Submission to the EC White Paper on Artificial Intelligence (AI)

The importance and opportunities of transatlantic cooperation on AI

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Introduction

Artificial Intelligence (AI) is a potentially transformational technology that will impact how people work and socialize and how economies grow. AI will also have wide ranging international implications, from national security to international trade. In this submission, we address the significance of international cooperation as a vehicle for realizing the ambitious goals in the key areas of AI innovation and regulation set out in the European Commission's White Paper on AI.[1] We focus particularly on the EU relationship with the US, which as both a major EU trading partner and a world leader in AI, is a logical partner for such cooperation.

The White Paper talks to the importance of international cooperation. Specifically, the White Paper observes that the " EU will continue to cooperate with like-minded countries, but also with global players, on AI, based on an approach based on EU rules and values." The White Paper also goes onto note that "the Commission is convinced that international cooperation on AI matters must be based on an approach that promotes the respect of fundamental rights, including human dignity, pluralism, inclusion, non-discrimination and protection of privacy and personal data and it will strive to export its values across the world."[2] The US and the EU as the world's leading economies with strong ties grounded in common values, provide a strong basis for AI governance that can work for the EU and the US, and provide a model globally.

This submission is divided into two parts. The first outlines why transatlantic cooperation on AI is important. Part two identifies three broad areas for transatlantic cooperation on AI: innovation, AI regulation and AI standards, including with respect to data.

1. Why Transatlantic Cooperation on AI

For the EU to be a leader in AI and achieve the goals outlined in the White Paper will require stepping up innovative capacity and regulating in a way sensitive to the risks and opportunities that AI presents. Europe has a strong foundation for AI innovation and application. It has excellent skills, talent and research capacity. [3] However, Europe lags in terms of digital adoption more generally, as well as diffusion of AI.[4] In all of these areas, successful transatlantic cooperation can support the EU's AI goals

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[1] European Commission White Paper on Artificial Intelligence - A European Approach to Excellence and Trust, Brussels 19.2.20 COM(2020) 65 Final

[2] European Commission White Paper on Artificial Intelligence - A European Approach to Excellence and Trust, Brussels 19.2.20 COM(2020) 65 Final

[3] Daniel Castro, Michael McLaughlin, and Eline Chivot, "Who Is Winning the AI Race: China, the EU or the United States?" Center for Data Innovation, August 2019

[4] Jacques Bughin, Jeongmin Seong, James Manyika, Lari Hämäläinen, Eckart Windhagen, and Eric Hazan, "Tackling Europe's Gap in Digital and AI", McKinsey Global Institute Discussion Paper, Feb 7th, 2019

by leveraging comparative advantages on either side of the relationship. and can provide the basis for developing AI that is secure, non-discriminatory and built on common values and democratic norms.

The US is the natural partner for the EU on AI. As the world's leader in AI innovation and investment and with a strong history of working with the EU on economic, security and innovation opportunities, the development of AI should become a new focal point and goal that guides and deepens transatlantic cooperation.

A relationship built on common values that can guide AI

The transatlantic relationship is enduring and important because it is ultimately built on shared values and shared sacrifices. This includes a commitment to democracy, human rights and by extension, a form of governance that is open, transparent, and accountable to citizens.

Shared transatlantic values have guided a common US and EU approach to internet governance so far. For instance, the EU and US have aligned over the importance of an open, neutral environment in which freedom of expression and innovation can thrive, a multi-stakeholder system of internet governance, support for the Internet Governance Forum, and on the need to avoid fragmentation of the internet and strengthening cybersecurity within the context of a free and open internet.[5]

However, the future of internet governance, including with respect to AI, being consistent with such values and norms, cannot be taken for granted.[6] AI is not a single technology but a general purpose technology comprising software and hardware enabling technologies (machine learning, knowledge representation) that can be applied in many ways across every industry sector. China already shows how different political values can guide AI, where AI is being used to monitor and detain ethnic minorities to ensure compliance with CCP instruction. [7] These technologies are being exported to other governments with authoritarian goals; in 2018, Freedom House documented 18 countries that purchased AI surveillance tools from China. [8] China also hosts other countries for multi-week seminars on using surveillance tech.[9] In addition, the sheer economic size of China, its access to population-scaled data sets and its willingness to use state power to boost domestic AI at the expense of AI developed elsewhere, all present unique challenges to the transatlantic vision of how AI innovation and governance should develop.

Transatlantic cooperation on AI can be the foundation for AI governance based on common transatlantic values.

To ensure that AI is built on human rights and democratic norms will require the US and EU to leverage transatlantic economic heft and success around AI innovation. Failure to build and deepen transatlantic cooperation threatens a further splintering of the digital space, and risks ceding ground to China's vision of AI governance.[10]

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[5] Council of the European Union (2014), 'Council conclusions on Internet Governance', http://italia2014.eu/media/3769/council- conclusions-on-internet-governance.pdf
[6] Emily Taylor and Stacie Hoffmann, "EU–US Relations on Internet Governance", Chatham House, November 2019
[7] The White House, "The United States Approach to the Peoples Republic of China", May 2020
[8] https://freedomhouse.org/sites/default/files/10192018_FINAL_FOTN_2018.pdf
[9] https://freedomhouse.org/sites/default/files/10192018_FINAL_FOTN_2018.pdf
[10] O'Hara, K. and Hall, W. (2018), Four Internets: The Geopolitics of Digital Governance, CIGI Papers No. 206, December 2018, https://www.cigionline.org/publications/four-internets-geopolitics-digital-governance

Leveraging the combined economic might of the EU and the US

The transatlantic relationship is the most important economic, people and innovation-focused relationship globally. AI is a new general purpose technology (GPT) that will shape patterns of innovation and economic growth. [11] The success of the transatlantic economic relationship over the next decades will be shaped in part by the extent that the US and EU embrace and become world leaders in AI. Leaders in AI stand to gain outsized benefits economically, which in turn will underpin the power to guide the values and goals of AI.

By many accounts, China is either leading or number two in AI research, leading AI application in at least some industries such as facial recognition. Perhaps more troubling is that Europe may be lagging China on AI.[12] The EU has recognized these challenges and in developing its approach towards China has identified the importance of being a leader in AI, including AI innovation and development, in conjunction with international partners.[13]

China's vision for the economic development of AI is also at odds with transatlantic values of open markets and non-discrimination and competition on a level playing field. In October 2018, President Xi affirmed that China should "achieve world-leading levels"[14] in AI technology and reduce its vulnerable "external [foreign] dependence for key technologies and advanced equipment." This push for independence and support for national AI champions has continued. This has included extensive government subsidies, IP theft and industrial espionage and strategic investments in US and EU AI technology firms that can bolster China's AI goals.

For these reasons, the US and EU must cooperate to leverage their markets, technology and talent to ensure transatlantic leadership on AI, in order to ensure that the economic gains from AI are realized and appropriately distributed, and as a necessary element for achieving broader AI governance goals.

A strategic relationship that matters for AI

AI will have an impact on a broad range of areas of common concern, including national security, climate change and international development. Transatlantic cooperation on AI can create opportunities for deeper EU-US engagement across these issues. For instance, AI will become increasingly important for alliance work in NATO, where AI has potentially wide-ranging military applications, as well as in cybersecurity. [15] Addressing climate change will require new technologies such as battery storage, and more efficient mass transport that will take advantage of AI. And many of the SDG are grounded in expanding access to technology. The economic impact of AI also extends to international trade and will

[11] Erik Brynjolfsson et al., "Artificial Intelligence and the Modern Productivity Paradox: A Clash of Expectations and Statistics", NBER Working Paper no. 24001, October 2017 (revised December 2017)
[12] Daniel Castro, Michael McLaughlin, and Eline Chivot, "Who Is Winning the AI Race: China, the EU or the United States?" Center for Data Innovation, August 2019
[13] European Commission and HR/VP contribution to the European Council, "EU-China – A strategic outlook", JOIN(2019) 5 final, 12 March 2019
[14] Jacques Bughin, Jeongmin Seong, James Manyika, Lari Hämäläinen, Eckart Windhagen, and Eric Hazan, "Tackling Europe's Gap in Digital and AI", McKinsey Global Institute Discussion Paper, Feb 7th, 2019 https://www.mckinsey.com/featured-insights/artificial-intelligence/tackling-europes-gap-in-digital-and-ai
[15] Martin Hagstrom, "Military Applications of Machine Learning and Autonomous Systems", in The Impact of Artificial Intelligence on Strategic Stability and Nuclear Risk, Vol1. Euro-Atlantic Perspectives, (SIPRI, ed. Vincent Boulanin), May 2019, p. 32

require new trade rules and international economic architecture to consolidate a global approach to AI governance grounded in common values.[16] A transatlantic approach to AI is needed to lead the way.

Building transatlantic scale for AI

The scale that can be achieved from US-EU cooperation on AI will affect opportunities for AI innovation and development and regulation. Together the US and EU account for around 50 percent of global GDP and around 770 million people. Together the US and EU cooperation on AI will be a model for global convergence around AI regulations and standards. Transatlantic scale can also guide investment, cooperation over access to resources, computing power and talent. Transatlantic scale can also address the advantages China has from access to its population sized data sets.

2. Opportunities for Transatlantic Cooperation on AI

The following outlines three main areas of focus for transatlantic cooperation on AI. These are around innovation, regulation and standards, including with respect to data. The White Paper also identifies these are priorities for the EU on AI. Each is also a focus for the US government and industry.

Strengthen Transatlantic cooperation on AI Innovation

The US and EU are key centers of AI innovation. These capacities are one area for ambitious transatlantic cooperation. This includes in basic R&D, skills development and investment in AI applications across government and the private sector.[17] The fact that the capacity to innovate will determine whether the EU emerges as a leader in AI. Yet there are challenges. McKinsey identifies EU innovative capacity as a key constraint in developing a world-class AI ecosystem.[18] The AI White Paper grapples with this challenge by aiming to build an 'ecosystem of excellence". The US government has also made AI innovation a key focus of its AI strategy.[19] The aim of increasing total EU investment in AI over the next decade to over Euros 20 billion per year is an important goal, and parallels growing US public and private sector investment in AI.

A transatlantic approach to AI innovation provides an important starting point for cooperation on AI. Transatlantic cooperation can provide a boost to EU goals for building an ecosystem of excellence. For instance, US private sector investment in AI research in Europe is already extensive and should be further encouraged. The US and EU need to expand opportunities for joint AI research collaboration and commercialization. Here, the US has important strengthens including building collaborative partnerships between AI research and industry. Support for such relationships could also be partnered with analysis of sectoral opportunities in Europe to deploy AI.

[16] Joshua Meltzer, "The impact of artificial intelligence on international trade", Brookings Blueprint for the Future of AI, December 2018

[17] European High Level Expert Group, "Policies and Investment Recommendations for Trustworthy AI", 26 June 2019.

[18] Jacques Bughin, Jeongmin Seong, James Manyika, Lari Hämäläinen, Eckart Windhagen, and Eric Hazan, "Tackling Europe's Gap in Digital and AI", McKinsey Global Institute Discussion Paper, Feb 7th, 2019 https://www.mckinsey.com/featured-insights/artificial-intelligence/tackling-europes-gap-in-digital-and-ai

[19] U.S. White House, "American Artificial Intelligence Initiative: Year One Annual Report, February 2020

The following outlines areas for transatlantic cooperation on innovation in AI:

- Think big on AI R&D – develop a CERN approach to AI. Past successful scientific collaborations can also guide opportunities with AI. For instance, CERN – a collaborative European scientific research venture into particle physics has included membership with other non-European countries. Such a framework could be developed for AI, involving contributions by government and the private sector to support joint collaborative efforts, pooling hardware, software and data to work on the most cutting-edge of AI challenges.
- The Commissions' goal to create a lighthouse center for AI research and innovation and expertise in Europe is an excellent initiative. As the EU seeks to streamline and better coordinate AI research underway in many EU states, this provides an opportunity to also build and strengthen innovation links with the US.
- The capacity to lead on innovation will require people with the talent and skills. As David Wipf, a lead researcher at Microsoft Research in Beijing has said, "The future [of AI] is going to be a battle for data and for talent."[20] This imperative should be the basis for scaling up cooperation on skills development and education. It can include facilitating the ability of AI researchers to study and travel and expanding grants awarded by respective science agencies for transatlantic research on AI.
- The US and EU could develop a common approach to open-sourced data sets as one way of expanding access to data. This could include a common approach to open government data and developing the protocols for linking transatlantic data sets. Such an outcome could drive transatlantic research and innovation in AI and improve governance more broadly.

Develop a common approach to AI Regulation

Some regulations and standards will be needed to ensure that AI is developed consistent with underlying values, is functional, interoperable, avoids unnecessary barriers and supports innovation. Divergent approaches to AI regulation and standards can raise barriers to AI cooperation, crimping the full potential of the transatlantic market and potentially splintering AI technologies.

The White Paper identifies "high risk" AI as being in need of regulation. Successful transatlantic cooperation on identifying what constitutes high risk AI could form a key first step in reducing unnecessary divergences in transatlantic AI regulation.

Some regulation will be required as AI is used in novel ways that creates risk of harm. Such regulation can provide business certainty, give consumers confidence that the AI is trustworthy. However, regulation can also raise barriers to the development and application of AI. This underscores the need for a balanced approach to AI regulation, one that takes into account the risks of AI and its benefits, a regulatory process informed by experts and science, that is sufficiently flexible to respond and learn from experiences with AI use-cases. Regulation also needs to be alive to the importance of competition as a driver of AI uptake by business, pointing to the need for regulation to avoiding creating costs that stifle competition, particularly when those costs fall most heavily on SMEs.[21]

[20] David Cyranoski, "China Enters the Battle for AI talent," Nature, January 15, 2018, https://www.nature.com/articles/d41586-018-00604-6

[21] Jacques Bughin, Jeongmin Seong, James Manyika, Lari Hämäläinen, Eckart Windhagen, and Eric Hazan, "Tackling Europe's Gap in Digital and AI", McKinsey Global Institute Discussion Paper, Feb 7th, 2019

The following outlines three steps for building Transatlantic cooperation on AI regulation

1. Develop a common view of the goals of AI regulation

Common transatlantic values can ground transatlantic cooperation on AI regulation. In this respect, the US and EU have expressed similar goals for AI regulation, including on the US side the need for the government to address risks to privacy, individual rights, autonomy and civil liberties".[22] For the EU, the aim is to prevent harm to EU fundamental rights, safety and consumer rights.[23] The US and EU also support OECD AI principles, which provide a common baseline.

As a next step, the EU and the US need to move from high level common principles to specific use-cases where common concerns and opportunities from AI can be identified and principles applied. For instance, there is robust debate in the US regarding the potential for systemic bias in AI-driven decision making, the impact of AI on education and learning outcomes,[24] and how AI can impact privacy.[25]

Assessment of risk and the extent of harm should also be compared in many of these cases. Such opportunities for transatlantic learning can underpin a common approach to assessing and responding to AI risk. '

2. Develop common risk assessment and risk management for AI

Risk assessments which include cost-benefit analysis are central to the development of regulation in the EU and US. Risk assessments share a core feature: the use of information and analysis to improve decisions about the future.[26] While there are differences in how the EU and US assess risk in specific cases, overall risk regulation has been characterized more by similarity than difference.[27] Such commonality provides a strong basis for developing a common understanding of AI risk and risk management practices.

The following provides some comments and observations focused on transatlantic cooperation and alignment:

- AI risk will often be uncertain. The challenge is ensuring that regulators have access to the best information, expert opinion and regulate with high levels of transparency.
- Regulators need to grapple with the interconnectedness of AI risk - how AI risk can be global, underscoring the need for cooperation and coordination to effectively address.
- Regulators also need to consider risk and the extent of harm from AI compared to the status quo. Concerns with AI should not be made independent of the context, including where and how AI is

[22] Draft Memorandum for the Heads of Executive Departments and Agencies, January 2020, https://www.whitehouse.gov/wp-content/uploads/2020/01/Draft-OMB-Memo-on-Regulation-of-AI-1-7-19.pdf
[23] Draft EC AI White Paper, p.17
[24] Andre Perry and Nicole L. Turner, AI is coming to schools and if we're not careful, so will its biases", The Avenue 2019, https://www.brookings.edu/blog/the-avenue/2019/09/26/ai-is-coming-to-schools-and-if-were-not-careful-so-will-its-biases/
[25] Cameron Kerry, "Protecting Privacy in an AI Driver World", Brookings Report, February 2020, https://www.brookings.edu/research/protecting-privacy-in-an-ai-driven-world/
[26] Jonathan B. Wiener and Daniel L. Ribeiro, "Impact Assessment: Diffusion and Integration" in Comparative Law: Understanding the Global Regulatory Process (editors Bignami, Francesca; Zaring, David), Edward Elgar Publishing Limited, 2016
[27] IRGC. (2017). Transatlantic pattern of risk regulation: Implications for international trade and cooperation. Report, Lausanne, EPFL International Risk Governance Center

being used. For instance, some risk of bias in AI based automated decisions should be assessed against human bias when making the same decisions.

- Uncertain risks put the spotlight on the importance of learning. This can happen by mandating regular review of AI regulation where updated information can be considered. It also points to the importance of transatlantic regulatory networks for the diffusion of lessons learned about AI risk and regulation.[28]
- Any cost benefit analysis needs to grapple with the static nature of risk assessments, as the benefits and risks of AI may change with adoption and the dynamic nature of AI systems, pointing to the need for a process that both avoids unnecessarily preempting AI opportunity and also avoiding a free pass on AI. This will require opportunities for experimentation with AI, such as by using regulatory sandboxes and pilot programs such as hackathons and tech sprints.

3. Work together to identify optimal responses to the risk of harm from AI.

In order for AI to be used requires trust in AI. The US recognizes the need for government action that promotes reliable, robust and trustworthy AI.[29] The AI White Paper also emphasizes trustworthy AI. The US and EU should seek to align on optimal approaches to building trust by reducing risk of harm from AI. This will likely require a portfolio of approaches with some new regulation, the application of existing laws and other non-regulatory approaches that could include policy guidance, voluntary consensus standards and voluntary labelling schemes.

It will be important for a risk-based approach to be grounded in science and experience with AI use-cases. For instance, many current AI use-cases build on existing analytical techniques, such as using AI to improve routing and reduce fuel consumption, to improve inventory management, for predictive maintenance and services, such as in the air cargo industry, or speech recognition tools in call management centers. Indeed, a McKinsey report mapping 400 AI use cases across industries and companies estimated that in 69 percent of the use cases, the gains from AI arose from improving performance beyond that provided by other analytic techniques, and only in 16 percent of cases was AI being used in so-called "greenfield" cases.[30] This underscores the importance of regulation being informed by actual AI science and experience with its use. EU engagement with the private sector as part of the HLEG process shows how this process can be developed.[31]

Where AI regulation is needed it should be based on a risk assessment and cost-benefit analysis and targeted to each high-risk category. As noted above, this should include assessment of likelihood and severity of harm compared against the status quo. Where AI provides some risk of harm that is nevertheless less than the alternative, then further consideration should be required to determine whether and how to regulate AI.

[28] Anne-Marie Slaughter, "The Networked Century" (2009) 88 Foreign Affairs 94
[29] Draft Memorandum for the Heads of Executive Departments and Agencies, January 2020, p. 3
[30] Michael Chui et al, "Notes from the AI Frontier: Insights from Hundreds of Use Cases", McKinsey Global Institute Discussion Paper, April 2018
[31] https://ec.europa.eu/futurium/en/ethics-guidelines-trustworthy-ai/register-piloting-process-0

Focus Transatlantic Cooperation on AI Standards

The development of AI standards is a key area for transatlantic cooperation on AI. Where possible, the EU and US should emphasize the development of international standards, such as the ISO/IEC Joint Technical Committee work on Artificial Intelligence.

Where AI standards are developed domestically, the US and EU should work together to minimize unnecessary divergences. This can include harmonization where possible, recognition of conformity assessment by domestic bodies with each other's standards, and developing interoperability mechanisms.

The importance of a cooperative approach to AI standards also needs to be considered in light of China's approach to technology standards broadly, where the CCP is seeking to expand China-specific standards through One Belt One Road, bilateral agreements and in standards bodies. For example, China has been active within the ITU to shape technical standards, which would support its authoritarian vision for internet governance.[32] These developments are a warning sign that a multi-stakeholder future for internet governance is not inevitable.[33] This could produce a so-called "Beijing effect", where China globalizes its approach to AI regulation. Should China succeed in leading AI standards development, this could further isolate the Chinese market from US and EU competitors as well as effect AI Governance in third countries that adopt such standards. The impact of such an approach will also depend on whether the US and EU are able to cooperate, minimize divergence and align where possible on AI regulation.

The US and EU should also work to develop a common approach to access to and use of data. The EU proposes wide ranging new rules on sharing data.[34] To the extent the approach is grounded in improving access to data consistent with common transatlantic values, there is ample opportunities for collaboration. However, there are other aspects of the Commission's approach to data that could close off opportunities for collaboration, depending on how they are pursued in practice. The repeated reference in the White Paper to European technological sovereignty should not become an EU approach to data standards that forecloses data interoperability with the US, or that limit the use of data in the EU. Moreover, given the importance of access to data for current iterations of AI, getting the data strategy right will matter for how successful the EU is with respect to its AI goals.

The following outlines key areas where transatlantic cooperation can help achieve the Commission's key goals with respect to data:

- As outlined above, common transatlantic protocols on how governments make public data sets available could significantly increase data available to European businesses and researchers.
- A review of application of copyright law to copying data sets could increase business certainty on when data sets can be retrained and shared.

[32] Okano-Heijmans, M. and van der Putten, F-P. (2018), 'A United Nations with Chinese characteristics?', Clingendael, https://www.clingendael.org/ sites/default/files/2018-12/China_in_the_UN_1.pdf

[33] Emily Taylor and Stacie Hoffman 2019, "US-EU Relations on Internet Governance", Chatham House Research Paper, November 2019, https://www.chathamhouse.org/sites/default/files/publications/research/2019-11-14-EU-US-Relations-Internet-Governance2.pdf

[34] European Commission, Communications from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions, A European Strategy for Data COM(2020) 66 final,

- Access to data will inevitably raise privacy issues. Clarifying where GDPR may allow data sets to be shared could help business share data.

The Commission has also proposed active international engagement on international data flows based on European values. The US is also a strong supporter of international data flows consistent with other values such as privacy and security. Developing a transatlantic approach to how data is governed internationally will be key. As noted, the WTO e-commerce negotiations provide a window into the opportunities and existing challenges in forging a transatlantic approach to developing new trade rules that matter for AI, including with respect to data flows. As the EU develops it approach to AI (and data), this is the time to also work towards an approach that can build transatlantic cooperation on AI as a means of achieving the EU domestic and international goals.