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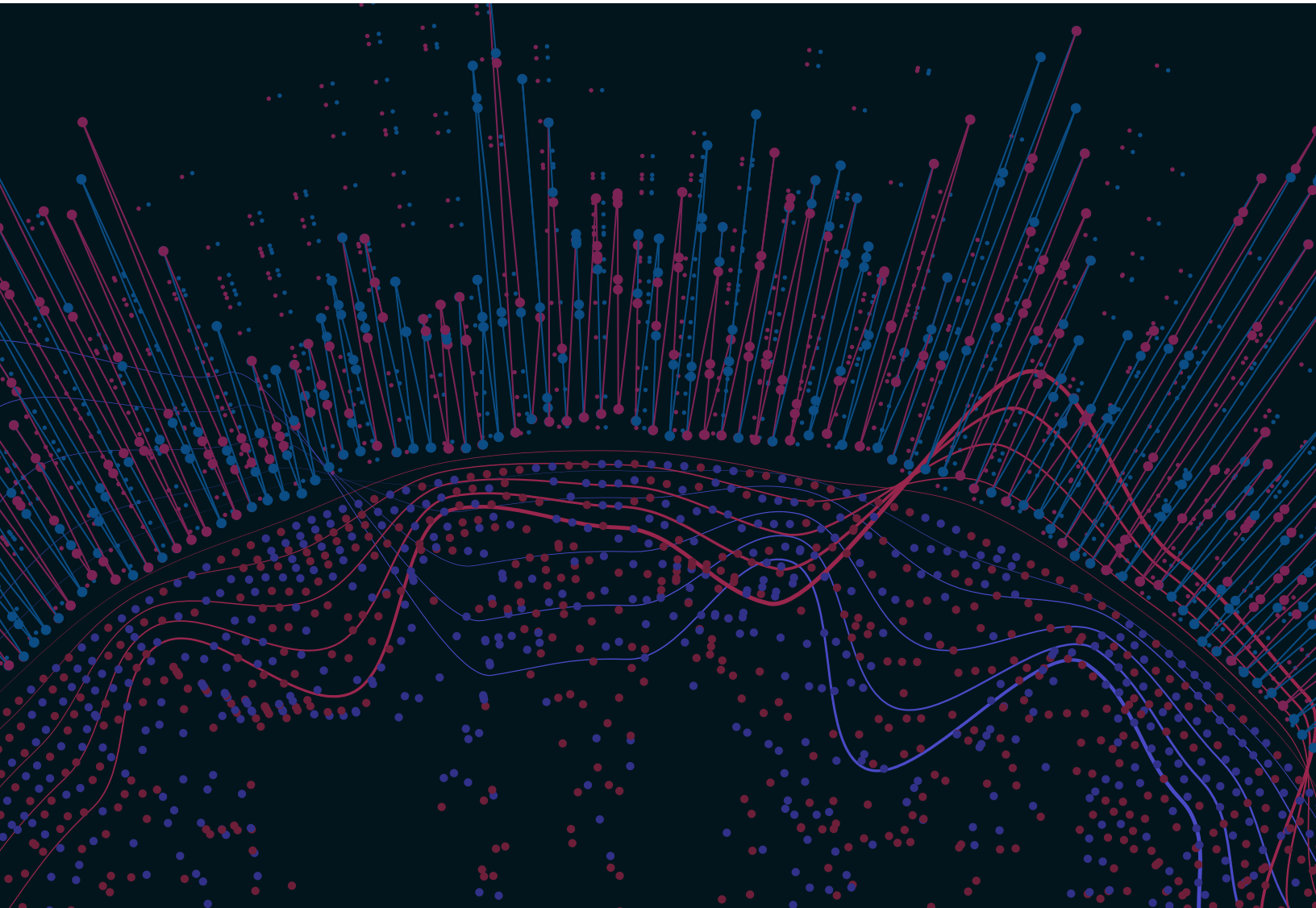

DataGovHub Paradigm for a Comprehensive Approach to Data Governance

Year 1 Report

By Susan Aaronson, Thomas Struett, and Adam Zable

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Center for Inclusive Growth

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Overview

WHO BENEFITS AND HOW FROM A COMPREHENSIVE DATA GOVERNANCE METRIC?

RESEARCHERS WILL BENEFIT
From an organized approach to comprehensive data governance and evidence for further investigation.

POLICYMAKERS WILL BENEFIT
From a clear mapping of where they are compared to other nations.

CITIZENS WILL BENEFIT
From a clearer understanding of these topics and an evidence base to prod local officials to do more.

Human beings have been collecting, producing, and governing various types of data for centuries.[1] However, with the advent of the Internet and data analysis methods such as artificial intelligence, the volume, variety, and data transmission speed have increased dramatically, making the governance of this data more complex and important.[2] Digital data has become a vital input to both the traditional economy (services, manufacturing, and agriculture) and the new data-driven economy based on the creation, use, mixing, and sharing of various types of data.[3]

There is no one shared definition of data governance, and data governance is often confused with data management.[4] The OECD defines data governance as principles and policy guidance on how governments can maximize the cross-sectoral benefits of all types of data—personal, non—personal, open, proprietary, public and private – while protecting the rights of individuals and organizations.[5] For many governments, governing various types of data has become an essential, albeit challenging, task, requiring new strategies, structures, policies, and processes.[6] Data governance has become an essential element of governance for all nations.

Executive Summary

The Digital Trade and Data Governance Hub seeks to assess data governance and help others better understand how governments are tackling this evolving responsibility. As part of these efforts, in 2021 the Hub designed a new evidence-based metric to characterize a comprehensive approach to data governance at both the national and international levels.[7] We define comprehensive data governance as a systemic and flexible approach to governing different types of data use and re-use.[8] The metric includes 6 attributes of data governance, which we delineate through some 26 indicators which provide evidence of governance. This report:

1. Describes why and how the Hub team developed the metric.
2. Explains the characteristics and findings of this first iteration of the metric.
3. Discusses some of the broad findings revealed by the data.

WHY MAKE A METRIC OF COMPREHENSIVE DATA GOVERNANCE?

TO DISCOVER what governments are doing at the national and international levels to govern data.

TO DELINEATE the attributes we consider necessary to governing data comprehensively and **TO ASSESS** the depth of countries' performance on them.

TO COMPARE the specific elements that comprise governments' approaches.

TO IDENTIFY emerging issues and the nations that are tackling these issues.

TO PROMOTE UNDERSTANDING that the governance is an essential aspect of 21st century governance.

Background on the Metric

In 2020, the Hub team performed a desk study of 51 nations and the EU. Using a questionnaire, we mapped and assessed hard laws, regulations, and directives focused on the governance of data. We separated questions into those related to personal data, public data, and business confidential data, and also included questions related to the governance of data in international agreements. To make the process manageable, we limited our analysis to acts of state that are binding upon governmental entities, rather than 'softer' policies and strategies. We found that almost all of our sample had adopted domestic laws and/or regulations to govern personal, public, and proprietary data, and participated in a trade agreement governing cross-border data flows. But we also found significant divergence and governance gaps. For example, many states were just beginning to develop rules governing data sharing or to think about questions of collective vs. individual rights.[9]

Once we issued the report, we recognized that our methodology prevented us from providing a complete picture of the state of data governance. Moreover, we noted that data governance is fluid, reflecting societal and technological challenges as well as the will, understanding, and expertise of both policymakers and the public. Consequently, we recognized that we needed to weave strategies, ethical frameworks, technological challenges to governance (such as algorithmic discrimination), structural change (how government institutions are adapting and organizing to these new responsibilities), and participation/feedback processes into our framework.

Therefore, we decided to create the world's first metric of comprehensive data governance, which would reveal both its nuances and challenges. Data governance, like the data-driven economy, is constantly evolving, reflecting changes in technology, society, and policymakers' will and expertise. Consequently, data governance is a work in progress and a different experience for all nations. For this reason, we define comprehensive data governance as a systemic and flexible approach to governing different types of data use and re-use. Governments that can accommodate such change in a responsive, competent, and anticipatory manner are likely to build and maintain trust in their institutions.[10]

We began our process by thinking about how organizations respond to change and in particular how they formulate changes to organizational strategy and structure.[11] Next, we studied how others, including the Worldwide Governance Indicators and the Ibrahim Index of Governance, thought about how to define, measure, and compare governance among nations.[12] We then turned to metrics of data governance which helped us understand how to assess the impact of data governance policies on, for example, data availability, accessibility, and re-use.[13]

Building on our review, we divided data governance into what we see as its primary six attributes. These attributes (strategic, regulatory, responsible, structural, participatory, and international) can be thought of as the different dimensions of action a nation takes to govern data. They represent our vision of how governance occurs. Figure 1 below describes these attributes. For more information, see the Annex to this report.

FIGURE 1
THE SIX ATTRIBUTES

STRUCTURAL: The government alters institutional structures in response to data-driven transformation.

REGULATORY: The government constructs a legal regime around data's types and/or uses.

PARTICIPATORY: The government informs its constituents about its activities and asks for public comment, with the intention of incorporating their feedback.

INTERNATIONAL: The government joins with other first-movers in shared international efforts to establish data governance rules and norms.

STRATEGIC: The government plans for the different contexts of data use and re-use.

RESPONSIBLE: The government thinks about the ethical, trust, and human rights implications of data use and re-use.

Once we determined the attributes, we began searching for specific pieces of evidence that we could take as indicators of the broader attributes. We understood that we had to limit the purview of our analysis when it came to identifying these indicators, in order not to get overwhelmed by all the types and uses of data and the variety of issues related to data governance. Hence, we decided not to include various other types of related governance such as digital infrastructural, ICT, competition policies, smart manufacturing, cybersecurity, statistical data, etc.

For this iteration of our metric, we decided that 26 indicators provided the necessary evidence of concrete action to illustrate a comprehensive approach. We arrived at these indicators using both inductive and deductive methods, attempting to view the question from as many angles as possible. We began by scanning the variety of documents that governments had published related to data. We found that some, such as smart manufacturing or cybersecurity strategies, did not focus on the governance of data (and many did not even mention data). We also asked ourselves what other indicators would work for our attributes and searched to see if we could find them. This iterative process, the particular indicators and attributes we use, and the number of indicators in each attribute, will likely change over time as the data-driven economy and data governance evolve. As of this iteration, some of the attributes have 4 indicators, others 5 (See Table 1).

We determined individual country scores as follows: If a country had the indicator in full, we gave it a 1, if not we gave it a 0. We then translated these 1's and 0's into scores that could be used to compare the countries. Because we viewed each indicator as essential, the team decided to weigh each indicator equally within its attribute, regardless of the number of indicators contained within that attribute. Each attribute's score is therefore the sum of its indicators divided by the number of indicators, expressed as an integer out of 100. Similarly, we believe each of the six attributes is vital and interdependent, so we gave each of the six attributes equal weight in the final scoring by averaging the scores of the six attributes. This strategy enabled us to make each country's final score also out of 100. You can see more detail on this in the Annex.

In order to make sure our evidence was as complete as possible, we performed extensive searches on general purpose search engines in the official language of each country and used other free online translation services to ensure the consistency of our results. Because the team lacked language and policy expertise, we also hired two experts to analyze China and Latin American nations.[14] In addition, we had multiple reviewers double-check evidence of every indicator to ensure veracity and consistency. Finally, we checked our analysis against those of other scholars, research organizations, and data governance databases,[15] and reached out to scholars and policymakers for feedback.[16]

We have several concerns about our methodology which we are trying to address. First, the metric does not cover all types of data; it includes personal, public, and indirectly proprietary data (through rules that govern the use of algorithmic decision making).[17] Second, we understand that because of our focus on participatory and accountable governance as well as human rights and ethics and civic participation, some researchers might view our perspective as biased.[18] Hence, while we designed the metric based on facts which we include as indicators, we acknowledge that these indicators reveal our biases. Third, our indicators reflect the state of our understanding of data governance. We rely on the countries we are evaluating (and ultimately their web presence) for the data to develop

our metric, an endogeneity problem. However, these countries have little incentive to misrepresent their policies, visions, and processes. Moreover, there are international commitments that encourage them to make their policies in an open, participatory, and accountable manner such as the WTO or the Open Government Partnership.[19] Fourth, we cannot say whether or not an indicator definitively does not exist in a country. To address that problem, and to reflect changes in government practice and feedback from others, we frequently monitor data governance and will revise the metric every six months. For example, Bangladesh currently does not meet the metric's criteria for the personal data protection law indicator, but the government just issued a draft law.[20] If the law passes and it meets the indicator criteria (see the Annex), we will update the metric accordingly.

Finally, we do not purport to say anything about the effectiveness of data governance among our sample nations. The indicators do not reveal if ethical frameworks are anything more than bluster, that new institutional structures are doing what they were designed to do, or that policymakers actually hear and revise policies in response to public comment.

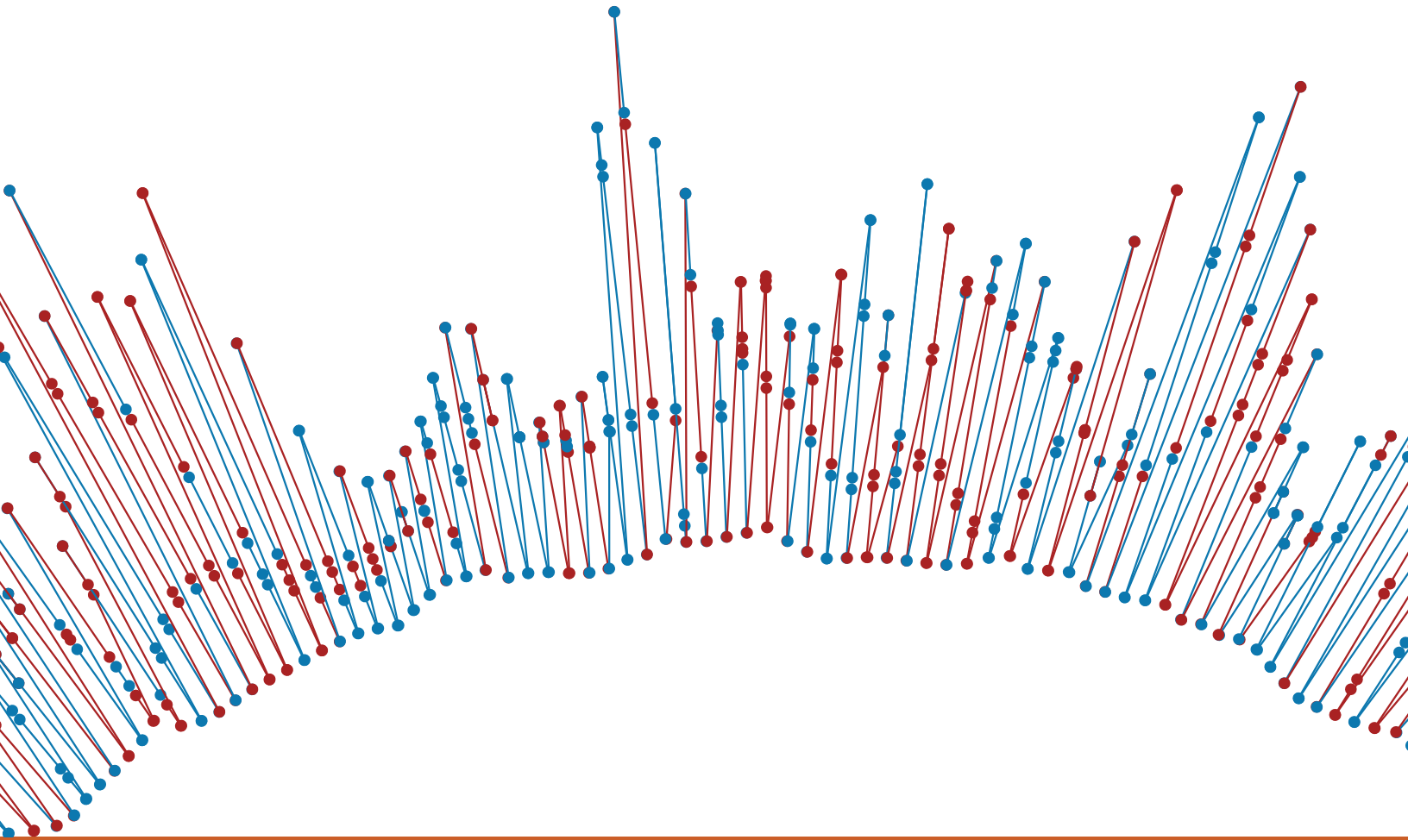


TABLE 1
THE 26 INDICATORS

Strategic				
Data Strategy	Public Administration Data Strategy	Federal Guidelines for Private Sector Data Sharing	AI Strategy	
Regulatory				
Personal Data Protection Law	Open data law for the proactive release of government information by default	Freedom of Information Act	Right to be Protected from Automated Decision-Making	Right of Data Portability
Responsible				
Data Charter	Public Sector Data Ethics Framework	AI Ethics Framework	Trust Framework for Digital Identity Management	
Structural				
Personal Data Protection Body	Open Data Portal	Open Data Body	Public Sector Data Governance Body	International Data Affairs Body
Participatory				
Public Consultation on Personal Data	Public Consultation on Public Data	Expert Advisory Body on Data Ethics	Expert Advisory Body on Data-Driven Technical Change and its Impact on Society	
International				
Convention 108+	Open Government Partnership	OECD AI Principles	Binding Trade Agreements on Cross-Border Data Flows	

Comparative Data Analysis

We encourage readers to compare countries, but we do not intend the scoring to be used as a ranking of data governance quality or effectiveness. Moreover, we have not performed an empirical analysis on our datasets. Nonetheless, we can make some assertions about our 51 countries and the EU as a group and individually.

All of our Case Studies are Governing Data, but many High and Middle Income Nations have made Significant Progress in Data Governance

Chart 1 shows that some countries, like the United Kingdom and Germany, perform well across all attributes. At the same time, nations such as Iran, Ethiopia, and Bangladesh are just beginning to adopt data governance policies, processes, and structural changes. Moreover, the 16 highest-scoring countries are all high-income countries with the prominent exception of Brazil (see Chart 1). Most of the high-performing countries are located in Europe. The OECD countries in general are the most active nations in data governance.

Data Governance Convergence

Table 3 is an analysis of which attributes are the most prevalent among our sample. We found three areas of convergence. First, more than 84% of the sample studied have adopted Freedom of Information Acts and Open Data Portals. These policies predate the internet age and reflect citizen demands for access to information and open public data.[21] Second, most nations (some 70%) have adopted personal data protection structures and regulations. Personal data protection is now seen as an essential element of the data-driven economy, building on principles first articulated in 1997 by the Clinton Administration.[22] Third, many governments have articulated AI strategies, reflecting the import of AI to the data-driven economy as well as public concerns about its use for decision-making.

In Contrast, Divergent Regulatory Strategies on Personal Data Protection

Although most of our countries have laws governing public and private sector use of personal data (37 out of 51 countries and the EU), these laws vary in scope. For example, China and Malaysia have passed data protection laws that limit the private sectors' use of personal data, but these laws do not cover the government's use of personal data. India is debating similar exceptions for the government. While the US does not have one comprehensive federal law protecting private use of personal data, it has laws governing public sector use of personal data.

Data Governance is a Rapidly Evolving Field of Governance

First, policymakers are adopting novel and innovative approaches to emerging challenges such as how to encourage trustworthy data-sharing. Secondly, government officials are moving quickly to enact rules, policies and alter governance structures. For example, while we were writing this report, Saudi Arabia approved a new data protection law.

Nations are doing more to Regulate and Adapt Governance Structures than to Develop Participatory and Responsible Approaches

As Chart 2 shows, we found more evidence that the 51 (plus EU) countries in our sample are doing more to regulate and adapt government structures (the regulatory and structural attributes) than they are doing to hear public comments or draft human rights or ethical guidelines (the participation and responsible attributes.) Moreover, in general, developing countries were not yet adopting such practices.

Evidence of the Feedback Loop is Elusive

We found considerable evidence that governments ask for comments from their constituents on data governance strategies, processes, and structures. But we were unable to measure if citizens actually commented and if those citizens truly reflect a diversity of views within the country. Moreover, we could not ascertain the extent to which governments 'heard' these comments and make changes in response. However, because so much human activity has moved online, data governance has become an essential governance responsibility. Hence, we believe that policymakers should work with educators to ensure that their public understands the changes wrought by the data driven economy and participates in governing it.

CHART 1
COUNTRY SCORE BY ATTRIBUTE

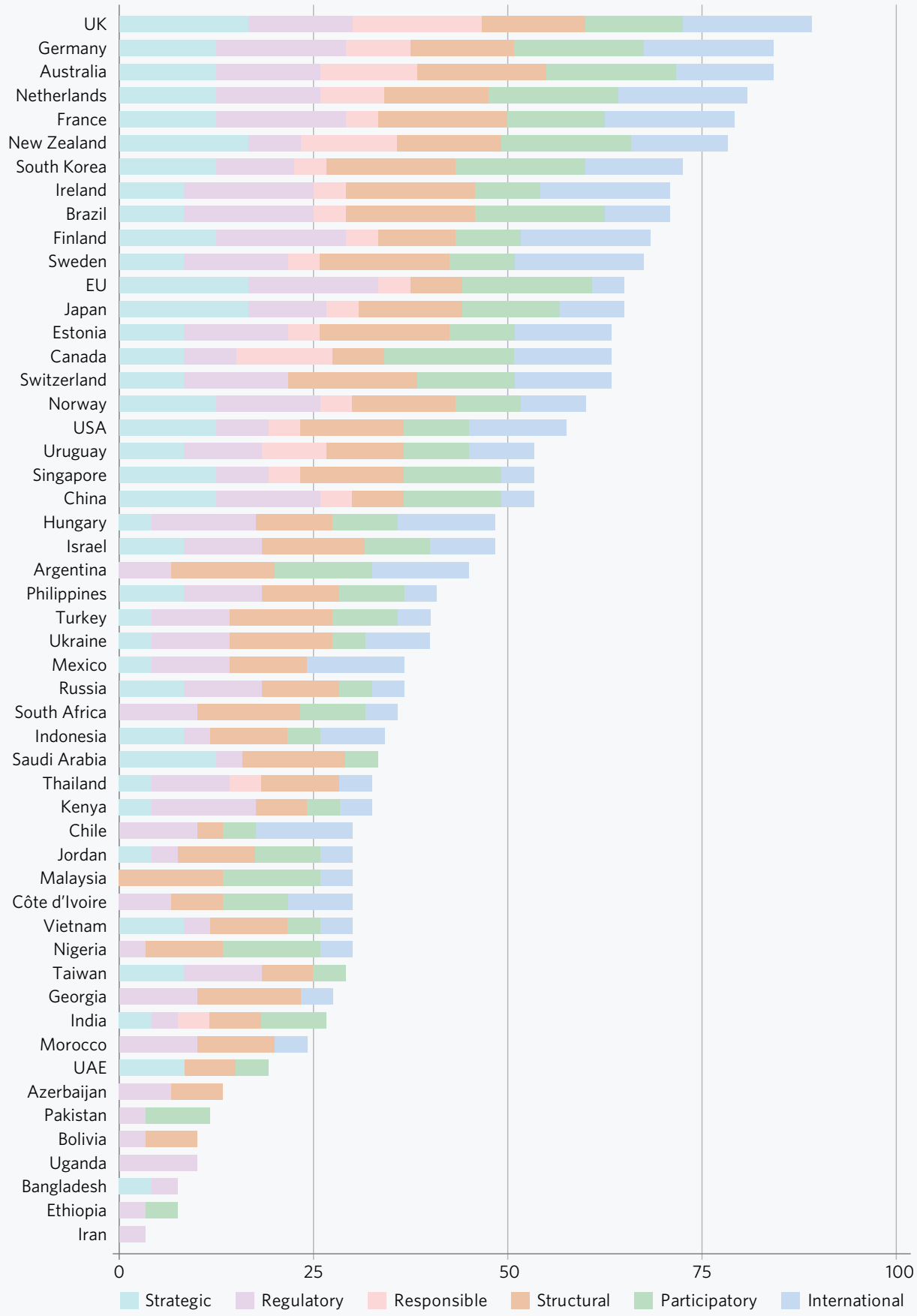


TABLE 2
TOP 16 COUNTRIES BY OVERALL SCORE

Country	Region	Income Category	Overall Score
United Kingdom	Europe & Central Asia	High Income	89.17
Germany	Europe & Central Asia	High Income	84.17
Australia	Europe & Central Asia	High Income	84.17
Netherlands	Europe & Central Asia	High Income	80.83
France	Europe & Central Asia	High Income	79.17
New Zealand	Europe & Central Asia	High Income	78.33
South Korea	East Asia & Pacific	High Income	72.50
Ireland	Europe & Central Asia	High Income	70.83
Brazil	Latin America & Caribbean	Upper Middle Income	70.83
Finland	Europe & Central Asia	High Income	68.33
Sweden	Europe & Central Asia	High Income	67.50
European Union	Europe & Central Asia	High Income	65.00
Japan	East Asia & Pacific	High Income	65.00
Estonia	Europe & Central Asia	High Income	63.33
Canada	North America	High Income	63.33
Switzerland	Europe & Central Asia	High Income	63.33

Chart 2 shows the attributes where our 51 countries and the EU countries were the most active. We added up the total indicators counting each yes as a 1. However, some attributes have four indicators while others five. To make this data understandable, we normalized the data, dividing the number of 1's in each attribute by the number of indicators in the attribute, to make the totals comparable among these attributes. We then added up these new totals and divided the normalized scores by the new total to get the scores which we present as percentages on this chart. The chart shows that our 51 countries and the EU countries are focusing more on changing regulations and governance structures to adapt to new data governance, with 23% of all our evidence falling under the Structural attribute, and 20.5% under Regulatory. Conversely, they are generally doing less in terms of taking into consideration the societal implications of data use, as just 6% of the policies we analyzed fell under the Responsible attribute.

CHART 2
EVIDENCE BY ATTRIBUTE

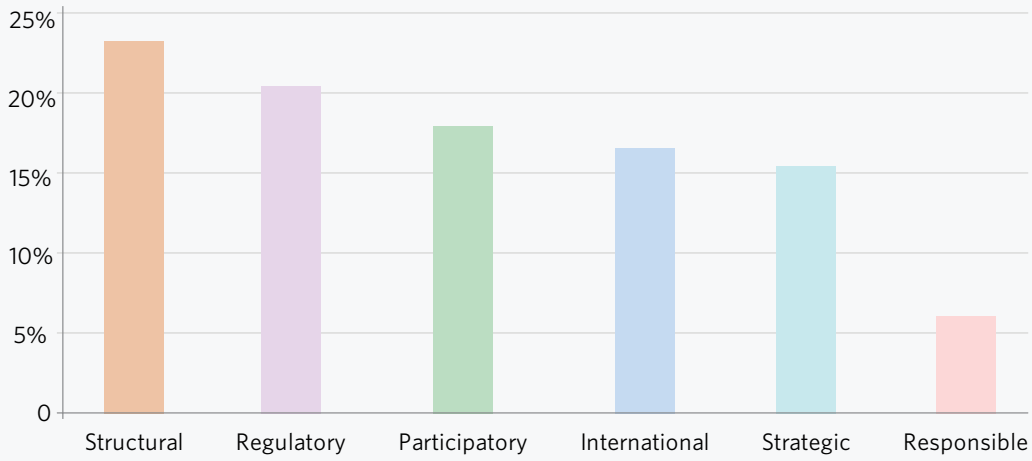


Table 3 looks at the indicators we found most often in our sample nations. We see three areas of data governance convergence. First, more than 84% of them have adopted Freedom of Information Acts and Open Data Portals (respectively, 48 and 44 of our 51 countries and the EU countries). Our analysis here is not surprising; citizens have long pressed for access to information and open public data.[23] Secondly, most nations have now adopted personal data protection structures and regulations.[24] Third, many governments have adopted AI strategies, reflecting the import of AI to the data-driven economy as well as public concerns about its use for decision-making. We also note that 16 countries or one quarter of our sample have issued AI ethics frameworks.

TABLE 3
MOST UBIQUITOUS INDICATORS

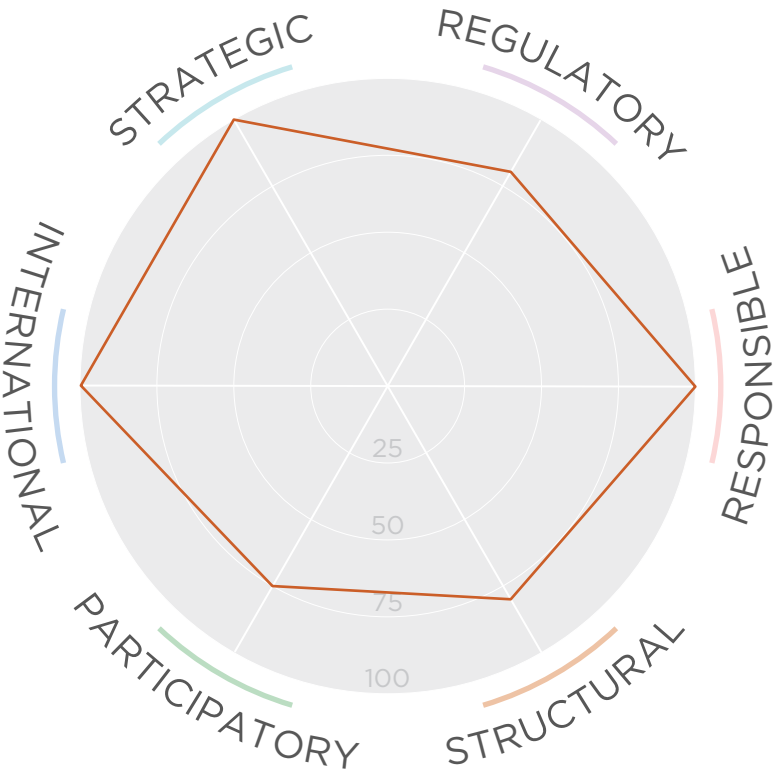
Indicator	Attribute	Percent of Countries with this Indicator
Freedom of Information Act	Regulatory	92%
Open Data Portal	Structural	85%
AI Strategy	Strategic	71%
Data Protection Body	Structural	71%
Personal Data Protection Law	Regulatory	71%
Public Consultation on Personal Data	Participatory	69%

In the radar charts that follow, we show how a sample of countries performed on the metric. We do not discuss every attribute but focus on key elements that explain the country's performance. We want to stress that these charts do not provide evidence of data governance effectiveness or quality.

Example Countries

United Kingdom

The United Kingdom was the highest-scoring country and the most well-rounded in its performance on each of our 6 attributes, with an overall score of 89.2 out of 100.[25] We found evidence that it had adopted a wide range of strategies, ethics, and human rights statements, and joined and/or led international initiatives on data governance. It was, for example, the only country to have evidence for all four indicators of responsible data governance (a data charter,[26] public sector data ethics framework,[27] AI ethics framework,[28] and trust framework for digital identity management[29]). While it performed well in strategic, responsible, and international indicators, it performed less well (although still well relative to many other countries) on structural and participatory attributes. Thus, despite significant progress, the United Kingdom has some data governance gaps. For example, while the UK is very transparent and open with public data, the Parliament has not yet approved open-by-default open data principles into law.



United States

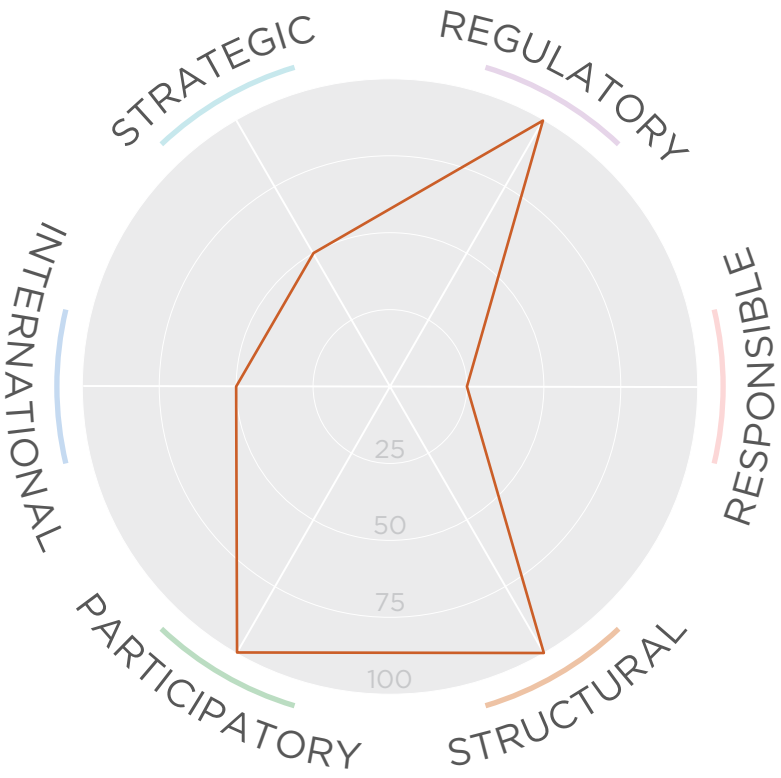
The United States of America is the world's leading data-driven economy, home to many of the largest and most innovative firms.[30] Yet America's governance of data lags behind many other countries active in the data-driven economy, placing 18th on our overall metric with 57.5 points. The US performed well on our attributes of international, strategic, and structural, but less well on regulatory, responsible, and participatory data governance. While the US has many national sectoral laws governing personal data, it does not have a comprehensive federal personal data protection law (nor even a pending or draft bill, thus placing it as one of only a small handful of such nations in our sample. In addition, the US has not adopted a formal statement delineating its human rights responsibilities related to data, although it has issued quite a few ethical guidelines for AI use. Finally, the US has no institutionalized advisory body related to either data protection or data-driven change that includes expert representatives from outside the government.

India

India's large and growing population and high level of digital prowess give it considerable global influence upon the data-driven economy and data governance.[31] Yet as of this writing our evidence indicates that India has made little progress in comprehensively governing data, scoring just 26.7 points in our overall metric. While it has an AI strategy,[32] it has no data strategy. Moreover, while the country has been debating a national personal data protection bill since 2019, the bill contains significant exceptions for the federal government.[33] Under our metric, we only count personal data protection laws that set limits on the public sector use of personal data as well as the private sector. Finally, India has not put in place significant changes (such as data protection authority) to government structures to address data governance nor has it been active in international efforts to find shared international approaches to data governance.

Brazil

Brazil scored highly on three of the six attributes that underpin the metric. Because of these high scores Brazil was among the top ten countries of our 51 countries and the EU examined (with an overall score of 70.8). Brazil has established a wide range of policies, processes, and structural changes to accommodate data governance, and performed extremely well on our attributes of regulation, participation, and structure, although with significantly lower scores in the other three attributes. Brazil was also the first country to establish a human rights law for the Internet and the personal data underpinning it (the Marco Civil).[34] More recently, Brazil established a Central Data Governance Committee to issue guidelines on data sharing within the public sector, and to consult with experts and the larger public on data governance measures.[35]



Kenya

Kenya has a burgeoning digital economy, and the government understands the import of data governance to economic growth and social stability.[36] For example, it has enacted a strong data protection law designed to comply with the European Commission's General Data Protection Regulation.[37] But Kenya is just beginning to govern various types of data. Although Kenya has a Freedom of Information Act, it has not passed a law mandating open data by default. Moreover, Kenya performed poorly in the structural, responsible, participatory, and international attributes.

Next Steps

As noted earlier, we are constantly evaluating ways that we can improve the metric. For example, we hope to increase the scale and scope of the metric by increasing the number of countries covered and adding indicators such as national cloud architecture, public feedback portal, etc. By including additional countries and developing the dataset for a longer period we will be better positioned to generalize our results and see if the same countries continue to lead on data governance. Additionally, we hope to gain a better understanding of how data governance strategies, policies, and processes spread among countries. While our metric cannot answer why a particular country adopted a particular data governance strategy, by adding additional information including when each document was published and which agencies or government bodies developed such documents, we can map when one country followed another in adopting such actions.

We welcome ideas for improving the metric such as suggestions for additional indicators. We constantly monitor the news, but the rapid pace of change prevents us from seeing everything. (For example, the September 27 news that Saudi Arabia has a new personal data protection law came too late for inclusion in this report).[38] We plan to have the first update of the metric by the end of May 2022. From then on, we hope to update our analysis annually.

If you think we have missed data, please contact Thomas Struett at *tstruett@gwu.edu* or Adam Zable at *ajzable@gmail.com*.

Endnotes

1 We are grateful to the funders who made this metric possible: the IDEA 2030 research initiative, funded by Mastercard Center for Inclusive Growth, at The Fletcher School at Tufts University; the Institute for Data, Democracy, and Politics at GW; and the GWU Center for International Business, Education, and Research, which in turn is funded by the US government.

2 Chen, Hsinchun, et al. "Business Intelligence and Analytics: From Big Data to Big Impact." MIS Quarterly, vol. 36, no. 4, Management Information Systems Research Center, University of Minnesota, 2012, pp. 1165–88, https://doi.org/10.2307/41703503.

3 UNCTAD. I Digital Economy Report 2019: Value Creation and Capture: Implications for Developing .Digital Economy Report; and Dan Ciuriak, The Economics of Data: Implications for the Data-driven Economy, CIGI, March 5, 2018, https://www.cigionline.org/articles/economics-data-implications-data-driven-economy/

4 According to the Data Governance Institute (DGI), data governance is "a system of decision rights and accountabilities for information-related processes, executed according to agreed-upon models which describe who can take what actions with what information, and when, under what circumstances, using what methods." https://www.delphix.com/glossary/what-is-data-governance

5 OECD, " Data governance: Enhancing access to and sharing of data, October 2021, https://www.oecd.org/sti/ieconomy/enhanced-data-access.htm

6 See Freedom on the Net 2021: The Global Drive to Control Big Tech #KeepItOn update: who is shutting down the internet in 2021? and Government data management for the digital age; and OECD Digital Economy Outlook 2020.

7 The Digital Trade & Data Governance Hub team includes Susan Aaronson, Research Professor at the Elliott School of International Affairs; Thomas Struett, Director of Research; and Adam Zable, Koch Associate Program Fellow; with help from a team of RAs. Web Director, Siaka Togola created the project website and made the dataset searchable. Ian Wheeler, Director of Outreach, edited and improved the report.

8 Benfeldt Nielsen, Olivia, "A Comprehensive Review of Data Governance Literature" (2017). Selected Papers of the IRIS, Issue Nr 8 (2017). 3.https://aisel.aisnet.org/iris2017/3

9 For more on this project, see The Global Data Governance Mapping Project

10 https://www.oecd.org/gov/trust-in-government.htm

11 Following Alfred D. Chandler, Jr. Strategy and Structure: Chapters in the History of the Industrial Enterprise. MIT Press, 1962.

12 The World Bank defines governance as "the traditions and institutions by which authority in a country is exercised." The Bank's Worldwide Governance Indicators assesses 6 dimensions of governance, which include policies, processes, and feedback loops (Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi, Worldwide Governance Indicators: Methodology and Analytical Issues, Policy Research Working Paper 5430, September 2010, p.4). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1682130. In contrast the Ibrahim Index of Governance defines governance as the provision of political, social, and economic public goods and services that every citizen has the right to expect and that the government should deliver to its citizens. https://mo.ibrahim.foundation/iiag.

13 We reviewed the OECD's Our data Index, World Bank's Statistical Performance Indicators, the Open Data Inventory, and the European Open Data Maturity Assessment.

14 Professor Henry Gao of Singapore Management University and Dr. Carolina Aguerre, Senior Research Fellow at Centre for Global Cooperation Research GCR21, Universität Duisburg-Essen

15 We checked our work again the following: Professor Graham Greenleaf does an analysis of data protection laws, as does the law firm DLA-Piper and the website DataGuidance. The OECD does a Digital Trade Inventory and the University of Lucerne maps digital trade agreements. We also looked to the Open Data Barometer, OECD databases, etc.

16 Feedback from: Vivien Foster and David Satola, World Bank Data for Better Lives WDR Team 2021; Teresa Scassa, Canada Research Chair in Information Law, University of Ottawa; Stefaan Verhulst, Govlab; Aart Kraay, World Bank; Esther Huyer, Capgemini SE; Jenni Tennison, Open Data Institute; Gabriel Marceau, WTO; Javier Lopez-Gonzalez and Francesca Cassolini, OECD and audiences at a webinar addressed by Aaronson for the Indian think tank IMPR on September16, 2021l.

17 We do not address financial data, intellectual property rights, research data, government statistics, ICT and digital infrastructure, or cybersecurity. We also do not include data on the quality, enforcement, outcomes, or public opinion of data governance.

18 Davis, Kevin, et al., eds. Governance by indicators: Global power through classification and rankings. Oxford University Press, 2012.

19 For example, 51 of the 51 countries and the EU countries in our sample (except for Iran) are obligated to make domestic regulations that can affect trade (such as personal data protection rules) in a transparent accountable manner and to encourage public comment or they could be challenged in a trade dispute. Susan Ariel Aaronson and M. Rodwan Abouharb, "Unexpected Bedfellows: The GATT, the WTO and Some Democratic Rights," International Studies Quarterly, 2011) 55, 379—408, Unexpected Bedfellows: The GATT, the WTO and Some Democratic Rights. In addition, 32 of our case studies are members of the Open Government Partnership. OGP, countries have to commit to uphold the principles of open and transparent government by endorsing the Open Government Declaration. Open Government Declaration.

20 www.theweek.in/news/sci-tech/2021/09/15/personal-data-protection-law-door-ajar-for-misuse.html

21 On freedom of information; https://www.access-info.org/wp-content/uploads/Access_Info_Europe_Briefing_Paper.pdf; and https://www.access-info.org/2009-07-25/history-of-right-of-access-to-information/ on open data see http://parisinnovationreview.com/articles-en/a-brief-history-of-open-data

22 See the Global Information Infrastructure Framework, https://clintonwhitehouse4.archives.gov/WH/New/Commerce/read.html Some countries already had an organization protecting personal data and/or privacy (such as Canada). Others have empowered an existing body to act against companies that breach data protection laws as example (the US FTC).

23 On freedom of information; https://www.access-info.org/wp-content/uploads/Access_Info_Europe_Briefing_Paper.pdf; and https://www.access-info.org/2009-07-25/history-of-right-of-access-to-information/ on open data see http://parisinnovationreview.com/articles-en/a-brief-history-of-open-data

24 Some countries already had an organization protecting personal data and/or privacy (such as Canada). Others have empowered an existing body to act against companies that breach data protection laws as example (the US FTC).

25 This placement reflects the current makeup of the indicators and countries included in the metric and is thus subject to change.

26 https://www.gov.uk/government/publications/digital-charter/digital-charter

27 https://www.gov.uk/government/publications/data-ethics-framework

28 https://www.nhsx.nhs.uk/media/documents/NHSX_AI_report.pdf

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