries in northern and western Europe tend to be the most active in AI development, while some countries in central and southern Europe are taking a more cautious approach, often due to concerns about sovereignty or less developed infrastructures.

C. Position of EU enterprises and corporations:

1. Introduction:

European enterprises and corporations view artificial intelligence (AI) as a transformative technology critical to maintaining global competitiveness. Many companies focus on integrating AI to optimize processes, improve customer engagement, and enhance decision-making. There is a significant emphasis on ethical AI development, data privacy, and compliance with the EU's regulatory frameworks, such as the forthcoming AI Act. However questions remain about whether these measures are sufficient.



ec.europa.eu/eurostat

Major industries in the EU , including manufacturing, healthcare, and finance, leverage AI to boost productivity and develop innovative solutions. European corporations also support public-private partnerships to foster research. However, they often call for greater investment in infrastructure and clarity in regulations to ensure Europe remains competitive with global tech leaders like the U.S. and China.

2. SAP and Artefact: 2 big European AI-specialized companies:

SAP, a leading European software corporation, leverages AI mainly to enhance enterprise resource planning (ERP) systems and develop intelligent business applications. Its AI initiatives primarily focus on automating processes, optimizing supply chains, and providing predictive analytics for several industries (retail, finance...) The company also tries to invest more in AI research to ensure ethics and transparency.

SAP's key objectives in AI include:

- 1. Helping businesses make better decisions using advanced data analysis.
- 2. Making work processes easier and faster with AI-powered tools.
- 3. Using smart solutions to save resources and promote sustainability. <u>SAP AI Solutions: Q3 2024 Innovation Highlights - InsideSAP</u>

Artefact, a European leader in digital transformation and data consulting, specializes in using AI to drive business value through marketing and customer experience optimization. Its AI initiatives focus on personalized customer engagement and advanced analytics for retail and e-commerce. Artefact combines data science with AI technologies to help businesses get to the full potential of their data.

Artefact's objectives include:

- 1. Improving marketing with AI tools that predict customer behavior.
- 2. Connecting data strategies with business goals by using AI effectively.
- 3. Encouraging the use of sustainable AI methods for long-term digital success.

Artefact

IV) OBJECTIVES OF EU REGULATION OF AI

The main objective of this commission is consequently to establish a legal framework agreed upon by all of the members for AI that ensures the protection of public interests by guaranteeing innovation. Key subjects to consider are:

Economically: How much money would the EU invest in Artificial Intelligence? Where would these funds be used? For example in its development, research, the education of users, etc... Will these figures be distributed equally between each member country or do they depend on their GDP? These are a certain number of issues that should be researched by the participants of this commission.

Socially: How to respect the protection of personal data, transparency of suppliers and deployers of AI systems, as well as public interests and fundamental rights, common rules must be established for AI systems?

Politically: How to ensure the respect for European values? Al must not affect the fundamental rights of the European Union, protecting people, businesses, democracy, the rule of law, and the environment, as many others.

Environmentally: What are the environmental risks of AI? How can the EU maximize the opportunities that AI offers, given that it can provide economic and environmental benefits through improved predictions.

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