UNIVERSITY OF TORONTO

G20 RESEARCH GROUP | munk school OF GLOBAL AFFAIRS & PUBLIC POLICY

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 Interim 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

	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	+0.75 (88%)		

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."[159] 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."[160] 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.[161] General AI are intended to be a systems that can perform most activities that humans can do.[162] 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 Taromina 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.[163] The leaders assessed the potential opportunities and challenges for the next product revolution.[164] To that end, G7 leaders acknowledged the need for production innovation, developing

[159] 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
[160] 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
[161] 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
[162] 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
[163] G7 People-Centered Action Plan on Innovation, Skills and Labor, G7 Research Group (Toronto) 27 May 2017. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2017taormina/action-plan.html
[164] G7 People-Centered Action Plan on Innovation, Skills and Labor, G7 Research Group (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.[165] The 2017 Taormina Summit marked the first time the G7 leaders discussed AI.

At the 2018 Charlevoix Summit, G7 leaders agreed to the *Charlevoix Common Vision for the Future of Artificial Intelligence.*[166] 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.[167] The leaders acknowledged that developing a human-centric vision of AI requires a predictable and stable policy environment that encompasses multi-stakeholder engagement.[168] 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. [169] 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.[170]

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.*[171] 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.[172] The leaders assessed the potential contributions of AI to provide innovative solutions and progress towards achieving the 2030 Agenda for Sustainable Development and current challenges.[173] 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.[174] In addition, the leaders also committed to exploring advancements in AI to share and understand best practices as well as to bring international AI initiatives.[175]

Commitment Features

This commitment has two main components.

[165] G7 People-Centered Action Plan on Innovation, Skills and Labor, G7 Research Group (Toronto) 27 May 2017. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2017taormina/action-plan.html
[166] Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Research Group (Toronto) 9 June 2018. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.html
[167] Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Research Group (Toronto) 9 June 2018. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm
[168] Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Research Group (Toronto) 9 June 2018. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm
[169] Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Research Group (Toronto) 9 June 2018. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm
[170] Charlevoix Common Vision for the Future of Artificial Intelligence, G7 Research Group (Toronto) 9 June 2018. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2018charlevoix/ai-commitment.htm
[171] Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Research Group (Toronto) 26 August 2019. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html
[172] Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Research Group (Toronto) 26 August 2019. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html
[173] Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Research Group (Toronto) 26 August 2019. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html
[174] Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Research Group (Toronto) 26 August 2019. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html
[175] Biarritz Strategy for an Open, Free and Secure Digital Transformation, G7 Research Group (Toronto) 26 August 2019. Access Date: 7 November 2019. http://www.g7.utoronto.ca/summit/2019biarritz/biarritz-strategy-for-digital-transformation.html

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" refers to actions that improve on the understanding of AI and its impacts on society.[176] This includes efforts to untangle the implications of AI on broad sections of or specific industry of society that does not directly relate to technical issues of the implementation or development of AI. "Explore ways" can be achieved through the development of working groups, intergovernmental research programs, or allocating funding for 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.[177]

"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."[178] This refers to actions directed to 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 Organisation 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.[179]

To achieve full compliance, G7 members must: 1. Explore ways to improve their understanding of the issue; and 2. explore ways to share results; and 3. explore ways to share best practices.

If only two of three parts of this commitment are fulfilled, members will receive a score of partial compliance. For instance, if a G7 member takes actions towards exploring ways to improve their understanding of the issue and explores ways to share results, but does not explore ways to share 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 explore ways to improve their

[176] Digital Transformation in Africa, G7 Research Group (Toronto) 26 August 2019. Access Date: 15 October 2019. http://www.g7.utoronto.ca/summit/2019biarritz/digital-transformation.html
[177] 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
[178] Digital Transformation in Africa, G7 Research Group (Toronto) 26 August 2019. Access Date: 15 October 2019. http://www.g7.utoronto.ca/summit/2019biarritz/digital-transformation.html
[179] 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

understanding of the issue; or if the member explores ways to improve their understanding of the issue and share practices, without exploring ways to share results.

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

Scoring Guidelines

−1	The member has ONLY taken action towards ONE of the three parts of the commitment, OR has NOT taken any action towards any of the three parts of the commitment.
0	The member takes actions towards TWO of the three parts of the commitment, and has NOT taken action towards one of the parts of the commitment.
+1	The member takes actions to explore ways to improve their understanding of the issue, AND explores ways to share results, AND explores ways to share 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.[180] 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.[181]

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 the Global Partnership in Artificial Intelligence. 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. 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. 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.[182]

Canada has taken clear measures to improve its understanding of AI and its impact on society as well as explore ways to share results and best practices, through its support for the Global Partnership in Artificial Intelligence.

[180] 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

[181] 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

[182] 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

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.[183] 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.[184]

On 27 September 2019, the Ministry of Finance published the 2020 finance bill, which pledges EU38 million towards research programs on AI.[185]

On 16 October 2019, France and Germany signed a roadmap for a Franco-German Research and Innovation Network on AI. Both countries also agreed to advocate an ambitious agenda for AI research and innovation at the EU level, particularly within the European Research Council and the newly created European Innovation Council.[186]

On 28-30 October 2019, France hosted the Global Forum on AI for Humanity in Paris. 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. Participants explored and discussed the various opportunities and challenges associated with AI. Participants also deliberated on the best methods and tools to address the challenges raised by AI. At the end of the forum, President Macron also acknowledged the importance of further examining the impact that AI has had on society.[187]

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.[188]

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. The Minister

[183] 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

[184] 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

[185] 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

[186] French-German Declaration of Toulouse, Ministry for Europe and Foreign Affairs (Paris) 16 October 2019. Access Date: 12 December 2019. https://www.diplomatie.gouv.fr/en/country-files/germany/events/article/french-german-declaration-of-toulouse-16-oct-19

[187] 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

[188] 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

reaffirmed the importance of multilateral approaches to digital technology such as AI to appropriately address the issues concerning cyberspace which includes a multitude of actors.[189]

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. The minister highlighted the regulatory challenges and the need to address the digital economy notably AI.[190]

On 28 November 2019, the French government released the results and findings of the first six AI projects proposed to the Ministry for public service.[191]

France has taken actions to explore their understanding of AI, explored ways to share results and best practises with international partners.

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 10 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.[192] The German government set up the Commission in 2018 to develop ethical guidelines with respect to AI and recommendations for protecting individual rights.

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.[193] A roadmap on AI is presented during the Council. 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

[189] 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

[190] 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

[191] Proposed Experimented Projects for Public Service, Ministry of Interdepartmental Digital Direction (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

[192] 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

[193] 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

on both sides.[194] 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.[195]

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.[196] For instance, they addressed the potential use of "deepfakes" during elections – which refers to when AI is used to produce fake videos and audio that appear to be authentic.[197] Officials and experts also discussed strategies that could be undertaken in order to address these challenges that AI poses to democracy.[198]

On 2 December 2019, the Federal Ministry for Economic Affairs and Energy launched the "Regulatory Sandboxes Innovation Prize."[199] The Ministry said its aim is to test environments for innovation and regulation. These regulatory sandboxes are going to be used to test things such as self-driving cars, telemedicine and new e-public administration.[200]

On 5 December 2019, during an interview conducted by the German broadcasting service Deutsche Welle, Ina Schieferdecker, a junior minister in Germany's Federal Ministry of Education and Research, defended the "trustworthiness" of AI and technology in general.[201] Junior minister Schiefferdecker also called for an interdisciplinary approach to developing AI, involving business, science and education sectors.[202]

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[194] 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

[195] 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

[196] 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

[197] 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

[198] 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

[199] 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

[200] 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

[201] 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

[202] 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

Germany has taken measures to enhance its understanding of AI, through pursuing various research initiatives on the matter. Additionally, it has worked with other G7 members 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 failed to comply with its commitment to explore ways to improve its understanding of artificial intelligence (AI), as well as to share results and best practices.

Italy has not taken any actions that comply as compliance.

Italy has not explored ways to share its understanding of the issue of AI and practices, ways to share results or explore ways to share best practices.

Thus, Italy receives a score of −1.[203]

Analyst: Tigran Abelyan

Japan: +1

Japan has fully complied with its commitment to explore ways to improve its understanding of the issue of artificial intelligence (AI), ways to share results, and ways to share 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).[204] 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.'[205] 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. Japan also committed to continuing to work with and support UNESCO as it develops ethical guidelines for AI.[206]

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.[207] The workshop involved over 130 participants including academic researchers

[203] This non-compliance was determined after a deep search of the following websites: https://www.agid.gov.it/en, https://ia.italia.it, https://www.sviluppoeconomico.gov.it/index.php/en/news, and https://www.repubblica.it/.

[204] Japan 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

[205] 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

[206] TICAD7 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

[207] 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

from Japan and industry representatives from Japan and the UK.[208] 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.[209] 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."[210]

On 10-11 October 2019, in Tokyo, Japan at the tenth U.S.-Japan Policy Cooperation Dialogue on the Internet Economy the U.S. and Japan emphasised their commitment to an open, interoperable, reliable and secure internet and the global digital economy policy environment.[211] 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."[212] 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. Furthermore, the members emphasised the importance of sharing best practises of the results of social implementation on AI at international forums.[213]

On 3 December 2019, in Paris, France the UNESCO held a roundtable on the topic of "Changing Relationship between Artificial Intelligence and Humans."[214] The roundtable is part of a series of events hosted by the UNESCO with financial support from the Ministry of Education, Culture, Sports, Science and Technology of Japan.[215] 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.[216]

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[208] 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

[209] 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

[210] 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

[211] 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

[212] 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

[213] 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

[214] 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

[215] 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

[216] 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, the European Union and Japan co-chaired the fifth Joint Committee on Scientific and Technological Cooperation.[217] The EU and Japan recognized research and innovation as key areas of cooperation and explored priority areas for future collaboration.[218] Subsequently, the EU and Japan reviewed the results from past collaborations and discussed present activities, new initiatives and the ways to strengthen future thematic cooperation in AI among other areas.[219]

Japan has taken actions to explore ways to share results and ways to share best practices for AI with partners.

Thus, Japan receives a score of +1.

Analyst: Tiffany Kwok

United Kingdom: +1

The United Kingdom has fully complied with its commitment to strive for actions that improve on its understanding of artificial intelligence (AI) and its impacts on society as well as actions directed 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.[220] The workshop involved over 130 participants including academic researchers from Japan and industry representatives from Japan and the UK.[221] 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.[222] 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."[223]

[217] 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

[218] 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

[219] 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

[220] 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

[221] 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

[222] 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

[223] 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

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. A new case study was added in "Examples of Artificial Intelligence Use."[224]

On 20 October 2019, the United Kingdom will be the first country to pilot government procurement guidelines published by the World Economic Forum. 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.[225]

On 24 October 2019 the United Kingdom Research and Innovation promoted applications to the Turing AI Fellowship. The Fellowship encourages research and development in the AI sector in both the study of AI and the applications of it.[226]

The United Kingdom has explored ways to share results and practices in the AI sector with international partners alongside finding ways to improve knowledge and understanding of AI.

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, as well as bringing together international AI initiatives.

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. Over 175 leaders and experts from government, industry, and 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.[227]

On 10 September 2019, the White House released a supplementary report following the announcement from the Donald Trump administration that nearly USD1 Billion would be allocated to non-defense AI research and development in 2020.[228] The report outlined the strategic priorities around AI across various government agencies, such as examining the impact of further

[224] 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

[225] 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/

[226] 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/

[227] 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

[228] 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

developments in AI, exploring collaboration opportunities, and exploring ways to design AI systems that align with ethical, legal, and societal standards.[229]

On 10-11 October 2019, in Tokyo, Japan at the tenth U.S.-Japan Policy Cooperation Dialogue on the Internet Economy the U.S. and Japan emphasised their commitment to an open, interoperable, reliable and secure internet and the global digital economy policy environment.[230] 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."[231] 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. Furthermore, the members emphasised the importance of sharing best practises of the results of social implementation on AI at international forums.[232]

The United States has fully complied with its commitment to explore ways to improve their understanding of AI, 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.

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

Analyst: Rhoda Akuol 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,[233] published the Report on liability for AI and other emerging technologies.[234] 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.[235]

[229] 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

[230] 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

[231] 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

[232] 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

[233] Expert Group on liability and new technologies (E03592), European Commission (Brussels) 9 March 2018. Access Date: 19 December 2019. https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3592

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

[235] 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

On 5 December 2019 in Brussels, the EU and Japan co-chaired the fifth Joint Committee on Scientific and Technological Cooperation.[236] The EU and Japan recognised research and innovation as key areas of cooperation and explored priority areas for future collaboration.[237] Subsequently, the EU and Japan reviewed the results from past collaborations and discussed present activities, new initiatives and the ways to strengthen future thematic cooperation in AI among other areas.[238]

The EU 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

[236] 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

[237] 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

[238] 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