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CEPA strategy guidance note on
Open government data

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The [United Nations Committee of Experts on Public Administration \(CEPA\)](#) has developed a set of principles of effective governance for sustainable development. The essential purpose of these voluntary principles is to provide interested countries with practical, expert guidance on a broad range of governance challenges associated with the implementation of the 2030 Agenda. CEPA has identified 62 commonly used strategies to assist with the operationalization of these principles. This guidance note addresses open government data, which is associated with the principle of transparency and can contribute to strengthening the accountability of institutions. It is part of a series of such notes prepared by renowned experts under the overall direction of the CEPA Secretariat in the Division for Public Institutions and Digital Government of the United Nations Department of Economic and Social Affairs.

In reading this guidance note, individuals in government ministries and agencies who are less familiar with the topic will be able to understand the fundamentals. Those who have perhaps taken initial steps in this area with limited follow-through or impact will be able to identify how to adjust elements of their practice to achieve better results and to better embed and institutionalize the strategy in their organizations. Those who are more advanced in open government data will be able to recognize the practices which contribute to their success.

Understanding the strategy

Publication of government data in an open format is an example of operationalizing transparency, one of the 11 principles of effective governance for sustainable development. “Open data” is structured data that is made available to be reused by any person or organization. As the term suggests, open government data refers to data created, collected, held or commissioned by government or government-controlled entities.¹ This includes public entities at both the national and subnational levels and can refer to institutions involved in the administration of executive and legislative organs, independent constitutional bodies and State corporations. It can even refer to data that is produced when public services are outsourced to non-governmental organizations, as well as by publicly funded research and development corporations, sovereign wealth funds and other quasi-governmental entities.

Dissemination of open government data is often part of a broader strategy to enhance the proactive disclosure of information whereby agencies make their records publicly available in a variety of formats without waiting for specific requests from the public. The strategy is fundamentally rooted in the right to access public information, which encompasses the right to seek, receive and impart information held by public bodies.² Publication of open government data, especially within a larger policy of proactive disclosure of information across government bodies, contributes to greater transparency, accountability and citizen engagement in building strong institutions for sustainable development.

To be considered “open” data should be machine-readable and accessible for free use, reuse and redistribution by anyone, subject at most to the requirement to attribute and share alike, without legal or technical barriers. The international Open Data Charter, a collaboration among some 170 governments and organizations established in 2015, elaborated on these critical requirements in the form of six core principles and related guidance on their operationalization.³

¹ See the Open Knowledge Foundation’s definition of “open” for the purposes of understanding open data, open content and open knowledge: <https://opendefinition.org/government/>.

² Access to information is monitored through SDG indicator 16.10.2 which tracks the number of countries that have adopted and implemented constitutional, statutory and/or policy guarantees for public access to information. According to UNESCO, a total of 138 United Nations Member States had adopted laws that safeguard access to information as of 2023, with 26 countries having established legal frameworks that safeguard access to information since the adoption of the 2030 Agenda. For details, see <https://unesdoc.unesco.org/ark:/48223/pf0000389214/PDF/389214eng.pdf.multi>.

³ For the full text of the Charter, see <https://opendatacharter.org/principles/>. Several years earlier, in 2007, a group of 30 interested experts had articulated a common understanding of how open government data contributed to democracy and set out eight principles to encapsulate its essential features (open data should be complete, primary, timely, accessible, machine-processable, non-discriminatory, non-proprietary and license-free). The Open Data Charter of 2015 reorganized the original eight principles into six and expanded on them, emphasizing the value of open data for effective governance and inclusive development.

- Principle 1 – Open by default
- Principle 2 – Timely and interoperable
- Principle 3 – Accessible and usable
- Principle 4 – Comparable and interoperable
- Principle 5 – For improved governance and citizen engagement
- Principle 6 – For inclusive development and innovation

Frameworks and principles established by organizations such as the United Nations, the Organization for Economic Co-operation and Development (OECD) and others also provide guidance on identifying which dataset categories to prioritize for public use in accordance with their respective mandates. While open government data initiatives could extend to virtually all unrestricted data, in practice the scope of open government data depends on a government's priorities and existing data architecture, among other factors. The provision of open government data can follow a demand approach (which datasets are in high demand) or a supply approach (which datasets are easiest to get into the public's hands). Most commonly, open government data is produced from government administrative records (such as business information, registers, patent and trademark information, public tender databases, social data and transport information) as well as from various types of geospatial information (such as geographic and meteorological data).

The European Union's Open Data Directive provides an example of how governments define their open data priorities in practice. Under this Directive, the European Union's implementing regulation identifies six categories of high-value datasets that are deemed to be important for its economy, society and environment.⁴ This list covers geospatial data, Earth observation and environment data, meteorological data, statistical data, data on companies and company ownership, and mobility data. Similar efforts to identify high-value datasets have been undertaken at the national level, for example by Australia,⁵ Thailand,⁶ and others.

Despite the merits of open data, not all data can or should be made openly available. The scope of open government data is circumscribed by the principles embedded within right-to-information legislation and data protection laws. Right-to-information laws in most countries specify permissible exceptions to information access, most commonly due to national security, prevention of legal wrongs, international relations, public health and safety and protection of legitimate commercial interests.⁷ The data that is made open should exclude information that is legitimately protected under these legal frameworks. This ensures a balanced approach, safeguarding personal privacy and sensitive information while promoting transparency.

⁴ See Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information, Annex I, at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L1024>.

⁵ See <https://dataavailability.pmc.gov.au/designated-datasets.html>.

⁶ See <https://ieeexplore.ieee.org/document/8457350>.

⁷ UNESCO, *Report on Access to Information 2023*, Section 2.2, pp.16-17.

Benefits and impact

The overall potential impact of open data on the economy and society can be hard to analyze, but evidence has shown that exploiting public sector data reduces administrative costs and can be a valuable resource that can be used by stakeholders for a multitude of purposes beyond its contribution to building transparent institutions. Some countries have taken bold steps to expand the role of government data in operations and decision-making; in such contexts, data constitutes a central input and output and is used to steer and inform policy options and entire policy cycles—from agenda setting and policy formulation to policy implementation and evaluation.

Government effectiveness

Open government data directly supports the achievement of several of the Sustainable Development Goals (SDGs), especially Goal 16, which emphasizes the need for transparent, effective and accountable institutions. The 2030 Agenda for Sustainable Development and more recently, the Pact for the Future, have made data a focal point, acknowledging that data is key to effective decision-making and that timely, reliable, high-quality and disaggregated data is needed to facilitate the measurement of progress towards sustainable development.

Data and related issues and developments in the public sector have become increasingly important in terms of government analysis and operations, academic research and real-world applicability and acceptance. Data is now integral to every sector and function of government—as essential as physical assets and human resources. Much of the operational activity in government is now data-driven, and many governments would find it difficult, if not impossible, to function effectively without access to data from multiple sources. (See also the CEPA strategy guidance note on data sharing.⁸)

There are examples of benefits associated with the release of open government data to strengthen the provision of services,⁹ for example to better address the needs of particular groups, including vulnerable people, or more simply to reduce the amount of red tape, time and resources associated with public requests for information.

Sound policymaking

Access to accurate data allows for well-informed choices that positively impact communities and organizations. It significantly contributes to the achievement of various SDGs. For instance, the importance of data during the COVID-19 pandemic underscores its impact on

⁸ United Nations, Department of Economic and Social Affairs, “CEPA strategy guidance note on data sharing” (New York, February 2021).

<https://publicadministration.un.org/sites/default/files/cepa/Strategy%20note%20data%20sharing%20Mar%202021.pdf>

⁹See, for example, Open Data in Developing Countries: Toward Building an Evidence Base on What Works and How at <https://odim pact.org/files/odim pact-developing-economies.pdf>.

good health and well-being (Goal 3).¹⁰ Also, open government data enhances quality education (Goal 4) not only by informing policy decisions but also by serving as a valuable resource for teaching and learning.¹¹ It also supports efforts towards climate action (Goal 13),¹² life below water (SDG 14) and life on land (SDG 15), enabling better monitoring of the state of the environment and design and execution of environmental policies.¹³ In addition, according to the United Nations E-Government Survey 2022, open government data provides insights in terms of trends and patterns across different sectors, aiding decision-makers in forecasting upcoming challenges and helping to optimize the use of available resources for the greater public good.¹⁴

Data constitutes a central input and output for public institutions and is used to steer and inform policy options and entire policy cycles—from agenda-setting and policy formulation to policy implementation and evaluation. The broader and more robust use of government data can play a catalytic role in transforming institutions and strengthening service provision and engagement with the public. Data also strengthens the capacity of institutions to fulfil their mandates, create public value and contribute to the public good, for example by changing the way policymakers think about measuring and interpreting public needs, expectations and behaviour.

Reduced corruption

By proactively disclosing information, governments demonstrate transparency and a commitment to keeping citizens informed about their activities, decisions and policies. Evidence points to a strong association between the prevalence and impact of open data initiatives and perceived levels of public sector corruption.¹⁵ This suggests that open

¹⁰ Open health data, including electronic health records, insurance claims and registry data can be aggregated and reused for secondary purposes to help optimize healthcare resources, support personalized treatment, and foster innovation in policymaking through predictive modelling and diagnosis or data flows that track and respond to patient needs in real time. Data-driven decision-making played a pivotal role during COVID-19 in guiding government decisions across multiple sectors, including healthcare, economic recovery, and public safety. See <https://arxiv.org/pdf/2202.11435>.

¹¹ A study in Kenya showed that data-driven policies, such as hiring local contract teachers to reduce overcrowding, significantly improved student learning outcomes. See <https://www.povertyactionlab.org/evaluation/peer-effects-pupil-teacher-ratios-and-teacher-incentives-kenya>. Open data also allows students to work with real-world datasets, improving their practical skills and enhancing the learning experience across various subjects. See <https://datos.gob.es/en/blog/open-data-tool-education-and-training>.

¹² See <https://www.wri.org/research/implementing-open-data-strategies-climate-action-suggestions-and-lessons-learned>.

¹³ In Chile, the Center for Climate and Resilience Research (CR2) uses open data to create relevant climate models and a user-friendly platform, which government agencies rely on for accurate and accessible climate data. See <https://www.cr2.cl/eng/>.

¹⁴ See <https://publicadministration.un.org/egovkb/en-us/reports/un-e-government-survey-2022>.

¹⁵ Renata Máchová, *Measuring the Effects of Open Data on the Level of Corruption*. Conference Paper in Proceedings of the 21st International Conference Current Trends in Public Sector Research (2017).

government data can play a significant role in anti-corruption efforts by enabling public accountability and fostering a culture of integrity, which is essential for the long-term success of anti-corruption efforts and the achievement of SDG target 16.5.

Moreover, when pertinent datasets are combined and analyzed they can highlight significant patterns, or notable discrepancies, that may be hard to discern in isolation. For example, when data from a lobbying register is integrated with legislative voting records or data on political financing, it can enhance the accountability of the legislative process by revealing substantial donor dependencies and serve as a possible indication of one or more private interests behind a public policy agenda.¹⁶ Data on public procurement can also uncover favouritism towards certain companies or individuals at the expense of more competitive procurement processes,¹⁷ particularly when reviewed in combination with data on the beneficial ownership of companies and other legal persons and arrangements. (See CEPA strategy guidance notes on lobbying registers¹⁸ and registers of beneficial ownership.¹⁹)

Inclusive, responsive and participatory decision-making

Open government data provides citizens with the information necessary to engage in public discourse. It leads to a more informed citizenry that can actively participate in democratic processes, as shown in platforms such as the “Tree of Truth”²⁰ in Estonia or the “Vulekamali” in South Africa.²¹ It also holds the potential to cultivate a vibrant community around shared datasets, bringing together individuals working on similar issues (via hackathons²² and different types of challenges). This collaborative environment allows for the exchange of ideas, the sharing of findings, and collective discussions to address challenges more effectively, as demonstrated in numerous open data-related Open Government Partnership commitments (and supporting Goal 17).

While it holds tremendous potential for citizen engagement it is important to be clear about what can and cannot be expected from open government data alone. Experts caution that substantial changes in decision-making processes and mechanisms to ensure public participation may also be needed to ensure responsive, inclusive, participatory and representative decision-making at all levels (SDG target 16.7).

¹⁶ [Institute for Democracy and Electoral Assistance \(2019\)](#).

¹⁷ See, for example, <https://www.regardscitoyens.org/sunshine/>.

¹⁸ See <https://publicadministration.desa.un.org/sites/default/files/cepa-sessions/Strategy%20note%20lobbying%20registers%20Nov%202024.pdf>.

¹⁹ See https://publicadministration.desa.un.org/sites/default/files/cepa-sessions/Strategy%20note%20beneficial%20ownership%20registries%20Oct%202024_0.pdf.

²⁰ See <https://tamm.stat.ee/?lang=en>.

²¹ See <https://vulekamali.gov.za/>.

²² A hackathon is a collaborative event where participants converge to tackle problems or discover new opportunities. The term hackathon blends the words “hack,” denoting creative problem solving, and “marathon,” reflecting the event's intensive, extended nature.

Promotion of inclusive economic growth and productive employment

Open data is a valuable resource to augment existing organizational and corporate datasets,²³ benefiting entities of all sizes and especially smaller companies. Several studies have attempted to measure the economic benefits of open data, despite its methodological difficulties, and by extension its contribution to achieving decent work and economic growth (SDG 8). As an example, by some estimates the European data economy was worth approximately €355 billion in 2020, with potential growth to €829 billion by 2025, of which open government data was estimated to have contributed €10 billion.²⁴ Other examples from the same region estimate that open real-time traffic data can potentially save €13.7 billion to €20 billion in labour costs due to reduced waiting times in traffic,²⁵ and that open government data can aid the development of machine translations resulting in a potential cost saving of €1.1 billion in translations on the European Data Portal. Thus, it appears to have the potential to play a significant role in economic growth.²⁶ Widening access to data also fuels innovation by enabling more individuals to explore novel analyses in support of industry, innovation and infrastructure investment (Goal 9).

Public sector situation and trends

The establishment of the Open Government Partnership in 2011 provided a significant impetus for open government data, rallying countries worldwide around the cause of transparency and accountability.²⁷ Building upon this momentum, the international Open Data Charter emerged in 2015, signaling a global commitment to principles that went beyond mere accessibility. These principles, developed through inclusive processes involving governments and civil society, emphasized the proactive publication of open government data.

Over the past decade, the conversation around open government data has evolved from being largely based on the understanding that simply opening up data would unlock a wealth of innovation and public engagement to recognizing that open government data intersects with a variety of critical issues, including privacy, the safeguarding of human rights within technological deployments, the advancement of machine learning and artificial intelligence, digital security, the establishment of robust data governance frameworks, and the promotion

²³ For example, the beginning of Duedil, which is a data platform built on top of open data that leverages geo-localization and network analysis techniques. For more information, see [here](#) or [Properati](#) in South America.

²⁴ See the [Open Government Data Needs Assessment Study](#).

²⁵ See <https://data.europa.eu/sites/default/files/the-economic-impact-of-open-data.pdf>.

²⁶ M. C. Jelenic, [From Theory to Practice: Open Government Data, Accountability, and Service Delivery](#), World Bank Policy Research Working Paper (World Bank, 2019); A. Munte, [El valor de los datos.\(LinkedIn, 2023\)](#).

²⁷ See <https://www.opengovpartnership.org/>.

of inclusivity in data and algorithm production. These dimensions have added significant complexity to the initial focus on data availability.

Open government data within national data governance frameworks

National data governance can be described as the policies, guidelines, standards, procedures and practices that regulate the generation, management, use and reuse of data, including guidelines for managing the exchange of data between the public and private sectors. Open government data strategies are increasingly seen as part of the national data governance framework along with other data-related policies and institutional arrangements. A 2024 baseline study on this subject conceptualized four pillars of a model framework (policies, institutions, people and processes) that is responsible for outlining and enforcing rules of engagement, decision rights and accountabilities for the effective management and governance of data assets. Data sharing, interoperability and open government data are seen as basic elements of these emerging frameworks, reflecting a growing appreciation of the value of open government data as part of a broader, national data ecosystem. Other framework elements include data standards and classification; data security; data privacy and ethics; national data infrastructure; and links with national digital identity, where applicable.²⁸

In terms of functional responsibility, national statistical offices (NSOs) and chief information officers (or their equivalent) have been key players. Although their roles vary across countries and are sometimes combined, NSOs are often responsible for the management of national statistical databases and open data policies as they pertain to official statistics, while chief information officers may be responsible for open data policies in the context of administrative data, data sharing, protection, usage, information security and information technology infrastructure across government agencies.²⁹ Data privacy commissioners, cybersecurity agencies and others also play a role in policies and guidelines impacting open government data initiatives. Given the varied mandates and responsibilities, strengthened collaboration among all relevant stakeholders in the elaboration of an open government data strategy, including government data producers, is recommended.³⁰

²⁸ United Nations, Department of Economic and Social Affairs, *Compendium of Baseline Studies on the National Data Governance Frameworks* (April 2024). See https://publicadministration.desa.un.org/sites/default/files/list-of-files/2024/Compendium%20of%20Baseline%20Studies%20of%20National%20Data%20Governance%20Frameworks_CLEAN_21April2024.pdf.

²⁹ See United Nations Statistical Commission guidance for the practical application of open data in the context of official statistics at <https://unstats.un.org/open-data/>.

³⁰ The United Nations' Compendium of Baseline Studies on the National Data Governance Frameworks identified varying approaches to the management of open government data initiatives across surveyed countries. In most cases, these initiatives are overseen by the National Statistical Office or the Chief Information Officer.

Measuring open government data maturity

There are several assessments that measure the state of open government data in different sectors and regions as shown in Table 1. These include the Open Data Inventory (ODIN), produced by Open Data Watch, which measures the openness and coverage of data provided by NSOs,³¹ and the OURdata Index, produced by OECD, which benchmarks efforts made by governments to design and implement national open government data policies.³² There are also initiatives with a broad approach, such as the Open Government Data Index, which focuses on policy, platforms and impact and is connected with the United Nations E-Government Survey³³ and the Global Data Barometer, which was designed in response to the changes in the field and the need, expressed at the 2019 Open Government Partnership Global Summit, for in-depth, country-level insights on data.³⁴

Table 1. Selected open government data indexes as of October 2024

<i>Measurement tool</i>	<i>Main elements</i>	<i>Geographic coverage</i>	<i>Temporal coverage</i>
Open Data Watch Open Data Inventory	Availability of official statistics by function, administrative level and openness attributes	Global	2015-2022
United Nations E-Government Survey Open Data Index	Open data policy, platform and impact	Global	2020-2024
Global Data Barometer	Data governance, data capabilities, data availability, data use and impact	109 countries (all regions)	First edition: 2020-2022 (preceded by the Global Open Data Index and Open Data Barometer) Second edition to be released in 2025 (covers 2022-2024 period)
OECD OURdata Index	Data availability, data accessibility and government support for data reuse	OECD area	2019-2023

Source: Author.

³¹ See <https://odin.opendatawatch.com/>.

³² See <https://www.oecd.org/publications/2023-oecd-open-useful-and-re-usable-data-ourdata-index-a37f51c3-en.htm>.

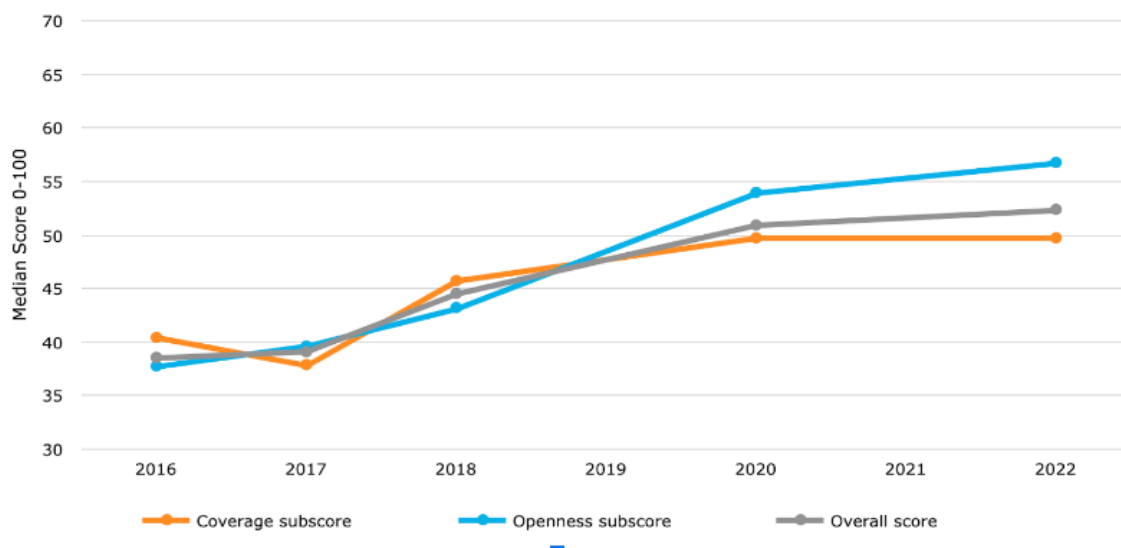
³³ United Nations, Department of Economic and Social Affairs, “UN E-Government Survey 2024: Technical Appendix”, pp. 85-90. (New York, 2024), <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2024>.

³⁴ See <https://globaldatabarometer.org/>.

Trends in data availability

By comparing the latest findings from the Global Data Barometer with data from the last five editions of the Open Data Barometer³⁵ and the Open Government Data Index, a picture of steady, albeit modest, growth in open government data initiatives over the past several years emerges. For example, there has been a slight increase in the number of datasets that conform to the open data definition since 2017.³⁶ This observation is consistent with the results from ODIN, which focuses on data coverage and openness on the part of NSOs. Although overall scores have continued to improve, as shown in Figure 1, there is evidence to suggest that the pace of this progress has slowed. The most recent assessment by ODIN in 2020 showed a median score increase of 2.1 points for all countries surveyed, marking the smallest increment since 2017.

Figure 1. Trends in data coverage and openness on the part of National Statistics Offices, 2016-2022



Source: ODIN 2022/2023.

At the same time, out of nearly 100 countries that had launched national open data initiatives, only 72 remained active at the time of the 2022 ODB survey, while some 58 countries had

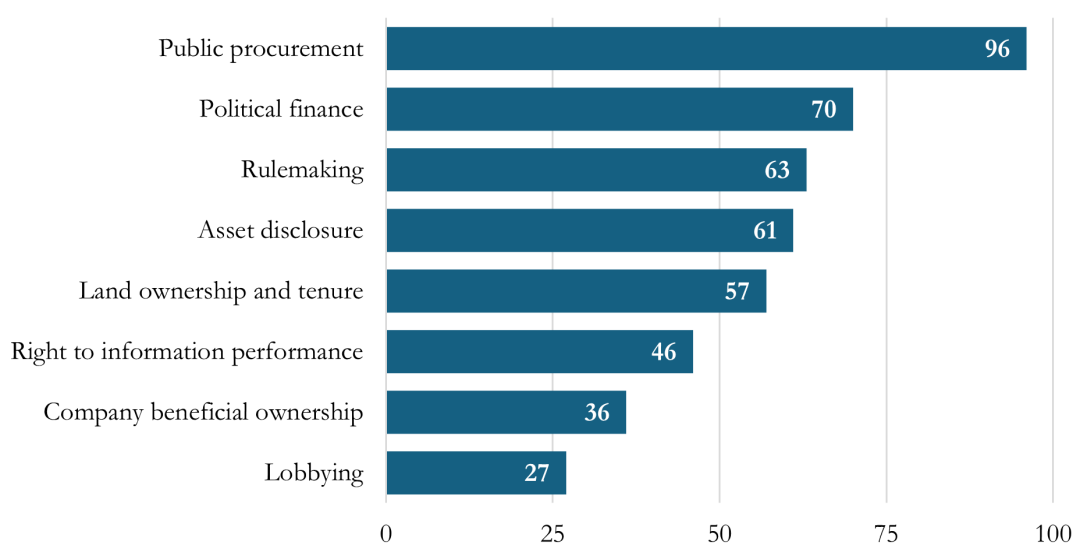
³⁵ In spite of the differences between the two barometers, the Global Data Barometer team explored ways in which the Global Data Barometer could track data openness on its own. See <https://globaldatabarometer.org/2022/06/how-to-track-openness-with-the-global-data-barometer/>.

³⁶ See the Global Data Barometer report, p. 46. The proportion of datasets published as open data (free of charge, in bulk and machine-readable forms, and openly licensed) has remained relatively stagnant over the last decade with 10.63 percent of the datasets surveyed meeting the open definition. This is only marginally above the high of 10 percent recorded in the 2015 Open Data Barometer. However, adopting a more flexible approach to assessment, a total of 17 percent of datasets were found that either meet, or come close to, being provided as open data.

active local initiatives.³⁷ This highlights the importance of effective collaboration among various entities, including NSOs, open data teams, and data offices within line ministries, to ensure the continued growth and development of OGD initiatives.

Disparities with respect to the publication of high-value datasets by category are shown in Figure 2. Key findings from reports such as Broken Links³⁸ and the 2022 Global Data Barometer survey³⁹ reveal significant progress in certain areas, while pointing to difficulties with data availability, poor integration of databases and limitations in open data policies in others.

Figure 2. Percentage of 67 Open Government Partnership (OGP) countries surveyed that published selected high-value datasets in 2022, by category



Source: Open Government Partnership, Broken Links report based on the first edition of the Global Data Barometer.

Data quality

In terms of strengths and weaknesses, even within the same area, there is variability. For example, while information on tenders and awards for public contracts is commonly published,⁴⁰ data on contract implementation is less frequently available. Similarly, basic political finance data is often accessible,⁴¹ but detailed information on lobbying and beneficial ownership lag behind, sometimes because this data has not been systematically collected. Thus,

³⁷ See Global Data Barometer Report (2022), p, 40, which focuses on how open data initiatives are developing.

³⁸ See <https://www.opengovpartnership.org/broken-links/>.

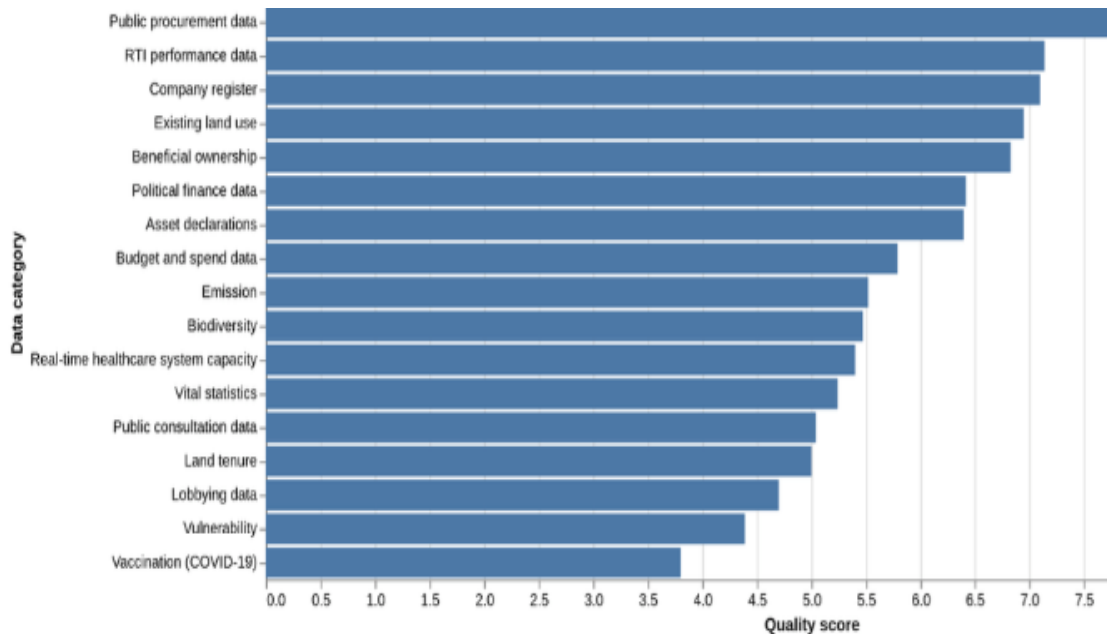
³⁹ See <https://globaldatabarometer.org/the-global-data-barometer-report-first-edition/>.

⁴⁰ According to the first edition of the Global Data Barometer, 106 countries present some budget and spending data online, and 100 countries provide public procurement data.

⁴¹ Initiatives such as the Open Contracting Partnership have propelled the availability of procurement data and networks such as GIFT have supported the publication and use of public finance data.

there is significant variability in the quality of open data across different policy areas as shown in Figure 3.

Figure 3. Dataset quality score by policy area, 2022



Source: Global Data Barometer 2022. The quality score represents a weighted average of how many desirable fields or features for the dataset were available in online data.

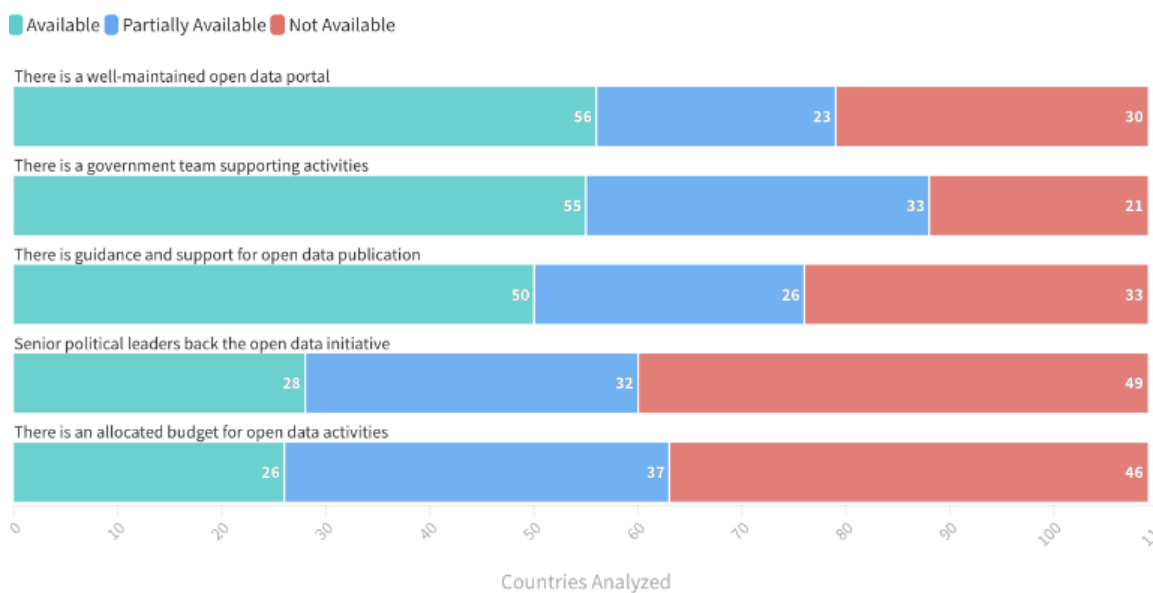
Relevance and use

Resolving these challenges requires a multifaceted approach that transcends merely increasing publication numbers, reflecting a shift from the initial notion of “open and they will come” to a more nuanced understanding of the complexities of data accessibility covering the issues of governance and capabilities, as well as availability and use. These complexities call for a shift towards a more purpose-driven “Third Wave” approach that focuses on impactful data reuse through inter-sectoral collaboration and partnerships. This approach addresses both supply and demand while considering the socio-political and economic contexts in which data is used.⁴²

Specific open government data policies and guidelines are crucial for setting standards and procedures to ensure datasets are both relevant and useful. Figure 4 denotes indications of support for open government data initiatives in 2022, as evidenced by governments’ strategic commitments.

⁴² See <https://opendatapolicylab.org/images/odpl/third-wave-of-opendata.pdf>.

Figure 4. Indications of support for open government data initiatives, 2022



Source: Global Data Barometer 2022.

Governments have also established a variety of specific initiatives to promote the usage of open government data to achieve the main benefits identified above. In the United States, the Open Government Data Act requires federal agencies to release key datasets, making them publicly accessible through the national open data portal.⁴³ Similarly, the European Union’s Open Data Directive (referenced in the first section of this Note), provides a regional example mandating public sector bodies and public undertakings to make documents available in open, machine-readable formats, facilitating their reuse, with European Union Member States ensuring access, online searchability and guidance for effective reuse.

Civil society organizations such as the Open Knowledge Foundation, World Wide Web Foundation, and Transparency International have also promoted the use of open government data to facilitate effective governance and anti-corruption efforts through the Open Data Handbook, Global Open Data Index, Open Data Barometer, Global Data Barometer, Corruption Perceptions Index and other tools. Multilateral networks such as the Open Government Partnership bring together governments and civil society to create action plans and secure commitments to promote open government, anti-corruption, and improved governance. Initiatives from academia such as GovLab at New York University further strengthen these efforts through impact assessment projects in their Open Data Impact Repository.

⁴³ See <https://www.cio.gov/handbook/it-laws/ogda/>.

Other issues

Analyzing the risks and challenges may help policymakers identify the most urgent areas of need, allow them to prioritize the allocation of scarce resources for data initiatives and guide these initiatives in their design and implementation. The ability to clearly identify challenges can help practitioners gain senior management buy-in and can guide practitioners as they design and implement data initiatives and processes. The objective is to ensure that data projects, programmes and strategies are designed to maximize the benefits of open government data for sustainable development while minimizing risks through applicable data governance frameworks.

Privacy and ethical considerations

Privacy and ethical considerations pose formidable challenges in data governance. As governments strive to make data more accessible to the public, they must navigate the delicate balance between transparency and privacy. The challenge lies in ensuring that while promoting openness, sensitive personal information is adequately protected from unauthorized access or misuse. Additionally, ethical considerations, such as the potential for data exploitation or discrimination, further complicate governance efforts. Registered public concerns relate to issues such as the legitimacy of project objectives, the lack of public awareness, and the lack of clarity around possibilities for opting out of data extraction processes. The use of government data is generally deemed unacceptable when it is perceived as an invasion of privacy. Governments worldwide grapple with the task of promoting transparency through open data while safeguarding individuals' privacy rights and addressing ethical concerns related to data use and dissemination.

Data security

Data breaches can limit the effective functioning of institutions and impact the economic well-being of key sectors such as healthcare and social security systems, but they also affect the safety and security of people, impose intangible social costs, and undermine public trust in the government. For example, the healthcare sector is a repository for a large amount of sensitive information that needs to be protected for privacy reasons, and the consequences of any hacking incident are typically very serious. Along with the growing need for the adoption or amendment of data policies and for the strengthening of institutional capacities and capabilities around data and analytics, there is an increasing demand for the enhancement and enforcement of data security and protection provisions.

There are justifiable concerns about people's data being lost or stolen, and governments have a statutory obligation to protect such data. It is vital that appropriate security measures be put in place to ensure online data security as prerequisites for the use of data to drive sustainable growth and maintain a healthy digital environment. Cybersecurity is a top priority for many countries, with governments focused not only on domestic threats but also on international risks, given the cross-boundary architecture of the Internet.

Data literacy and data capacities

Many governments, especially those in developing countries and countries in special situations, currently lack the capacity to fully develop the potential of open government data as a strategic asset and to mitigate the attendant risks and challenges. Public-sector expertise is needed in many areas, including data access, analytics, visualization, data sharing, interoperability, evidence-based policymaking, data security, and privacy protection. It is important that data capacities be developed early so that a strong foundation exists for future development; as the volume and applications of data and data usage increase, so will the complexity of managing data.

Strengthening data literacy and capacities enables public officials and administrators to navigate new data realities and pursue innovation in accordance with well-defined rules that ensure data security and privacy. Becoming more data-centric represents a major change in the institutional culture of agencies at all levels and therefore requires strategic oversight at the national level.

Use of open government data in artificial intelligence

The widespread use of artificial intelligence (AI) tools presents a range of challenges that require careful consideration. It is essential not only to expand open data initiatives but also to manage data from various sources effectively to develop sophisticated AI tools. However, when data itself contains biases or is not fully representative of the entire population, AI algorithms can perpetuate or even exacerbate these biases. This issue becomes even more critical when AI is used for decision-making processes, as it can lead to unfair or discriminatory outcomes. Therefore, a balanced and thoughtful approach is needed to tackle these challenges.

Methods of implementation

Governance

Effective governance forms the cornerstone of open government data initiatives, ensuring that data is managed, shared and protected in a responsible and ethical manner. Governments are encouraged to adopt a comprehensive data governance framework with a structured approach that supports sustainable development. Effective data governance comprises a set of principles and practices that guide the formal management of data assets within all public institutions. While it may be challenging to employ a whole-of-government approach (rather than a piecemeal or silo approach) in reviewing and consolidating data-related strategies, doing so will prove worthwhile as governments move towards treating data as a key government asset.

Establishing robust privacy and data protection laws is necessary to strike a balance between openness and personal data security. Integrating these components into a comprehensive governance framework is key for the success of open government data initiatives. Such

integration guarantees that government data is not only accessible and secure but also utilized effectively. Complementing this framework with data-sharing policies that oversee the usage of sensitive or proprietary data is crucial. This holistic approach is fundamental to realizing effective, ethical open government data initiatives, ultimately fostering more transparent, accountable and inclusive societies. The global momentum towards stronger data protection laws is evident, as more nations adopt or refine regulations to address privacy concerns and cybersecurity risks, often drawing inspiration from frameworks such as the European Union's General Data Protection Regulation.

Furthermore, with the increasing use of AI tools, which magnify privacy concerns and accentuate the risks of biases stemming from excluding certain populations in data collection, striking a delicate balance between data availability and privacy protection is paramount. Inclusion and privacy are imperative for ethical technology use, and thus necessitate a vigilant approach amid rapid technological advancements.

When institutional reform for effective governance is not possible due to political or resource constraints, governments could consider the issuance of a mandate to create the institutional framework and infrastructure needed for a data ecosystem or national data service. Governments could also consider the establishment of a central entity such as an oversight body or a steering committee to establish leadership and performance indicators, review security and privacy measures, devise structured processes and carry out strategic planning. Pilot projects could be introduced to demonstrate how data initiatives represent a viable approach to addressing developmental challenges and objectives, especially those relating to the SDGs and national development goals. A national data strategy should be built around a data ecosystem that includes a solid data architecture, data cloud, analytics and visualization support and is able to engage people, promote partnerships and foster data innovation.

Capabilities

Another fundamental pillar in the successful implementation of open government data initiatives is the development of robust capabilities within government institutions. These capabilities encompass the skills, resources and infrastructure necessary to effectively collect, manage, share and use data. However, there are numerous obstacles to realizing these capabilities, such as the insufficient allocation of resources for data-related endeavours.

Ensuring the quality and accuracy of data is vital; inaccuracies can derail decision-making processes and lead to ineffective policies. Moreover, the issue of the digital divide cannot be overlooked, as open government data initiatives disproportionately benefit those with the skills and resources to access and leverage them, risking the perpetuation of inequality.

A successful open government data initiative hinges on the presence of a dedicated team. Such a team not only spearheads coordination and execution but also embodies the initiative's commitment to overcoming obstacles, including budgetary constraints that can restrict scope

and impact. Political leadership also plays a crucial role, offering both advocacy and direction to navigate political and administrative landscapes effectively.

Data leadership is essential for the implementation of the national data strategy and the data governance framework. Often required within this context is an institutional review that could transform the way agencies in all sectors and at all levels effectively deploy government data as a strategic asset. Inaction or indecision within the top tiers of government is problematic, as executive-level support is key to successful data governance. It is generally easier to communicate the value of data to all stakeholders within a government if senior decision makers understand data and have helped align the goals of data governance with national and institutional goals.

Many countries are becoming more aware of the increasing role and importance of government data and have introduced some important institutional changes. Chief data officers are becoming common in national and subnational governments. In some countries, data offices are set up at the highest levels, within the offices of the national, provincial or local leadership, and are commissioned to capture data, perform analytics and provide rapid policy solutions to public policy questions. Many governments are now hiring data scientists, recognizing that their role in government is as essential as that of statisticians, information officers, economists and other quantitative social scientists. There are also newly created functions, such as chief digital strategy officer, chief innovation officer, and other positions that require both a managerial and a practical understanding of data science. While there is no one-size-fits-all approach, it is evident that not all public officials need to be trained and function as data scientists. Different data roles and skill sets are needed at different levels.

On the capacity-building front, the initiative must invest in its people. This involves not only forming a team with the right blend of skills and commitment but also ensuring ongoing training and professional development. Public officials, especially those in data-centric roles, require a sophisticated understanding of data management and analysis techniques. Moreover, a baseline of data literacy is essential across all levels of public administration to ensure that the benefits of open government data initiatives are fully realized.

Training programs, certifications and opportunities for professional growth are essential for equipping civil servants with the necessary skills to manage and leverage data effectively. This capacity building is a cornerstone for the success of open government data initiatives, enabling them to be initiated, sustained and scaled with the backing of both human and technological resources. As such, the efficacy of open government data initiatives is not solely a matter of having the right tools but also involves cultivating the right environment, where skilled personnel are supported by strong political leadership and a commitment to addressing the digital divide, ensuring equitable benefits for all segments of society.

Availability and use⁴⁴

Data standardization and classification are necessary to ensure the consistency and compatibility of data, especially in integrated or whole-of-government contexts. However, enforcing data classification and standardization in multiple sectors has proved challenging. Some countries have a leading ministry or inter-ministerial committee to address these issues, such as Statistics New Zealand, which is the lead agency for government-held data and which has guidelines on data standards and a stewardship arrangement.⁴⁵ In the Republic of Korea, policies and guidelines focusing on data classification and standardization have been established, enforced and amended over the years to address emerging trends, and in the update of the Guidelines for Database Standardization in Public Institutions in 2019.⁴⁶

Other countries have adopted sectoral approaches to data standardization or have established relevant legal mechanisms governing public-private partnerships relating to the utilization of public and private sector data. Japan adopted the Basic Law for the Promotion of Public-Private Data Utilization to facilitate and manage the use of public-private data through infrastructure development and the regulation of public-private participation and cooperation, with consideration given to the division of roles within the government.⁴⁷ This integrated approach facilitates the effective dissemination of public and private sector data and helps to ensure that all stakeholders maintain agreed-upon standards and adhere to compatibility requirements.

Inter-agency and inter-level government data sharing, linking and exchange can increase public sector productivity, improve services, reduce data requests, strengthen evidence-based policymaking and the integration of public services, and facilitate a whole-of-government or whole-of-society response to public needs and emergencies. New data applications are created and deployed on an ongoing basis, so it is essential that modern, open and adaptable platforms be put in place to facilitate interoperability. There are both direct and indirect benefits associated with the sharing of government data. When agencies are required to review their data and ensure that they are in the appropriate form for release, they are also forced to evaluate the status and quality of their data and to take stock of the data they have in their possession. This often leads to improved data quality within organizations. In addition to this intra-organizational benefit, sharing data encourages communication and partnerships across agencies.

To elevate the effectiveness and inclusivity of open government data initiatives, it is essential to adopt a holistic and strategic approach that addresses several key areas in a cohesive manner.

⁴⁴ Parts of this section have been drawn from Chapter 6 of the UN E-Government Survey 2020. Accessed December 2024 at <https://desapublications.un.org/file/781/download>.

⁴⁵ New Zealand, “Data leadership” (2019), available at <https://www.stats.govt.nz/about-us/data-leadership>.

⁴⁶ Republic of Korea, Act No. 11956 of 30 July 2013 on Promotion of the Provision and Use of Public Data, as amended. Available at https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=47133&type=part&key=4.

⁴⁷ Japan, Basic Act 103 of 14 December 2016 on the Advancement of Public and Private Sector Data Utilization, Available at https://japan.kantei.go.jp/policy/it/data_basicact/data_basicact.html.

It is important to ensure that data is accessible to a diverse audience—including researchers, policymakers, the general public and the private sector. This wide range of users is critical for leveraging data to drive innovation, informed decision-making, community engagement, and the creation of diverse products and services. To achieve this, the data must be of high quality, meaning it should be timely, comprehensive, ethically sourced and mindful of privacy concerns.

The significance of interoperability cannot be overstated, as it enhances the utility of open government data by allowing various datasets to be effectively combined. This necessitates the adoption of interoperability standards such as the [General Transit Feed Specification](#) (GTFS), [Open Contracting Data Standard](#) (OCDS), The [Humanitarian Exchange Language](#); and [Beneficial Ownership Data Standard](#), among others, which facilitate the seamless integration of datasets, thereby expanding their applicability and maximizing potential impact.

One of the problems preventing or undermining interoperability in government systems is the lack of cohesion in the way data is shared and managed. At the horizontal level, one of the options governments could explore is to combine and share data about an individual from several systems across agencies to gain a better overall picture of the individual. This would allow governments to provide e-services using a life-events approach. However, it might also lead to a level of public surveillance that is perceived as an invasion of personal privacy. Comprehensive interoperability would have a transformative impact in a number of areas, from the way governments monitor the effects of specific initiatives to the way they deliver services to the public. To benefit from this, different government departments would have to set up effective collaboration mechanisms for data exchange, which could prove challenging in large government bureaucracies.

Developing mechanisms to monitor the use and impact of the data released is crucial for aligning publication efforts with the needs and interests of users, thereby maximizing data utility and relevance. Such monitoring helps to prioritize data releases and to demonstrate the tangible benefits of open government data initiatives. Collaboration plays a vital role in the success of these initiatives as well. By fostering partnerships among various stakeholders, including National Statistical Offices, open data teams, and data offices within ministries, and by engaging through mechanisms like [OGP action plans](#), a collaborative ecosystem is created that ensures open government data policies and practices are inclusive and meet the needs of all stakeholders, encouraging the use of data for a broad spectrum of purposes.

In essence, by focusing on the quality and relevance of data, ensuring interoperability, monitoring use and impact, and fostering collaboration and engagement, open government data initiatives can overcome the challenges associated with the publication of poor-quality data, lack of interoperability, and insufficient use or impact. This integrated approach not only enhances the accessibility and utility of government data but also ensures it serves as a solid foundation for innovation, decision-making, and societal progress.

Table 2 summarizes the main challenges in open government data implementation and good practices to address them.

Table 2. Challenges and good practices in open government data implementation

<i>Pillar</i>	<i>Challenges</i>	<i>Good practices</i>
Governance	<ul style="list-style-type: none"> ● Privacy ● Ethical considerations ● Artificial intelligence 	<ul style="list-style-type: none"> ● Develop a clear governance framework aligned with legal norms such as the right to access information, privacy/data protection laws, and guiding principles on the use of AI by the public sector ● Update right-to-information legislation for proactive disclosure of data in open formats ● Define clear exceptions to the “open by default” principle ● Establish privacy and data protection laws to balance openness with personal data security
Capabilities	<ul style="list-style-type: none"> ● Lack of resources for data collection, management, sharing and use 	<ul style="list-style-type: none"> ● Build a dedicated team for open government data initiatives supported by sufficient budget and political leadership ● Implement training and professional development for civil servants, focusing on data skills and literacy ● Promote capacity building in data-centered roles and general positions within the public administration
Availability and use	<ul style="list-style-type: none"> ● Publication of low-quality data ● Lack of interoperability ● Lack of use/impact 	<ul style="list-style-type: none"> ● Ensure data quality through validation processes and maintaining accuracy, completeness and relevance ● Develop data inventories ● Develop interoperability standards to facilitate the integration of different datasets ● Develop monitoring mechanisms to capture the use and impact of the data in order to prioritize the release of data that aligns with the needs and interests of intended users ● Foster collaboration among various entities such as National Statistical Offices and open data teams ● Utilize tools and resources like the ODI Data Spectrum and open data maturity model

Source: Author’s summary.

Key resources

There are numerous resources that, together with all the above-mentioned elements, can guide governments to open data and to achieve a balance between openness, privacy and effective

data use. These tools can help governments understand how to start the process, which data should be open and how to prioritize dissemination. One such resource is the [ODI Data Spectrum](#), which provides insightful guidance on the steps between open and closed data, as mentioned earlier. Other tools can be used to assess the readiness of a government or individual agency to evaluate, design and implement an open government data initiative such as the World Bank's Open Data Readiness Assessment ([ODRA](#)) or, the European Union's [Open Data Maturity \(ODM\)](#) study, which is based on self-assessment questions that national open data teams can answer every year.

The Open Data Charter Open-Up Guides offer practical assistance for government officials, outlining how to open data from high-value datasets that aim to solve specific policy problems. These guides focus on topics such as [anti-corruption](#) and [climate action](#), ensuring governments can tackle pressing issues by leveraging open data.

Think tanks like the Govlab also offer [a periodic table](#) detailing the enabling conditions and disabling factors that often determine the impact of open data initiatives. These conditions include having a clear definition and understanding of data requirements, fostering a data-centric culture with adequate capacity, promoting collaboration among sectors, assessing and mitigating risks, and ensuring responsive decision-making processes. The World Bank also provides the [Open Data toolkit](#), which includes some tools governments can use to take the first steps in an open data initiative. In addition to those resources, private consultancy firms such as [OpenDataSoft](#) offer valuable guidance for launching an open data initiative.⁴⁸

All these tools, encompassing everything from comprehensive kits to detailed guides and established standards, have been developed and refined over several years, as open data initiatives have evolved and matured. This advancement significantly simplifies and streamlines the process for public officials and organizations, whether they are starting or seeking to enhance their open data practices, offering them a more straightforward and guided approach

Case studies

Open government data initiatives around the world are powerful tools for solving local challenges. In addition to the previous examples provided in this note, there are other examples which leverage collaborative and innovative approaches, involving partnerships

⁴⁸ These firms cover several areas such as data management (which discusses the importance of a straightforward, well-structured process for preparing open data for publication); licensing (which stresses the need for organizations to clearly define and communicate the terms under which the data is made available); and metadata (which is crucial for providing context to the datasets).

among governments, nongovernmental organizations, academic institutions and the private sector. Such collaborations are pivotal in driving the exchange of good practices and resources.

Climate data and agriculture in Colombia

The [Aclimate Colombia](#) project is a pioneering example of integrating open government data into agriculture, demonstrating its immense potential to foster economic growth, efficiency and informed policymaking. This initiative, which came from a collaboration between the International Center for Tropical Agriculture (CIAT), the Colombian government and private stakeholders, has been instrumental in enhancing the resilience of agricultural practices to climate change. By merging association-specific data with open government datasets, Aclimate Colombia⁴⁹ provides farmers with predictive analytics on weather patterns and vital agricultural advice. This data-driven approach has proven invaluable, particularly in the context of Colombia's bimodal climate pattern.

In 2013, the potential impact of this data-centric approach was vividly illustrated when Montería and Cereté rice farmers, heeding scientific advice facilitated by the project, successfully avoided losses estimated at USD 3.6 million, according to a report [by GovLab](#). This initial impact underscored the project's alignment with economic sustainability and productivity enhancement, contributing substantially to the region's development. Thus, the Colombian government partnered with CIAT, as they both recognized the critical need to strengthen growers' associations in the face of escalating climate vulnerabilities. This collaboration led to the use of open data from government agencies and farmers' union databases to offer tailored guidance on optimal sowing periods, significantly aiding in decision-making processes.⁵⁰

The success of this endeavour in empowering farmers through informed decision-making has not only contributed to economic development, but also exemplifies the essence of informed policymaking. By effectively responding to immediate weather fluctuations and preparing for long-term climatic shifts, Aclimate Colombia has set a precedent, highlighting the transformative power of open data in agriculture. This initiative's achievements were globally acknowledged in 2014 when it received a United Nations award for the best work on climate

⁴⁹ S. Verhulst and A. Young, *ACLIMATE COLOMBIA- Open Data to Improve Agricultural Resiliency* (2017). Retrieved from <https://odimpact.org/files/case-acclimate-colombia.pdf>.

⁵⁰ Muenta and Serale (2018) highlighted the "Aclimate Colombia" initiative as a testament to the power of collaboration (essential in bridging data supply and demand) and open data as foundational public infrastructure. A. Muenta-Kunigami, and F. Serale, *Los datos abiertos en América Latina y el Caribe* (IADB, 2018). Retrieved 1 September 2023. <https://cleiman.com/dev/wp-content/uploads/2020/10/PublicacionDatosAbiertosFinal.pdf>.

change and data,⁵¹ reinforcing its role in implementing open data to enhance agricultural productivity and climate resilience.

Moreover, by providing predictive analytics on weather patterns and actionable agricultural advice, the initiative significantly benefits local farmers. This approach aligns with the Economic Growth and Efficiency impact area, as it enhances agricultural productivity and sustainability, contributing to overall economic development. Moreover, it resonates with the goal of informed policymaking, as the data-driven insights assist in making well-informed agricultural decisions, crucial for addressing climate-related challenges and ensuring food security.

Health systems in Uruguay

DATA Uruguay and the Uruguayan Ministry of Public Health, with the support of the Latin American Initiative for Open Data (Iniciativa Latinoamericana por los Datos Abiertos, ILDA) have partnered to create a platform that provides citizens with comprehensive government health data, known as [A Tu Servicio](#). This web application is designed to display data from various public and private health service providers in Uruguay. It enables users to consult, list and compare indicators for each institution, thereby democratizing access to crucial health information. Thus, a better-informed citizenry can then make more informed decisions about their healthcare providers.

It is a testament to the transformative impact of open data in enhancing transparency, accountability, and integrity in public services. By making comprehensive government health data accessible, the initiative not only fosters a culture of accountability within the healthcare sector but also empowers patients to make informed decisions when choosing a health provider. For example, before the introduction of the application in 2014, healthcare data shared by the Ministry of Public Health was downloaded less than 500 times. This minimal engagement was likely due to a lack of public knowledge about the existence of the data. However, the influence of A Tu Servicio was quickly noticeable as in just the first month following its release, the website attracted around 35,000 visitors, a figure that represents 1 percent of Uruguay's entire population.⁵²

Moreover, the quality of data from healthcare providers in Uruguay used to be poor, which hampered its usability and lessened public interest. However, with A Tu Servicio, users are able to identify inaccuracies in the data provided by healthcare providers and through the integrated feedback channels in the application, they can request corrections. This advancement enhances the reliability of healthcare data and has prompted healthcare providers to review and revise the prices of their services, making healthcare more transparent for users.

⁵¹ United Nations, *Global Pulse: Using Big Data To Make The Case For Climate Change Action* (United Nations, 2014). Retrieved 1 September 2023. <https://www.unglobalpulse.org/challenges-hackathons/big-data-climate-challenge-2014/>.

⁵² See <https://odim pact.org/case-uruguays-a-tu-servicio.html>.

This aligns with the innovation impact area, as it encourages the development of new ways to access and use health data, potentially leading to innovative healthcare solutions and improved patient outcomes by creating a more patient-centric healthcare system and democratizing health information.⁵³

Public procurement in Ukraine

Several years ago, Ukraine witnessed substantial progress in its medical procurement sector, thanks to initiatives spearheaded by patient groups, anti-corruption advocates and reform-minded government officials. The transfer of medicine procurement to international organizations in 2015 resulted in a 40 percent cost reduction, demonstrating the power of open and transparent systems.⁵⁴ State agencies began utilizing Ukraine's transparent procurement system, [Prozorro](#),⁵⁵ for the procurement of medicines, enhancing the efficiency of the process. By 2020, this agency managed to save an additional 21.5 percent of its budget, adding to the reductions achieved through international organizations. This has placed Ukraine among the regions with the lowest costs for essential medicines. The impact of these reforms extends beyond cost savings. By ensuring that procurement is conducted fairly and transparently, Ukraine has been able to improve access to critical medicines for its population.

Other initiatives

Other impactful initiatives include Municipal Money and Haezoom. [South Africa's Municipal Money](#) is a web-based tool, developed by [OpenUp](#) for the National Treasury, that bridges the gap between the public and complex municipal financial data. It simplifies and makes financial data accessible and understandable to all citizens, thereby fostering greater transparency and accountability in municipal spending.⁵⁶ In the Republic of Korea, the solar industry has been revolutionized by a company named [Haezoom](#). Using data from various government ministries and the Korean Meteorological Administration, Haezoom provides consumers with cost-benefit analyses of solar panel installations. This initiative exemplifies how open data can empower consumers, promote industry fairness and support sustainable energy solutions.⁵⁷

These diverse cases from Colombia, the Republic of Korea, South Africa, Ukraine and Uruguay, though focused on different sectors, share the common themes of innovation, collaboration and community empowerment. They illustrate the transformative power of open

⁵³ F. Scrollini, *A tu servicio: Datos Abiertos para mejorar los servicios de Salud* (ILDA, 2015). Retrieved from: <https://datosabiertos.org/a-tu-servicio-datos-abiertos-para-mejorar-los-servicios-de-salud/>.

⁵⁴ For more information, see <https://www.open-contracting.org/2021/02/22/fight-for-life-how-ukraine-is-fixing-medical-procurement-and-serving-patients-better/>.

⁵⁵ Prozorro is an electronic system that ensures public access to procurement information, enabling transparency and accountability in public spending. By using Prozorro, the state agency could further the savings achieved from initial reforms. The platform facilitated a competitive and transparent bidding process, ensuring that procurement decisions were made in the best interests of public health and the efficient use of resources.

⁵⁶ <https://openup.org.za/projects/municipal-money>

⁵⁷ <https://opendataimpactmap.org/eap>

data in improving citizens' quality of life, emphasizing the importance of cross-sector partnerships in maximizing the benefits of open data initiatives. Whether it is enhancing agricultural resilience, improving healthcare transparency, promoting fair trade in the energy sector or ensuring the effective use of public funds, these initiatives demonstrate the far-reaching impacts of open data around the world.

Peer-to-peer learning and research

As demonstrated in all the cases mentioned above, collaboration and exchange opportunities are key to a successful implementation of open data initiatives. Thus, the open government data community has a variety of peer exchange and learning opportunities at both the global and regional levels, each focusing on different aspects of open government data. The key platforms, networks and events enumerated in Table 3 provide unique opportunities for learning, sharing experiences and collaborating on open government data initiatives. They cater to a wide range of stakeholders, including governments, civil society organizations and data professionals, helping to promote transparency, accountability and public participation through open data. These events and networks are crucial in enhancing open data strategies in different regions and sectors.

Table 3. Platforms, networks and events that promote peer learning and research

Platforms and resource centres	Organizations such as Open Data Charter and Govlab offer resources and expert insights for the successful implementation of open data projects. They provide tools, research and platforms for collaboration and learning. Apolitical is a platform that bridges the gap between government officials and civil society, creating a global network for the sharing of knowledge and practices in open government data.
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Transnational coalitions and networks	<p>D4D (Data for Development) is a network of organizations that focuses on utilizing data for sustainable development.</p> <p>GIFT (Global Initiative on Fiscal Transparency) is a network that aims to enhance transparency in fiscal data.</p> <p>The Open Government Partnership (OGP) aims to foster transparent, participatory and accountable governance, with open data being one of its key commitments.</p> <p>Asia Open Data Partnership (AODP) promotes exchanging ideas and best practices in open data across Asia. It involves governments, NGOs and private sector stakeholders.</p> <p>African Open Data Network (AODN) focuses on enhancing the use and impact of open data in Africa. It includes governments, civil society, and other stakeholders. At the country-level there are also coalitions such as the SDG Kenya Forum that promote the use of data in the monitoring and implementation of SDGs in Kenya.</p> <p>Code for Africa (CfA) is the continent's largest network of African civic technology and data journalism laboratories, which often work with open data.</p> <p>Red Gealc (E-Government Network of Latin America and the Caribbean) is a network that has brought together digital government agency leaders from countries in the region since 2003. In the past decade, the group has also focused on open government data and, recently, on AI developments.</p>
Thematic initiatives and organizations	<p>Land Portal focuses on land rights and promotes transparency in land ownership and governance.</p> <p>Open Ownership (OO) encourages transparency and accountability in corporate ownership and control.</p> <p>Open Contracting Partnership (OCP) focuses on transparency and accountability in public contracting.</p>
Events	<p>Abrelatam/Condatos is a set of events in Latin America that fosters collaboration on open data across the region organized by ILDA in collaboration with a host government and many of the main stakeholders in the region.</p> <p>Festival de Datos is organized by Global Partnership for Sustainable Development Data. It promotes a culture of data literacy and is an essential event for data enthusiasts and professionals.</p> <p>UN World Data Forum is a global event that brings together all partners in the data ecosystem to drive innovation, trust, partnerships, use and impact, and investments in data and statistics.</p>

International development cooperation

A diverse set of actors make up the international community that aims to advance government data openness. This community includes international organizations, national governments and multi-stakeholder coalitions.

At the international level, organizations such as the United Nations, the World Bank and the OECD play pivotal roles in promoting transparency, accountability and inclusivity in sustainable development through open government data initiatives. The multifaceted approach of these organizations underscores a commitment to not only fostering open data ecosystems at the national and global levels but also ensuring that these initiatives drive economic growth, enhance public services, and contribute to the transparency and effectiveness of governance worldwide.

The United Nations, through the World Data Forum and the Global Partnership for Sustainable Development Data (GPSDD), fosters collaboration, advocating for accessible, high-quality open data and sharing best practices worldwide. This commitment to collaboration is further echoed in the Hangzhou Declaration from the [World Data Forum 2023](#), which emphasizes the need for innovation, trust, partnerships and investment in the data ecosystem and the unveiling of the [Data Values Manifesto](#) by GPSDD, which advocates for a “fair data future.”

The World Bank offers technical assistance and financial support to governments through its [Open Data Toolkit](#) and [Open Data Readiness Assessments \(ODRA\)](#), and dedicates resources to highlight the importance of data in improving lives, as seen in the [2021 World Development Report](#).

The OECD plays a critical role by setting standards, facilitating knowledge exchange and providing a platform for policy dialogue and cooperation on open data and its governance.

Additionally, the International Development Research Centre (IDRC) in Canada, USAID in the United States, and the Foreign, Commonwealth & Development Office (FCDO) of the United Kingdom play crucial roles in advancing open government data. These agencies primarily focus on funding research projects, capacity building, policy development and data literacy to ensure comprehensive understanding and utilization of open data within their respective countries and regions. For instance, the IDRC emphasizes research projects that explore the impact and application of open data, while also fostering community engagement and technological innovation through initiatives like the Open Data for Development (OD4D) currently broadened to form [D4D](#) network. Similarly, USAID and FCDO provide significant support in terms of funding, research and policy development, aimed at enhancing the impact and application of open data to address various development challenges.

International foundations, including the Bill & Melinda Gates Foundation, the Ford Foundation and the Hewlett Foundation, have also been vital in leveraging open data for

health, agriculture and economic development. These foundations support projects that use open data to address challenges in these sectors, focusing especially on under-resourced and developing regions, and in fostering social justice and inclusivity.

Complementing these efforts, multi-stakeholder coalitions like the Open Government Partnership offer a platform for collaborative commitment between governments and civil society to create more inclusive, transparent and participatory governance structures, emphasizing open data as a cornerstone for achieving these goals.

International development cooperation plays a pivotal role in advancing open government data practice worldwide, particularly in areas where resources and expertise are limited. This cooperation is essential for providing the funding and resources necessary to establish and maintain effective open data systems and to enhance transparency and accountability in governance, thus contributing to the achievement of the SDGs.

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