2021 G7 Cornwall Summit Final Compliance Report

14 June 2021 to 11 June 2022

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23 June 2022

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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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22. International Cooperation: Research and Knowledge Sharing

"As our nations and communities start to recover from the pandemic and build resilience for future shocks, we will continue to work with our research and business communities to remove barriers to the open and rapid sharing of knowledge, data and tools, to the greatest extent possible, recognising the importance of research security in particular in cutting-edge fields."

G7 2021 Research Compact

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		+1.00 (100%)	

Background

The COVID-19 pandemic that started in the beginning of 2020 has prompted global leaders to pledge their fullest efforts in finding COVID-19 prevention and mitigation measures to address the world-wide public health challenge.[4593] As the G7 leaders stated in their G7 Research Compact, "the global response to COVID-19 has demonstrated the progress that arises from long-term collaboration which puts science at the heart of prevention, preparedness, response, recovery and resilience."[4594]

The G7 leaders have long acknowledged the need for a coordinated response to infectious diseases and global health challenges. At the 1996 Lyon Summit, G7 leaders made their first commitment to promote "international cooperation among research teams," and "encourage the scientific community in its search for remedies" for diseases including human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS).[4595]

At the 1997 Denver Summit, G8 leaders committed to "work to provide the resources necessary to accelerate AIDS vaccine research, and … [to]enhance international scientific cooperation and collaboration."[4596]

At the 1998 Birmingham Summit, G8 leaders committed "to enhance mutual cooperation on infectious and parasitic diseases and support the World Health Organization's efforts in those areas" of which AIDS and Malaria was highlighted.[4597]

[4593] G7 Leaders' Statement, G7 Information Centre (Toronto) 16 March 2020. Access Date: 29 September 2021. http://www.g7.utoronto.ca/summit/2020usa/covid-200316.html

[4594] G7 Research Compact, G7 Information Centre (Toronto) 13 June 2021. Access Date: 29 September 2021. http://www.g7.utoronto.ca/summit/2021cornwall/210613-research.html

[4595] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf

[4596] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf

[4597] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf

At the 2000 Okinawa Summit, G8 leaders committed to "strengthening cooperation in the area of basic research and development of new drugs, vaccines and other international public health goods" with particular emphasis on HIV/AIDS, Malaria and Tuberculosis.[4598]

At the 2001 Genoa Summit, G8 leaders affirmed their "commitment to strong and effective intellectual property rights protection as a necessary incentive for the research and development of life-saving drugs."[4599]

At the 2003 Évian Summit, the G8 leaders reiterated their commitment to fight against AIDS, tuberculosis and malaria through actions including research activities.[4600] Additionally, G8 leaders committed to improve international coordination against the new severe acute respiratory syndrome (SARS) pandemic.[4601] In response to persistent public health concerns in developing countries at the time, G8 leaders committed to support developing and least-developed countries in their own research and development of protections against infectious diseases, including the creation of "incentives and regulatory systems to support ethical and safe clinical trials."[4602]

At the 2004 Sea Island Summit, the G8 leaders coordinated a meeting with stakeholders to encourage their collaboration in HIV vaccine development.[4603]

At the 2006 St. Petersburg Summit, to contribute to the need for knowledge diffusion from developed nations to developing nations, G8 leaders supported the "intensification of scientific research and exchanges in the area of infectious diseases, with attention given to involving scientists from developing countries in international scientific research programs" and aimed "to increase scientific cooperation with developing countries, encourage partnerships between experts and laboratories of developing and developed countries, and increase the scientific potential in countries of all income levels."[4604]

At the 2009 L'Aquila Summit, the G8 leaders acknowledged the benefits of an international Intellectual Property Rights system for promoting innovations that address public health challenges.[4605]

The subsequent years saw the G7 continue their focus in eradicating polio, providing prevention and treatment to AIDS and enhancing surveillance capacity for infectious diseases with less emphasis on collaborative research activities until the 2014 Ebola outbreak. At the subsequent 2015 Schloss Elmau Summit, G7 leaders renewed their commitment to contribute to the coordination of research and development efforts and committed to engage in: basic research, research on epidemiology, development of new antibiotics, alternative therapies and vaccines.[4606] The response to the Ebola outbreak inspired a new focus on "faster and targeted development of easily usable and affordable" drugs, vaccines and point-of-care technologies.

[4598] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf
[4599] G7/8 Summit Compliance Data Sets by Issue, 1985-2013: Health, G7 Information Centre (Toronto) 17 April 2015. Access Date: 29 September 2021. http://www.g7.utoronto.ca/compliance/dataset/health.html
[4600] Health: A G8 Action Plan, G7 Information Centre (Toronto) 2 June 2003. Access Date: 25 October 2021. http://www.g7.utoronto.ca/summit/2003evian/health_en.html
[4601] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf
[4602] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf
[4603] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf
[4604] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf
[4605] Responsible Leadership for a Sustainable Future, G7 Information Centre (Toronto) 8 July 2009. Access Date: 29 September 2021. http://www.g7.utoronto.ca/summit/2009laquila/2009-declaration.html
[4606] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf

At the 2016 Ise-Shima Summit, G7 leaders continued their commitment to promoting research collaboration by committing to "explore the feasibility of partnerships such as the Vaccine Innovation for Pandemic Preparedness Partnership to conduct coordinated vaccine research and development."[4607]

The G7 emphasis on public health emergency preparedness and coordination in infectious disease control persisted with no explicit commitment on research collaboration until the emergence of COVID-19 as a new threat to global public health. At the 2020 USA Virtual Summit, the G7 leaders committed to "marshalling the full power of [their] governments to: encourage science, research, and technology cooperation."[4608] In particular, the leaders emphasized: real-time information sharing, pooling epidemiologic data, increasing coordinated research efforts, the launch of joint research projects and the sharing of facilities towards the objective of "improving prevention strategies and mitigation measures" and "rapid development, manufacture and distribution of treatments and a [COVID-19] vaccine."

Commitment Features

At the 2021 Cornwall Summit, G7 leaders made the following commitment: "as our nations and communities start to recover from the pandemic and build resilience for future shocks, we will continue to work with our research and business communities to remove barriers to the open and rapid sharing of knowledge, data and tools, to the greatest extent possible, recognising the importance of research security in particular in cutting-edge fields."[4609]

"Recover" means "to return to a normal state after an unpleasant or unusual experience or a period of difficulty."[4610]

"Resilience" means "the ability of a system to anticipate, absorb, recover from, and adapt to a wide array of systemic threats"[4611]

"Shock" means something that causes "a disturbance in the equilibrium or permanence of something"[4612]

"Continue" is understood to mean that the commitment is "established and implemented."[4613] To achieve full compliance, G7 members must take new actions that build upon existing efforts.[4614]

G7 members have identified "work[ing] with [their] research and business communities" as the means to achieve greater research cooperation. "Work with" means the action or process of working together to the same end. "Research" refers to systematic activities in natural sciences, engineering, social sciences, humanities and interdisciplinary fields that increases the stock of knowledge and the use of this knowledge to

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[4607] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf

[4608] Putting Humanitarian Health First: G7 Summit Health Performance 1975-2020, G7 Information Centre (Toronto) 7 July 2020. Access Date: 16 January 2021. http://www.g7.utoronto.ca/evaluations/dobson-kirton-putting-humanitarian-health-first.pdf

[4609] G7 Research Compact, G7 Information Centre (Toronto) 13 June 2021. Access Date: 29 September 2021. http://www.g7.utoronto.ca/summit/2021cornwall/210613-research.html

[4610] Recover, Oxford Learner's Dictionaries (Oxford) n.d. Access Date: 26 October 2021. https://www.oxfordlearnersdictionaries.com/definition/english/recover

[4611] A systemic resilience approach to dealing with Covid-19 and future shocks, Organization for Economic Co-operation and Development (France) 28 April 2020. Access Date: 26 October 2021. https://read.oecd-ilibrary.org/view/?ref=131_131917-kpfefrdfnx&title=A-Systemic-Resilience-Approach-to-dealing-with-Covid-19-and-future-shocks&_ga=2.128194380.1135806902.1635303678-1094489859.1635303678

[4612] Shock, Merriam-Webster's Dictionary (Springfield) n.d. Access Date: 26 October 2021. https://www.merriam-webster.com/dictionary/shock

[4613] Compliance Coding Manual for International Institutional Commitments, G7 and G20 Research Groups (Toronto) 12 November 2020. Access Date: 29 September 2021. http://www.g7.utoronto.ca/compliance/Compliance_Coding_Manual_2020.pdf

[4614] Compliance Coding Manual for International Institutional Commitments, G7 and G20 Research Groups (Toronto) 12 November 2020. Access Date: 29 September 2021. http://www.g7.utoronto.ca/compliance/Compliance_Coding_Manual_2020.pdf

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devise new applications.[4615] "Research community" refers to research practitioners, collaborators and institutions such as universities, hospitals and laboratories. "Business" means "companies that buys and sells goods and services."[4616] "Business community" refers to firms and industry associations in the private sector. If the G7 member reduces barriers to research cooperation but does not work with either the research or business communities, this is beyond the scope of the commitment and should only count towards partial compliance if the barrier removed is intended to benefit either the research or business community.

The objective of this commitment is to "remove barriers to the open and rapid sharing of knowledge, data and tools" in a way that contribute to recovering from the COVID-19 pandemic and building resilience for future shocks.

"Remove" means to take away something from a place.[4617]

"Barriers" means social, legal, regulatory and administrative hindrances.[4618] This indicates that full compliance requires not merely the act of sharing knowledge, data and tools but structural changes that enable open and rapid sharing of knowledge, data and tools.

"Open" means "to be available and ready to use."[4619]

"Rapid" means "happening quickly or in a short period of time."

"Knowledge, data and tools" include any input that facilitates research processes.[4620] This may be expanded to include: "software, code, and other research resources."

The G7 2021 Research Compact states that the efficient sharing of research data can be achieved through "improving the availability, sustainability, usability and interoperability of research data, technologies, infrastructure and services."[4621] Some examples may include: establishing collaborative research platforms, streamlining data sharing procedures, removing rules that restrict the sharing of research outcome and creating incentives that recognize and reward research collaborations.

"To the greatest extent possible" is understood to mean that the leaders commit to strong actions that fully utilize their ability to share knowledge, data and tools.[4622]

To complement their commitment to sharing knowledge, data and tools, G7 members added the consideration to "recognize the importance of research security."

"Recognize" means to acknowledge formally.[4623]

[4615] Glossary of Statistical Terms, Organisation of Economic Cooperation and Development (Paris) 12 March 2003. Access Date: 2 January 2022. https://stats.oecd.org/glossary/detail.asp?ID=2312
[4616] Business, Cambridge Dictionary (Cambridge) 2022. Access Date: 2 January 2022.
https://dictionary.cambridge.org/dictionary/english/business
[4617] Remove, Oxford Learner's Dictionaries (Oxford) n.d. Access Date: 26 October 2021.
https://www.oxfordlearnersdictionaries.com/definition/english/remove_1?q=remove
[4618] G7 Research Compact, G7 Information Centre (Toronto) 13 June 2021. Access Date: 29 September 2021.
http://www.g7.utoronto.ca/summit/2021cornwall/210613-research.html
[4619] Open, Oxford Learner's Dictionaries (Oxford) n.d. Access Date: 26 October 2021.
https://www.oxfordlearnersdictionaries.com/definition/english/open_1?q=open
[4620] G7 Research Compact, G7 Information Centre (Toronto) 13 June 2021. Access Date: 29 September 2021.
http://www.g7.utoronto.ca/summit/2021cornwall/210613-research.html
[4621] G7 Research Compact, G7 Information Centre (Toronto) 13 June 2021. Access Date: 29 September 2021.
http://www.g7.utoronto.ca/summit/2021cornwall/210613-research.html
[4622] Compliance Coding Manual for International Institutional Commitments, G7 and G20 Research Groups (Toronto) 12 November 2020. Access Date: 29 September 2021. http://www.g7.utoronto.ca/compliance/Compliance_Coding_Manual_2020.pdf

The G7 2021 Research Compact elaborated on "research security" to mean "effectively ensure the security and integrity of the research ecosystem, … preventing the theft, misuse and inappropriate exploitation of our intellectual property and personal data, and other forms of misconduct."[4624] Therefore, "research security" refers to the protection of intellectual property, personal data and other aspects of research integrity. The recognition of research security should be evaluated holistically with the primary objective of this commitment to remove barriers in sharing knowledge, data and tools. The latter should not compromise the protection of research security and recognizing research security should not result in restricting research cooperation. Actions that compromise one of these two principles should only be counted as partial compliance.

"In particular" means "deserving of special mention, to a higher degree than is usual or average."[4625]

"Cutting-edge" means "the newest, most advanced stage in the development of something."[4626] Some examples may include Artificial Intelligence (AI)[4627], engineering robotics and synthetic biology.[4628] This statement means that the importance of research security is to be emphasized in the newest research fields, but recognizing research security in all research activities would be counted towards compliance actions.

The depth dimension, or the strength of the action required to demonstrate compliance, is qualified by the phrase "continue to work", meaning the G7 members are building on already existing work and the phrase "to the greatest extent possible", meaning the G7 members commit to undertake strong actions.

Full compliance, or a score of +1, is assigned to G7 members that take strong action to work with both the research and business communities to remove barriers in sharing knowledge, data and tools while recognizing research security. The G7 member should demonstrate substantial action that improves the structures that enable the sharing of knowledge, data and tools. These actions must involve collaboration with both the research and the business communities to achieve full compliance.

Partial compliance, or a score of 0, is assigned if the G7 member only work strongly with either the research or business community to remove barriers in sharing knowledge, data and tools while recognizing research security. Partial compliance is also assigned if the G7 member work less than strongly with both the research and the business community. Less than strong actions include one-off actions to share knowledge, data and tools without strengthening long-term collaborative platforms or expressing support for research collaboration without committing programs, resources or frameworks for structural change.

Non-compliance, or a score of −1, is assigned if the G7 member only work less than strongly with either business or research community or not at all with both communities to remove barriers in sharing knowledge, data and tools while recognizing research security.

Scoring Guidelines

−1	The G7 member work less than strongly with EITHER the research or the business community to remove barriers in sharing knowledge, data and tools while recognizing research security OR the G7

[4623] Recognize, Merriam-Webster's Dictionary (Springfield) n.d. Access Date: 29 September 2021. https://www.merriam-webster.com/dictionary/recognize

[4624] G7 Research Compact, G7 Information Centre (Toronto) 13 June 2021. Access Date: 29 September 2021. http://www.g7.utoronto.ca/summit/2021cornwall/210613-research.html

[4625] Compliance Coding Manual for International Institutional Commitments, G7 and G20 Research Groups (Toronto) 12 November 2020. Access Date: 29 September 2021. http://www.g7.utoronto.ca/compliance/Compliance_Coding_Manual_2020.pdf

[4626] Cutting edge, Oxford Learner's Dictionaries (Oxford) n.d. Access Date: 19 September 2021. https://www.oxfordlearnersdictionaries.com/definition/american_english/cutting-edge

[4627] STI Policy and the COVID-19 crisis, Organization for Economic Co-operation and Development (Paris) n.d. Access Date: 26 October 2021. https://www.oecd.org/sti/science-technology-innovation-outlook/STIP-and-COVID-19-crisis/

[4628] OECD Science, Technology and Innovation Outlook, Organization for Economic Co-operation and Development (Paris) n.d. Access Date: 26 October 2021. https://www.oecd.org/sti/science-technology-innovation-outlook/

	member work with NEITHER the research or the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.
0	The G7 member work strongly with EITHER the research community or the business community to remove barriers in sharing knowledge, data and tools while recognizing research security OR the G7 member work less than strongly with BOTH the research and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.
+1	The G7 member work strongly with BOTH the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

Compliance Director: Chan Wai Suet Gi Gi
Lead Analyst: Sara Teme

Canada: +1

Canada has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 15 June 2021, Canada and the United States signed the Memorandum of Understanding between the National Science Foundation (NSF) of the United States of America and the Natural Sciences and Engineering Research Council (NSERC) of Canada concerning Research Cooperation.[4629] This first formal partnership between the NSERC of Canada and NSF paves the way for collaborations in cutting-edge technology and knowledge-sharing between the two countries' research communities.

On 23 June 2021, Canada announced an investment of CAD5.25 million under Canada's Strategy for Patient-Oriented Research (SPOR) that will create a new national training platform based at Université Laval.[4630] The SPOR National Training Entity platform will centralize and streamline training activities, promote knowledge-sharing and coaching and mentoring for new researchers.

On 24 June 2021, Canada and the United States signed a Memorandum of Understanding on energy cooperation as part of the Roadmap for a Renewed US-Canada Partnership.[4631] The partnership increases bilateral cooperation, including knowledge sharing on nuclear energy policies.

On 28 June 2021, the Standards Council of Canada published the Canadian Data Governance Standardization Roadmap which identifies 35 areas and gaps within data governance to assess for standardization.[4632] The Canadian Data Governance Standardization Collaborative involved 220 experts across society to streamline the data sharing process with a more secure digital infrastructure founded on quality, trust and ethics.

[4629] New US-Canada partnership announced for collaboration in research and innovation, Natural Sciences and Engineering Research Council of Canada (Ottawa) 24 June 2021. Access Date: 5 January 2022. https://www.nserc-crsng.gc.ca/Media-Media/NewsDetail-DetailNouvelles_eng.asp?ID=1271

[4630] Government of Canada creates national training platform for patient-oriented research, Canadian Institutes for Health (Ottawa) 24 June 2021. Access Date: 5 January 2022. https://www.canada.ca/en/institutes-health-research/news/2021/06/government-of-canada-creates-national-training-platform-for-patient-oriented-research.html

[4631] Canada Strengthens Energy Partnership With the United States, Natural Resources Canada (Ottawa) 24 June 2021. Access Date: 5 January 2022. https://www.canada.ca/en/natural-resources-canada/news/2021/06/canada-strengthens-energy-partnership-with-the-united-states.html

[4632] Minister Champagne marks the launch of the Canadian Data Governance Standardization Collaborative Roadmap, Innovation, Science and Economic Development (Ottawa) 28 June 2021. Access Date: 5 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/06/minister-champagne-marks-the-launch-of-the-canadian-data-governance-standardization-collaborative-roadmap.html

On 29 June 2021, Canada joined the Coalition on Disaster Resilient Infrastructure, a global and multilateral partnership group involving both the public and private sector.[4633] Canada committed to participating in the knowledge-sharing coalition to ensure resilient investments and mitigate future climate risks.

On 30 June 2021, Canada led the Global Partnership on Artificial Intelligence (GPAI) Council meeting to emphasize the possibility for international collaboration on projects and policies to address the socio-ethical impacts of AI.[4634] The GPAI involved AI experts from diverse sectors to inform governments on the potential applications of AI to address global challenges.

On 5 July 2021, Minister of Health and Minister of Innovation, Science and Industry announced an investment of CAD4.95 million in a new research training platform, the Implementing Smart Cities Interventions to Build Healthy Cities Training Platforms (SMART).[4635] As a component of the Canadian Institutes of Health Research Healthy Cities Research Initiative, SMART aims to deliver interdisciplinary training to new generations of researchers and build resilience and health in Canadian cities.

On 12 July 2021, Minister of Innovation, Science and Industry Francois-Philippe Champagne, Minister of Public Safety and Emergency Preparedness Bill Blair and Minister of Health Patty Hajdu released new National Security Guidelines for Research Partnerships to integrate national security considerations into the development, evaluation and funding of international research partnerships.[4636] These guidelines were developed in collaboration with research communities, such as the NSERC and the Government of Canada-Universities Working Group.

On 16 July 2021, Minister Champagne and the Minister of Canadian Heritage Steven Guilbeault launched a public consultation to ensure that the modern copyright framework for artificial intelligence and the Internet of Things can respond to future challenges.[4637] The Government called for stakeholders to provide input on Technological Protection Measures' adequacy and potential challenges in dealing with the digital economy, including the repair and interoperability of technological measures.

On 20 July 2021, Innovation, Science and Economic Development Canada launched a series of virtual roundtables with principal stakeholders in Canada's quantum research and business communities.[4638] This public consultation on a collaborative platform advances the sharing of vital insights from the Canadian quantum industry to further inform the National Quantum Strategy.

On 20 July 2021, Natural Resources Canada signed a new Cooperative Research and Development Agreement with the US Environmental Protection Agency to enhance and update the ENERGY STAR

[4633] Government of Canada joins the Coalition on Disaster Resilient Infrastructure, Infrastructure Canada (Ottawa) 29 June 2021. Access Date: 15 January 2022. https://www.canada.ca/en/office-infrastructure/news/2021/06/government-of-canada-joins-the-coalition-on-disaster-resilient-infrastructure.html

[4634] Minister Champagne presents Global Partnership on Artificial Intelligence priorities for 2021, Innovation, Science and Economic Development (Ottawa) 30 June 2021. Access Date: 5 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/06/minister-champagne-presents-global-partnership-on-artificial-intelligence-priorities-for-2021.html

[4635] Investing in science-based solutions to improve health and well-being in urban areas, Canadian Institutes of Health Research (Ottawa) 5 July 2021. Access Date: 15 January 2022. https://www.canada.ca/en/institutes-health-research/news/2021/07/investing-in-science-based-solutions-to-improve-health-and-well-being-in-urban-areas.html

[4636] Government of Canada takes action to protect Canadian research and intellectual property, Innovation, Science and Economic Development (Ottawa) 12 July 2021. Access Date: 5 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/07/government-of-canada-takes-action-to-protect-canadian-research-and-intellectual-property.html

[4637] The Government of Canada Launches Consultation on a Modern Copyright Framework for AI and the Internet of Things, Innovation, Science and Economic Development (Ottawa) 16 July 2021. Access Date: 5 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/07/the-government-of-canada-launches-consultation-on-a-modern-copyright-framework-for-ai-and-the-internet-of-things.html

[4638] Government of Canada launches public consultations on National Quantum Strategy, Innovation, Science and Economic Development (Ottawa) 20 July 2021. Access Date: 7 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/07/government-of-canada-launches-public-consultations-on-national-quantum-strategy.html

Portfolio Manager, a free platform for institutional and commercial building owners to monitor and compare energy performance for potential upgrades and improvements.[4639] The agreement deepens the two countries' cooperation in energy efficiency through the sharing of tools.

On 28 July 2021, Minister Champagne and Minister Hajdu launched the Biomanufacturing and Life Sciences Strategy to strengthen the life science sector and to ensure resilience to future pandemics.[4640] The government committed CAD2.2 billion over seven years to invest into foundational research and research infrastructure of post-secondary institutions and affiliated research, streamline regulations to support health innovations, and create mechanisms for international and public-private partnerships.[4641]

On 8 August 2021, the National Research Council of Canada (NRC) announced funding of more than CAD23 million on research projects under its Ideation Fund initiatives, Challenge programs and the Supercluster support programs.[4642] These investments will advance NRC scientists' collaboration with academics, industries, and non-profit organizations to generate innovative technological solutions to Canada's pressing challenges.

On 12 August 2021, Parliamentary Secretary to the Minister of Infrastructure and Communities Andy Fillmore called any legal entities validly incorporated or registered in Canada to submit proposals under the Research and Knowledge Initiative (RKI).[4643] RKI aims to facilitate collaboration and partnership among key public infrastructure actors and stakeholders, and support data, research and knowledge-sharing activities.

On 12 August 2021, the Government committed CAD61.5 million for the next phase of the Canadian Longitudinal Study on Aging (CLSA).[4644] The CLSA is a collaboration between 160 researchers located at 26 Canadian institutions that monitor the health outcomes of over 50,000 Canadians for 20 years. The investment ensures the continuation of data collection for global researchers to access CLSA data for health insights.

On 13 August 2021, Minister Champagne and Minister Hajdu launched the application process for the Strategic Science Fund (SSF), an initiative to support third-party science and research organizations through a transparent and merit-based federal funding process.[4645]

On 3 November 2021, Minister Champagne and US Secretary of Commerce Gina Raimondo outlined a work plan to increase cross-border collaboration and advance post-COVID-19 economic recovery efforts, building

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[4639] Canada-U.S. Sign New Cooperative Research and Development Agreement on Energy Efficiency, Natural Resources Canada (Ottawa) 20 July 2021. Access Date: 12 January 2022. https://www.canada.ca/en/natural-resources-canada/news/2021/07/canada-us-sign-new-cooperative-research-and-development-agreement-on-energy-efficiency.html

[4640] The Government of Canada announces biomanufacturing and life sciences strategy, Innovation, Science and Economic Development (Vancouver) 28 July 2021. Access Date: 7 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/07/the-government-of-canada-announces-biomanufacturing-and-life-sciences-strategy.html

[4641] Canada's Biomanufacturing and Life Sciences Strategy, Innovation, Science and Economic Development (Ottawa) 28 July 2021. Access Date: 7 January 2022. https://www.ic.gc.ca/eic/site/151.nsf/eng/00019.html

[4642] Government of Canada funding research collaborations for breakthrough technologies, National Research Council Canada (Ottawa) 6 August 2021. Access Date: 12 January 2022. https://www.canada.ca/en/national-research-council/news/2021/08/government-of-canada-funding-research-collaborations-for-breakthrough-technologies.html

[4643] Government of Canada announces a call for proposals to strengthen community-level data and research projects related to public infrastructure, Infrastructure Canada (Ottawa) 10 August 2021. Access Date: 15 January 2022. https://www.canada.ca/en/office-infrastructure/news/2021/08/government-of-canada-announces-a-call-for-proposals-to-strengthen-community-level-data-and-research-projects-related-to-public-infrastructure.html

[4644] Government of Canada renews investment in largest Canadian study on aging, Canadian Institutes of Health Research (Ottawa) 12 August 2021. Access Date: 12 January 2022. https://www.canada.ca/en/institutes-health-research/news/2021/08/government-of-canada-renews-investment-in-largest-canadian-study-on-aging.html

[4645] Government of Canada opens Strategic Science Fund application process, Innovation, Science and Economic Development (Ottawa) 10 August 2021. Access Date: 15 January 2022. canada.ca/en/innovation-science-economic-development/news/2021/08/government-of-canada-opens-strategic-science-fund-application-process.html

upon the Roadmap for a Renewed US-Canada Partnership.[4646] Through the work plan, Minister Champagne and US Secretary Raimondo agreed to cooperate on enhancing resiliency for advanced network technologies and deepen collaboration on emerging technologies.

On 11 November 2021, Minister Champagne attended the second annual plenary of the GPAI in Paris alongside leading international AI experts and 18 representatives from member countries and the European Union.[4647] The Paris Summit encouraged all members to leverage the proposals and recommendations of GPAI experts to ensure a responsible and ethical development of AI.

On 22 November 2021, the Government of Canada partnered with the European Commission to examine the use of digital credentials.[4648] Their partnership resulted in a series of workshops and a report entitled "Canada and the European Union Joint Workshop Series for Enabling Interoperability and Mutual Support for Digital Credentials." Future work involves addressing recommendations from the report to collaborate on digital credentials research and innovation, focusing on interoperability and mutual support while protecting privacy and personal data.

On 29 November 2021, Canada, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4649] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 13 December 2021, Minister of Health Jean-Yves Duclos tabled the annual report on Canada's public health, "A Vision to Transform Canada's Public Health System" in parliament.[4650] Under the Pan-Canadian Health Data Strategy, the report aims to modernize health data collection, sharing and interoperability, and address gaps in public health surveillance and data systems in an ethical and secure manner. In addition, the report emphasizes the need to modernize collaboration structures to mobilize all of society with clear and measurable indicators to approach complex health challenges.

On 14 December 2021, Minister Duclos announced the release of the sixth "Report on Human Biomonitoring of Environmental Chemicals" in Canada based on data from the Canadian Health Measures Survey.[4651] The reported human biomonitoring information contributes to the availability of data to all Canadians through the Open Government portal and the CHMS biomonitoring site.

On 15 December 2021, the Special Advisory Committee on the Epidemic of Opioid Overdoses acknowledged the significance of improving data sharing and comparability to inform evidence-based policies

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[4646] Joint readout: Minister François-Philippe Champagne meets with Secretary Gina Raimondo of the United States, Innovation, Science and Economic Development (Washington D.C.) 3 November 2021. Access Date: 7 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/11/joint-readout-minister-francois-philippe-champagne-meets-with-secretary-ginaraimondo-of-the-united-states.html

[4647] Minister Champagne attends the Global Partnership on Artificial Intelligence Paris Summit, Innovation, Science and Economic Development Canada (Ottawa) 11 November 2021. Access Data: 16 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/11/minister-champagne-attends-the-global-partnership-on-artificial-intelligence-paris-summit.html

[4648] Government of Canada announces partnership with the European Commission to examine the use of digital credentials, Innovation, Science and Economic Development Canada (Ottawa) 22 November 2021. Access Data: 16 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/11/government-of-canada-announces-partnership-with-the-european-commission-to-examine-the-use-of-digital-credentials.html

[4649] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/

[4650] Statement from the Chief Public Health Officer of Canada on the CPHO Annual Report 2021: A Vision to Transform Canada's Public Health System, Public Health Agency of Canada (Ottawa) 13 December 2021. Access Data: 16 January 2022. https://www.canada.ca/en/public-health/news/2021/12/statement-from-the-chief-public-health-officer-of-canada-on-the-cpho-annual-report-2021-a-vision-to-transform-canadas-public-health-system.html

[4651] Government of Canada announces the release of the latest results from the Canadian Health Measures Survey, Health Canada (Ottawa) 14 December 2022. Access Date: 16 January 2022. https://www.canada.ca/en/health-canada/news/2021/12/government-of-canada-announces-the-release-of-the-latest-results-from-the-canadian-health-measures-survey.html

and to expand data collection on the broader factors that contribute to substance-related harms in various Canadian population groups.[4652]

On 13 January 2022, Canada recognized the research effort from the Council of Canadian Academies and the Expert Panel on Disaster Resilience in a Changing Climate.[4653] Their report, "Building a Resilient Canada," urged an integrated response and collaboration on climate change-related extreme weather events. Canada affirmed its commitment to knowledge sharing and collaboration with stakeholders through the development of a National Risk Profile and National Adaptation Strategy to strengthen communities' resilience.

On 13 January 2022, the Canada Research Coordinating Committee released its 2020–21 progress report "Collective Response" summarizing the efforts of federal research funding organizations during the pandemic.[4654] The report outlined six strategic priorities for Canadian research, including enhancing interagency operation on international research, supporting Canada's research response to COVID-19, and engagement in interdisciplinary, international, high-risk, rapid-response research.

On 14 January 2022, the Government created the Centre for Research on Pandemic Preparedness and Health Emergencies with an ongoing investment of CAD18.5 million per year.[4655] The Research Centre focuses on growing Canada's capacity to mobilize knowledge in the recovery of the current pandemic and resilience to future pandemics through collaboration with domestic and international stakeholders. The Research Centre has already supported COVID-19 research initiatives that equip decision-makers with research evidence and address the wider impacts of the pandemic.

On 3 February 2022, the Minister of Natural Resources Jonanthan Wilkinson endorsed the Pan-Canadian Geoscience Strategy.[4656] The Strategy is committed to improving collaboration and the availability and accessibility of public geoscience data and knowledge. It prioritizes the facilitation of access to online geoscience data, the support of the training of geoscientists and the enhancement of collaboration with research communities, such as geological survey organizations.

On 8 February, the Minister of Innovation, Science and Industry François-Philippe Champagne released a report on the results of the public consultations that have helped shape the National Quantum Strategy.[4657] Reflecting on the inputs of research and business communities, the report highlights the importance of establishing quantum security and increasing domestic and international collaboration.

[4652] Joint Statement from the Co-Chairs of the Special Advisory Committee on the Epidemic of Opioid Overdoses – Latest Modelling Projections on Opioid Related Deaths and National Data on the Overdose Crisis, Public Health Agency of Canada (Ottawa) 15 December 2021. Access Date: 16 January 2022. https://www.canada.ca/en/public-health/news/2021/12/joint-statement-from-the-co-chairs-of-the-special-advisory-committee-on-the-epidemic-of-opioid-overdoses--latest-modelling-projections-on-opioid-re.html
[4653] Government of Canada welcomes Council of Canadian Academies' report Building a Resilient Canada, Public Safety Canada (Ottawa) 13 January 2022. Access Date: 16 January 2022. https://www.canada.ca/en/public-safety-canada/news/2022/01/government-of-canada-welcomes-council-of-canadian-academies-report-building-a-resilient-canada.html
[4654] Canada Research Coordinating Committee releases 2020–21 progress report, Canada Research Coordinating Committee (Ottawa) 13 January 2022. Access Date: 16 January 2022. https://www.canada.ca/en/research-coordinating-committee/news/2022/01/crcc-releases-2020-21-progress-report.html
[4655] Government of Canada creates Centre for Research on Pandemic Preparedness and Health Emergencies, Canadian Institutes of Health Research (Ottawa) 14 January 2022. Access Date: 16 January 2022. https://www.canada.ca/en/institutes-health-research/news/2022/01/government-of-canada-creates-centre-for-research-on-pandemic-preparedness-and-health-emergencies.html
[4656] Pan-Canadian Geoscience Strategy: Enhancing Data, Knowledge and Access for a Stronger Future, Natural Resources Canada (Ottawa) 3 February 2022. Access Date: 21 March 2022. https://www.canada.ca/en/natural-resources-canada/news/2022/02/pan-canadian-geoscience-strategy-enhancing-data-knowledge-and-access-for-a-stronger-future.html
[4657] Government of Canada shares results of public consultations on the future of quantum technology in Canada, Innovation, Science and Economic Development Canada (Ottawa) 8 February 2022. Access Date: 21 March 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2022/02/government-of-canada-shares-results-of-public-consultations-on-the-future-of-quantum-technology-in-canada.html

On 17 February 2022, the National Cybersecurity Consortium announced up to CAD80 million to lead the Cyber Security Innovation Network (CSIN).[4658] This funding will help establish a stronger national cyber security ecosystem and increase collaboration between academia and industry. CSIN will enhance research and help develop skilled cyber security talent to address the current shortage of cyber security specialists.

On 18 February 2022, the Minister of Innovation, Science and Industry Francois-Philippe Champagne, on behalf of the Minister of International Trade, Export Promotion, Small Business and Economic Development Mary Ng, announced an investment of CAD2.8 million towards establishing the Business Data Lab (BDL).[4659] The BDL will increase the availability of data on businesses' current conditions and provide them with data tools to aid their economic recovery.

On 17 March 2022, the government along with Maritime provinces invested CAD16.1 million to the Maritime Strategy for Patient-Oriented Research Support for People and Patient-Oriented Research and Trials Unit (MSSU).[4660] MSSU collaborates with government stakeholders, local research institutions, health authorities and patients to support patient-oriented research. It focuses on enhancing platforms for easier access to provincial health data, fostering interprovincial research collaboration and creating and sharing tools for patient engagement.

On 18 March 2022, the Minister of Agriculture and Agri-Food Marie-Claude Bibeau announced an investment of up to CAD113,575 for Be Seen Be Safe Ltd. to develop its biosecurity technology in vehicle-tracking to improve disease outbreak management.[4661] This funding will also go towards the company's effort in distributing recommendations on best-fit technology and deployment information to the livestock industry.

On 30 March 2022, the Minister of Innovation, Science and Industry François-Philippe Champagne announced a CAD92 million investment in adMare BioInnovations, a not-for-profit organization that provides expertise, infrastructure and capital to advance the Canadian life sciences sector.[4662] The new investment in adMare BioInnovations will continue to support its collaborations in health research and development with Canadian small and medium-sized enterprises.

On 6 April 2022, the Minister of Crown-Indigenous Relations Marc Miller announced the donation of approximately CAD1 million to 17 Indigenous organizations to better understand the causes of violence towards Indigenous women, girls and 2SLGBTQQIA+ people.[4663] Specifically, the fund supports the

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[4658] Government of Canada announces next phase to strengthen Cyber Security Innovation Network, Innovation, Science and Economic Development Canada (Ottawa) 17 February 2022. Access Date: 21 March 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2022/02/government-of-canada-announces-next-phase-to-strengthen-cyber-security-innovation-network.html

[4659] Government of Canada announces partnership to establish Business Data Lab to provide enhanced insight on business conditions, Innovation, Science and Economic Development Canada (Ottawa) 18 February 2022. Access Date: 21 March 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2022/02/government-of-canada-announces-partnership-to-establish-business-data-lab-to-provide-enhanced-insight-on-business-conditions.html

[4660] Maritime SPOR SUPPORT Unit, Canadian Institutes of Health Research (Ottawa) 17 March 2022. Access Date: 21 March 2022. https://www.canada.ca/en/institutes-health-research/news/2022/03/maritime-spor-support-unit.html

[4661] Government of Canada invests in the development of biosecurity technology to help farmers mitigate the risk of disease outbreaks, Agriculture and Agri-Food Canada (Guelph) 18 March 2022. Access Date: 21 March 2022. https://www.canada.ca/en/agriculture-agri-food/news/2022/03/government-of-canada-invests-in-the-development-of-biosecurity-technology-to-help-farmers-mitigate-the-risk-of-disease-outbreaks.html

[4662] Government of Canada advances domestic life sciences sector by supporting Canadian companies, talent, and research and development, Innovation, Science and Economic Development Canada (Vancouver) 30 March 2022. Access Date: 25 April 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2022/03/government-of-canada-advances-domestic-life-sciences-sector-by-supporting-canadian-companies-talent-and-research-and-development.html

[4663] Canada supports 19 Indigenous-led projects to improve data to address violence against Indigenous women, girls and 2SLGBTQQIA+ people, Crown-Indigenous Relations and Northern Affairs Canada (Ottawa) 6 April 2022. Access Date: 25 April 2022. https://www.canada.ca/en/crown-indigenous-relations-northern-affairs/news/2022/04/canada-supports-19-indigenous-led-projects-to-improve-data-to-address-violence-against-indigenous-women-girls-and-2slgbtqqia-people.html

initiatives of Indigenous-led data projects to create qualitative and population-specific indicators to improve and streamline data collection, analysis and interpretation regarding the ongoing violence towards underrepresented populations.

On 6 April 2022, the Government of Canada, the Government of Saskatchewan, together with industry organizations, the Saskatchewan Cattlemen's Association and Fertilizer Canada allocated CAD885,000 towards 43 projects under the Agriculture Demonstration of Practices and Technologies (ADOPT) program.[4664] The ADOPT program aims to promote the sharing of knowledge to Saskatchewan producers and ranchers. The 43 projects will locally evaluate new agricultural practices so that regional producers can adapt their agricultural operations accordingly to successful trials.

On 8 April 2022, Prime Minister Justin Trudeau announced CAD220 million in funding for international assistance in response to COVID-19.[4665] Canada reiterated its commitment to supporting Access to COVID-19 Tools (ACT) Accelerator and the COVAX Facility, international partnerships that ensure equitable access to COVID-19 tests, treatments and vaccines.

On 25 April 2022, the Government of Canada invested CAD6.7 million in a new pediatric COVID-19 research platform: Pediatric Outcome Improvement through Coordination of Research Networks (POPCORN).[4666] POPCORN will facilitate knowledge-sharing and collaboration between research teams at 16 pediatric hospitals to ensure coordination in examining COVID-19's health effects on children and youth.

On 19 May 2022, the Minister of Innovation, Science and Economic Development Champagne and Minister of Public Safety Mendicino announced that Canada will "prohibit the inclusion of products, and services from high-risk vendors in our telecommunications system," specifically disallowing Huawei and ZTE products from Canada's telecommunications network.[4667] This decision continues to allow research partnerships while following the decision of other members of Five Eyes security alliance to protect national security.[4668]

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4669] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

On 14 June 2022, Minister of Foreign Affairs Mélanie Joly, Denmark's Minister of Foreign Affairs Jeppe Kofod, Greenland's Prime Minister Múte B. Egede and Greenland's Minister of Foreign Affairs, Industry and Trade Vivian Motzfeldt issued a joint statement that committed to help their communities to "monitor and

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[4664] Governments of Canada and Saskatchewan further support research demonstration projects, Agriculture and Agri-Food Canada (Saskatchewan) 6 April 2022. Access Date: 25 April 2022. https://www.canada.ca/en/agriculture-agri-food/news/2022/04/governments-of-canada-and-saskatchewan-further-support-research-demonstration-projects.html
[4665] Prime Minister announces additional funding for COVID-19 vaccination in lower-income countries, Prime Minister of Canada (Ottawa) 8 April 2022. Access Date: 25 April 2022. https://pm.gc.ca/en/news/news-releases/2022/04/08/prime-minister-announces-additional-funding-covid-19-vaccination
[4666] New investment in collaborative research will address the impacts of COVID-19 on children and youth, Canadian Institutes of Health Research (Montreal) 25 April 2022. Access Date: 25 April 2022. https://www.canada.ca/en/institutes-health-research/news/2022/04/new-investment-in-collaborative-research-will-address-the-impacts-of-covid-19-on-children-and-youth.html
[4667] Canada formally bans China's Huawei, ZTE from 5G networks, Global News (Vancouver) 19 May 2022. Access Date: 12 June 2022. https://globalnews.ca/news/8849160/huawei-canada-ban-decision-5g/
[4668] Huawei 5G ban puts UBC research partnership in the spotlight, Vancouver Sun (Vancouver) 20 May 2022. Access Date: 12 June 2022. https://vancouversun.com/business/huawei-5g-ban-puts-ubc-research-partnerships-in-the-spotlight
[4669] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

build resilience in response to climate change in the Arctic" through research collaboration, especially in using scientific, local and indigenous knowledge.[4670]

Canada has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security. Canada has taken action to work with the research community through the Canadian Data Governance Standardization Collaborative to streamline data sharing process, the Biomanufacturing and Life Sciences Strategy that support public-private partnerships, and the Ideation Fund initiative that invest in collaborative research projects. Canada has worked with the business community by hosting a series of roundtables to consult them on Canada's National Quantum Strategy. Canada also recognized research security, particularly in its release of the National Security Guidelines for Research Partnerships.

Thus, Canada receives a score of +1.

Analyst: Serena Honekin

France: +1

France has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 10 November 2021, the President of France Emmanuel Macron met with US Vice President Kamala Harris to establish the "US-France Comprehensive Dialogue on Space" to collaborate on civil, fiscal, national and space security.[4671] This agreement seeks to strengthen existing collaborative strategies to technological advancement and future pandemic preparedness.[4672]

On 29 November 2021, France, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4673] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 7 December 2021, France attended the sixth annual United States - France Joint Committee Meeting (JCM) on Science and Technology Cooperation in Washington D.C.[4674] The JCM brought together government and research organization representatives from France and the United States to discuss the advancements in their environmental, climate sciences, health research and emerging technology sectors. Representatives agreed to deepen cooperation in research, knowledge sharing, health affairs, climate crises, and pandemic responses.

On 8 December 2021, the Ministry of Health, the Ministry of Education, Research and Innovation, and the Ministry of Finance announced approximately EUR142 million to support 17 beneficiaries through the fifth

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[4670] Canada-Kingdom of Denmark Announces Bilateral Cooperation, Government of Canada (Ottawa) 14 June 2022. Access Date: 14 June 2022. https://menafn.com/1104375523/Canada-Kingdom-Of-Denmark-Announces-Bilateral-Cooperation
[4671] U.S. VP Harris announces expanded cooperation on space issues after meeting Macron, Reuters (Paris) 11 November 2021. Access Date: 4 December 2021. https://www.reuters.com/world/us/us-vp-harris-announces-expanded-cooperation-space-issues-after-meeting-macron-2021-11-10/
[4672] Vice President Kamala Harris's Meeting with President Emmanuel Macron of France, White House Briefing Room (Washington D.C.) 10 November 2021. Access Date: 4 December 2021. https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/10/statement-by-senior-advisor-and-chief-spokesperson-symone-sanders-on-vice-president-kamala-harriss-meeting-with-president-emmanuel-macron-of-france/
[4673] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/
[4674] Joint Statement on U.S. - France Science and Technology Cooperation, US Department of State (Washington D.C.) 7 December 2021. Access Date: 9 December 2021. https://www.state.gov/us-france-science-technology-cooperation

annual Investments for the Future Program.[4675] Through the National Research Agency, these pledges support innovative research partnerships in academia, technological and healthcare industries. This will promote diverse projects that work towards sustainable growth, research incentivization and multi-sectoral network building domestically.

On 9 December 2021, President Macron cited digital transformation as a key priority for France's upcoming presidency of the EU.[4676] France will focus on digital transformation, through the Digital Services Act and the Digital Market, that will seek to provide additional regulations, security, and accountability on digital platforms used within the EU.

On 20 December 2021, the Minister for Europe and Foreign Affairs Jean-Yves Le Drian met with Mexico's President Andres Manuel Lopez Obrador and Foreign Secretary Marcelo Ebrard.[4677] Minister Le Drian reaffirmed France's desire to advance multilateral diplomacy within the G20 and the Organization for Economic Co-Operation and Development, focusing on bilateral cooperation with Mexico in the areas of health, research, financial investment and higher education.

On 20 December 2021, Minister Le Drian met with Costa Rican President Carlos Alvarado Quesada and Minister of Foreign Affairs and Worship Rodolfo Solano Quiros.[4678] Minister Le Drian expressed France's goal to deepen the partnership with Costa Rica in areas such as agricultural research and development, with a focus on building environmental resilience. In collaboration with higher educational institutions and leaders in the private sector, France and Costa Rica commit to advance global COVID-19 research and vaccine supply.

On 7 February 2022, the Ministry for Europe and Foreign Affairs and President Macron hosted the annual Mediterranean Forum in Marseille, France.[4679] The event brought together multiple civil society stakeholders in the Mediterranean region to address common challenges including education, mobility, climate change, employment and innovation.

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4680] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

France has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research

[4675] Investments for the future: 17 new winners and 142 million for the fifth call for projects "University hospital research in health", Ministry of Higher Education, Research and Innovation (Paris) 8 December 2021. Translation provided by Google Translate. Access Date: 10 December 2021. https://www.enseignementsup-recherche.gouv.fr/fr/investissements-d-avenir-17-nouveaux-laureats-et-142-meu-pour-le-cinquieme-appel-projets-recherche-82567
[4676] The French Presidency of the Council of the European Union, Ministry of Higher Education, Research and Innovation (Paris) 10 December 2021. Translated by Google Translate. Access Date: 10 December 2021. https://www.enseignementsup-recherche.gouv.fr/fr/la-presidence-francaise-du-conseil-de-l-union-europeenne-82627
[4677] Mexico - Visit by Jean-Yves Le Drian, Ministry of Higher Education, Research and Innovation (Paris) 22 December 2021. Translation provided by Google Translate. Access Date: 23 March 2022. https://www.diplomatie.gouv.fr/en/country-files/mexico/news/article/mexico-visit-by-jean-yves-le-drian-dec-20-21-2021
[4678] Costa Rica - Visit by Jean-Yves Le Drian, Ministry of Higher Education, Research and Innovation (Paris) 22 December 2021. Translation provided by Google Translate. Access Date: 23 March 2022. https://www.diplomatie.gouv.fr/en/country-files/costa-rica/events/article/costa-rica-visit-by-jean-yves-le-drian-dec-22-23-2021
[4679] The Mediterranean Forum: An Appeal for the Mediterranean, Ministry of Higher Education, Research and Innovation (Paris) 22 December 2021. Translation provided by Google Translate. Access Date: 23 March 2022. https://www.diplomatie.gouv.fr/en/french-foreign-policy/civil-society/the-mediterranean-forum-an-appeal-for-the-mediterranean-7-and-8-february-2022/
[4680] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

security. France worked with research communities through the US-France in Joint Committee Meeting that brings research representatives to share cutting-edge knowledge and deepen collaboration on research. France has also worked with business communities through the Investments for the Future program that support research partnerships between academia and industries.

Thus, France receives a score of +1.

Analyst: Theresa Jones

Germany: +1

Germany has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 15 July 2021, the Ministry of Health announced that it would contribute an additional EUR260 million to the WHO to aid in the global response against the COVID-19 pandemic.[4681] This sum will go towards the global cooperation platform the Access to COVID-19 Tools Accelerator, which aims to accelerate the global response to the COVID-19 pandemic.

On 1 September 2021, Chancellor Angela Merkel, along with the WHO Director-General Tedros Adhanom Ghebreyesus inaugurated the Hub for Pandemic and Epidemic Intelligence based in Berlin.[4682] The Hub aims to assist data science innovation for public health surveillance and response, and share expertise globally. Moreover, Germany announced an initial investment of USD100 million in the WHO Hub, which seeks to connect technology, data, tools and communities through broad partnerships across professional disciplines in order to ensure that actionable data and intelligence are widely available for the common good.

On 6 September 2021, the Federal Ministry of Health and the Ministry of Education and Research announced EUR150 million to support six coordinating German companies in their joint effort to develop COVID-19 related medicine and pharmaceuticals.[4683] The government funding will support: AdrenoMed AG, Apogenix AG, Atriva Therapeutics GmbH, CORAT Therapeutics GmbH, InflaRX GmbH and the DRK Baden-Württemberg-Hessen gGmbH.

On 29 November 2021, Germany, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4684] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4685] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

[4681] Germany supports the global COVID-19 response, World Health Organization (Geneva) 1 September 2021. Access Date: 16 January 2022. https://www.who.int/about/funding/contributors/deu

[4682] WHO, Germany open Hub for Pandemic and Epidemic Intelligence in Berlin, World Health Organization (Berlin) 1 September 2021. Access Date: 16 January 2022. https://www.who.int/news/item/01-09-2021-who-germany-open-hub-for-pandemic-and-epidemic-intelligence-in-berlin

[4683] Spahn/Karliczek: Further impetus for the development and manufacture of supply-related drugs against COVID-19, Federal Ministry of Health(Berlin) 6 September 2021. Translation provided by Google Translate. Access Date: 16 January 2022. https://www.bundesgesundheitsministerium.de/presse/pressemitteilungen/2021/3-quartal/arzneimittel-gegen-covid-19.html

[4684] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/

[4685] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

Germany has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security. Germany has worked with the research community by investing in the WHO Hub for Pandemic and Epidemic Intelligence. Additionally, Germany has engaged with its business community by investing in six German pharmaceutical companies' joint effort to develop medicines against COVID-19.

Thus, Germany receives a score of +1.

Analyst: Ceylan E. Borgers

Italy: +1

Italy has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 18 June 2021, the Institute of Public Health published a report declaring the need to improve and develop new medical technologies to assist those living with disabilities and those whose health has been affected by COVID-19.[4686]

On 24 November 2021, Italy adopted the Strategic Program for Artificial Intelligence 2022-24.[4687] This program includes policies to strengthen the Italian research ecosystem in AI and foster collaboration between academic, industry and public actors. Additionally, the program will finance national platforms for data sharing and software. It also aims to create more accessible data infrastructures and support start-ups with AI solutions to address problems in the public sector.

On 29 November 2021, Italy, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4688] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 29 December 2021, the National Recovery and Resilience Plan and the Ministry of University and Research called for new proposals on research measures and infrastructure and allocated EUR1.58 billion to the cause.[4689] The initiative aims to improve current research infrastructure while allowing for technological innovation.

On 3 January 2022, the Ministry of Economy and Finance and the Ministry of University and Research announced the funding of EUR1,250 million for private research institutions.[4690] The funds will help to offset the operating costs of private research entities.

On 16 March 2022, the National Recovery and Resilience Plan and the Ministry of University and Research announced the funding of EUR1.61 billion to a maximum of 14 partnerships between research universities,

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[4686] Technologies to support frailty, disability and rare diseases: development and submission of a survey during the pandemic emergency COVID-19, Higher Institute of Health (Rome) 18 June 2021. Access Date: 16 January 2022. https://www.iss.it/web/iss-en/rapporti-iss-covid-19/-/asset_publisher/0JjjK4TivXZp/content/id/5828712
[4687] Artificial Intelligence: Italy launches the national strategy, Minister for technological innovation and digital transition (Rome) 24 November 2021. Translation provided by Google Translate. Access Date: 1 February 2022. https://innovazione.gov.it/notizie/comunicati-stampa/intelligenza-artificiale-l-italia-lancia-la-strategia-nazionale/
[4688] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/
[4689] NRP: calls for research infrastructures and technological innovation infrastructures published, Ministry of University and Research (Rome) 29 December 2022. Translation provided by Google Translate. Access Date: 9 May 2022. https://www.mur.gov.it/it/news/mercoledi-29122021/pnrr-pubblicati-i-bandi-le-infrastrutture-di-ricerca-e-le-infrastrutture
[4690] Research: set up of the 2020-2022 three-year table of private entities, Ministry of University and Research (Rome) 16 February 2022. Translation provided by Google Translate. Access Date: 8 May 2022. https://www.mur.gov.it/it/news/mercoledi-16022022/ricerca-istituita-la-tabella-triennale-2020-2022-degli-enti-privati

centres and companies.[4691] The initiative aims to provide financial aid to research projects to strengthen research at the national and international level by increasing Italy's participation in the European and global research sphere. Funding will support training initiatives aimed at providing researchers with the best skills offered by both universities and companies thus bridging the gap between the skills found in the private and public sector.

On 12 April 2022, the Ministry of University and Research announced the National Research Program in Antarctica with a funding of EUR6.44 million for projects aimed at broadening knowledge of the Earth System.[4692] The program is open to universities, private research entities and national public research institutions. It will involve existing knowledge sharing from the permanent observers in Antarctica and the collection and sharing of data from the new researchers thus ensuring the collaboration of many countries and their platforms.

On 14 April 2022, Minster Maria Cristina Messa held the first table of experts in the research field aimed at improving and developing Italy's strategy for fundamental research.[4693] The initiative allows for the continuation of innovative research and development laid out in the National Recovery and Resilience Plan by identifying research needs, funding demands and actions required for Italy to be on par with international and European research.

On 3 May 2022, Minster of University and Research Maria Cristina Messa and Minister of Economic Development Giancarlo Giorgetti published the criteria and guidelines for the Italian Fund for Applied Science (FISA) which amounts to EUR50 million for the year 2022.[4694] The FISA aims to protect the innovative ideas proposed by both private and public sector researchers in the national research system by expanding the resources and aid available to them in developing their research.

On 4 May 2022, the Ministry of University and Research stated that the Italian scientific community will be able to participate in the mission of open science as stated in the Convention signed between the Ministry of University and Research, Ministry of Economics and Health and the Human Technopole Foundation, which aims to broaden the access of the national scientific community.[4695] Italian researchers will gain access to cutting-edge research infrastructure and create a sustainable environment for long-term research by increasing research security through the collaboration of universities, public research institutions, industries and hospitalization institutes.

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4696] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers

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[4691] Pnrr, Mur: call for proposals on partnerships for research activities published, Ministry of University and Research (Rome) 16 March 2022. Translation provided by Google Translate. Access Date: 8 May 2022. https://www.mur.gov.it/it/news/mercoledi-16032022/pnrr-mur-pubblicato-bando-su-partenariati-attivita-di-ricerca

[4692] National research program in Antarctica: the 2022 call published, Ministry of University and Research (Rome) 12 April 2022. Translation provided by Google Translate. Access Date: 8 May 2022. https://www.mur.gov.it/it/news/martedi-12042022/programma-nazionale-di-ricerca-antartide-pubblicato-il-bando-2022

[4693] Italian strategy for fundamental research: first meeting pf the panel of experts, Ministry of University and Research (Rome) 14 February 2022. Translation provided by Analyst. Access Date: 8 May 2022. https://www.mur.gov.it/it/news/giovedi-14042022/strategia-italiana-la-ricerca-fondamentale-prima-riunione-del-tavolo-di

[4694] Italian Fund for Applied Sciences: here is the MUR-MISE decree with criteria and methods, Ministry of University and Research (Rome) 3 May 2022. Translation provided by Google Translate. Access Date: 8 May 2022. https://www.mur.gov.it/it/news/martedi-03052022/fondo-italiano-le-scienze-applicate-ecco-il-decreto-mur-mise-con-criteri-e

[4695] Research: second level consultation started as foreseen by agreement with HT, Ministry of University and Research (Rome) 4 May 2022. Translation provided by Google Translate. Access Date: 8 May 2022. https://www.mur.gov.it/it/news/mercoledi-04052022/ricerca-iniziata-consultazione-di-secondo-livello-prevista-da-convenzione

[4696] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

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emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

Italy has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security. Italy has worked with its research community through the Strategic Program for Artificial Intelligence. Additionally, Italy has collaborated with business communities by adopting policies to strengthen the research environment and encourage collaboration between academia, industry and the government.

Thus, Italy receives a score of +1.

Analyst: Ceylan E. Borgers

Japan: +1

Japan has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 14 June 2021, the International Cooperation Agency signed a Record of Discussions with the Government of Peru under the Science and Technology Research Partnership for Sustainable Development (SATREPS).[4697] This program aims to facilitate knowledge sharing between Japan and Peru and aid in the development of strategies to mitigate the impacts of climate, health and geo-political crises upon local infrastructure in the Lima Metropolitan Area.[4698]

On 16 June 2021, The Science and Technology Agency along with the Ministry of Education, Culture, Sports, Science and Technology hosted an online symposium to recognize the establishment of the COI-NEXT platform, which seeks to connect industry leaders with post-secondary institutions in advancing UN Sustainable Development Goals through research and development.[4699] The symposium brought key stakeholders in academia, technological industries and local governments together to discuss the goals and potential outcomes of the program.

On 1 September 2021, The Government of Japan established the Digital Agency that aims to enhance digital literacy and connectivity for all Japanese citizens.[4700] The Agency will seek to advance strategies, legislation and investments to promote user-friendly platforms and services that facilitate knowledge sharing and capacity building across sectors.[4701]

On 28 September 2021, The National Center of Incident Readiness and Strategy for Cybersecurity launched the 'Cybersecurity for All' initiative to ensure that cybersecurity is guaranteed to all "people, business sectors, and local regions" that live and work through cyberspace.[4702] This strategy will work with the Digital Agency

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[4697] Signing of Records of Discussions, Japan International Cooperation Agency (Tokyo) 16 June 2021. Access Date: 2 December 2021. https://www.jica.go.jp/english/news/press/2021/20210616_30.html

[4698] About SATREPS, Japan Science and Technology Agency (Tokyo) Access Date: 14 January 2022. https://www.jst.go.jp/global/english/about.html

[4699] COI-NEXT Kick-Off Symposium, Japan Science and Technology Industry (Tokyo) 16 June 2021. Access Date: 2 December 2021. https://www.jst.go.jp/report/2021/210726_e.html

[4700] What is the Digital Agency?, Digital Agency of Japan (Tokyo) 1 September 2021. Access Date: 2 December 2021. https://www.digital.go.jp/en

[4701] National Data Strategy, National Strategy Office of IT, Cabinet Secretariat (Tokyo) 6 June 2021. Access Date: 3 December 2021. https://cio.go.jp/sites/default/files/uploads/documents/digital/20210901_en_05.pdf

[4702] Commitment to a Free, Fair, and Secure Cyberspace - About NISC (Tokyo) 22 October 2021. Access Date: 3 December 2021. https://www.nisc.go.jp/eng/index.html

to strengthen the technological networks and cyber infrastructure shared between foreign governments, business leaders and post-secondary institutions.[4703]

On 21 October 2021, the Cabinet Secretariat for the National Center of Incident Readiness and Strategy for Cybersecurity hosted the 14th annual ASEAN-Japan Cybersecurity Policy Meeting virtually.[4704] Key priorities of the meeting included enhancing collaboration on cybersecurity between ASEAN member states through trilateral dialogue between government, academia and industry to facilitate cybersecurity exercises, cyber-infrastructure protection workshops and capacity building initiatives.

On 29 November 2021, Japan, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4705] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 9 December 2021, Parliamentary Vice-Minister for Foreign Affairs Taro Honda met with his counterpart in Kuwait to discuss the long-standing diplomatic relationship between their countries.[4706] Vice-Minister Honda reaffirmed Japan's commitment to a "comprehensive partnership" in areas including post-pandemic recovery strategies both domestically and abroad.

On 10 December 2021, the Minister of Foreign Affairs Hayashi Yoshimasa attended the G7 Foreign and Development Ministers Meeting held in Liverpool, United Kingdom.[4707] Minister Hayashi met with of his G7 counterparts and expressed the need for cooperation in the international community, primarily in the Indo-Pacific region. With the rise in global cases due to the spread of the Omicron variant, each member agreed to reinforce their efforts to deploy vaccines and strengthen protective measures.

On 4 March 2022, the Government of Japan announced the Startup City Project Japan, a start-up acceleration program in partnership with the Japan External Trade Organization.[4708] The project will provide research, financing and global outreach support to lead start-ups in the technology sector in collaboration with local governments, universities and private sector actors. The project aims to advance Japan's commitment to grow and participate in global technological industries in post-pandemic economic efforts.

On 26 March 2022, the Ministry of Foreign Affairs hosted the Tokyo International Conference of African Development with African state representatives.[4709] The meeting prioritized assistance to post-COVID-19 research and development efforts in Africa in the areas of economy, society, peace and security.

On 3 April 2022, the Japanese Agency for Medical Research and Development established the Strategic Centre of Biomedical Research and Development for Preparedness and Response (SCARDA).[4710] SCARDA

[4703] Cybersecurity Strategy, The Government of Japan (Tokyo) 28 September 2021. Access Date: 3 December 2021. https://www.nisc.go.jp/eng/pdf/cs-senryaku2021-en.pdf

[4704] Outcomes of the 14th ASEAN-Japan Cybersecurity Policy Meeting, The National Center of Incident Readiness and Cybersecurity (Tokyo) 22 October 2021. Access Date: 2 December 2021. https://www.nisc.go.jp/eng/pdf/AMSJ_CPM_20211021_eng_r2.pdf

[4705] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/

[4706] Japan lauds a multi-layered relationship in Kuwait, Ministry of Foreign Affairs (Tokyo). 9 December 2021. Access Date: 23 March 2022. https://www.mofa.go.jp/files/100284047.pdf

[4707] Japan-UK Foreign Ministers' Meeting, Ministry of Foreign Affairs (Tokyo) 11 December 2021. Access Date: 23 March 2022. https://www.mofa.go.jp/erp/we/gb/page6e_000265.html

[4708] This Acceleration Program is Helping Japan's Startups Go Global, Forbes (Tokyo) 4 March 2022. Access Date: 24 March 2022. https://www.forbes.com/sites/japan/2022/03/04/this-acceleration-program-is-helping-japans-startups-go-global/?sh=6c87c79f7859

[4709] Tokyo TICAD Tokyo International Conference on African Development Meeting, Ministry of Foreign Affairs (Tokyo) 26 March 2022. Access Date: 21 April 2022. https://www.mofa.go.jp/press/release/press3e_000345.html

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aims to support the rapid expansion of vaccine research and development in Japan and contribute to global vaccination deployment campaigns. SCARDA will also work towards the development of vaccines against other potentially infectious diseases.

On 5 April 2022, the Government of Japan announced USD9.5 million through the Asia-Europe Foundation Project for Strengthening Preparedness and Response to COVID-19 and other emerging infectious diseases.[4711] This funding will help support the commitments of the World Health Organization to combat COVID-19 in Ukraine and neighbouring countries within the Eastern European region.

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4712] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

Japan has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security. Japan has worked with both research and business community through the Cybersecurity for All initiative that aims to strength cyber infrastructure shared between businesses and post-secondary institutions and the 14th ASEAN-Japan Cybersecurity Policy Meeting that planned to facilitate cybersecurity capacity building initiatives between government, academia and industry

Thus, Japan receives a score of +1.

Analyst: Theresa Jones

United Kingdom: +1

The United Kingdom has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 20 July 2021, the Department for Business, Energy & Industrial Strategy published the guideline "National Security and Investment Act" which stated that prior approval from the government is required before research on 17 specified sensitive areas of the UK economy can be done, and that government intervention can only be taken under extreme conditions.[4713]

On 22 July 2021, the Secretary of State published the Innovation Strategy for the UK with the vision of the UK becoming a world-class innovation hub in 15 years.[4714] The policy actions include forming a Business Innovation Forum to implement this strategy, investing EUR25 million through the Connecting Capability

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[4710] Japan looks to accelerate vaccine research and development with new government body, The Japan Times (Kyodo) 3 April 2022. Access Date: 21 April 2022. https://www.japantimes.co.jp/news/2022/04/03/national/science-health/japan-vaccine-development-agency/

[4711] Assistance for COVID-19 response: ASEF's support for displaced people from Ukraine through WHO, Ministry of Foreign Affairs (Tokyo) 5 April 2022. Access Date: 21 April 2022. https://www.mofa.go.jp/press/release/press4e_003109.html

[4712] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

[4713] National Security and Investment Act: guidance for the higher education and research-intensive sectors, Department for Business, Energy & Industrial Strategy (London) 20 July 2021. Access Date: 13 December 2021. https://www.gov.uk/government/publications/national-security-and-investment-act-guidance-for-the-higher-education-and-research-intensive-sectors/national-security-and-investment-act-guidance-for-the-higher-education-and-research-intensive-sectors

[4714] UK Innovation Strategy: leading the future by creating it, Department for Business, Energy & Industrial Strategy (London) 22 July 2021. Access Date: 10 January 2022. https://www.gov.uk/government/publications/uk-innovation-strategy-leading-the-future-by-creating-it/uk-innovation-strategy-leading-the-future-by-creating-it-accessible-webpage#secretary-of-states-foreword

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Fund to drive university-business innovation and create new Prosperity Partnerships to set up business-led projects for transformational technologies.

On 9 August 2021, the Defence Science and Technology Laboratory (DSTL), an executive agency of the Ministry of Defence, announced that it had sponsored and collaborated with academia to support innovative development, including the defence and security research programme operated by the Alan Turing Institute.[4715] The DSTL will increase its budget to GBP6.6 billion to fund research and development, in which GBP1 billion will be spent on science and technology.[4716]

On 26 August 2021, the Department for Digital, Culture, Media & Sport published instructions for the UK manual to undertake assessments in international data transfers.[4717] The statement announced that UK adequacy, a status that allows the UK to freely transfer personal data elsewhere, is granted by the Secretary of State to remove data-related barriers between UK organizations and their international partners.[4718]

On 28 November 2021, the National Security Technology and Innovative Exchange, a government-led science, technology and innovation (ST&I) partnership, held a two-day annual event called the International Security Expo in Olympia, London that promoted the connection between government, industry and academia, and facilitated coherence and efficiency across the ST&I ecosystem to enhance research on national security.[4719]

On 29 November 2021, the United Kingdom organised an urgent meeting alongside other G7 members' health ministers as part of its 2021 G7 presidency to evaluate the developments of the uprising COVID-19 variant, Omicron.[4720] Ministers expressed support for information sharing via an international pathogen surveillance network.[4721]

On 8 December 2021, the Centre for Data Ethics and Innovation (CDEI) published an independent report on its roadmap for building an effective AI ecosystem in the UK.[4722] The report stated that the CDEI has developed a reliable and trustworthy AI assurance system to support AI governance, business operations, and addressing the spread of misinformation on social media platforms.

On 17 December 2021, the DSTL issued a guideline for AI and robotics system developers to follow to ensure autonomous systems are used properly to aid humans in dangerous and difficult jobs.[4723] The DSTL

[4715] AI and data science: defence science and technology capability, Defence Science and Technology Laboratory (London) 9 August 2021. Access Date: 13 January 2022. https://www.gov.uk/guidance/ai-and-data-science-defence-science-and-technology-capability

[4716] Dstl research and funding priorities, Defence Science and Technology Laboratory, Ministry of Defence, and Defence and Security Accelerator (London) 12 August 2021. Access Date: 30 December 2021. https://www.gov.uk/guidance/dstl-research-and-funding-priorities

[4717] UK approach to international data transfer, Department for Digital, Culture, Media & Sport (London) 26 August 2021. Access Date: 13 December 2021. https://www.gov.uk/government/publications/uk-approach-to-international-data-transfers

[4718] International data transfers: building trust, delivering growth and firing up innovation, Department for Digital, Culture, Media & Sport (London) 26 August 2021. Access Date: 13 December 2021. https://www.gov.uk/government/publications/uk-approach-to-international-data-transfers/international-data-transfers-building-trust-delivering-growth-and-firing-up-innovation

[4719] Industry event: International Security Expo, National Security Technology and Innovative Exchange (London) 12 October 2021. Access Date: 13 December 2021. https://www.gov.uk/government/news/industry-event-international-security-expo

[4720] Government takes decisive action against new COVID-19 variant, Department of Health and Social Care (London) 28 November 2021. Access Date: 13 December 2021. https://www.gov.uk/government/news/government-takes-decisive-action-against-new-covid-19-variant

[4721] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/

[4722] Independent report: The roadmap to an effective AI assurance ecosystem, Centre for Data Ethics and Innovation (London) 8 December 2021. Access Date: 13 December 2021. https://www.gov.uk/government/publications/the-roadmap-to-an-effective-ai-assurance-ecosystem

[4723] Robotics and autonomous systems: defence science and technology capability, Defence Science and Technology Laboratory (London) 17 December 2021. Access Date: 13 January 2022. https://www.gov.uk/guidance/robotics-and-autonomous-systems-defence-science-and-technology-capability

will continue to monitor the AI industry to ensure that AI, autonomy, and robotics are used safely and ethically.

On 19 January 2022, in response to the series of cyberattacks on several foreign critical national infrastructures, the Department for Digital, Culture, Media and Sports called for an open consultation on the proposal for the regulating the Cyberworld to improve the cyber resilience of businesses and organizations across the UK economy.[4724] The aim of the open consultation is to collect opinions from key industries and organizations – especially IT service providers and managers – to elevate the level of cyber resistance to safeguard the UK's national security and the operation of economic activities. Alongside the open consultation, the department also remarked that the UK Security Council is authorized to recognize cyber job titles and verify certificates and qualifications which helps employers to identify cyber security professionals easily and empowers the cyber security profession.[4725]

On 25 January 2022, the Department for Digital, Culture, Media, and Sports stated that establishing a free and secure data transfer system is a top priority for the UK after Brexit and announced that the UK has invited experts from academia and digital companies, such as Google, Mastercard and Microsoft, to facilitate the UK with the task.[4726] The expert group comes from the healthcare, scientific research, IT and business sectors, and the meeting takes place quarterly to cover national cooperation, partnership issues and data transfer tool developments. The UK has also hired the International Date Transfer Expert Council as an independent agency to advise and assist the government with cross-border data and information flow.

On 1 February 2022, the Government Office of Science provided a guideline on the Concordat to Support Research Integrity ("Concordat") for government researchers to comply with to ensure accurate scientific information is provided to the public and research integrity is respected.[4727] The Concordat is applicable to all government departments, agencies and public laboratories that are conducting research on new ideas and policies. The Government of Science and Engineering (GSE) will closely monitor scientific research processes and assist GSE professionals on their research when necessary, which will ensure that publicly-funded research progress and data remain open and transparent for all to access.

On 7 February 2022, the UK Cabinet Office published an update on its national security strategy policies for 2022 and gave a brief review of its cyber security policies in the previous years.[4728] The new strategy consists of five pillars: "strengthening the UK cyber ecosystem; building a resilient and prosperous digital UK; taking the lead in the technologies vital to cyber power; advancing UK global leadership and influence for a more secure, prosperous and open international order and detecting, disrupting and deterring our adversaries to enhance UK security in and through cyberspace." These core pillars reflect the UK's determination to continue its leadership in the research field and promote a more accessible and safer cyberspace not only for UK citizens but also for global netizens to use. The government has also established the National Cyber Force and launched the National Offensive Cyber Program to raise the awareness of businesses and

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[4724] Proposal for legislation to improve the UK's cyber resilience, Department for Digital, Culture, Media, and Sports (London) 19 January 2022. Access Date: 25 January 2022. https://www.gov.uk/government/consultations/proposal-for-legislation-to-improve-the-uks-cyber-resilience
[4725] New laws proposed to strengthen the UK's resilience from cyber attack, Department for Digital, Culture, Media, and Sports (London) 19 January 2022. Access Date: 18 March 2022. https://www.gov.uk/government/news/new-laws-proposed-to-strengthen-the-uks-resilience-from-cyber-attack
[4726] Global data experts fire up the government's plans to promote free flow of data, Department for Digital, Culture, Media, and Sports (London) 25 January 2022. Access Date: 3 March 2022. https://www.gov.uk/government/news/global-data-experts-fire-up-governments-plans-to-promote-free-flow-of-data
[4727] Guidance to implement the Concordat to Support Research Integrity within government, Government Office of Science (London) 1 February 2022. Access Date: 3 March 2022. https://www.gov.uk/government/publications/implementing-the-concordat-to-support-research-integrity-within-government/guidance-to-implement-the-concordat-to-support-research-integrity-within-government
[4728] National Cyber Strategy 2022 (HTML), Cabinet Office (London) 7 February 2022. Access Date: 16 March 2022. https://www.gov.uk/government/publications/national-cyber-strategy-2022/national-cyber-security-strategy-2022

cyberspace users on the potential cyber risks they face and investigate cyberspace criminals as part of their strategy.

On 17 February 2022, the Department for International Trade (DIT) published a guideline for researchers within the security research community to explain how the DIT will handle and assist security researchers with reported IT security vulnerabilities.[4729] The guideline emphasized that researchers must prioritize the security of data, follow the rules of the DIT system and respect the privacy of DIT's users, staff and contractors.

On 8 March 2022, the Defence, Science and Technology Laboratory (DSTL) updated its guidelines to allow its researchers to explain how the DSTL stores and handles scientific and technological research work on behalf of the Ministry of Defence (MOD).[4730] The DSTL explains that the department seeks to be as transparent as possible by setting up a central system called Athena to allow researchers among the defence and security sector to publish their research and gain access to research sponsored by the MOD.

On 11 March 2022, the National Institute for Health research, the Medicines and Healthcare products Regulatory Agency and the Health Research Authority released a joint statement with health and societal care organizations across the UK. The statement committed to "support the research community to carry out excellent public involvement" and share "guidance, policies, systems and incentives."[4731]

On 23 March 2022, Innovate UK announced an investment EUR3 million in a joint competition with Enterprise Singapore to "fund collaborative research and development projects focused on industrial research."[4732] This competition particularly encourages research in "advanced manufacturing and materials, agrifood tech, mobility and transport, cybersecurity and health and life sciences."

On 24 March 2022, the UK Health Security Agent (UKHSA) released a study which evaluates the effectiveness of vaccines against the spread of the new Omicron B.1.1.529 variant within a community.[4733] The UKHSA found out that high levels of booster doses are effective against the spread of Omicron, especially for seniors and high-risk groups.

On 25 March 2022, the UKHSA published another study which revealed the effectiveness of the booster doses against Omicron in the UK.[4734] The researchers shared their observations on the level of protection by different kinds of COVID-19 vaccines within the UK population.

On 31 March 2022, the DSTL published an article to introduce their work in building a stronger system and safe cyber space internationally.[4735] The DSTL's work include working with MOD to develop the Sensing for Asset Protection with Integrated Electronic Networked Technology used for AI algorithms to operate in

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[4729] Report a vulnerability on a DIT system, Department for International Trade (London) 17 February 2022. Access Date: 28 February 2022.https://www.gov.uk/guidance/report-a-vulnerability-on-a-dit-system
[4730] Access defence science and technology research, Defence Science and Technology Laboratory (London) 8 March 2022. Access Date: 19 April 2022. https://www.gov.uk/guidance/access-defence-science-and-technology-research
[4731] Health and social care leaders unite to improve public involvement in research, Medicines and Healthcare products Regulatory Agency (London) 11 March 2022. Access Date: 12 June 2022. https://www.gov.uk/government/news/health-and-social-care-leaders-unite-to-improve-public-involvement-in-research
[4732] UK-Singapore Collaborative R&D, Innovate UK (London) 23 Marc 2022. https://echalliance.com/uk-singapore-collaborative-rd/#:~:text=Innovate%20UK%2C%20part%20of%20UK,projects%20focused%20on%20industrial%20research.
[4733] Effectiveness of COVID-19 vaccines against Omicron and Delta hospitalisation: test negative case-control study, UK Health Security Agent (London) 24 March 2022. Access Date: 20 April 2022. https://khub.net/documents/135939561/430986542/Effectiveness+of+COVID-19+vaccines+against+Omicron+and+Delta+hospitalisation+-+test+negative+case-control+study.pdf/d0e803c0-3dd2-0c1b-03b8-0a12fd211980
[4734] COVID-19 Vaccine Effectiveness against the Omicron BA.2 variant in England, K Health Security Agent (London) 25 March 2022. Access Date: 20 April 2022. https://www.medrxiv.org/content/10.1101/2022.03.22.22272691v1.full-text
[4735] Sensing: defence science and technology capability, Defence Science and Technology Laboratory (London) 31 March 2022. Access Date: 19 April 2022. https://www.gov.uk/guidance/sensing-defence-science-and-technology-capability

sensors, and the Stone Soup framework with Defence Research and Development Canada to increase the precision of data tracking.[4736]

On 12 June 2022, the Food Standards Agency and Biotechnology and Biological Science Research Council announced an investment of EUR1.6 million in a food safety network that will "connect industry, food and health policymakers and academia on shared research priorities to protect the UK from foodborne hazards." This network will "coordinate and fund cross-sectoral work and training that address current and emerging challenges."[4737]

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4738] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

On 13 June 2022, the UK released a joint declaration with the Portuguese Republic where they committed to further research collaboration, cooperate in education and science sectors and establish a "policy dialogue on research culture."[4739] UK and Portugal emphasized facilitating engagement between their research institutions and science and innovation community and explore opportunities to share research, data and best practices.

On 13 June 2022, the UK announced with the US government a joint prize challenge to "advance the maturity of privacy-enhancing technologies to combat financial crime."[4740] This prize challenge will encourage innovators from both the UK and the US to develop solutions to petter protect person privacy and financial information.

On 13 June 2022, the UK released the UK Digital Strategy which committed support to its research committee to ensure that university research is not funded by or conducted in collaboration with entities with affiliation to hostile states that may threaten the UK's national security. The strategy provides EUR114 million additional funding to the National Cyber program to enhance cyber research and development, along with training and infrastructure. It also increased UK Research and Innovation allocations to support innovation in digital and technology sectors.[4741]

On 13 June 2022, the Department of Health and Social Care published a new data strategy named "Data saves lives: reshaping health and social care with data." This strategy provides EUR200 million to create

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[4736] Dstl shares new open-source framework initiative, Defence Science and Technology Laboratory (London) 14 May 2019. Access Date: 19 April 2022. https://www.gov.uk/government/news/dstl-shares-new-open-source-framework-initiative

[4737] UK sets up network to address food safety issues, News Desk (London) 12 June 2022. Access Date: 14 June 2022. https://www.foodsafetynews.com/2022/06/uk-sets-up-network-to-address-food-safety-issues/

[4738] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

[4739] UK-Portugal Joint Declaration on Bilateral Cooperation, Prime Minister's Office (London), 13 June 2022. Access Date: 14 June 2022. https://www.gov.uk/government/publications/uk-portugal-joint-declaration-on-bilateral-cooperation/uk-portugal-joint-declaration-on-bilateral-cooperation

[4740] U.K. and U.S. governments collaborate on prize challenges to accelerate development and adoption of privacy-enhancing technologies, Centre for Data Ethics and Innovation (London), 13 June 2022. Access Date: 14 June 2022. https://www.gov.uk/government/news/uk-and-us-governments-collaborate-on-prize-challenges-to-accelerate-development-and-adoption-of-privacy-enhancing-technologies

[4741] UK Digital Strategy, Department for Digital, Culture, Media & Sports (London) 13 June 2022. Access Date: 14 June 2022. https://www.gov.uk/government/publications/uks-digital-strategy/uk-digital-strategy

trusted research environments to "better enable researchers to securely access linked NHS data while maintaining the highest levels of privacy and security."[4742]

On 13 June 2022, the Department for Digital, Culture, Media and Sports released the Plan for Digital Regulation: Developing and Outcomes Monitoring Framework. The Plan sets UK's vision to regulate digital technologies. It aims to "enable data sharing to support competition" and "ensure data is used to support scientific research and development" as part of its objective to promote competition and innovation.[4743]

On 13 June 2022, the UK along with the US officially launched the London Tech Bridge which is a partnership between the Royal Naval Office of the Chief Technology Officer and the US office of Naval Research Global. The London Tech Bridge offers services to nurture innovation ecosystems for businesses and focus on game-changing technologies.[4744]

The United Kingdom has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security. The UK has worked with its research community through the Open Innovation Team and the National Security Technology and Innovative Exchange. The UK has worked with the business community through its Innovation Strategy which established a Business Innovation Forum and invested in university-business innovative collaborations.

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

Analyst: Kelly Chan

United States: +1

The United States has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 15 June 2021, the United States signed a Memorandum of Understanding between the National Science Foundation of the United States of America and the Natural Sciences and Engineering Research Council of Canada.[4745] The memorandum "paves the way for new opportunities between members of the research community in both countries to build diverse and inclusive collaborations at the frontiers of science and emerging technologies."

On 10 August 2021, Science Advisor to the President and Director of the Office of Science and Technology Policy Eric Lander announced that his office will work with the National Science and Technology Council on the government's implementation plan for the National Security Presidential Memorandum-33 (NSMP-33).[4746] The implementation guidance will address policy concerning conflicts of interest, oversight and

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[4742] New data strategy to drive innovation and improve efficiency, Department of Health and Social Care (London) 13 June 2022. Access Date: 14 June 2022. https://www.gov.uk/government/news/new-data-strategy-to-drive-innovation-and-improve-efficiency

[4743] Plan for Digital Regulation: Developing an Outcomes Monitoring Framework, Department for Digital, Culture, Media & Sports (London) 13 June 2022. Access Date: 14 June 2022. https://www.gov.uk/government/publications/digital-regulation-driving-growth-and-unlocking-innovation/plan-for-digital-regulation-developing-an-outcomes-monitoring-framework

[4744] London Tech Bridge breaks down barriers with new collaboration space, Eurek Alert (London) 14 June 2022. Access Date: 14 June 2022. https://www.eurekalert.org/news-releases/956012

[4745] Joint statement to Leaders from the United States' Director of the White House Office of Science & Technology Policy and Canada's Minister of Innovation, Science and Industry, The White House (Washington D.C.) 18 November 2021. Access Date: 17 January 2022. https://www.whitehouse.gov/ostp/news-updates/2021/11/18/joint-statement-to-leaders-from-the-united-states-director-of-the-white-house-office-of-science-technology-policy-and-canadas-minister-of-innovation-science-and-industry-2/

[4746] Clear Rules for Research Security and Researcher Responsibility, The White House (Washington D.C.) 10 August 2021. Access Date: 15 January 2022. https://www.whitehouse.gov/ostp/news-updates/2021/08/10/clear-rules-for-research-security-and-researcher-responsibility/

enforcement for disclosure violations and research security requirements for federally funded research organizations.

On 11 August 2021, the White House Office of Science and Technology Policy and the National Science Foundation sponsored a community forum with representatives from university and scientific associations to seek advice on the implementation of NSMP-33.[4747]

On 18 September 2021, the United States Agency for International Development (USAID), along with the Ministry of Health and Family Welfare (MoHFW) and the NITI Aayog agency launched a City-to-City COVID-19 Vaccination Learning Exchange (CoVLEx).[4748] CoVLEx is a web-based portal, providing a platform for cities across the global south to share their best practices in practical vaccine application data.

On 4 October 2021, the National Institute of Allergy and Infectious Diseases (NIAID) released their Data Management and Sharing Guidelines in which they endorsed the rapid release of both experimental, clinical and other metadata associated with genomic, omics and other data valuable to research.[4749]

On 26 October 2021, the US committed to provide up to USD40 million to "accelerate joint research, strengthen health system capacity, and develop the next generation of human capital in health through the US-Association of Southeast Asian Nations Strategic Partnership Health Futures initiative."[4750]

On 29 November 2021, the US, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4751] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 4 January 2022, Science Advisor to the President and Director of the Office of Science and Technology Policy Dr. Eric Lander issued a statement regarding implementation guidance for NSPM-33.[4752] He directed federal research agencies to "develop model grant application forms and instructions that can be used by any federal research funding agency," allowing researchers to clearly understand what to submit when applying for funding and improving consistency across agencies.

On 11 April 2022, Secretary of State Antony Blinken, Secretary of Defense Lloyd Austin, Minister of Defence Rajnath Singh and Minister of External Affairs S. Jaishankar concluded a memorandum of understanding at the fourth annual US-India 2+2 Ministerial Dialogue to continue their joint support for the Indo-US International Centre for Excellence in Research between the National Institute of Allergy and Infectious

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[4747] Readout of National Security Presidential Memorandum 33 Community Forum, The White House (Washington D.C.) 12 August 2021. Access Date: 17 January 2022. https://www.whitehouse.gov/ostp/news-updates/2021/08/12/readout-of-national-security-presidential-memorandum-33-community-forum/

[4748] USAID launches COVID-19 Vaccination Learning Exchange for Cities Across the Global South, United States Agency for International Development (Washington D.C.) 20 September 2021. Access Date: 25 April 2022. https://pdf.usaid.gov/pdf_docs/PA00Z4WR.pdf

[4749] Data Management and Sharing Guidelines, National Institute of Allergy and Infectious Diseases (Bethesda) 4 October 2021. Access Date: 17 January 2022. https://www.niaid.nih.gov/research/data-sharing-guidelines

[4750] Fact Sheet: New initiatives to Expand the U.S.-ASEAN Strategic Partnership, The White House (Washington D.C.) 26 October 2021. Access Date: 17 January 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2021/10/26/fact-sheet-new-initiatives-to-expand-the-u-s-asean-strategic-partnership/

[4751] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/

[4752] Guidance for U.S. Scientific Research Security That Preserves International Collaboration, The White House (Washington D.C.) 4 January 2022. Access Date: 15 January. https://www.whitehouse.gov/ostp/news-updates/2022/01/04/guidance-for-u-s-scientific-research-security-that-preserves-international-collaboration/

Diseases and the Indian Council of Medical Research (ICMR).[4753] The memorandum renewed the countries' joint commitment to support collaborative research on "infectious diseases of global health significance."

On 21 May 2022, President Biden released a joint statement with the President of the Republic of Korea Yoon Suk Yeol. US and Korea agreed to "enhance public and private cooperation to protect and promote critical and emerging technologies" and expressed support for expert exchanges, enhanced partnership, investment promotion and research and development cooperation.[4754] They also agreed to partner to foster space and health research.

On 13 June 2022, the US announced with the UK government a joint prize challenge to "advance the maturity of privacy-enhancing technologies to combat financial crime."[4755] This prize challenge will encourage innovators from both the UK and the US to develop solutions to petter protect person privacy and financial information.

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4756] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

On 13 June 2022, the US along with the UK officially launched the London Tech Bridge which is a partnership between the US office of Naval Research Global and the Royal Naval Office of the Chief Technology Officer. The London Tech Bridge offers services to nurture innovation ecosystems for businesses and focus on game-changing technologies.[4757]

The United States has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security. The US has worked with its research community by consulting research institutions on the implementation of NSPM-33, simplifying grant applications and publishing Data Management and Sharing Guidelines. The US worked with the business community through initiating a prize challenge, launch in privacy-enhancing technology and launching the London Tech Bridge in partnership with the UK.

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

Analyst: Peter Mikulash

[4753] Fourth Annual U.S.-India 2+2 Ministerial Dialogue, US Department of State (Washington D.C.) 11 April 2022. Access Date: 25 April 2022. https://www.state.gov/fourth-annual-u-s-india-22-ministerial-dialogue/

[4754] United States-Republic of Korea Leaders' Joint Statement, The White House (Washington D.C.) 21 May 2022. Access Date: 14 June 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/21/united-states-republic-of-korea-leaders-joint-statement/

[4755] U.K. and U.S. governments collaborate on prize challenges to accelerate development and adoption of privacy-enhancing technologies, Centre for Data Ethics and Innovation (London), 13 June 2022. Access Date: 14 June 2022. https://www.gov.uk/government/news/uk-and-us-governments-collaborate-on-prize-challenges-to-accelerate-development-and-adoption-of-privacy-enhancing-technologies

[4756] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts

[4757] London Tech Bridge breaks down barriers with new collaboration space, Eurek Alert (London) 14 June 2022. Access Date: 14 June 2022. https://www.eurekalert.org/news-releases/956012

European Union: +1

The European Union has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data and tools while recognizing research security.

On 15 June 2021, the European Commission President Ursula von der Leyen and President Joe Biden of the United States announced the formation of the EU-US Trade and Technology Council (TTC) at the US-EU Summit in Brussels.[4758] The TTC is a platform for EU and the US to cooperatively solve global economic and technology issues and support collaborative technological research. The TTC puts emphasis on the proper collection and usage of data, ICT security and preventing the misuse of technology that threatens security and human rights.

On 11 November 2021, President von der Leyen announced that the EU will join the other 27 Member States in the Paris Call for Trust and Security in Cyberspace, which aims at restoring a safe internet.[4759] She also announced the legislation of a European Cyber Resilience Act to establish common security standards for connected devices in European markets. President von der Leyen affirmed that the EU has been working closely with the US in the EU-US TTC to define shared principles for constructing a reliable and safe AI system.

On 11 November 2021, the EU attended the second annual plenary of the GPAI in Paris alongside leading international AI experts and 18 representatives from member countries.[4760] The Paris Summit encouraged all members to leverage the proposals and recommendations of GPAI experts to ensure a responsible and ethical development of AI.

On 22 November 2021, the European Commission partnered with the Government of Canada to examine the use of digital credentials.[4761] Their partnership resulted in a series of workshops and a report entitled "Canada and the European Union Joint Workshop Series for Enabling Interoperability and Mutual Support for Digital Credentials." Future work involves addressing recommendations from the report to collaborate on digital credentials research and innovation, focusing on interoperability and mutual support while protecting privacy and personal data.

On 24 November 2021, the European Research Council Executive Agency (ERCEA), an executive agency established by the European Commission to manage EU research programs, published a record explaining the changes in the transfer of personal data to third countries or international organizations.[4762] The Data Controller and the Data Protection Officer of the ERCEA will access and take actions to safeguard these personal data under extreme conditions.

[4758] EU-US launch Trade and Technology Council to lead values-based global digital transformation, European Commission (Brussels) 15 June 2021. Access Date: 9 January 2022. https://ec.europa.eu/commission/presscorner/detail/en/IP_21_2990
[4759] Speech by President von der Leyen at the Paris Peace Forum, European Commission (Washington D.C.) 11 November 2021. Access Date: 13 December 2021. https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_21_5977
[4760] Minister Champagne attends the Global Partnership on Artificial Intelligence Paris Summit, Innovation, Science and Economic Development Canada (Ottawa) 11 November 2021. Access Data: 16 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/11/minister-champagne-attends-the-global-partnership-on-artificial-intelligence-paris-summit.html
[4761] Government of Canada announces partnership with the European Commission to examine the use of digital credentials, Innovation, Science and Economic Development Canada (Ottawa) 22 November 2021. Access Data: 16 January 2022. https://www.canada.ca/en/innovation-science-economic-development/news/2021/11/government-of-canada-announces-partnership-with-the-european-commission-to-examine-the-use-of-digital-credentials.html
[4762] Record of Personal Data Processing, European Research Council Executive Agency (Brussels) 24 November 2021. Access Date: 15 January 2022. https://erc.europa.eu/sites/default/files/document/file/58_Trasmission_of_personal_data_of_ERCEA_Staff_to_third_parties.pdf

On 29 November 2021, the EU, alongside fellow G7 Health Ministers, released a joint statement reaffirming the importance of supporting research and development related to COVID-19 vaccines.[4763] Additionally, ministers expressed support for information sharing via an international pathogen surveillance network.

On 30 November 2021, the European Commission released a statement to support the statisticians in collaboration with the Eurostat and national statistical authorities in the European Statistical System and establish guidelines on addressing the disturbance of the collection and data processing due to the pandemic.[4764]

On 2 December 2021, at the high-level conference on "Joining forces for the next generation of Better Regulation," Vice-President of the European Commission for Interinstitutional Relations Maroš Šefčovič elaborated on the Better Regulation agenda that includes working with stakeholders to develop "agile and future-proof regulations" to take advantage of innovations while alleviating possible risks and adverse impact.[4765] He encouraged EU Member States to set up regulatory sandboxes for AI development and testing.

On 13 December 2021, the EU Science Hub announced that the European Commission's Joint Research Centre (JRC) had successfully developed a new detection method for the Omicron variant.[4766] The JRC shared its findings with EU policymakers and other scientists to help leaders to monitor and suppress the further spread of the Omicron variant around the globe.

On 10 February 2022, the Special Committee on Artificial Intelligence in a Digital Age (AIDA) held a conference to discuss the AIDA draft report and revise the existing AI acts.[4767] During the conference, it was suggested that the current AI act and cyber legislation are flawed and can lead to potential cyber security issues and its complexity has created market barriers for small and medium-sized enterprises. The committee suggested that European digital regulations strike a balance between innovation and basic rights protection, which can be achieved by reconsidering how data protection and privacy regimes are integrated into AI Act requirements and cybersecurity legislation to create more systematic legislation to foster a safer and more accessible digital space for information flow and exchange.

On 3 March 2022, the Council of the EU agreed to begin negotiations on international agreements for the prevention and preparation of future pandemics through the collaboration of global research centers and the sharing of knowledge between countries.[4768] The EU leaders and the council acknowledged that COVID has warned leaders of the importance of cooperation between countries and the sharing of research data in preventing and tackling future global diseases.

On 4 March 2022, the European Parliament published a press release announcing that President of the European Parliament Roberta Metsola has recognized the urgency to assist and support Ukraine in order to

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[4763] G7 joint statement on the Omicron variant, G7 UK 2021 (London) 29 November 2021. Access Date: 13 December 2021. https://www.g7uk.org/g7-joint-statement-on-the-omicron-variant/

[4764] COVID-19: Support for Statisticians, European Commission (Luxembourg) 30 November 2021. Access Date: 13 December 2021. https://ec.europa.eu/eurostat/data/metadata/covid-19-support-for-statisticians

[4765] Speech by Vice-President Šefčovič at the high-level conference on 'Joining forces for the next generation of Better Regulation', European Commission (Brussels) 2 December 2021. Access Date: 13 December 2021. https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_21_6530

[4766] Efficient tracing of Omicron with new PCR test, EU Science Hub (Brussels) 13 December 2021. Access Date: 13 December 2021. https://ec.europa.eu/jrc/en/news/efficient-tracing-omicron-new-pcr-test

[4767] Identification and assessment of existing and draft legislation in the digital field, European Parliament (Strasbourg) 10 February 2022. Access Date: 1 March 2022. https://www.europarl.europa.eu/RegData/etudes/STUD/2022/703345/IPOL_STU(2022)703345_EN.pdf

[4768] Council gives green light to start negotiations on international pandemic treaty, the Council of the EU (Strasbourg) 3 March 2022. Access Date: 19 April 2022. https://www.consilium.europa.eu/en/press/press-releases/2022/03/03/council-gives-green-light-to-start-negotiations-on-international-pandemic-treaty/

protect local Ukrainian institutions against the invasion of Russia.[4769] President Metsola affirmed that the European Parliament has already formed a structure that allows the key speakers and members from the Council of Europe to cooperatively work for cyber security, strategic communications and the removal of hybrid threats.

On 10 March 2022, the European Parliament announced that the plenary has approved the formation of three new committees on Pegasus spyware, foreign interference and COVID-19.[4770] The 38-member Pegasus spyware committee will be responsible for determining the appropriateness of the use of Pegasus spyware. The 33-member foreign interference committee will revise existing laws to prevent third countries from using the current loopholes for malicious purposes. Initially, the 38-member COVID-19 committee will focus on building EU's global relationships and helping states to recover from the pandemic. The three new committees are believed to be able to raise awareness of the importance of research security and the dangers of the spread of misinformation among EU member states.[4771]

On 11 March 2022, the Council of the EU announced that the Council will work with the EU Parliament to extend the regulation establishing the EU Digital COVID-19 certificate by one year until 30 June 2023, which can be used for international travel.[4772] The amendments in the regulation and the improvement in the digital system increase the recognition of the validity of vaccinations across countries.

On 17 March 2022, the Panel for the Future of Science and Technology (STOA) published a study on the privacy and security issues of 5G technology and assessed global opportunities and cybersecurity threats.[4773] The STOA proposed to prevent potential mistrust between countries in advance through the approach of 'ethics-by conception' and the practice of responsible research innovation.

On 5 April 2022, the Council of the EU announced that it will authorise EU members to sign the protocol calling for increased cooperation against cross-border cyber criminals on the international level.[4774] The authorisation helps to reduce cybercrimes through allowing electronic evidence to be transferred from one state to another on request.

On 6 April 2022, the European Parliament passed a legislation which encourages EU member states to share their data voluntarily by ensuring that their data will be used within and beyond the EU safely and fairly.[4775] The new legislation increased the difficulty for non-EU countries to abuse the Data Government Act (DGA) to gain access to confidential data and increased the transparency of data from EU states as whole.

[4769] Kyiv is under siege and so is democracy - President Metsola to Ukraine Speaker, European Parliament (Strasbourg) 4 March 2022. Access Date: 7 March 2022. https://www.europarl.europa.eu/news/en/press-room/20220304IPR24713/kyiv-is-under-siege-and-so-is-democracy-president-metsola-to-ukraine-speaker

[4770] Three new committees on Pegasus spyware, foreign interference and COVID-19, European Parliament (Strasbourg) 10 March 2022. Access Date: 20 March 2022. https://www.europarl.europa.eu/news/en/press-room/20220304IPR24801/three-new-committees-on-pegasus-spyware-foreign-interference-and-covid-19

[4771] Parliament committee recommends EU sanctions to counter disinformation, European Parliament (Strasbourg) 3 March 2022. Access Date: 20 March 2022. https://www.europarl.europa.eu/news/en/headlines/society/20220228STO24215/disinformation-parliament-committee-recommends-eu-sanctions

[4772] COVID-19: Council agrees to extend the Regulation establishing the EU Digital COVID Certificate, Council of the EU (Strasbourg) 11 March 2022. Access Date: 20 April 2022. https://www.consilium.europa.eu/en/press/press-releases/2022/03/11/covid-19-council-agrees-to-extend-the-regulation-establishing-the-eu-digital-covid-certificate/

[4773] Privacy and security aspects of 5G technology, European Parliament (Strasbourg) 17 March 2022. Access Date: 20 April 2022. https://www.europarl.europa.eu/RegData/etudes/STUD/2022/697205/EPRS_STU(2022)697205_EN.pdf

[4774] Access to e-evidence: Council authorises member states to sign international agreement, Council of the EU (Strasbourg) 11 March 2022. Access Date: 20 April 2022. https://www.consilium.europa.eu/en/press/press-releases/2022/04/05/access-to-e-evidence-council-authorises-member-states-to-sign-international-agreement/

[4775] Data governance: Parliament approves new rules boosting intra-EU data sharing, European Parliament (Strasbourg) 6 April 2022. Access Date: 20 April 2022. https://www.europarl.europa.eu/news/en/press-room/20220401IPR26534/data-governance-parliament-approves-new-rules-boosting-intra-eu-data-sharing

On 7 June 2022, the EU announced its budget 2023 which dedicated EUR13.6 billion for research and innovation, including key priorities such as twin green and digital transition, health sector, strategic technologies, cross-border infrastructure and defence research.[4776]

On 9 June 2022, the European Commission launched EUR20 million through the European Innovation Council program to support 200 Ukrainian technologies start up.[4777] This will enable Ukrainian innovators to take part in the European innovation ecosystem and obtain funding. The EU and Ukraine also ratified Ukraine's association to the Horizon Europe and Euratom Research and Training Programmes that will foster collaboration between European and Ukrainian researchers and businesses.

On 10 June 2022, EU science ministers approved a shared agreement in support of research assessment reform to value research quality over single indicators such as journal impact factors and citations.[4778] This reform agreement is developed in consultation with the research community. The ministers also agreed on principles of freedom, research excellence and protection of intellectual property rights to guide the EU's international cooperation in research and innovation.

On 13 June 2022, G7 science ministers issued a joint statement in support of greater research collaboration following a meeting in Frankfurt.[4779] They committed to creating a toolkit and "virtual academy" to "advance research freedom, scientific integrity and security among academics in the G7." Specifically, G7 ministers emphasized their shared priority on researching carbon dioxide removal and storage technology, the health of climate and ocean ecosystems and the impacts of Long Covid.

The European Union has fully complied with its commitment to work strongly with both the research community and the business community to remove barriers in sharing knowledge, data, and tools while recognizing research security. The EU has worked with the business community through the establishment of the AIDA to aid small and medium businesses in creating a more accessible platform for research and business activities. It has also worked with the research community to crack down on cyber criminals, data leakage and to improve technological platforms for ensuring cybersecurity and the prevention of the spread of misinformation and disinformation.

Thus, the European Union receives a score of +1.

Analyst: Kelly Chan

[4776] EU budget 2023: Empowering Europe to continue shaping a changing world, European Commission (Brussels) 7 June 2022. Access Date: 12 June 2022. https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3473

[4777] EU sets up €20 million support for Ukrainian start-ups through European Innovation Council, Relief Web (New York City) 9 June 2022. Access Date: 12 June 2022. https://reliefweb.int/report/ukraine/eu-sets-eu20-million-support-ukrainian-start-ups-through-european-innovation-council

[4778] EU science ministers agree on research assessment reform, Science | Business (Luxembourg) 10 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/eu-science-ministers-agree-research-assessment-reform

[4779] G7 science ministers urge democracies to unite research efforts, Science | Business (Frankfurt) 14 June 2022. Access Date: 14 June 2022. https://sciencebusiness.net/news/g7-science-ministers-urge-democracies-unite-research-efforts