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NOTE

From:	Presidency
To:	Council
Subject:	Presidency note for the lunch debate on artificial intelligence

Delegations will find attached a Presidency note on artificial intelligence with a view to prepare the lunch debate at the Competitiveness Council on 28 May 2018.

Presidency note for the lunch debate on artificial intelligence

1. The Bulgarian Presidency has been emphasising that the completion of the Digital Single Market and the strengthening of Europe's data economy are at the heart of economic growth. In October 2017 the European Council called on the Commission to put forward a European approach to Artificial Intelligence (AI). In March 2018 the Competitiveness Council stressed the need for companies to continue focusing on the innovative development and take-up of key forward-looking trends, which include artificial intelligence, robotics and big data. On 25 April 2018 the Commission published a Communication on Artificial Intelligence for Europe, setting out the European approach to AI.

2. On the occasion of the Digital Day organised by the European Commission under the Bulgarian Presidency on 10 April 2018, 24 Member States and Norway signed a Declaration of Cooperation on Artificial Intelligence. The signatories agreed to work together on the most important issues raised by AI, including ensuring Europe's competitiveness in the research and deployment of AI, and dealing with social, economic, ethical and legal questions.

3. During the EU Industry Day on 22-23 February 2018, industry leaders agreed that Europe is well positioned to be globally competitive in the field of high-quality, safe and trustworthy AI. Europe must master the deployment of critical industrial AI applications in order to turn thousands of its world-leading companies into "Intelligent Enterprises".

4. The Competitiveness Council in May is an opportunity to discuss the new European approach on AI and the initiatives based on this approach in order to enable Europe to be a leader in the development and use of AI, building on its values and its strengths. Several Member States have already developed or are working towards strategies to support AI.

5. AI is estimated to contribute up to EUR 13.3 trillion to the global economy in 2030. Moreover, it is helping to solve some of the world's biggest challenges such as treating chronic diseases, reducing traffic accidents, fighting climate change, or anticipating cybersecurity threats.

6. Most developed economies recognise the game-changing nature of AI. The US government presented its AI strategy in 2016. China is planning to become a global leader in AI by 2030 and is investing heavily. Moreover, large companies in the US and China are investing significantly in AI and are exploiting large amounts of data. Japan and Canada have also adopted their AI strategies. Europe has to ensure that it stays at the forefront of the AI revolution and continues to build on its assets in order to remain competitive.

7. Europe’s assets include world-class researchers, labs and start-ups, and a competitive robotics segment. Europe also features a world-leading industry, including in transport, healthcare and manufacturing, which should be at the forefront of the adoption of AI.

8. The European approach on AI has three dimensions: (1) boosting the EU’s technological and industrial capacity and AI uptake across the economy, (2) preparing for socio-economic changes brought about by AI, and (3) ensuring an appropriate ethical and legal framework.

9. Joint efforts by both the public (at national and EU levels) and private sectors are needed to gradually increase overall **investments** by 2020 and beyond, in line with the EU's economic weight and investments in other continents. In the last year, public and private research and development investments in AI in the EU were estimated to total EUR 4-5 billion. According to the recently outlined EU approach, the EU as a whole (public and private sectors combined) should aim to increase this investment to at least EUR 20 billion by the end of 2020. After this period, its investments should amount to more than EUR 20 billion per year over the following decade.

10. The investment in research and innovation in AI is being increased to around EUR 1.5 billion in the period 2018-2020 in order to support developments in key sectors; it will connect and strengthen AI research centres across Europe, facilitating their collaboration. The Commission expressed its intention to support the development of AI resources through a dedicated platform, as well as a dense network of digital innovation hubs and advanced manufacturing support centres to encourage SMEs and mid-caps to test AI solutions.

11. Another stated aim is to create an environment that stimulates investment. As data is the raw material for most AI technologies, the Commission is also proposing legislation to open up more data for re-use, notably from the public sector, and other measures to make data sharing easier. This covers data, for example, from public utilities and the environment as well as research and health data.

12. AI and automation will have an important impact on **labour markets**. Many jobs will be created, some will disappear, and most will be transformed. Member States are facing challenges to modernise their education and training systems, anticipate changes, and support labour market transitions, building on the European pillar of Social Rights.

13. AI brings about new job profiles. Despite the increase in the number of ICT professionals in recent years, there are at least 350 000 vacancies for such experts in Europe and companies experience difficulties in recruiting them. Europe should strive to increase the number of people trained in AI and data science, creating an attractive environment for the best talent to work in Europe, and attracting more women and people with diverse backgrounds. This is key also to addressing potential biases in AI developments.

14. AI may raise new **ethical and legal questions**. The EU should ensure that AI is developed in an appropriate framework which respects the EU's values and fundamental rights. To ensure that new developments are in line with a human-centric approach, ethical guidelines should be developed, addressing issues such as the future of work, safety, transparency and bias.

15. A European approach to AI will boost the EU's competitiveness and ensure trust based on European values. Without joint efforts, the EU risks losing out on the new opportunities in the age of AI, as no individual EU country can be competitive on its own. It is essential to ensure that strategies work together as a whole to achieve synergies and maximise impact. In this respect, work is ongoing in the areas of critical industrial applications, guidance on the product liability directive, initiatives for updating standards, and bringing public administrations up to speed.

16. Building on the Declaration of Cooperation on Artificial Intelligence signed by the Member States in April 2018, the European approach on AI proposes that the Commission and the Member States join forces and work together towards a coordinated action plan on AI by the end of 2018. The goal is to maximise the impact of investments at EU and national levels, encourage synergies and cooperation across the EU, exchange best practices, and collectively define the way forward to ensure that the EU as a whole can compete globally. Discussions will take place as part of the existing European platform of national initiatives to digitise industry. The next meeting is already scheduled to take place on 18 June 2018 in Brussels.

17. In the next multi-annual financial framework investments in AI-related research and innovation are expected to continue through Horizon Europe, across all areas, including health, transport and manufacturing industry. The European Research Council is expected to prove a valuable instrument that will help AI driven innovation. The Commission also proposes a new Digital Europe Programme to build up and strengthen core AI capacities in Europe, including data resources and repositories of algorithms. It could reinforce and network digital innovation hubs in the Member States with a focus on testing and experimentation. This will be complemented by investments in High Performance Computing, Cybersecurity, and Digital Skills, and by a significant effort to widen the diffusion and uptake of these digital technologies by all businesses and public administrations. This approach will support the digital transformation of the European economy and bring its benefits to European citizens and businesses.

18. The lunch discussion at the Competitiveness Council on 28 May 2018 will focus on the Member States' views to the AI approach, mainly by focusing on the following questions:

1. ***In which areas could AI create the highest added value for the EU?***
2. ***To bring Europe on a par with world's major actors, joint forces at the EU level will be required. Would you agree that aligning investment and strengthening cooperation in capacity building is the way forward? In which other areas could it be useful to promote more collaboration among Member States?***
3. ***How could we ensure effective commercialisation of the strong EU research base?***