

G20 AI Strategies on Data Governance

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This analysis focuses on national AI strategies of the G20 countries and gives a brief overview of what they say about data governance. AI systems are built on data, so the governance of data is key to the success of any nation's AI strategy. Out of the 20 countries, 12 countries have officially published national AI strategies. Some countries, such as Russia and Argentina, are in the process of developing strategies. Others, such as Brazil, have made their AI plans a key element of their digital strategy.

Our research strategy is as follows: We first examine whether or not the country has an AI strategy. Then, we seek to ascertain if the AI strategy explicitly addressed personal data, public data, and proprietary data and whether and how these various types of data could be governed if organizations or researchers sought to mix them. Finally, we look to see if there were public hearings/public comments associated with the AI strategy. We make some judgements regarding the explicitness of a strategy. If the document does not clearly discuss the mixing of data or a type of data, we described it as a no. If the document mentioned personal or any other type of data, we described it as a yes. Our research is current as of August 2019.

Each country's approach is unique, but we find several shared attributes. Of the 12 countries, 11 of them (excluding Canada) explicitly discuss data governance. Canada's plan focuses on how best to encourage AI research and its adoption by business. While most governments discuss public and personal data in their AI plan, only 7 nations explicitly discuss proprietary data governance. Most countries involved business and academic experts in AI as they developed their plan, but we find that only 4 countries consulted with the public on their AI strategy. However, we note that most countries have had a dialogue with citizen on personal data protection, digital policies (e.g. Canada's digital charter) and/or AI research strategies (e.g the US). (see specifics below). We welcome comments and corrections on the methodology and analysis.

¹ Struett is Director of Research at the Digital Trade and Data Governance Hub and a student in political communication at American University. Dr. Susan Aaronson assisted in the analysis. Any mistakes are our own, and we welcome corrections.



Argentina

Draft National Plan of Artificial Intelligence (Not in English)

Argentina is currently working on the National Plan of Artificial Intelligence. This strategy has yet to be published and is currently in the consultation phase.



Australia

[2018-2019 Australian budget](#): Australian Technology and Science Growth Plan — building Australia's Artificial Intelligence capability to support business

- **Does the AI plan mention data governance?**

Yes; the fifth section, *Data* (pg. 33), covers data governance.

- **Does the AI plan discuss open public data?**

Yes; the Government will increase the availability of high-quality, well-managed data by:

- Working with industry to identify valuable public datasets
- Providing open access to spatial data
- Providing funding to governments, businesses, researchers, and individuals to access standardized satellite imagery data
- Implementing a framework to guide use of health records
- Appointing a National Data Commissioner with a mandate to promote greater use of data
- Establishing an Accredited Data Authority to support efficient and safe sharing of data
- Establishing a National Data Advisory Council to advise on ethical data use, community expectations, technical best practices, and international developments

- **Does the AI plan discuss proprietary data?**

Yes; strategy suggests that Australia needs to develop ways to account for data as a business asset.

- **Does the AI plan discuss personal data?**

Yes; the strategy suggests:

- Implementing a [Consumer Data Right](#) to give customers greater control over their data and transaction activities
- Developing an ethical framework in partnership with industry and research organizations around data use in AI and ML
- Delivering legislative reforms around the sharing of public data to protect privacy

- Providing advice to government agencies with regard to privacy law
- Shaping international rules and standards around data governance

- **Does the AI plan discuss the mixing of data (hybrid)?**

No; however, the Productivity Commission released the report, [Data Availability and Use](#), which addresses the risks of personal identification that can increase with the linkage of separate datasets about an individual.

- **Has the government consulted with the public on its AI strategy?**

In July 2018, the Australian government released an [issues paper for consultation](#) on a Data Sharing and Release Bill which aims to balance sharing data held by the government with appropriate risk management.



Brazil

No dedicated AI strategy

Brazil has yet to publish a dedicated AI strategy. However, Brazil has published an E-Digital Strategy that does include AI along with other digital transformations.



Canada

[Pan-Canadian AI Strategy](#)

- **Does the AI plan mention data governance?**

No

- **Does the AI plan discuss open public data?**

No

- **Does the AI plan discuss proprietary data?**

No

- **Does the AI plan discuss personal data?**

No

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

No; however, the government did consult with its citizens on [Canada's Digital Charter](#), which covers data governance.



China

[A New Generation Artificial Intelligence Development Plan \(2017\)](#) (Translation provided by New America)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; key policy recommendations include the implementation of open data policies and launching open public data reform pilots.

- **Does the AI plan discuss proprietary data?**

No

- **Does the AI plan discuss personal data?**

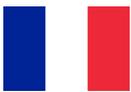
Yes; the strategy seeks to increase management and disciplinary efforts aimed at the abuse of data and violations of personal privacy.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

No



France

[For a Meaningful Artificial Intelligence: Towards a French and European Strategy \(2018\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; public authorities must create new ways of producing and opening up data to restore a balance of power between smaller and larger companies. Terms and conditions for access to this data must be set up on public interest grounds. Focus will be put on the healthcare, environment, transportation mobility, and defense-security sectors.

- **Does the AI plan discuss proprietary data?**

Yes; public authorities should encourage economic players to share and pool their data, with the State acting as a trusted third party. In some circumstances, public authorities could impose openness on certain data of public interest.

- **Does the AI plan discuss personal data?**

Yes; the use of the GDPR and new laws for data portability will be used to ensure the safeguarding of personal data.

- **Does the AI plan discuss the mixing of data (hybrid)?**

Yes; the strategy suggests creating sector-specific pooling platforms where various actors could combine their data.

- **Has the government consulted with the public on its AI strategy? Yes**

Yes; preparations for the strategy included a [public consultation](#) in partnership from Parlement & Citizens in which 1,639 people participated.



Germany

[Artificial Intelligence Strategy \(2019\)](#)

- **Does the AI plan mention data governance? Yes**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy includes:

- Assessing existing requirements for making data available in a public database following the completion of government-financed research projects
- Providing high-performance computing resources to improve accessibility of Earth observation data
- Providing non-personal public-sector data as open data

- **Does the AI plan discuss proprietary data?**

Yes; the strategy directly acknowledges the importance of machine-generated data from industrial and business-to-business contexts. Trust must be increased in the infrastructure and institutions managing companies' data because their data is their most important asset and often involves confidential business information or trade secrets.

- **Does the AI plan discuss personal data?**

Yes; the strategy lays out that personal rights, the right to control one's own data or other fundamental rights must not be violated in the use of data and that this must be done at the EU

level. The strategy also suggests inviting data protection authorities and business associations for a roundtable to develop joint guidelines on the use of AI systems that is compatible with data protection rules.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

Yes; the AI strategy was based on suggestions taken from a [nationwide online consultation](#)



India

[National Strategy for Artificial Intelligence #AIForAll \(2018\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy suggests establishing platforms for making datasets in the area of the social sector (either collected during implementation of a scheme or in normal business processes) available for open public use in a machine-readable format.

- **Does the AI plan discuss proprietary data?**

Yes; the strategy lays out the concept of a data marketplace that would address some issues associated with proprietary data like the original owner being compensated for the resale of data.

- **Does the AI plan discuss personal data?**

Yes; the strategy suggests the government implement a data protection framework and collaborate with industry to develop sector-specific guidelines on privacy.

- **Does the AI plan explicitly discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

No; however, India has had a public consultation on the [Government Open Data Use License](#) that is used to access, use, and share open data. Also, the Indian government is currently holding a public consultation on [draft e-commerce guidelines](#) until September 16, 2019.



Indonesia

No dedicated AI strategy



Italy

[White Paper on Artificial Intelligence at the service of citizens](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy does discuss open public data and the need to make it more accessible to the public.

- **Does the AI plan discuss proprietary data?**

No

- **Does the AI plan discuss personal data?**

Yes; the plan mentions the use of personal data by the Public Administration and that the adoption of GDPR principles may be necessary.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

Yes; a [public consultation](#) for comments and recommendations was open to the public.



Japan

[Artificial Intelligence Technology Strategy \(2017\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy briefly mentions the importance of maintaining open public data.

- **Does the AI plan discuss proprietary data?**

Yes; the strategy does discuss the promotion of utilization and application of data owned by the private sector and acknowledges that it is difficult to make judgments on competitive domains and cooperative domains for the data itself.

- **Does the AI plan discuss personal data?**

Yes; the strategy does state that the handling of personal data is an issue that needs to be addressed.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

No



Mexico

[Towards an AI Strategy in Mexico: Harnessing the AI Revolution \(2018\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the government should maintain and share core data services which describe the country and provide information relating to the delivery of public services. It should consider curating, funding, and establishing a governance framework for data sets in priority sectors as part of the precompetitive stage.

- **Does the AI plan discuss proprietary data?**

No

- **Does the AI plan discuss personal data?**

Yes; the Mexican Institute of Access to Information and Personal Data Protection (INAI) should review, update and/or create new data protection regulatory frameworks to keep pace with innovation and striking the right balance.

- **Does the AI plan discuss the mixing of data (hybrid)?**

Yes; the strategy suggests the creation of a data sandbox to facilitate the sharing of data between researchers and industry.

- **Has the government consulted with the public on its AI strategy?**

No



[Mid- to Long-Term Master Plan in Preparation for the Intelligent Information Society
Managing the Fourth Industrial Revolution \(2017\)](#)

**Republic
of Korea**

- **Does the AI plan mention data governance?**

Yes; the Republic of Korea's plan explicitly addresses data governance.

- **Does the AI plan discuss open public data?**

Yes; the plan suggests converting public data owned by the government into open formats amenable to machine learning and ensure their public disclosure. Public agencies and organizations should also identify and disclose their own data.

- **Does the AI plan discuss proprietary data?**

No

- **Does the AI plan discuss personal data?**

Yes; the plan suggests a government program that allows businesses to share the personal information of their clients with other businesses, subject to clients' consent.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

Yes; Open Public Seminars were held six times, from June to September of 2016, to prompt and disseminate public discourses regarding the strategy.



**Republic of
South
Africa**

No dedicated AI strategy



Russia

No dedicated AI strategy



**Saudi
Arabia**

No dedicated AI strategy



Turkey

No dedicated AI strategy



United
Kingdom

[AI Sector Deal \(2018\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy suggests publishing more high-quality public data in an open, easily findable, and reusable format.

- **Does the AI plan discuss proprietary data?**

Yes; the strategy acknowledges that some of the most important datasets contain commercially sensitive information and that data trusts can be used to address this issue.

- **Does the AI plan discuss personal data?**

Yes; data trusts are also suggested as a possible solution to dealing with privacy issues.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No; the strategy does not explicitly address the mixing of data but does suggest the use of data trusts to increase the sharing of different datasets.

- **Has the government consulted with the public on its AI strategy?**

No; however, the United Kingdom has had a public consultation on [data governance](#). The Department for Business, Energy and Industrial Strategy and the Department for Digital, Culture, Media and Sport have also conducted a public consultation on the [use of smart data](#).



United
States

[American AI Initiative \(2019\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy directs federal agencies to make federal data, models, and computing resources more open.

- **Does the AI plan discuss proprietary data?**

No

- **Does the AI plan discuss personal data?**

Yes; the strategy states that when federal agencies make data open, they must make sure to maintain the safety, security, civil liberties, privacy, and confidentiality of individuals.

- **Does the AI plan discuss the mixing of data (hybrid)?**

Yes; the strategy requires federal statistical entities, federal program managers, and other relevant personnel to identify any barriers to, or requirements associated with, safety and security concerns, including those related to the association or compilation of data.

- **Has the government consulted with the public on its AI strategy?**

No; however, the United States had a [public consultation on the AI Research Strategy in 2016](#).

Moreover, as part of the executive order *Maintaining American Leadership in Artificial Intelligence* ([Section 5.a.i](#)) the White House has opened a public request for information on how federal agencies can better improve access and quality of public data that can be used in AI.



European
Union

[Communication on Artificial Intelligence \(2018\)](#)

- **Does the AI plan mention data governance?**

Yes

- **Does the AI plan discuss open public data?**

Yes; the strategy states the Commission is taking action to make data sharing easier and to open up more data for re-use. This includes data from the public sector in particular. A new support center for data sharing will provide public authorities and companies with legal and technical support when trying to access data from public sector bodies and companies.

- **Does the AI plan discuss proprietary data?**

Yes; the strategy states public policy should also encourage the wider availability of privately-held data, while ensuring full respect for legislation on the protection of personal data. The Commission calls on companies to recognize the importance of non-personal data re-use, including for AI training purposes.

- **Does the AI plan discuss personal data?**

Yes; the strategy lays out that the GDPR will be the main regulation to protect personal data and that clarifying data protection law for research in AI is needed.

- **Does the AI plan discuss the mixing of data (hybrid)?**

No

- **Has the government consulted with the public on its AI strategy?**

No; however, The Joint Research Center has held a [workshop](#) to reach stakeholders on the issue of data governance.

Overview of National AI Strategies on Data Governance
(Only national AI strategies included in the table)

Country	Year of AI plan	Data governance	Open Public Data	Proprietary Data	Personal data	Mixing of data	Public consultation on AI Plan
Argentina	No Strategy	-	-	-	-	-	-
Australia	No Strategy	-	-	-	-	-	-
Brazil	No Strategy	-	-	-	-	-	-
Canada	2017	No	No	No	No	No	No
China	2017	Yes	Yes	No	Yes	No	No
France	2018	Yes	Yes	Yes	Yes	Yes	Yes
Germany	2019	Yes	Yes	Yes	Yes	No	Yes
India	2018	Yes	Yes	Yes	Yes	No	No
Indonesia	No Strategy	-	-	-	-	-	-
Italy	2018	Yes	Yes	No	Yes	No	Yes
Japan	2017	Yes	Yes	Yes	Yes	No	No
Mexico	2018	Yes	Yes	No	Yes	Yes	No
Republic of Korea	2017	Yes	Yes	No	Yes	No	Yes
South Africa	No Strategy	-	-	-	-	-	-
Russia	No Strategy	-	-	-	-	-	-
Saudi Arabia	No Strategy	-	-	-	-	-	-
Turkey	No Strategy	-	-	-	-	-	-
UK	2018	Yes	Yes	Yes	Yes	No	No
US	2019	Yes	Yes	No	Yes	Yes	No
EU	2018	Yes	Yes	Yes	Yes	No	No
Total yes:		11/12	11/12	6/12	11/12	3/12	4/12