

The
G7 Research Group
at the Munk School of Global Affairs and Public Policy at Trinity College
in the University of Toronto presents the

2019 G7 Biarritz Summit Second Interim Compliance Report

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“We have meanwhile set up a process and there are also independent institutions monitoring which objectives of our G7 meetings we actually achieve. When it comes to these goals we have a compliance rate of about 80%, according to the University of Toronto. Germany, with its 87%, comes off pretty well. That means that next year too, under the Japanese G7 presidency, we are going to check where we stand in comparison to what we have discussed with each other now. So a lot of what we have resolved to do here together is something that we are going to have to work very hard at over the next few months. But I think that it has become apparent that we, as the G7, want to assume responsibility far beyond the prosperity in our own countries. That’s why today’s outreach meetings, that is the meetings with our guests, were also of great importance.”

Chancellor Angela Merkel, Schloss Elmau, 8 June 2015

G7 summits are a moment for people to judge whether aspirational intent is met by concrete commitments. The G7 Research Group provides a report card on the implementation of G7 and G20 commitments. It is a good moment for the public to interact with leaders and say, you took a leadership position on these issues — a year later, or three years later, what have you accomplished?

Achim Steiner, Administrator, United Nations Development Programme,
in G7 Canada: The 2018 Charlevoix Summit



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3. Digital Economy: Artificial Intelligence

“We will continue to explore ways to advance our work on AI [artificial intelligence] to understand and share, on a regular basis, multidisciplinary research results on artificial intelligence issues and best practices, as well as bringing together international artificial intelligence initiatives.”

Biarritz Strategy for an Open, Free and Secure Digital Transformation

Assessment

	No Compliance	Partial Compliance	Full Compliance
Canada			+1
France			+1
Germany			+1
Italy			+1
Japan			+1
United Kingdom			+1
United States			+1
European Union			+1
Average	+1 (100%)		

Background

Artificial intelligence (AI) is defined as the following, “AI systems are software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal.”²⁶⁷ These systems can derive the processing and reasoning of information through either “symbolic rules or numeric models and can adapt their behaviour by analysing how the environment is affected by their previous actions.”²⁶⁸ The applications of AI can be defined and described in terms of its scope of application. This scope can be either in terms of narrow/weak or general/strong. Narrow AI are systems that can perform one or a few specific tasks.²⁶⁹ General AI are intended to be systems that can perform most activities that humans can do.²⁷⁰ While current AI systems are limited to their application in narrow terms, general AI systems can have broad effects on culture, society and the economy.

At the 2017 Taormina Summit, G7 leaders agreed to the G7 People-Centered Action Plan on Innovation, Skills and Labor which acknowledged the role of AI to drive inclusive economic growth and progress.²⁷¹ The leaders assessed the potential opportunities and challenges for the next product revolution.²⁷² To that end, G7 leaders acknowledged the need for production innovation, developing

²⁶⁷ A definition of Artificial Intelligence: main capabilities and scientific disciplines, European Commission (Brussels) 8 April 2019. Access Date: 7 November 2019. https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=56341

²⁶⁸ A definition of Artificial Intelligence: main capabilities and scientific disciplines, European Commission (Brussels) 8 April 2019. Access Date: 7 November 2019. <https://ec.europa.eu/digital-single-market/en/news/definition-artificial-intelligence-main-capabilities-and-scientific-disciplines>

²⁶⁹ A definition of Artificial Intelligence: main capabilities and scientific disciplines, European Commission (Brussels) 8 April 2019. Access Date: 7 November 2019. https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=56341

²⁷⁰ A definition of Artificial Intelligence: main capabilities and scientific disciplines, European Commission (Brussels) 8 April 2019. Access Date: 7 November 2019. https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=56341

²⁷¹ G7 People-Centered Action Plan on Innovation, Skills and Labor, G7 Information Centre (Toronto) 27 May 2017. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2017taormina/action-plan.html>

²⁷² G7 People-Centered Action Plan on Innovation, Skills and Labor, G7 Information Centre (Toronto) 27 May 2017. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2017taormina/action-plan.html>

knowledge-based capital and enabling infrastructure and evaluating the future of work.²⁷³ The 2017 Taormina Summit marked the first time that the G7 leaders discussed AI.

At the 2018 Charlevoix Summit, G7 leaders agreed to the Charlevoix Common Vision for the Future of Artificial Intelligence.²⁷⁴ The leaders committed to a common approach to addressing issues on the future of AI, with particular emphasis to foster economic growth, societal trust, gender equality and inclusion.²⁷⁵ The leaders acknowledged that developing a human-centric vision of AI requires a predictable and stable policy environment that encompasses multi-stakeholder engagement.²⁷⁶ The leaders encouraged investments in AI technology to create new opportunities for all people and the development of voluntary codes of conduct, standards or guidelines and the sharing of best practises.²⁷⁷ In addition, the leaders committed to promoting investments in research and development that generates public trust while addressing issues relating to accountability, safety, biases and potential misuse.²⁷⁸

At the 2019 Biarritz Summit, the G7, plus Australia, Chile, India, and South Africa agreed to the Biarritz Strategy for an Open Free and Secure Digital Transformation.²⁷⁹ The leaders committed to promoting an open, free and secure digital transformation and recognised the role of the Internet to enable societal and economic development.²⁸⁰ The leaders assessed the potential contributions of AI to provide innovative solutions and progress toward achieving the 2030 Agenda for Sustainable Development and current challenges.²⁸¹ The leaders recognised the potential of AI to transform societies, the global economy, and the future of work to improve the well-being of people, but also the disparate effects regarding privacy and data protection, and the implications for democracy.²⁸² In addition, the leaders also committed to exploring advancements in AI to share and understand best practices as well as to bring together international AI initiatives.²⁸³

²⁷³ G7 People-Centered Action Plan on Innovation, Skills and Labor, G7 Information Centre (Toronto) 27 May 2017. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2017taormina/action-plan.html>

²⁷⁴ Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Information Centre (Toronto) 9 June 2018. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.html>

²⁷⁵ Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Information Centre (Toronto) 9 June 2018. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm>

²⁷⁶ Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Information Centre (Toronto) 9 June 2018. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm>

²⁷⁷ Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Information Centre (Toronto) 9 June 2018. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm>

²⁷⁸ Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Information Centre (Toronto) 9 June 2018. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm>

²⁷⁹ Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Information Centre (Toronto) 26 August 2019. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html>

²⁸⁰ Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Information Centre (Toronto) 26 August 2019. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html>

²⁸¹ Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Information Centre (Toronto) 26 August 2019. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html>

²⁸² Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Information Centre (Toronto) 26 August 2019. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html>

²⁸³ Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Information Centre (Toronto) 26 August 2019. Access Date: 7 November 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html>

Commitment Features

This commitment has two main components.

The first component of this commitment is to “explore ways to advance our work on AI to understand and share multidisciplinary research results on artificial intelligence issues and best practices.” which refers to actions that improve on the understanding of AI and its impacts on society.²⁸⁴ This includes efforts to untangle the implications of AI on different sections or specific industries of society that do not directly relate to technical issues regarding the implementation or development of AI.

“Explore ways” can be achieved through the development of working groups, intergovernmental research programs, or allocating funding for the exploration of AI with regards to multidisciplinary research.

“Share” refers to the distribution and dissemination of research findings. Examples include the research and development of practices for distribution of the results from nationally funded AI research programs, contributions to AI specific forums and research projects and the outcomes of discussions. Thus, to be measured as compliance, G7 leaders must research, develop and create methods to which information from research findings can be shared amongst each other.

“Multidisciplinary research” is understood as research that encompasses more than one area of study. Examples include research on AI from public policy, science and technology policy, health, consumer protection, education, industry and transport.²⁸⁵

“Artificial intelligence issues and best practices” are understood as ideas, concepts and standards that relate to the study of AI and its implications on society as the product of research, study and relevant discussions. Thus, these research results must be developed as the product of learned experiences for specific issues relating to AI. Examples can include methods to ensure “human centric” values in the development of AI, the development of workflows to remove potential biases and/or the best methods of measuring the impact of AI on agricultural and other jobs.

The second component is “bringing together international artificial intelligence initiatives.”²⁸⁶ “Bringing together” refers to taking actions directed at developing international norms, standards, and common approaches to AI. “International artificial intelligence initiatives” is interpreted as initiatives that involve coordination with external partners that facilitate a common pool of research. Examples include supporting Organization for Economic Co-operation and Development policy initiatives on AI, developing international forums and/or partnerships on AI related issues to facilitate knowledge exchange and the establishment of common legal standards on AI issues.²⁸⁷

To achieve full compliance, G7 members must take actions that support at least three of the four parts of the commitment: 1) explore ways to improve their understanding of the issue; 2) explore ways to share results; 3) explore ways to share best practices; or 4) take actions that support the development of international best practices.

²⁸⁴ Digital Transformation in Africa, G7 Information Centre (Toronto) 26 August 2019. Access Date: 15 October 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/digital-transformation.html>

²⁸⁵ OECD AI Policy Observatory: A Platform for AI information, evidence and policy options, OECD (Paris) September 2019. Access Date: 15 October 2019. <https://www.oecd.org/going-digital/ai/about-the-oecd-ai-policy-observatory.pdf>

²⁸⁶ Digital Transformation in Africa, G7 Information Centre (Toronto) 26 August 2019. Access Date: 15 October 2019. <http://www.g7.utoronto.ca/summit/2019biarritz/digital-transformation.html>

²⁸⁷ Canada and France work with international community to support responsible use of artificial intelligence, Innovation, Science and Economic Development Canada (Ottawa) 16 May 2019. Access Date: 15 October 2019. <https://www.canada.ca/en/innovation-science-economic-development/news/2019/05/canada-and-france-work-with-international-community-to-support-responsible-use-of-artificial-intelligence.html>

If only two of four parts of this commitment are fulfilled, members will receive a score of partial compliance. For instance, if a G7 member takes actions toward exploring ways to improve their understanding of the issue and share results, but does not explore ways to share best practices or take actions that support the development of international best practices, the member will receive a score of 0. The same score will be applied if a G7 member explores ways to share results and best practices, but does not examine ways to improve their understanding of the issue or support the development of international best practices; or if the member explores ways to improve their understanding of the issue and share practices, but fails to examine ways to share results or promote the development of international best practices.

A score of -1, no compliance, will be assigned if the G7 member fulfills only one of four parts of the commitment. A score of no compliance will also be assigned if a G7 member takes no action toward any of the four parts of the commitment.

Note: Actions taken between 13 April and 3 June 2020 have been included in this report but were not included in the version sent out for stakeholder feedback.

Scoring Guidelines

-1	G7 member has ONLY taken action toward ONE of the four parts of the commitment, OR has NOT taken any action towards any of the four parts of the commitment.
0	G7 member takes actions toward TWO of the four parts of the commitment and has NOT taken action towards the other parts of the commitment.
+1	G7 member takes actions toward at least THREE of the four parts of the commitment by exploring ways to improve their understanding of the issue, OR exploring ways to share results, OR exploring ways to share best practices, OR taking actions to develop international best practices.

*Compliance Director: Joe Wu
Lead Analyst: Feaven Abidta*

Canada: +1

Canada has fully complied with its commitment to explore ways to improve its understanding of artificial intelligence (AI), as well as to share results and best practices.

On 26 August 2019, Prime Minister Justin Trudeau and French President Emmanuel Macron established the Global Partnership in Artificial Intelligence, in collaboration with several other countries and the Organisation for Economic Co-operation and Development.²⁸⁸ This global partnership will enable policymakers and experts from the industry and academia, to come together to deliberate on further developments in AI and its policy implications.²⁸⁹

On 6 September 2019, Canada's Minister of Innovation, Science and Economic Development Navdeep Bains and Quebec's Minister of International Relations and La Francophonie Nadine Girault announced the creation of a Montreal-based international centre of expertise in AI, as part of

²⁸⁸ Address by Prime Minister Justin Trudeau at the G7 Summit, Office of the Prime Minister (Ottawa) 26 August 2019. Access Date: 15 December 2019. <https://pm.gc.ca/en/news/news-releases/2019/08/26/prime-minister-concludes-productive-g7-leaders-summit-france>

²⁸⁹ G7 Leaders Summit: Digital Economy and Artificial Intelligence, OECD (Paris) 26 August 2019. Access Date: 15 December 2019. <https://www.oecd.org/about/secretary-general/artificial-intelligence-g7-summit-france-august-2019.htm>

the Global Partnership in Artificial Intelligence.²⁹⁰ The Canadian government has committed to investing CAD10 million over five years to support the activities of the centre, while an additional CAD5 million in funding will be provided by the Quebec government.²⁹¹ Once it formally begins its operation, the centre will facilitate collaboration between industry, academia, and civil society, to identify and anticipate issues associated with AI.²⁹² The centre's research and analysis will also be aimed at supporting the responsible development of AI, which is based in ethical values, human rights, innovation, and economic growth.²⁹³

On 10 January 2020, Canada's School of Public Service Scott McNaughton released a podcast series titled "Innovate on Demand: Regulatory Artificial Intelligence" available to the general public, in order to better understand how federal regulators can integrate technologies such as AI and Rules as Code into their work.²⁹⁴ This podcast aims to demystify and improve public understanding of AI policy for all.²⁹⁵

On 14 January 2020, the Government of Canada's Innovation Superclusters Initiative announced ten new AI projects.²⁹⁶ These projects will bring together private companies, academic institutions, and non-for profits organizations, that are examining how artificial intelligence can modernize and enhance productivity in the sectors of shipping, retail trade, aeronautics, and healthcare. The federal government, the Quebec government, and industry partners will invest CAD74.7 million in these projects.²⁹⁷

On 15-16 January 2020, in Toronto, Canada the Canadian Institution for Advance Research, Innovation, Science and Economic Development Canada and the U.S. Consulate General Toronto held the Canada – U.S. AI Symposium on Economic Innovation.²⁹⁸ The Symposium brought together students, researchers, policy makers, government and industry members to discuss the

²⁹⁰ Government of Canada and Government of Quebec announce the creation of an international centre of expertise in Montreal for the advancement of artificial intelligence, Innovation, Science and Economic Development Canada (Ottawa) 6 September 2019. Access Date: 16 December 2019. <https://www.canada.ca/en/innovation-science-economic->

²⁹¹ Government of Canada and Government of Quebec announce the creation of an international centre of expertise in Montreal for the advancement of artificial intelligence, Innovation, Science and Economic Development Canada (Ottawa) 6 September 2019. Access Date: 16 December 2019. <https://www.canada.ca/en/innovation-science-economic->

²⁹² Government of Canada and Government of Quebec announce the creation of an international centre of expertise in Montreal for the advancement of artificial intelligence, Innovation, Science and Economic Development Canada (Ottawa) 6 September 2019. Access Date: 16 December 2019. <https://www.canada.ca/en/innovation-science-economic->

²⁹³ Government of Canada and Government of Quebec announce the creation of an international centre of expertise in Montreal for the advancement of artificial intelligence, Innovation, Science and Economic Development Canada (Ottawa) 6 September 2019. Access Date: 16 December 2019. <https://www.canada.ca/en/innovation-science-economic-development/news/2019/09/government-of-canada-and-government-of-quebec-announce-the-creation-of-an-international-centre-of-expertise-in-montreal-for-the-advancement-of-arti.html>

²⁹⁴ Innovate on Demand: Regulatory Artificial Intelligence, Government of Canada (Ottawa) 10 January 2020. Access Date: 6 April 2020. <https://www.cspc-efpc.gc.ca/podcasts/innovate7-eng.aspx>

²⁹⁵ Innovate on Demand: Regulatory Artificial Intelligence, Government of Canada (Ottawa) 10 January 2020. Access Date: 6 April 2020. <https://www.cspc-efpc.gc.ca/podcasts/innovate7-eng.aspx>

²⁹⁶ Supercluster invests in AI's economic potential for Canadians, Innovation, Science and Economic Development Canada (Ottawa) 14 January 2020. Access Date: 6 April 2020. <https://www.canada.ca/en/innovation-science-economic-development/news/2020/01/supercluster-invests-in-ais-economic-potential-for-canadians.html>

²⁹⁷ Supercluster invests in AI's economic potential for Canadians, Innovation, Science and Economic Development Canada (Ottawa) 14 January 2020. Access Date: 6 April 2020. <https://www.canada.ca/en/innovation-science-economic-development/news/2020/01/supercluster-invests-in-ais-economic-potential-for-canadians.html>

²⁹⁸ Canada-U.S. AI Symposium on Economic Innovation, CIFAR (Toronto) 1 March 2020. Access Date: 27 April 2020. <https://www.cifar.ca/ai/ai-society/canada-us-ai-symposium-on-economic-innovation>

future of work, data governance and regulatory innovations to support the development of competitive AI strategies.²⁹⁹ The participants agreed to cooperate across the private sector, government, academia and civil society to support measures of competitive develop AI technologies that support economic growth and regional development in socially responsible methods, that “cultivate public trust” and address societal concerns.³⁰⁰

On 28 January 2020, the Office of the Privacy Commissioner of Canada announced that it would launch a consultation process to help ensure the appropriate regulation of AI.³⁰¹ Through this process, experts in the field will have an opportunity to provide feedback on how existing federal legislation should potentially be reformed in order enhance the protection of personal data and promote responsible innovation as there continues to be rapid developments in AI.³⁰²

On 1 February 2020, the Canada-UK Artificial Intelligence Initiative released its funding to program participants.³⁰³ The joint initiative launched in June 2019, aimed support AI collaboration to build competitive and resilient economies and maximize social and health benefits.³⁰⁴ Research participants in the initiative will conduct interdisciplinary research within the fields of social sciences and humanities, health and biomedical sciences, and natural sciences and engineering.³⁰⁵

On 24 February 2020, the Minister of Innovation, Science, and Industry, Navdeep Bains and the British High Commissioner to Canada, Susan le Jeune d’Allegeershecque announced that their respective governments would provide an additional investment of CAD5 million and GBP5 million to fund ten international research teams, under the Canada-UK Artificial Intelligence Initiative.³⁰⁶ These research teams will consist of experts from Canada and the UK, who will work on multidisciplinary projects that examine how AI can be harnessed to combat abusive online language, detect and monitor global disease outbreaks, and other purposes.³⁰⁷

²⁹⁹ Canada-U.S. AI Symposium on Economic Innovation, CIFAR (Toronto) 1 March 2020. Access Date: 27 April 2020. <https://www.cifar.ca/ai/ai-society/canada-us-ai-symposium-on-economic-innovation>

³⁰⁰ Canada-U.S. AI Symposium on Economic Innovation, CIFAR (Toronto) 1 March 2020. Access Date: 27 April 2020. <https://www.cifar.ca/ai/ai-society/canada-us-ai-symposium-on-economic-innovation>

³⁰¹ Consultation on the OPC’s Proposals for ensuring appropriate regulation of artificial intelligence, Office of the Privacy Commissioner of Canada (Ottawa) 28 January 2020. Access Date: 7 April 2020.

https://www.priv.gc.ca/en/about-the-opc/what-we-do/consultations/consultation-ai/pos_ai_202001/

³⁰² Consultation on the OPC’s Proposals for ensuring appropriate regulation of artificial intelligence, Office of the Privacy Commissioner of Canada (Ottawa) 28 January 2020. Access Date: 7 April 2020.

https://www.priv.gc.ca/en/about-the-opc/what-we-do/consultations/consultation-ai/pos_ai_202001/

³⁰³ Announcement-Canada-UK Artificial Intelligence Initiative, Canadian Institutes of Health Research (Ottawa) 1 February 2020. Access Date: 6 April 2020. <https://cihr-irsc.gc.ca/e/51520.html>

³⁰⁴ Announcement-Canada-UK Artificial Intelligence Initiative, Canadian Institutes of Health Research (Ottawa) 1 February 2020. Access Date: 6 April 2020. <https://cihr-irsc.gc.ca/e/51520.html>

³⁰⁵ Announcement-Canada-UK Artificial Intelligence Initiative, Canadian Institutes of Health Research (Ottawa) 1 February 2020. Access Date: 6 April 2020. <https://cihr-irsc.gc.ca/e/51520.html>

³⁰⁶ Canada and the United Kingdom Collaborate on responsible artificial intelligence, Government of Canada (Ottawa) 24 February 2020. Access Date: 15 April 2020. <https://www.canada.ca/en/social-sciences-humanities-research/news/2020/02/canada-and-the-united-kingdom-collaborate-on-responsible-artificial-intelligence.html>

³⁰⁷ Canada and the United Kingdom Collaborate on responsible artificial intelligence, Government of Canada (Ottawa) 24 February 2020. Access Date: 15 April 2020. <https://www.canada.ca/en/social-sciences-humanities-research/news/2020/02/canada-and-the-united-kingdom-collaborate-on-responsible-artificial-intelligence.html>

On 1 April 2020, Public Services and Procurement Canada, in partnership with Treasury Board of Canada Secretariat, released a list of AI suppliers that can provide responsible and effective AI products and services to the federal government.³⁰⁸

Canada has taken clear measures to improve its understanding of AI and its impact on society. It has also explored ways to share results and best practices, through its involvement in both the Global Partnership in Artificial Intelligence and the Canada-UK Artificial Intelligence Initiative.

Thus, Canada receives a score of +1.

Analyst: Tiffany Kwok

France: +1

France has fully complied with its commitment to explore ways to improve its understanding of artificial intelligence (AI), as well as to share results and best practices.

On 26 August 2019, Prime Minister Justin Trudeau and French President Emmanuel Macron established the Global Partnership in Artificial Intelligence, in collaboration with several other countries and the Organisation for Economic Co-operation and Development.³⁰⁹ This global partnership will enable policymakers and experts from the industry and academia, to come together to deliberate on further developments in AI and its policy implications.³¹⁰

On 27 September 2019, the Ministry of Finance published the 2020 finance bill, which pledges EU38 million toward research programs on AI.³¹¹ The AI program will reinforce and focus on research collaboration between the public and private sector.³¹²

On 16 October 2019, during the Franco-German Ministerial Council in Toulouse, Germany and France agreed to reach a joint approach in early 2020 on a common data infrastructure and to explore new data sharing initiatives in specific industries.³¹³ A roadmap on AI was presented during the Council.³¹⁴ The four ministries from both sides (in charge of economy and research) finalized the plans for the creation of a “virtual AI network,” with the establishment of a “research link” and a

³⁰⁸ List of interested Artificial Intelligence (AI) Suppliers, Government of Canada (Ottawa) 1 April 2020. Access Date: 7 April 2020. <https://www.canada.ca/en/government/system/digital-government/modern-emerging-technologies/responsible-use-ai/list-interested-artificial-intelligence-ai-suppliers.html>

³⁰⁹ Address by Prime Minister Justin Trudeau at the G7 Summit, Office of the Prime Minister (Ottawa) 26 August 2019. Access Date: 15 December 2019. <https://pm.gc.ca/en/news/news-releases/2019/08/26/prime-minister-concludes-productive-g7-leaders-summit-france>

³¹⁰ G7 Leaders Summit: Digital Economy and Artificial Intelligence, OECD (Paris) 26 August 2019. Access Date: 15 December 2019. <https://www.oecd.org/about/secretary-general/artificial-intelligence-g7-summit-france-august-2019.htm>

³¹¹ Baisser Les Impôts, Préparer L’Avenir 2020, Ministry of Finance (Paris) 27 September 2019. Access Date: 12 December 2019. https://minefi.hosting.augure.com/Augure_Minefi/r/ContenuEnLigne/Download?id=1DC53905-71C2-4CC9-86C6-4B9CC24CF246&filename=Dossier%20de%20presse%20-%20PLF%202020.pdf

³¹² Baisser Les Impôts, Préparer L’Avenir 2020, Ministry of Finance (Paris) 27 September 2019. Access Date: 12 December 2019. https://minefi.hosting.augure.com/Augure_Minefi/r/ContenuEnLigne/Download?id=1DC53905-71C2-4CC9-86C6-4B9CC24CF246&filename=Dossier%20de%20presse%20-%20PLF%202020.pdf

³¹³ Franco-German Ministerial Council: new roadmap on economic and financial cooperation, Federal Ministry of Finance (Berlin) 16 October 2019. Access Date: 30 November 2019. <https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Europe/Articles/2019-10-16-franco-german-ministerial-council.html>

³¹⁴ Franco-German Ministerial Council: new roadmap on economic and financial cooperation, Federal Ministry of Finance (Berlin) 16 October 2019. Access Date: 30 November 2019. <https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Europe/Articles/2019-10-16-franco-german-ministerial-council.html>

“business” link, to facilitate the transfer of skills and technologies between companies and research institutions on both sides.³¹⁵ A joint working group was also set up to identify common methods for bilateral and multilateral cooperation with the objective of reaching coordinated action on AI standardisation and a common position on AI legislation.³¹⁶

On 28-30 October 2019, France hosted the Global Forum on AI for Humanity in Paris.³¹⁷ This forum served as the formal launch pad for Global Partnership on AI and was attended by policy makers, experts from the industry and academia, and civil society representatives.³¹⁸ Participants explored and discussed the various opportunities and challenges associated with AI.³¹⁹ Participants also deliberated on the best methods and tools to address the challenges raised by AI.³²⁰ At the end of the forum, President Macron also acknowledged the importance of further examining the impact that AI has had on society.³²¹

On 4 November 2019, the Ministry of Environment published a General Commission for Sustainable Development report, which detailed the benefits of AI to carry out effective data processing and for public policy makers.³²²

On 12 November 2019, during the Paris Peace Forum, Minister for Europe and Foreign Affairs Jean-Yves Le Drian opened the roundtable session on the Alliance for Multilateralism.³²³ The Minister reaffirmed the importance of multilateral approaches to digital technology such as AI to appropriately address issues concerning cyberspace which includes a multitude of actors.³²⁴

On 22-23 November 2019, the Secretary of State to the Minister for Europe and Foreign Affairs Jean-Baptiste Lemoyne attended the G20 meeting of Foreign Affairs Ministers in Nagoya, Japan.³²⁵

³¹⁵ Roadmap for a Research and Innovation Network on Artificial Intelligence between the Governments of the French Republic and the Federal Republic of Germany, Federal Ministry of Education and Research (Berlin) 16 October 2019. Access Date: 5 December 2019. https://www.bmbf.de/files/191016_Roadmap_FRA_GER_AI_Network.pdf

³¹⁶ Franco-German Minister Council: new roadmap on economic and financial cooperation, Federal Ministry of Finance (Berlin) 16 October 2019. Access Date: 30 November 2019. <https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Europe/Articles/2019-10-16-franco-german-ministerial-council.html>

³¹⁷ Global Forum on AI for Humanity, Embassy of France in Washington DC (Paris) 6 November 2019. Access Date: 12 December 2019. <https://franceintheus.org/spip.php?article9413>

³¹⁸ Global Forum on AI for Humanity, Embassy of France in Washington DC (Paris) 6 November 2019. Access Date: 12 December 2019. <https://franceintheus.org/spip.php?article9413>

³¹⁹ Global Forum on AI for Humanity, Embassy of France in Washington DC (Paris) 6 November 2019. Access Date: 12 December 2019. <https://franceintheus.org/spip.php?article9413>

³²⁰ Global Forum on AI for Humanity, Embassy of France in Washington DC (Paris) 6 November 2019. Access Date: 12 December 2019. <https://franceintheus.org/spip.php?article9413>

³²¹ Global Forum on AI for Humanity, Embassy of France in Washington DC (Paris) 6 November 2019. Access Date: 12 December 2019. <https://franceintheus.org/spip.php?article9413>

³²² General Commission for Sustainable Development, Ministry of Environment (Paris) 4 November 2019. Access Date: 14 December 2019. <https://www.ecologique-solidaire.gouv.fr/sites/default/files/Th%C3%A9ma%20-%20Challenge%20RST-Analytics%20.pdf>

³²³ Paris Peace Forum Roundtable session at the Alliance for Multilateralism, Ministry for Europe and Foreign Affairs (Paris) 12 November 2019. Access Date: 12 December 2019. <https://www.diplomatie.gouv.fr/en/our-ministers/jean-yves-le-drian/speeches/article/paris-peace-forum-round-table-session-at-the-alliance-for-multilateralism>

³²⁴ Paris Peace Forum Roundtable session at the Alliance for Multilateralism, Ministry for Europe and Foreign Affairs (Paris) 12 November 2019. Access Date: 12 December 2019. <https://www.diplomatie.gouv.fr/en/our-ministers/jean-yves-le-drian/speeches/article/paris-peace-forum-round-table-session-at-the-alliance-for-multilateralism>

³²⁵ G20 Jean-Baptiste Lemoyne’s participation in the G20 Meeting of Foreign Affairs Ministers, Ministry for Europe and Foreign Affairs (Paris) 23 November 2019. Access Date: 14 December 2019. <https://www.diplomatie.gouv.fr/en/french-foreign-policy/economic-diplomacy-foreign-trade/news/article/g20-jean-baptiste-lemoyne-s-participation-in-the-g20-meeting-of-foreign-affairs>

The minister highlighted the regulatory challenges relating to the digital economy, particularly in the areas of corporate tax, AI, and data protection.³²⁶

On 28 November 2019, the French government released the results and findings of the first six AI projects proposed for public service.³²⁷

On 15 January 2020, the French government announced a public call for innovative projects that would examine how AI can be implemented to improve the healthcare system, particularly with regards to medical diagnoses and the management of health data.³²⁸

On 18 February 2020, the government launched the French National Institute for Research in digital sciences (Inria) under the project “Ambition Inria 2023.”³²⁹ Through this project, Inria will be undertake research projects that focus on how digital technology, digital security, AI, and quantum computing, can address contemporary challenges.³³⁰ This project forms part of the foundation for France’s digital strategy to speed up France’s scientific and technological leadership in digital technology, as part of a broader Europe wide approach.³³¹

On 27 February 2020, France’s AI Strategy Report was updated to note that Inria would play a leading role in the national AI strategy and will conduct research on AI and provide annual reports on its coordination activities to the ministerial steering committee of the national AI strategy.³³²

On 5 March 2020, the AI France Summit was held in Paris by TECH IN France, in partnership with the Ministry of Economy and Finance.³³³ The summit brought together researchers, business officials, and civil servants, to discuss various topics, such as the impact of AI on work and society.³³⁴

France has taken clear measures to improve its understanding of AI and its impact on society through its funding of research projects and forums on AI. It has also explored ways to share results and best practices, through its participation in the Global Partnership in Artificial Intelligence.

³²⁶ G20 Jean-Baptiste Lemoyne’s participation in the G20 Meeting of Foreign Affairs Ministers, Ministry for Europe and Foreign Affairs (Paris) 23 November 2019. Access Date: 14 December 2019. <https://www.diplomatie.gouv.fr/en/french-foreign-policy/economic-diplomacy-foreign-trade/news/article/g20-jean-baptiste-lemoyne-s-participation-in-the-g20-meeting-of-foreign-affairs>

³²⁷ Proposed Experimented Projects for Public Service, Government of France (Paris) 28 November 2019. Access Date: 17 December 2019. <https://static.data.gouv.fr/resources/appel-a-manifestation-dinteret-ia-ndeg1/20191213-134819/20191128-pitch.pdf>

³²⁸ Call for Projects: Let’s innovate to improve the healthcare system thanks to artificial intelligence, Government of France (Paris) 15 January 2020. Access Date: 9 April 2020. <https://www.gouvernement.fr/appel-a-projets-innovons-pour-ameliorer-le-systeme-de-sante-grace-a-l-intelligence-artificielle>

³²⁹ Inria: for scientific, technological and industrial leadership in digital technology, French government News 24 February 2020. Access Date: 10 April 2020. <https://www.gouvernement.fr/en/inria-for-scientific-technological-and-industrial-leadership-in-digital-technology>

³³⁰ Inria: for scientific, technological and industrial leadership in digital technology, French government News 24 February 2020. Access Date: 10 April 2020. <https://www.gouvernement.fr/en/inria-for-scientific-technological-and-industrial-leadership-in-digital-technology>

³³¹ Inria: for scientific, technological and industrial leadership in digital technology, French government News 24 February 2020. Access Date: 10 April 2020. <https://www.gouvernement.fr/en/inria-for-scientific-technological-and-industrial-leadership-in-digital-technology>

³³² France AI Strategy Report, European Commission (Brussels) 27 February 2020. Access date: 10 April 2020. https://ec.europa.eu/knowledge4policy/ai-watch/france-ai-strategy-report_en

³³³ AI France Summit, AI France Summit (Paris) 5 March 2020. Access Date: 10 April 2020. <https://www.aifrancesummit.fr/>

³³³ Opinion of the Data Ethics Commission, Data Ethics Commission of the Federal Government (Berlin) 10 October 2019. Access Date: 30 November 2019.

³³⁴ AI France Summit, AI France Summit (Paris) 5 March 2020. Access Date: 10 April 2020. <https://www.aifrancesummit.fr/>

Thus, France has received a score of +1.

Analyst: Jessie Choden Namgyal

Germany: +1

Germany has fully complied with its commitment to explore ways to advance its understanding of artificial intelligence (AI) and share, on a regular basis, multidisciplinary research results on AI issues and best practices, as well as bringing together international AI initiatives.

On 16 October 2019, during the Franco-German Ministerial Council in Toulouse, Germany and France agreed to reach a joint approach in early 2020 on a common data infrastructure and to explore new data sharing initiatives in specific industries.³³⁵ A roadmap on AI was presented during the Council.³³⁶ The four ministries from both sides (in charge of economy and research) finalized the plans for the creation of a “virtual AI network,” with the establishment of a “research link” and a “business” link, to facilitate the transfer of skills and technologies between companies and research institutions on both sides.³³⁷ A joint working group was also set up to identify common methods for bilateral and multilateral cooperation with the objective of reaching coordinated action on AI standardisation and a common position on AI legislation.³³⁸

On 23 October 2019, Germany’s federally sponsored Data Ethics Commission published a report that sets out recommendations for how data and algorithmic development should happen in regard to AI.³³⁹ The German government set up the commission in 2018 to develop ethical guidelines with respect to AI and recommendations for protecting individual rights.³⁴⁰

On 10-11 November 2019, during a Cabinet retreat in Meseberg, senior officials from the German government and industry experts discussed concerns relating to AI, particularly with respect to democracy.³⁴¹ For instance, they addressed the potential use of “deepfakes” during democratic elections – which refers to when AI is used to produce fake videos and audio that appear to be

³³⁵ Franco-German Ministerial Council: new roadmap on economic and financial cooperation, Federal Ministry of Finance (Berlin) 16 October 2019. Access Date: 30 November 2019. <https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Europe/Articles/2019-10-16-franco-german-ministerial-council.html>

³³⁶ Franco-German Ministerial Council: new roadmap on economic and financial cooperation, Federal Ministry of Finance (Berlin) 16 October 2019. Access Date: 30 November 2019. <https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Europe/Articles/2019-10-16-franco-german-ministerial-council.html>

³³⁷ Roadmap for a Research and Innovation Network on Artificial Intelligence between the Governments of the French Republic and the Federal Republic of Germany, Federal Ministry of Education and Research (Berlin) 16 October 2019. Access Date: 5 December 2019. https://www.bmbf.de/files/191016_Roadmap_FRA_GER_AI_Network.pdf

³³⁸ Franco-German Minister Council: new roadmap on economic and financial cooperation, Federal Ministry of Finance (Berlin) 16 October 2019. Access Date: 30 November 2019. <https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Europe/Articles/2019-10-16-franco-german-ministerial-council.html>

³³⁹ Opinion of the Data Ethics Commission, Data Ethics Commission of the Federal Government (Berlin) 10 October 2019. Access Date: 30 November 2019. https://www.bmjv.de/SharedDocs/Downloads/DE/Themen/Fokusthemen/Gutachten_DEK_EN.pdf?__blob=publicationFile&v=1

³⁴⁰ Opinion of the Data Ethics Commission, Data Ethics Commission of the Federal Government (Berlin) 10 October 2019. Access Date: 30 November 2019. https://www.bmjv.de/SharedDocs/Downloads/DE/Themen/Fokusthemen/Gutachten_DEK_EN.pdf?__blob=publicationFile&v=1

³⁴¹ Government retreat focuses on digital issues, Press and Information Office of the Federal Government (Berlin), 20 November 2019. Access Date: 30 November 2019. <https://www.bundesregierung.de/breg-en/news/digital-klausur-meseberg-1693590>

authentic.³⁴² Officials and experts also discussed strategies that could be undertaken in order to address these challenges that AI poses to democracy.³⁴³

On 2 December 2019, the Federal Ministry for Economic Affairs and Energy launched the “Regulatory Sandboxes Innovation Prize.”³⁴⁴ The Ministry said the project will support innovation with regulation exemptions or “experimentation clauses” for a “limited time” where new and emerging technologies and their business models are tested in a “real life” environment.³⁴⁵ These regulatory “Sandboxes” will allow for testing of compatibility of legal and regulatory frameworks and new technologies to develop insights where for legal framework improvement.³⁴⁶ These regulatory sandboxes will be used applied to test technologies such as self-driving cars, telemedicine and new e-public administration models.³⁴⁷

On 5 December 2019, during an interview conducted by the German broadcasting service Deutsche Welle, Ina Schifferdecker, a junior minister in Germany’s Federal Ministry of Education and Research, defended the “trustworthiness” of AI and technology in general.³⁴⁸ Junior minister Schifferdecker also called for an interdisciplinary approach to developing AI, involving business, science and education sectors.³⁴⁹

On 17 January 2020, the German government and the state of Berlin announced that they would be funding the establishment of a new AI research centre.³⁵⁰ The two existing AI research centres at the

³⁴² Government retreat focuses on digital issues, Press and Information Office of the Federal Government (Berlin), 20 November 2019. Access Date: 30 November 2019. <https://www.bundesregierung.de/breg-en/news/digital-klausur-meseberg-1693590>

³⁴³ Government retreat focuses on digital issues, Press and Information Office of the Federal Government (Berlin), 20 November 2019. Access Date: 30 November 2019. <https://www.bundesregierung.de/breg-en/news/digital-klausur-meseberg-1693590>

³⁴⁴ Minister Altmaier: “Spotlighting regulatory sandboxes” - Economic Affairs Ministry awards innovation prize for testing environments for innovation and regulation, Federal Ministry for Economic Affairs and Energy (Berlin) 2 December 2019. Access Date: 12 December 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20191202-altmaier-spotlighting-regulatory-sandboxes.html>

³⁴⁵ Minister Altmaier: “Spotlighting regulatory sandboxes” - Economic Affairs Ministry awards innovation prize for testing environments for innovation and regulation, Federal Ministry for Economic Affairs and Energy (Berlin) 2 December 2019. Access Date: 12 December 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20191202-altmaier-spotlighting-regulatory-sandboxes.html>

³⁴⁶ Minister Altmaier: “Spotlighting regulatory sandboxes” - Economic Affairs Ministry awards innovation prize for testing environments for innovation and regulation, Federal Ministry for Economic Affairs and Energy (Berlin) 2 December 2019. Access Date: 12 December 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20191202-altmaier-spotlighting-regulatory-sandboxes.html>

³⁴⁷ Minister Altmaier: “Spotlighting regulatory sandboxes” - Economic Affairs Ministry awards innovation prize for testing environments for innovation and regulation, Federal Ministry for Economic Affairs and Energy (Berlin) 2 December 2019. Access Date: 12 December 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20191202-altmaier-spotlighting-regulatory-sandboxes.html>

³⁴⁸ Minister, what's a European artificial intelligence?, Deutsche Welle (Bonn) 5 December 2019. Access Date: 10 December 2019. https://www.dw.com/en/minister-whats-a-european-artificial-intelligence/a-51599207?maca=en-gk_volltext_AppleNews_scitech-16401-xml-atom

³⁴⁹ Minister, what's a European artificial intelligence?, Deutsche Welle (Bonn) 5 December 2019. Access Date: 10 December 2019. https://www.dw.com/en/minister-whats-a-european-artificial-intelligence/a-51599207?maca=en-gk_volltext_AppleNews_scitech-16401-xml-atom

³⁵⁰ ³⁵⁰ Novel cutting-edge AI research Centre in Berlin is funded with millions of euros by the German Government and the State of Berlin, The German Federal Ministry of Education and Research (Berlin), 17 January 2020. Access Date: 9 March 2019 https://www.research-in-germany.org/news/2020/1/2020-01-17_Novel_cutting-edge_AI_research_Centre_in_Berlin_is_funded_with_millions_of_euros_by_the_German_Government_and_the_State_of_Berlin.html

Technische Universität Berlin, the Berlin Big Data Center and the Berlin Centre for Machine Learning, will be merged in the newly created Berlin Institute for the Foundation of Learning.³⁵¹

On 7 February 2020, the German consulate in New York hosted an event which examined AI ethics.³⁵² The event examined current trends and practices in effectively applying the AI ethics principles of explainability and enforceability.³⁵³ Other topics of discussion included social media, big data, and data sovereignty.³⁵⁴

Germany has taken actions to enhance its understanding of AI, through pursuing various research initiatives and other funded projects. Furthermore, it has also worked with other G7 members, such as France, to further the means of exploring and sharing its results of AI research development and best practices.

Thus, Germany has received a score of +1.

Analyst: Henry Luo

Italy: +1

Italy has fully complied with its commitment to explore ways to improve its understanding of artificial intelligence (AI), as well as to share results and best practices.

On 13 September 2020, the Ministry of Economic Development closed the public consultation period for “Intelligenza Artificiale Verso una strategia nazionale” (National Strategy for Artificial Intelligence).³⁵⁵ The National Strategy for Artificial Intelligence identifies nine objectives including: increasing public and private collaboration; developing a research and innovation ecosystem; supporting the adoption of digital technologies; placing AI in the workforce; consolidating an ethical regulatory framework; promoting trust and awareness in AI among citizens and fostering European and International cooperation for responsible and inclusive AI.³⁵⁶

On 22 November 2019, Italian President Conte gave a speech at the “Conferenza statuto etico e giuridico dell’intelligenza artificiale” (Conference on the ethical and legal status of artificial intelligence) in the Chamber of Deputies.³⁵⁷ In his speech, President Comte called for the need to

³⁵¹ Novel cutting-edge AI research Centre in Berlin is funded with millions of euros by the German Government and the State of Berlin, The German Federal Ministry of Education and Research (Berlin), 17 January 2020. Access Date: 9 March 2019 https://www.research-in-germany.org/news/2020/1/2020-01-17_Novel_cutting-edge_AI_research_Centre_in_Berlin_is_funded_with_millions_of_euros_by_the_German_Government_and_the_State_of_Berlin.html

³⁵² For Better or for Worse? Peter Dabrock Debates AI Ethics, The German Consulates General in the United States (New York), 7 February 2020. Access Date: 9 March 2019. <https://www.germany.info/us-en/embassy-consulates/newyork/-/2305080>

³⁵³ For Better or for Worse? Peter Dabrock Debates AI Ethics, The German Consulates General in the United States (New York), 7 February 2020. Access Date: 9 March 2019. <https://www.germany.info/us-en/embassy-consulates/newyork/-/2305080>

³⁵⁴ For Better or for Worse? Peter Dabrock Debates AI Ethics, The German Consulates General in the United States (New York), 7 February 2020. Access Date: 9 March 2019. <https://www.germany.info/us-en/embassy-consulates/newyork/-/2305080>

³⁵⁵ Consultazione sulla Strategia nazionale per l’Intelligenza Artificiale, Governo Italiano (Rome), 5 September 2019. Access Date: 2 May 2020. <http://www.governo.it/it/articolo/consultazione-sulla-strategia-nazionale-l-intelligenza-artificiale/12694>

³⁵⁶ Consultazione sulla Strategia nazionale per l’Intelligenza Artificiale, Governo Italiano (Rome), 5 September 2019. Access Date: 2 May 2020. <http://www.governo.it/it/articolo/consultazione-sulla-strategia-nazionale-l-intelligenza-artificiale/12694>

³⁵⁷ Intervento del Presidente Conte alla Conferenza sullo statuto etico e giuridico dell’intelligenza artificiale, Presidenza del Consiglio dei Ministri (Rome), 22 November 2019. Access Date: 2 May 2020. <http://www.governo.it/it/articolo/intervento-del-presidente-conte-alla-conferenza-sullo-statuto-etico-e-giuridico-dell>

address AI from a regulatory and political point of view to preserve the role for the human in society and to protect their “cultural and material wealth.”³⁵⁸ President Conte also called for the study and research to address the needs of small and medium size businesses from the impacts of AI and technological innovation.³⁵⁹

On 28 February 2020, in Rome, Italy, the Italian Government alongside the Pontifical Academy for Life of the Vatican City, Microsoft, IBM, and the FAO signed the “Rome Call for AI Ethics.”³⁶⁰ The document aims to support the development of an ethical approach to AI which “promotes a sense of responsibility” for governments, organizations and institutions which serve human creativity.³⁶¹

On 2 March 2020, the UK-Italy robotics and AI research collaboration workshop between the UK Turing Institute, Consorzio Interuniversitario Nazionale per Informatica (CINI) – Laboratorio Nazionale di Artificial Intelligence and Intelligent Systems, Centro di Competenza ad Alta Specializzazione in Industria 4.0 e Robotica (Artes 4.0) and Istituto Italiano di Tecnologia postponed its workshop due to be held on 18-19 March 2020 due to COVID-19.³⁶² The workshop was to be held at the residence of the British Ambassador in Rome.³⁶³ The workshop aimed to bring together leading researchers in AI from Italy and the UK to identify topics of collaboration and establish a basis for future joint venture activities in AI.³⁶⁴

On 14 January 2020, CINI and NVIDIA signed a three-year joint collaboration partnership aimed to accelerate AI research and commercial adoption across Italy.³⁶⁵ The initiative has an estimated value of EUR2 million over three years.³⁶⁶ The initiative will create a local research hub at the University of Modena and Reggio Emilia (Unimore) and aims to train students, nurture start-ups and spread adoption of AI technology in industry.³⁶⁷

On 23 March 2020, the government of Italy announced the “Innova per l’Italia” initiative, which encourages companies, universities, research centers, and other organizations to contribute products

³⁵⁸ Intervento del Presidente Conte alla Conferenza sullo statuto etico e giuridico dell’intelligenza artificiale, Presidenza del Consiglio dei Ministri (Rome), 22 November 2019. Access Date: 2 May 2020.

<http://www.governo.it/it/articolo/intervento-del-presidente-conte-alla-conferenza-sullo-statuto-etico-e-giuridico-dell>

³⁵⁹ Intervento del Presidente Conte alla Conferenza sullo statuto etico e giuridico dell’intelligenza artificiale, Presidenza del Consiglio dei Ministri (Rome), 22 November 2019. Access Date: 2 May 2020.

<http://www.governo.it/it/articolo/intervento-del-presidente-conte-alla-conferenza-sullo-statuto-etico-e-giuridico-dell>

³⁶⁰ AI ethics backed by Pope and tech giants in new plan, BBC (London), 28 February 2020. Access Date 27 April 2020. <https://www.bbc.com/news/technology-51673296>

³⁶¹ Rome Call for AI Ethics, Pontifical Academy for Life (Vatican City), 28 February 2020. Access Date: 27 April 2020

[http://www.academyforlife.va/content/dam/pav/documenti%20pdf/2020/CALL%2028%20febbraio/AI%20Rome%20Ca](http://www.academyforlife.va/content/dam/pav/documenti%20pdf/2020/CALL%2028%20febbraio/AI%20Rome%20Call%20x%20firma_DEF_DEF_.pdf)

³⁶² UK-Italy robotics and AI research collaboration workshop, The Alan Turing Institute (London), 2 March 2020. Access Date: 2 May 2020. <https://www.turing.ac.uk/events/uk-italy-robotics-and-ai-research-collaboration-workshop>

³⁶³ UK-Italy robotics and AI research collaboration workshop, The Alan Turing Institute (London), 2 March 2020. Access Date: 2 May 2020. <https://www.turing.ac.uk/events/uk-italy-robotics-and-ai-research-collaboration-workshop>

³⁶⁴ UK-Italy robotics and AI research collaboration workshop, The Alan Turing Institute (London), 2 March 2020. Access Date: 2 May 2020. <https://www.turing.ac.uk/events/uk-italy-robotics-and-ai-research-collaboration-workshop>

³⁶⁵ Italy Forges AI Future in Partnership with NVIDIA, NVIDIA (Santa Clara), 15 January 2020. Access Date: 2 May 2020. <https://blogs.nvidia.com/blog/2020/01/15/italy-ai-nvaitc/>

³⁶⁶ La prima sede italiana di NVIDIA AI Technology Center apre in Unimore, Università degli Studi di Modena e Reggio Emilia Magazine (Modena), 14 January 2020, Access Date: 2 May 2020.

<https://www.magazine.unimore.it/site/home/notizie/articolo820052606.html>

³⁶⁷ Italy Forges AI Future in Partnership with NVIDIA, NVIDIA (Santa Clara), 15 January 2020. Access Date: 2 May 2020. <https://blogs.nvidia.com/blog/2020/01/15/italy-ai-nvaitc/>

and technologies that can help the fight against COVID-19.³⁶⁸ Through this initiative, the Italian government is seeking to utilize artificial intelligence and other technology to more effectively monitor and contain the spread of the virus.³⁶⁹

Italy has taken measures to enhance its understanding of AI and has attempted to /worked to explore ways to share results or best practices relating to further developments in AI. It has also taken actions that would promote the development of international best practises.

Thus, Italy receives a score of +1.

Analyst: Tigran Abelyan

Japan: +1

Japan has fully complied with its commitment to improve its understanding of artificial intelligence (AI) as well as explore ways to share results and best practices.

On 29 August 2019, Parliamentary Vice-Minister for Foreign Affairs of Japan Kenji Yamada committed to working with United Nations Educational, Scientific and Cultural Organization (UNESCO) for AI application and capacity-building in Africa, at the Seventh Tokyo International Conference for African Development (TICAD).³⁷⁰ The main focus of TICAD was to promote business for both countries involved, with the theme of ‘Advancing Africa’s development through people, technology and innovation’.³⁷¹ The panel discussion revolved around African AI prospects and challenges, and it also explored how AI could potentially be used in areas of disaster reduction.³⁷² Japan also committed to continuing to work with and support UNESCO as it develops ethical guidelines for AI.³⁷³

On 19 September 2019, at the Alan Turing Institute in London, the United Kingdom government in partnership with the Japanese government held a workshop in the fields of robotics, AI and the ethical use of data.³⁷⁴ The workshop involved over 130 participants including academic researchers from Japan and industry representatives from Japan and the UK.³⁷⁵ The workshop recognised the need to share and develop solutions on using data legally, ethically and safely while facilitating

³⁶⁸Innova per l’Italia: technology, research and innovation against the COVID emergency, Ministry for Technological Innovation and Digitization (Rome), 23 March 2020. Access Date: 2 April 2020. <https://innovazione.gov.it/innova-per-l-italia-technology-research-and-innovation-against-the-covid-emergency/>

³⁶⁹Innova per l’Italia: technology, research and innovation against the COVID emergency, Ministry for Technological Innovation and Digitization (Rome), 23 March 2020. Access Date: 2 April 2020. <https://innovazione.gov.it/innova-per-l-italia-technology-research-and-innovation-against-the-covid-emergency/>

³⁷⁰Japan renews commitment to UNESCO through enhanced cooperation on artificial intelligence and cultural diversity, UNESCO (Paris) 4 September 2019. Access Date: 18 November 2019. <https://en.unesco.org/news/japan-renews-commitment-unesco-through-enhanced-cooperation-artificial-intelligence-and>

³⁷¹The Seventh Tokyo International Conference on African Development, Ministry of Foreign Affairs (Tokyo) 4 September 2019. Access Date: 18 November 2019. <https://www.mofa.go.jp/files/000521256.pdf>

³⁷²The Seventh Tokyo International Conference on African Development, Ministry of Foreign Affairs (Tokyo) 4 September 2019. Access Date: 18 November 2019. <https://www.mofa.go.jp/files/000521256.pdf>

³⁷³TICAD7 official side event “Panel Discussion on AI Utilization,” Ministry of Foreign Affairs of Japan (Tokyo) 29 August 2019. Access Date: 18 November 2019. https://www.mofa.go.jp/pr_pd/mcc/page4e_001090.html

³⁷⁴UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

³⁷⁵UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

technological breakthroughs in scalable deployment of algorithms.³⁷⁶ The participants identified key potential impact areas for AI and robotics including “sustaining the health of aging populations; infrastructure inspection repair and maintenance in extreme environment; mitigating climate change; and managing transport systems within smart cities.”³⁷⁷

On 10-11 October 2019, during the tenth U.S.-Japan Policy Cooperation Dialogue on the Internet Economy in Tokyo, the US and Japan emphasised their commitment to an open, interoperable, reliable and secure internet and the global digital economy policy environment.³⁷⁸ The dialogue included discussions with public and private sector representatives on “public-private partnerships regarding the social implementation of artificial intelligence (AI) in a manner that fosters public trust in AI.”³⁷⁹ The U.S. and Japan reaffirmed their commitment to international policy discussions for an inclusive, open and transparent system of internet governance based on a multi-stakeholder approach.³⁸⁰ Furthermore, both countries also emphasised the importance of sharing best practises of the results of social implementation on AI at international forums.³⁸¹

On 3 December 2019, in Paris, France, the UNESCO held a roundtable on the topic of the “Changing Relationship between Artificial Intelligence and Humans.”³⁸² The roundtable is part of a series of events hosted by the UNESCO with funding from the Ministry of Education, Culture, Sports, Science and Technology of Japan.³⁸³ The roundtable aimed to address issues relating to AI assisted decision making and the impact of AI on human communications for policy makers, researchers, and the general public.³⁸⁴

³⁷⁶ UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

³⁷⁷ UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

³⁷⁸ Joint Statement on the 10th U.S.- Japan Policy Cooperation Dialogue on the Internet Economy, Ministry of Economy Trade and Industry of Japan (Tokyo). 11 October 2019. Access Date: 31 December 2019. <https://www.meti.go.jp/press/2019/10/20191018005/20191018006-2.pdf>

³⁷⁹ Tenth U.S.-Japan Policy Cooperation Dialogue on the Internet Economy Held, Ministry of Economy Trade and Industry (Tokyo) 18 October 2019. Access Date: 31 December 2019. https://www.meti.go.jp/english/press/2019/1018_005.html

³⁸⁰ Joint Statement on the 10th U.S.- Japan Policy Cooperation Dialogue on the Internet Economy, Ministry of Economy Trade and Industry of Japan (Tokyo). 11 October 2019. Access Date: 31 December 2019. <https://www.meti.go.jp/press/2019/10/20191018005/20191018006-2.pdf>

³⁸¹ Joint Statement on the 10th U.S.- Japan Policy Cooperation Dialogue on the Internet Economy, Ministry of Economy Trade and Industry of Japan (Tokyo). 11 October 2019. Access Date: 31 December 2019. <https://www.meti.go.jp/press/2019/10/20191018005/20191018006-2.pdf>

³⁸² Roundtable on “Changing Relationships between Artificial Intelligence and Humans,” UNESCO (Paris) 3 December 2019. Access Date: 31 December 2019. <https://en.unesco.org/events/roundtable-changing-relationship-between-artificial-intelligence-and-humans>

³⁸³ Roundtable on “Changing Relationships between Artificial Intelligence and Humans,” UNESCO (Paris) 3 December 2019. Access Date: 31 December 2019. <https://en.unesco.org/events/roundtable-changing-relationship-between-artificial-intelligence-and-humans>

³⁸⁴ Roundtable on “Changing Relationships between Artificial Intelligence and Humans,” UNESCO (Paris) 3 December 2019. Access Date: 31 December 2019. <https://en.unesco.org/events/roundtable-changing-relationship-between-artificial-intelligence-and-humans>

On 5 December 2019 in Brussels, Belgium, the European Union and Japan co-chaired the fifth Joint Committee on Scientific and Technological Cooperation.³⁸⁵ The EU and Japan recognized research and innovation as key areas of cooperation and explored priority areas for future collaboration.³⁸⁶ Subsequently, the EU and Japan reviewed the results from previous collaborations and discussed present activities, new initiatives, and ways to strengthen future thematic cooperation in AI among other areas.³⁸⁷

On 22 January 2020, the UK Research and Innovation (UKRI) through the Arts and Humanities Research Council announced the launch of six joint Japanese-UK research projects with the Japanese Science and Technology Agency (JST).³⁸⁸ These research projects will investigate the impacts of AI technologies effect on society, culture and economy for a duration of three years beginning in January 2020.³⁸⁹ The projects aim to improve the understanding of how AI technologies could affect people's lives in healthcare, housework and the ethics of AI driven legal decision making.³⁹⁰ The projects are funded through the joint UK-Japan initiative of the UKRI Fund for International Collaboration with a GBP2.4 million contribution from the UKRI and JPY180 million from the JST.³⁹¹

In February 2020, the JST announced a call for proposal for the Moonshot research and development program.³⁹² Through this program, the Japanese government has committed to spending JPY100 billion over five years to fund research on how technological innovations and further development in AI can address contemporary challenges, such as the early detection and prevention of infectious diseases.³⁹³

On 19 February 2020, the Minister of Economy, Trade and Industry Kajiyama Hiroshi held a meeting with the Director General of the World Intellectual Property Organization Director, Francis

³⁸⁵ The 5th Joint Committee on Scientific and Technological Cooperation between the EU and Japan Joint Summary. Ministry of Foreign Affairs of Japan (Tokyo) 5 December 2019. Access Date: 31 December 2019.

https://www.mofa.go.jp/dns/isc/page22e_000937.html

³⁸⁶ The 5th Joint Committee on Scientific and Technological Cooperation between the EU and Japan Joint Summary. Ministry of Foreign Affairs of Japan (Tokyo) 5 December 2019. Access Date: 31 December 2019.

https://www.mofa.go.jp/dns/isc/page22e_000937.html

³⁸⁷ The 5th Joint Committee on Scientific and Technological Cooperation between the EU and Japan Joint Summary. Ministry of Foreign Affairs of Japan (Tokyo) 5 December 2019. Access Date: 31 December 2019.

https://www.mofa.go.jp/dns/isc/page22e_000937.html

³⁸⁸ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

³⁸⁹ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

³⁹⁰ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

³⁹¹ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

³⁹² Moonshot: Announcing Calls for Proposals, Japanese Science and Technology Agency (Tokyo) February 2020. Access Date: 19 April 2020. <https://www.jst.go.jp/moonshot/en/application/>

³⁹³ Moonshot: Announcing Calls for Proposals, Japanese Science and Technology Agency (Tokyo) February 2020. Access Date: 19 April 2020. <https://www.jst.go.jp/moonshot/en/application/>

Gurry.³⁹⁴ The two leaders agreed on the importance on sharing knowledge and information in order to better protect intellectual property related to emerging technologies such as AI.³⁹⁵

Japan has taken clear measures to enhance its understanding of AI through its support of various research initiatives. It has also explored ways to share results and best practices with various international partners.

Thus, Japan receives a score of +1.

Analyst: Tiffany Kwok

United Kingdom: +1

The United Kingdom has fully complied with its commitment to take actions that improve on its understanding of artificial intelligence (AI) and its impacts on society as well as explore ways to share results and best practices.

On 19 September 2019, at the Alan Turing Institute in London, the UK government in partnership with the Japanese government held a workshop in the fields of robotics, AI and the ethical use of data.³⁹⁶ The workshop involved over 130 participants including academic researchers from Japan and industry representatives from Japan and the UK.³⁹⁷ The workshop recognised the need to share and develop solutions on using data legally, ethically, and safely while facilitating technological breakthroughs in scalable deployment of algorithms.³⁹⁸ The participants identified key potential impact areas for AI and robotics including “sustaining the health of aging populations; infrastructure inspection repair and maintenance in extreme environment; mitigating climate change; and managing transport systems within smart cities.”³⁹⁹

On 18 October 2019, the UK government updated their guide to using AI in the public sector, sharing best practices regarding the use of AI.⁴⁰⁰ A new case study was added in “Examples of Artificial Intelligence Use” which detailed the use of AI in a UK based bank to reduce the duration

³⁹⁴ Minister Kajiyama Holds Meeting with WIPO Director General Gurry, Ministry of Economy, Trade and Industry (Tokyo) 19 February 2020. Access Date: 7 April 2020. https://www.meti.go.jp/english/press/2020/0219_001.html

³⁹⁵ Minister Kajiyama Holds Meeting with WIPO Director General Gurry, Ministry of Economy, Trade and Industry (Tokyo) 19 February 2020. Access Date: 7 April 2020. https://www.meti.go.jp/english/press/2020/0219_001.html

³⁹⁶ UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

³⁹⁷ UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

³⁹⁸ UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

³⁹⁹ UK-Japan robotics and AI workshops produce promising collaboration in health, transport and smart city infrastructure. Alan Turing Institute (London). 19 September 2019. Access Date: 31 December 2019. <https://www.turing.ac.uk/research/research-programmes/artificial-intelligence-robotics/programme-articles/uk-japan-robotics-and-ai-workshops-produce-promising-collaborations-health-transport-and-smart-city>

⁴⁰⁰ A guide to using artificial intelligence in the public sector, UK Government (London) 18 October 2019. Access Date: 18 December 2019. <https://www.gov.uk/government/collections/a-guide-to-using-artificial-intelligence-in-the-public-sector#history>

of a compliance process.⁴⁰¹ The application of AI allowed the bank to automate its internal compliance processes to improve compliance risk, accuracy risk and processing time in accordance to regulatory compliance requirements.⁴⁰²

On 20 October 2019, the United Kingdom will be the first country to pilot government procurement guidelines published by the World Economic Forum.⁴⁰³ The guidelines aim to aid governments in optimizing the use of AI in the public sector, as well as answering and mitigating concerns regarding rapid AI development.⁴⁰⁴

On 24 October 2019, the United Kingdom Research and Innovation (UKRI) promoted applications to the Turing AI Fellowship.⁴⁰⁵ The Fellowship encourages research and development in the AI sector in both the study of AI and the applications of it.⁴⁰⁶

On 22 January 2020, the UKRI through the Arts and Humanities Research Council announced the launch of six joint Japanese-UK research projects with the Japanese Science and Technology Agency (JST).⁴⁰⁷ These research projects will investigate the impacts of AI technologies effect on society, culture and economy for a duration of three years beginning in January 2020.⁴⁰⁸ The projects aim to improve the understanding of how AI technologies could affect people's lives in healthcare, housework and the ethics of AI driven legal decision making.⁴⁰⁹ The projects are funded through the joint UK-Japan initiative of the UKRI Fund for International Collaboration with a GBP2.4 million contribution from the UKRI and JPY180 million from the JST.⁴¹⁰

On 1 February 2020, the Canada-UK Artificial Intelligence Initiative released its funding to program participants. The joint initiative launched in June 2019, aimed support AI collaboration to build

⁴⁰¹ A guide to using artificial intelligence in the public sector, UK Government (London) 18 October 2019. Access Date: 18 December 2019. <https://www.gov.uk/government/collections/a-guide-to-using-artificial-intelligence-in-the-public-sector#history>

⁴⁰² A guide to using artificial intelligence in the public sector, UK Government (London) 18 October 2019. Access Date: 18 December 2019. <https://www.gov.uk/government/collections/a-guide-to-using-artificial-intelligence-in-the-public-sector#history>

⁴⁰³ UK Government First to Pilot AI Procurement Guidelines Co-Designed with World Economic Forum, World Economic Forum (Geneva) 20 September 2019. Access Date: 18 December 2019. <https://www.weforum.org/press/2019/09/uk-government-first-to-pilot-ai-procurement-guidelines-co-designed-with-world-economic-forum/>

⁴⁰⁴ UK Government First to Pilot AI Procurement Guidelines Co-Designed with World Economic Forum, World Economic Forum (Geneva) 20 September 2019. Access Date: 18 December 2019. <https://www.weforum.org/press/2019/09/uk-government-first-to-pilot-ai-procurement-guidelines-co-designed-with-world-economic-forum/>

⁴⁰⁵ Turing AI Fellowships to keep UK at forefront of Artificial Intelligence, UK Research and Innovation (London) 24 October 2019. Access Date: 19 December 2019. <https://www.ukri.org/news/turing-ai-fellowships-to-keep-uk-at-forefront-of-artificial-intelligence-revolution1/>

⁴⁰⁶ Turing AI Fellowships to keep UK at forefront of Artificial Intelligence, UK Research and Innovation (London) 24 October 2019. Access Date: 19 December 2019. <https://www.ukri.org/news/turing-ai-fellowships-to-keep-uk-at-forefront-of-artificial-intelligence-revolution1/>

⁴⁰⁷ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

⁴⁰⁸ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

⁴⁰⁹ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

⁴¹⁰ UK-Japanese projects to explore effects of AI on society and economy. UK Research Institute Economic and Social Research Council (London) 22 January 2020. Access Date: 27 April 2020. <https://esrc.ukri.org/news-events-and-publications/news/news-items/uk-japanese-projects-to-explore-effects-of-ai-on-society-and-economy/>

competitive and resilient economies and maximize social and health benefits.⁴¹¹ Research participants in the initiative will conduct interdisciplinary research within the fields of social sciences and humanities, health and biomedical sciences, and natural sciences and engineering.⁴¹²

On 10 February 2020, the UK Government's Committee on Standards in Public Life published its report on AI and its impact on public service standards.⁴¹³ This report analyzes how AI can be utilized to enhance efficiency, accuracy, and effectiveness in the provision of public services.⁴¹⁴ The report also examines the potential negative implications of the growing use of AI in the public sector and provides several recommendations on how to mitigate these risks, such as establishing additional safeguards, regulations, and more clearly defined ethical guidelines to address concerns regarding data bias and transparency.⁴¹⁵

On 21 February 2020, the UK government launched a joint initiative with several companies in the private sector to offer additional funding for postgraduate students pursuing studies in the field of AI.⁴¹⁶ The objective of this joint initiative is to provide greater support to research and development into AI, as further developments in this field can enhance productivity and help address contemporary challenges.⁴¹⁷

On 24 February 2020, the Minister of Innovation, Science, and Industry Navdeep Bains and the British High Commissioner to Canada Susan le Jeune d'Allegeershecque announced that their respective governments would invest CAD5 million and GBP5 million to fund ten international research teams, under the Canada-UK Artificial Intelligence Initiative.⁴¹⁸ These research teams will consist of experts from Canada and the UK, who will work on multidisciplinary projects that examine how AI can be harnessed to combat abusive online language, detect and monitor global disease outbreaks, and other purposes.⁴¹⁹

On 2 March 2020, the UK- Italy robotics and AI research collaboration workshop between the UK Turing Institute, Consorzio Interuniversitario Nazionale per Informatica – Laboratorio Nazionale di Artificial Intelligence and Intelligent Systems, Centro di Competenza ad Alta Specializzazione in

⁴¹¹ Announcement-Canada-UK Artificial Intelligence Initiative, Canadian Institutes of Health Research (Ottawa) 1 February 2020. Access Date: 6 April 2020. <https://cihr-irsc.gc.ca/e/51520.html>

⁴¹² Announcement-Canada-UK Artificial Intelligence Initiative, Canadian Institutes of Health Research (Ottawa) 1 February 2020. Access Date: 6 April 2020. <https://cihr-irsc.gc.ca/e/51520.html>

⁴¹³ Artificial Intelligence and Public Standards: Committee publishes report, UK Government (London) 10 February 2020. Access Date: 8 March 2020. <https://www.gov.uk/government/news/artificial-intelligence-and-public-standards-committee-publishes-report>

⁴¹⁴ Artificial Intelligence and Public Standards: Committee publishes report, UK Government (London) 10 February 2020. Access Date: 8 March 2020. <https://www.gov.uk/government/news/artificial-intelligence-and-public-standards-committee-publishes-report>

⁴¹⁵ Artificial Intelligence and Public Standards: Committee publishes report, UK Government (London) 10 February 2020. Access Date: 8 March 2020. <https://www.gov.uk/government/news/artificial-intelligence-and-public-standards-committee-publishes-report>

⁴¹⁶ Next generation of artificial intelligence talent to be trained at UK universities, UK Government (London) 21 February 2020. Access Date: 13 April 2020. <https://www.gov.uk/government/news/next-generation-of-artificial-intelligence-talent-to-be-trained-at-uk-universities>

⁴¹⁷ Next generation of artificial intelligence talent to be trained at UK universities, UK Government (London) 21 February 2020. Access Date: 13 April 2020. <https://www.gov.uk/government/news/next-generation-of-artificial-intelligence-talent-to-be-trained-at-uk-universities>

⁴¹⁸ Canada and the United Kingdom Collaborate on responsible artificial intelligence, Government of Canada (Ottawa) 24 February 2020. Access Date: 15 April 2020. <https://www.canada.ca/en/social-sciences-humanities-research/news/2020/02/canada-and-the-united-kingdom-collaborate-on-responsible-artificial-intelligence.html>

⁴¹⁹ Canada and the United Kingdom Collaborate on responsible artificial intelligence, Government of Canada (Ottawa) 24 February 2020. Access Date: 15 April 2020. <https://www.canada.ca/en/social-sciences-humanities-research/news/2020/02/canada-and-the-united-kingdom-collaborate-on-responsible-artificial-intelligence.html>

Industria 4.0 e Robotica (Artes 4.0) and Istituto Italiano di Tecnologia postponed its workshop due to be held on 18-19 March 2020 due to COVID-19.⁴²⁰ The workshop was to be held at the residence of the British Ambassador in Rome.⁴²¹ The workshop aimed to bring together leading researchers in AI from Italy and the UK to identify topics of collaboration and establish a basis for future joint venture activities in AI.⁴²²

On 21 May 2020, through the Centre of Data Ethics and Innovation the UK published a repository of novel uses cases of AI and data to counter and mitigate the effects of COVID-19. The repository highlighted the use of different applications to manage the effects of the pandemic and different use cases in the healthcare and digital sectors. However, the repository concluded that the impact of AI and data-driven technology in mitigating the effects of the pandemic may be “overstated” as the evidence is still unclear as use cases are still in “early stages of development.”⁴²³

On 28 May 2020, the UK announced its participation in the global COVID-19 High Performance Computer consortium to share supercomputing resources to allow researchers access to the world’s largest and fastest super computers and perform complex calculations quickly. This will accelerate coronavirus research and further understanding on how the disease behaves.⁴²⁴ The UK also committed to launching a global partnership on artificial intelligence while developing solutions to the crisis.⁴²⁵

The United Kingdom has supported various research initiatives to improve its knowledge and understanding of AI. It has also explored ways to share results and best practices with its international partners, such as Canada and Japan.

Thus, the United Kingdom receives a score of +1.

Analyst: Benjamin Liu

United States: +1

The United States has fully complied with its commitment to explore ways to advance its understanding of artificial intelligence (AI) and share, on a regular basis, multidisciplinary research results on AI issues and best practices.

On 9 September 2019, the White House hosted the Summit on Artificial Intelligence in Government to facilitate discussions on how the federal government can adopt AI to better achieve its mission and improve services to citizens.⁴²⁶ Over 175 leaders and experts from government, industry, and

⁴²⁰ UK-Italy robotics and AI research collaboration workshop, The Alan Turing Institute (London), 2 March 2020. Access Date: 2 May 2020. <https://www.turing.ac.uk/events/uk-italy-robotics-and-ai-research-collaboration-workshop>

⁴²¹ UK-Italy robotics and AI research collaboration workshop, The Alan Turing Institute (London), 2 March 2020. Access Date: 2 May 2020. <https://www.turing.ac.uk/events/uk-italy-robotics-and-ai-research-collaboration-workshop>

⁴²² UK-Italy robotics and AI research collaboration workshop, The Alan Turing Institute (London), 2 March 2020. Access Date: 2 May 2020. <https://www.turing.ac.uk/events/uk-italy-robotics-and-ai-research-collaboration-workshop>

⁴²³ Surveying the landscape: COVID-19 repository, Center for Data Ethics and Innovation (London). 21 May 2020. Access Date: 4 June 2020. <https://cdei.blog.gov.uk/2020/05/21/surveying-the-landscape-covid-19-repository/>

⁴²⁴ International supercomputer pact set to fire up UK COVID-19 research, UK Government (London). 28 May 2020. Access Date: 4 June 2020. <https://www.gov.uk/government/news/international-supercomputer-pact-set-to-fire-up-uk-covid-19-research>

⁴²⁵ International supercomputer pact set to fire up UK COVID-19 research, UK Government (London). 28 May 2020. Access Date: 4 June 2020. <https://www.gov.uk/government/news/international-supercomputer-pact-set-to-fire-up-uk-covid-19-research>

⁴²⁶ Summary of the 2019 White House Summit on AI in Government, White House (Washington) 9 September 2019. Access Date: 18 December 2019. <https://www.whitehouse.gov/wp-content/uploads/2019/09/Summary-of-White-House-Summit-on-AI-in-Government-September-2019.pdf>

academia came together to identify best practices in the use of AI, opportunities to foster collaborative partnerships, and ways to potentially incorporate AI in the public service.

On 10 September 2019, the White House released a supplementary report following the announcement from the Trump administration that nearly USD1 billion would be allocated to non-defense AI research and development in 2020.⁴²⁷ The report outlined the strategic priorities around AI across various government agencies, such as examining the impact of further developments in AI, exploring collaboration opportunities, and exploring ways to design AI systems that align with ethical, legal, and societal standards.⁴²⁸

On 10-11 October 2019, during the tenth US-Japan Policy Cooperation Dialogue on the Internet Economy in Tokyo, the US and Japan emphasised their commitment to an open, interoperable, reliable and secure internet and the global digital economy policy environment.⁴²⁹ The dialogue included discussions with public and private sector representatives and on regarding “public-private partnerships regarding the social implementation of artificial intelligence (AI) in a manner that fosters public trust in AI.”⁴³⁰ The US and Japan reaffirmed their commitment to international policy discussions for an inclusive, open and transparent system of internet governance based on a multi-stakeholder approach.⁴³¹ Furthermore, both countries also emphasised the importance of sharing best practises of the results of social implementation on AI at international forums.⁴³²

On 5 December 2019, the Department of Veteran Affairs launched the National Artificial Intelligence Institute.⁴³³ The institute, working in collaboration with partners across federal agencies, industry, and academic institutions, will aim to explore ways to advance AI technology in the healthcare sector to benefit veterans and the wider public.⁴³⁴

On 15-16 January 2020, in Toronto, Canada the Canadian Institution for Advance Research, Innovation, Science and Economic Development Canada and the US Consulate General Toronto held the Canada–US AI Symposium on Economic Innovation.⁴³⁵ The Symposium brought together students, researchers, policy makers, government and industry members to discuss the future of work, data governance and regulatory innovations to support the development of competitive AI

⁴²⁷ The Networking and Information Technology Research and Development Program: Supplement to the President’s FY2020 Budget, White House (Washington) 10 September 2019. Access date: 19 December 2019.

<https://www.whitehouse.gov/wp-content/uploads/2019/09/FY2020-NITRD-AI-RD-Budget-September-2019.pdf>

⁴²⁸ The Networking and Information Technology Research and Development Program: Supplement to the President’s FY2020 Budget, White House (Washington) 10 September 2019. Access date: 19 December 2019.

<https://www.whitehouse.gov/wp-content/uploads/2019/09/FY2020-NITRD-AI-RD-Budget-September-2019.pdf>

⁴²⁹ Joint Statement on the 10th U.S.- Japan Policy Cooperation Dialogue on the Internet Economy, Ministry of Economy Trade and Industry of Japan (Tokyo). 11 October 2019. Access Date: 31 December 2019.

<https://www.meti.go.jp/press/2019/10/20191018005/20191018006-2.pdf>

⁴³⁰ Tenth U.S.-Japan Policy Cooperation Dialogue on the Internet Economy Held, Ministry of Economy Trade and Industry (Tokyo) 18 October 2019. Access Date: 31 December 2019.

https://www.meti.go.jp/english/press/2019/1018_005.html

⁴³¹ Joint Statement on the 10th U.S.- Japan Policy Cooperation Dialogue on the Internet Economy, Ministry of Economy Trade and Industry of Japan (Tokyo). 11 October 2019. Access Date: 31 December 2019.

<https://www.meti.go.jp/press/2019/10/20191018005/20191018006-2.pdf>

⁴³² Joint Statement on the 10th U.S.- Japan Policy Cooperation Dialogue on the Internet Economy, Ministry of Economy Trade and Industry of Japan (Tokyo). 11 October 2019. Access Date: 31 December 2019.

<https://www.meti.go.jp/press/2019/10/20191018005/20191018006-2.pdf>

⁴³³ VA Launches National Artificial Intelligence Institute, US Department of Veterans Affairs (Washington) 5 December 2019. Access Date: 28 February 2020. <https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5369>

⁴³⁴ VA Launches National Artificial Intelligence Institute, US Department of Veterans Affairs (Washington) 5 December 2019. Access Date: 28 February 2020. <https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5369>

⁴³⁵ Canada-U.S. AI Symposium on Economic Innovation, CIFAR (Toronto) 1 March 2020. Access Date: 27 April 2020.

<https://www.cifar.ca/ai/ai-society/canada-us-ai-symposium-on-economic-innovation>

strategies.⁴³⁶ The participants agreed to cooperate across the private sector, government, academia and civil society to support measures of competitive develop AI technologies that support economic growth and regional development in socially responsible methods, that “cultivate public trust” and address societal concerns.⁴³⁷

On 10 February 2020, the White House announced that the government would double federal spending for nondefense AI research and development by 2022 in the new Federal Budget for 2021.⁴³⁸ The budget prioritizes accelerating developing AI solutions in the Administration’s efforts to foster “industries of the future.”⁴³⁹ The White House also announced that the Department of Energy (DOE) established the Artificial Intelligence and Technology Office to provide oversight on AI and ensure AI technological developments are applied across the DOE.⁴⁴⁰ The budget allocates USD5 Million to the office under the DOE pursue and enhance research and development for projects already underway.⁴⁴¹ The office will also align investments and efforts with the White House Office of Science and Technology Policy’s AI strategic priorities.⁴⁴²

On February 24, 2020, the Department of Defense announced that it would adopt a series of ethical principles for the use of AI.⁴⁴³ These principles will be applied in both combat and non-combat situation and will ensure the US military maintains its legal, ethical, and policy commitments in the area of AI.⁴⁴⁴

On 18 May 2020, the Department of Defense awarded a USD800 million contract to develop a Joint Artificial Intelligence Center with AI products to “support war fighting operations” and embed AI decision making and analysis across all tiers of the DOD’s operations.⁴⁴⁵ The program will include AI product development and transitioning AI products into new and existing programs and systems across the department.⁴⁴⁶

The United States has taken actions to improve its understanding of AI. It has also explored ways to share multidisciplinary research results on AI issues and share best practices, particularly through funding for AI research and development as well as engagement with industry and academia and international partners.

⁴³⁶ Canada-U.S. AI Symposium on Economic Innovation, CIFAR (Toronto) 1 March 2020. Access Date: 27 April 2020. <https://www.cifar.ca/ai/ai-society/canada-us-ai-symposium-on-economic-innovation>

⁴³⁷ Canada-U.S. AI Symposium on Economic Innovation, CIFAR (Toronto) 1 March 2020. Access Date: 27 April 2020. <https://www.cifar.ca/ai/ai-society/canada-us-ai-symposium-on-economic-innovation>

⁴³⁸ Fiscal Year 2021: A Budget for America’s Future, White House (Washington). 10 February 2020. Access Date: 4 March 2020. https://www.whitehouse.gov/wp-content/uploads/2020/02/budget_fy21.pdf

⁴³⁹ Fiscal Year 2021: A Budget for America’s Future, White House (Washington). 10 February 2020. Access Date: 4 March 2020. https://www.whitehouse.gov/wp-content/uploads/2020/02/budget_fy21.pdf

⁴⁴⁰ Fiscal Year 2021: A Budget for America’s Future, White House (Washington). 10 February 2020. Access Date: 4 March 2020. https://www.whitehouse.gov/wp-content/uploads/2020/02/budget_fy21.pdf

⁴⁴¹ Fiscal Year 2021: A Budget for America’s Future, White House (Washington). 10 February 2020. Access Date: 4 March 2020. https://www.whitehouse.gov/wp-content/uploads/2020/02/budget_fy21.pdf

⁴⁴² Fiscal Year 2021: A Budget for America’s Future, White House (Washington). 10 February 2020. Access Date: 4 March 2020. https://www.whitehouse.gov/wp-content/uploads/2020/02/budget_fy21.pdf

⁴⁴³ DOD Adopts ethical principles for artificial intelligence, US Department of Defense (Washington). 24 February 2020 Access Date: 04 March 2020. <https://www.defense.gov/Newsroom/Releases/Release/Article/2091996/dod-adopts-ethical-principles-for-artificial-intelligence/>

⁴⁴⁴ DOD Adopts ethical principles for artificial intelligence, US Department of Defense (Washington). 24 February 2020 Access Date: 04 March 2020. <https://www.defense.gov/Newsroom/Releases/Release/Article/2091996/dod-adopts-ethical-principles-for-artificial-intelligence/>

⁴⁴⁵ Contracts For May 18, 2020, U.S. Department of Defense (Washington D.C.) 18 May 2020. Access Date: 4 June 2020. <https://www.defense.gov/Newsroom/Contracts/Contract/Article/2190758/>

⁴⁴⁶ Contracts For May 18, 2020, U.S. Department of Defense (Washington D.C.) 18 May 2020. Access Date: 4 June 2020. <https://www.defense.gov/Newsroom/Contracts/Contract/Article/2190758/>

Thus, the United States receives a score of +1.

Analyst: Rhoda Akeol Philip

European Union: +1

The European Union has fully complied with its commitment to explore ways to advance its understanding of artificial intelligence (AI), share multidisciplinary research results in AI issues and best practices, as well as bringing together international AI initiatives.

On 21 November 2019, the Expert Group on Liability and New Technologies – New Technologies Formation, an independent expert group set up by the European Commission, published the Report on liability for AI and other emerging technologies.⁴⁴⁷ The report assesses the limitations of existing liability regimes and lists necessary changes to appropriately respond to new challenges from emerging digital technologies including AI.⁴⁴⁸

On 5 December 2019 in Brussels, the EU and Japan co-chaired the fifth Joint Committee on Scientific and Technological Cooperation.⁴⁴⁹ The EU and Japan recognized research and innovation as key areas of cooperation and explored priority areas for future collaboration.⁴⁵⁰ Subsequently, the EU and Japan reviewed the results from past collaborations and discussed present activities, new initiatives and ways to strengthen future thematic cooperation in AI among other areas.⁴⁵¹

In January 2020, the European Commission organized a series of five workshops on reference testing and experimentation facilities (TEF) for AI.⁴⁵² The workshops aim to support the development of shared European reference TEF's for AI hardware, software, components, systems and solutions and underlying resources for difference sectors.⁴⁵³ The shared reference TEF's will work to foster the deployment and adoption of trustworthy AI.⁴⁵⁴ In the workshops, the

⁴⁴⁷ Artificial Intelligence, European Commission (Brussels) 9 December 2019. Access Date: 19 December 2019. <https://ec.europa.eu/digital-single-market/en/artificial-intelligence>

⁴⁴⁸ Liability for Artificial Intelligence and other emerging digital technologies, European Commission (Brussels) 21 November 2019. Access Date: 19 December 2019. <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=36608>

⁴⁴⁹ The 5th Joint Committee on Scientific and Technological Cooperation between the EU and Japan Joint Summary. Ministry of Foreign Affairs of Japan (Tokyo) 5 December 2019. Access Date: 31 December 2019. https://www.mofa.go.jp/dns/isc/page22e_000937.html

⁴⁵⁰ The 5th Joint Committee on Scientific and Technological Cooperation between the EU and Japan Joint Summary. Ministry of Foreign Affairs of Japan (Tokyo) 5 December 2019. Access Date: 31 December 2019. https://www.mofa.go.jp/dns/isc/page22e_000937.html

⁴⁵¹ The 5th Joint Committee on Scientific and Technological Cooperation between the EU and Japan Joint Summary. Ministry of Foreign Affairs of Japan (Tokyo) 5 December 2019. Access Date: 31 December 2019. https://www.mofa.go.jp/dns/isc/page22e_000937.html

⁴⁵² Workshops on reference testing and experimentation facilities for Artificial Intelligence in the Digital Europe Programme, European Commission (Brussels) 11 February 2020. Access Date: 2 April 2020. <https://ec.europa.eu/digital-single-market/en/news/workshops-reference-testing-and-experimentation-facilities-artificial-intelligence-digital>

⁴⁵³ Workshops on reference testing and experimentation facilities for Artificial Intelligence in the Digital Europe Programme, European Commission (Brussels) 11 February 2020. Access Date: 2 April 2020. <https://ec.europa.eu/digital-single-market/en/news/workshops-reference-testing-and-experimentation-facilities-artificial-intelligence-digital>

⁴⁵⁴ Workshops on reference testing and experimentation facilities for Artificial Intelligence in the Digital Europe Programme, European Commission (Brussels) 11 February 2020. Access Date: 2 April 2020. <https://ec.europa.eu/digital-single-market/en/news/workshops-reference-testing-and-experimentation-facilities-artificial-intelligence-digital>

Commission presented its goals for future TEFs for different sectors and technologies and asked for input from invited experts and national delegations on the existing structure and future needs.⁴⁵⁵

On 19 February 2020, the European Commission published its White Paper on Artificial Intelligence. This paper proposes a series of measures that will streamline research, foster collaboration between EU member states, and increase investment into AI development and deployment.⁴⁵⁶ This paper also addresses the potential risks associated with the growing use of AI and proposes policy options for a future EU regulatory framework which would determine legal requirements that would apply to relevant actors, with a focus on high-risk applications.⁴⁵⁷ The paper is also open to public consultation until 31 May 2020, which all European citizens, member states, and other relevant stakeholders can participate in.⁴⁵⁸

On 19 February 2020, the European Commission published a Commission Report on safety and liability implications of AI, the Internet of Things and Robotics.⁴⁵⁹ The report identified gaps in EU wide safety legislation as they apply to AI, and called for work to address these gaps in a “consistent and harmonised manner.”⁴⁶⁰ The report noted AI products poses new challenges for liability, which require clarifications of scope and to develop solutions compared to approaches currently applied to traditional technologies.⁴⁶¹ The report also highlighted that solutions need to balance with the needs of product innovation with those of protection as solutions which help create trust in digital technologies and enable investment stability.⁴⁶²

On 19 May 2020, the EU launched a new call for medical technologies, digital tools and AI analytics solutions to tackle the coronavirus.⁴⁶³ The new initiative, funded with EUR56 million and through the Horizon 2020 program, will be used to deploy and develop new solutions using medical

⁴⁵⁵ Workshops on reference testing and experimentation facilities for Artificial Intelligence in the Digital Europe Programme, European Commission (Brussels) 11 February 2020. Access Date: 2 April 2020. <https://ec.europa.eu/digital-single-market/en/news/workshops-reference-testing-and-experimentation-facilities-artificial-intelligence-digital>

⁴⁵⁶ The Seventh Tokyo International Conference on African Development, Ministry of Foreign Affairs (Tokyo) 4 September 2019. Access Date: 18 November 2019. <https://www.mofa.go.jp/files/000521256.pdf>

⁴⁵⁷ The Seventh Tokyo International Conference on African Development, Ministry of Foreign Affairs (Tokyo) 4 September 2019. Access Date: 18 November 2019. <https://www.mofa.go.jp/files/000521256.pdf>

⁴⁵⁸ White Paper on Artificial Intelligence – a European approach to excellence and trust, European Commission (Brussels) 16 March 2020. Access Date: 2 April 2020. <https://ec.europa.eu/digital-single-market/en/news/white-paper-artificial-intelligence-european-approach-excellence-and-trust>

⁴⁵⁹ Commission Report on safety and liability implications of AI, the Internet of Things and Robotics, European Commission (Brussels). 19 February 2020. Access Date: 3 April 2020. https://ec.europa.eu/info/publications/commission-report-safety-and-liability-implications-ai-internet-things-and-robotics-0_en

⁴⁶⁰ Commission Report on safety and liability implications of AI, the Internet of Things and Robotics, European Commission (Brussels). 19 February 2020. Access Date: 3 April 2020. https://ec.europa.eu/info/publications/commission-report-safety-and-liability-implications-ai-internet-things-and-robotics-0_en

⁴⁶¹ Commission Report on safety and liability implications of AI, the Internet of Things and Robotics, European Commission (Brussels). 19 February 2020. Access Date: 3 April 2020. https://ec.europa.eu/info/publications/commission-report-safety-and-liability-implications-ai-internet-things-and-robotics-0_en

⁴⁶² Commission Report on safety and liability implications of AI, the Internet of Things and Robotics, European Commission (Brussels). 19 February 2020. Access Date: 3 April 2020. https://ec.europa.eu/info/publications/commission-report-safety-and-liability-implications-ai-internet-things-and-robotics-0_en

⁴⁶³ Coronavirus response: €56 million for solutions using medical technologies, digital tools and artificial intelligence, European Commission (Brussels). 19 May 2020. Access Date: 4 June 2020 <https://ec.europa.eu/digital-single-market/en/news/coronavirus-response-eu56-million-solutions-using-medical-technologies-digital-tools-and>

technologies, digital tools and AI to increase responses to COVID-19 and to improve recovery and better prepare for future crises or waves of coronavirus infections.⁴⁶⁴

On 25 May 2020, the EU through the Digital Innovations Hubs (DIH) program hosted a webinar to discuss the application of AI in the European context and how DIH's can help build “smart cities” with AI.⁴⁶⁵ The event discussed how local level actors can most benefit from AI and concluded that communities are “not yet fully exploiting the value of data and AI.”⁴⁶⁶ The event also discussed the role that AI can play in enabling developing solutions which enable cities to benefit most from their application.⁴⁶⁷

On 27 May 2020, the EU launched a proposal for a recovery plan titled “Next Generation EU.”⁴⁶⁸ The proposal will bring together financial resources across EU members and will aim to strengthen the Single Market and “adapt” it to the digital age.⁴⁶⁹ The proposal has an aim to develop “stronger industrial and technological presences” in strategic sectors for the EU including cybersecurity, supercomputing and AI.⁴⁷⁰

On 8 June 2020, the EU will host a Webinar to discuss the civil liability aspects of AI and discuss methods to handle liability concerns for AI technologies.⁴⁷¹

The European Union has fully complied with its commitment to explore ways of improving their understanding of AI issues, sharing multidisciplinary research results, and sharing best practices.

Thus, the EU receives a score of +1.

Analyst: Emily Yu

⁴⁶⁴ Coronavirus response: €56 million for solutions using medical technologies, digital tools and artificial intelligence, European Commission (Brussels). 19 May 2020. Access Date: 4 June 2020 <https://ec.europa.eu/digital-single-market/en/news/coronavirus-response-eu56-million-solutions-using-medical-technologies-digital-tools-and>

⁴⁶⁵ DIH Webinar: Artificial Intelligence for Smart Cities, European Commission (Brussels). 25 May 2020. Access Date: 4 June 2020. <https://ec.europa.eu/digital-single-market/en/news/dih-webinar-artificial-intelligence-smart-cities>

⁴⁶⁶ DIH Webinar: Artificial Intelligence for Smart Cities, European Commission (Brussels). 25 May 2020. Access Date: 4 June 2020. <https://ec.europa.eu/digital-single-market/en/news/dih-webinar-artificial-intelligence-smart-cities>

⁴⁶⁷ DIH Webinar: Artificial Intelligence for Smart Cities, European Commission (Brussels). 25 May 2020. Access Date: 4 June 2020. <https://ec.europa.eu/digital-single-market/en/news/dih-webinar-artificial-intelligence-smart-cities>

⁴⁶⁸ Europe's moment: Repair and prepare for the next generation, European Council (Brussels) 27 May 2020. Access Date: 4 June 2020. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940

⁴⁶⁹ Europe's moment: Repair and prepare for the next generation, European Council (Brussels) 27 May 2020. Access Date: 4 June 2020. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940

⁴⁷⁰ Europe's moment: Repair and prepare for the next generation, European Council (Brussels) 27 May 2020. Access Date: 4 June 2020. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940

⁴⁷¹ Webinars on Liability for Artificial Intelligence, European Commission (Brussels) 8 June 2020. Access Date: 4 June 2020 https://ec.europa.eu/info/events/artificial-intelligence-who-should-be-liable-damage-2020-may-05_en