مؤسسة محمد بن راشد آل مكتوم للمعرفة
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UNDP



POLICY BRIEF 02

From Data to Decisions

Building human-centred and accountable data-driven governance

KNOWLEDGE PROJECT.

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Introduction

Data increasingly shape how governments understand public problems, design responses and account for results. Over the past decade, the availability of internationally comparable data for the Sustainable Development Goals (SDGs) has improved considerably. The number of indicators in the global SDG database has expanded from 115 in 2016 to 233 in 2026, while data records have risen from around 330,000 to 3.2 million. Significant strides have also been made in methodological development. When the SDG framework was first established, nearly 40 percent of indicators lacked internationally agreed-upon methodologies; today, every indicator has an agreed statistical methodology. Important gaps nonetheless remain: 30 of the 169 SDG targets still lack sufficient trend data to assess progress. Similarly, the Global Knowledge Index (GKI) 2025, produced by the United Nations Development Programme (UNDP) in partnership with the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF), could compute an overall score for only 149 of the 195 countries it covers, as the remaining 46 did not meet minimum data-coverage requirements.[1] Moreover, financial support for national statistical systems is shrinking at the very moment when timely, disaggregated data are most needed, and as artificial intelligence (AI) rapidly reshapes how information is generated, accessed and used.[2] This underinvestment persists despite substantial returns: strengthening data systems is estimated to yield an average of US$32 for every dollar invested. However, official development assistance for data and statistics has remained almost static since 2015, and fewer than half of all countries have comparable data on gender equality and climate action.[3]

233

Indicators in the global SDG database in 2026, up from 115 in 2016

149/195

Countries with enough data for an overall GKI 2025 score

US$32

Estimated return for every dollar invested in data systems

1 United Nations Development Programme and Mohammed bin Rashid Al Maktoum Knowledge Foundation (2025). *Global Knowledge Index 2025.* Available at: https://www.undp.org/arab-states/publications/global-knowledge-index-2025

2 United Nations, Department of Economic and Social Affairs (2026). *The Sustainable Development Goals Report 2026.* Available at: https://unstats.un.org/sdgs/report/2026/sdgs-monitoring/

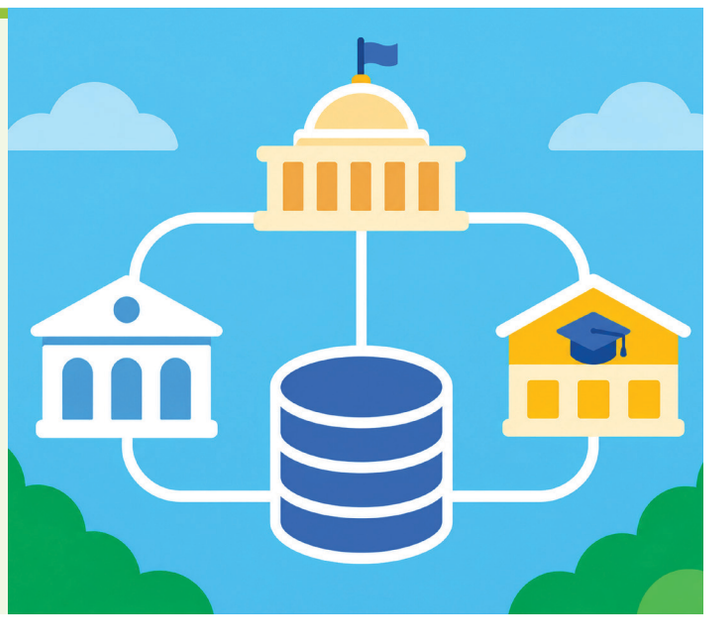
3 Global Partnership for Sustainable Development Data (2022). Investment Case: *Multiplying Progress through Data Ecosystems* (prepared by Dalberg). Available at: https://www.data4sdgs.org/resources/investment-case-multiplying-progress-through-data-ecosystems; United Nations (2023). *Power of Data: Unlocking the Data Dividend for the SDGs.* High Impact Initiative brochure. Available at: https://hlpf.un.org/sites/default/files/2023-09/Power%20of%20Data%20Brochure.pdf

Meanwhile, governments' digital capabilities are expanding rapidly. The global average E-Government Development Index (EGDI) rose from 0.6102 in 2022 to 0.6382 in 2024. Over the same period, the share of the world's population in countries lagging in digital government development fell from 45 percent to 22.4 percent. Averages for Africa, the least developed countries and Small Island Developing States nonetheless remain below the global average.[4] Governments are also moving beyond digitalization towards AI. The Organisation for Economic Co-operation and Development (OECD) documents 200 examples of government AI use across 11 core functions, ranging from public service delivery and justice administration to public financial management and civic participation.[5] Public expectations are rising as well. A UNDP global survey covering 21 countries and 63 percent of the world's population found that about 20 percent of respondents already use AI. About two thirds of respondents in countries with low, medium and high Human Development Index scores expect to use AI in education, health or work within a year.[6]

Whether these capabilities lead to better decisions depends on institutions. The World Bank argues that realizing the value of data requires a social contract built on three elements: creating value through data use and reuse, ensuring equitable access to the benefits, and building trust that people will not be harmed by misuse.[7] The UNDP *Human Development Report 2025* similarly argues that development outcomes will depend less on what AI can do than on the choices that people and institutions make about how it is used.[8]

THESE DYNAMICS FRAME THE CENTRAL QUESTION OF THIS BRIEF:

How can governments turn growing data and AI capabilities into decisions that are more effective, accountable and human-centred?



4 United Nations, Department of Economic and Social Affairs (2024). *United Nations E-Government Survey 2024: Accelerating Digital Transformation for Sustainable Development.* Available at: https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2024

5 Organisation for Economic Co-operation and Development (2025). *Governing with Artificial Intelligence: The State of Play and Way Forward in Core Government Functions.* Available at: https://www.oecd.org/en/publications/governing-with-artificial-intelligence_795de142-en.html

6 United Nations Development Programme (2025). *Human Development Report 2025: A Matter of Choice: People and Possibilities in the Age of AI.* Available at: https://hdr.undp.org/content/human-development-report-2025; United Nations Development Programme (2025). *2025 Global Survey on AI and Human Development.* Available at: https://hdr.undp.org/data-center/2025-global-survey-ai-and-human-development

7 World Bank (2021). *World Development Report 2021: Data for Better Lives.* Available at: https://wdr2021.worldbank.org/

8 United Nations Development Programme (2025). *Human Development Report 2025: A Matter of Choice: People and Possibilities in the Age of AI.* Available at: https://hdr.undp.org/content/human-development-report-2025

Defining the policy need

Governments today have access to unprecedented volumes of information, while advances in data science, AI and predictive analytics are expanding their ability to generate evidence for policymaking. Used effectively, these tools can help identify emerging problems earlier, improve the targeting of public programmes, allocate resources according to demonstrated needs, monitor implementation and assess the potential consequences of different policy choices. They can also strengthen accountability by making government performance and results more measurable and visible.

Yet access to information does not automatically lead to better decisions.

Public institutions often hold relevant data, but they often remain fragmented across agencies, are constructed with inconsistent definitions or are difficult to access and combine. Limited analytical capacity can further prevent information from being translated into action. Large repositories may therefore generate little public value unless institutions can connect their contents to the decisions they face. Cross-government data governance provides an important foundation for the productive, inclusive and trustworthy use of public-sector data.[9]

The starting point should be a clearly defined policy need. Before investing in databases, dashboards or AI systems, governments need to establish the public problem to be addressed, the decision to be improved, the users targeted and the outcomes sought. This provides a basis for selecting suitable data, analytical methods and technologies. A clearly defined policy need also connects data use to the wider policy cycle: designing and testing interventions, monitoring implementation, evaluating whether outcomes improve and examining who the beneficiaries are. The following sections consider the infrastructure, safeguards, capabilities and partnerships needed to support this process.

Making data usable across institutions

Once the policy need is established, governments must assess whether available data are suitable for addressing it. Information is often fragmented across ministries and agencies or published in formats that are difficult to combine and reuse. Making data available is therefore only an initial step: it must also be findable, accessible, interoperable and reusable (FAIR), supported by consistent definitions and appropriate documentation.[10]

The real value of public-sector data emerges when datasets are standardized, interoperable, and linked to clear policy objectives.

Building institutional capabilities to extract insights, not just collect data, is essential. Governments can generate more value from data by integrating multiple data streams such as administrative data, citizen feedback and real-time sensors to form holistic and actionable policy insights. Technological tools such as knowledge graphs can support this integration by connecting otherwise separate datasets, provided that underlying information is reliable and institutions have arrangements for exchanging it appropriately.

9 Organisation for Economic Co-operation and Development (2019). *The Path to Becoming a Data-Driven Public Sector. OECD Digital Government Studies.* Available at: https://www.oecd.org/en/publications/the-path-to-becoming-a-data-driven-public-sector_059814a7-en.html

10 Ibid.; van Ooijen, C., B. Ubaldi and B. Welby (2019). A data-driven public sector: Enabling the strategic use of data for productive, inclusive and trustworthy governance. OECD Working Papers on Public Governance, No. 33. Paris: OECD Publishing. Available at: https://www.oecd.org/en/publications/a-data-driven-public-sector_09ab162c-en.html

Usability also depends on how different audiences interact with information. Access to a dataset does not necessarily enable citizens or policymakers to query, combine, visualize or interpret it. AI and large language models may lower some technical barriers, but their usefulness depends on whether they address users' questions and if the reliability of outputs can be assessed.

Effective data infrastructure therefore combines technical capabilities with institutional arrangements. As more sources are connected and information becomes easier to use, governments need clear rules governing access, reuse and responsibility. These arrangements help translate improved data availability into policy value while protecting the people whose information is collected and used.

Ensuring accountable and trustworthy use

Greater use of data and AI raises interconnected concerns about privacy, fairness and trust. The discussion on ethics warned against unregulated data usage and highlighted three major concerns: privacy risks related to large-scale citizen data collection; bias in AI models, which can deepen inequality; and lack of regulatory coherence, particularly in emerging economies. The ethics discussion stressed the need for transparent AI governance frameworks, clear data protection laws, ethical oversight bodies and training programmes for civil servants on responsible AI. Addressing these concerns begins with clarity about why information is collected, how it is shared and reused, and what consent and protection arrangements apply.

Responsible use also requires attention to data quality and representativeness. Errors, gaps and biases in underlying information can carry through into analytical outputs, with consequences for decisions affecting access to public services. The UNESCO Recommendation on the Ethics of Artificial Intelligence emphasizes impact assessment, transparency, traceability and attention to discrimination and bias throughout the AI lifecycle.[11]

These safeguards require clear institutional accountability. Governance structures should assign responsibilities for data quality, access, ethical use and reporting, alongside mechanisms for reviewing risks and addressing harm. The World Bank similarly frames trusted data governance around creating social and economic value, sharing those benefits equitably and protecting people against harmful use.[12]

Human oversight makes these responsibilities meaningful in practice. Although AI can process information and identify patterns, officials remain responsible for interpreting outputs and making decisions. They need to examine the supporting evidence, understand its limitations and assess its suitability for the policy context. Citizens should also have understandable information and appropriate opportunities to review decisions affecting them, supported by institutions capable of responding.

Designing for people and meaningful participation

Human-centred design begins with understanding the needs of those who will use or be affected by a system. AI systems must be designed to serve multiple stakeholder groups, including citizens, the private sector and policymakers, to maximize impact and ensure equitable access. These groups have different questions, responsibilities and levels of technical expertise. Involving them early helps ensure that tools are accessible, relevant and appropriate for the decisions they support.

11 United Nations Educational, Scientific and Cultural Organization (2021). *Recommendation on the Ethics of Artificial Intelligence,* 23 November. Available at: https://www.unesco.org/en/legal-affairs/recommendation-ethics-artificial-intelligence

12 World Bank (2021). *World Development Report 2021: Data for Better Lives.* Available at: https://wdr2021.worldbank.org/

Economic efficiency and accountability require early citizen engagement and transparent reporting mechanisms as key pillars of responsible data-driven governance. Meaningful citizen engagement is both a democratic right and an economic necessity. Engagement can help governments identify needs and practical constraints before committing resources; engagement can also contribute experiential information missing from administrative records as well as assess whether proposed tools create barriers for particular groups.

Digital tools such as open data portals, feedback platforms and participatory applications can rebuild declining public trust. The discussion highlighted the role of transparency in policy acceptance, how data-driven systems can expose inefficiencies, and the importance of accountability for long-term policy success. From an economic perspective, stronger governance structures improve both efficiency and growth prospects. Open-data initiatives enable researchers, civil society, private sector and other actors to examine public information, while feedback platforms can help institutions identify service needs and implementation problems.

Realizing these benefits requires accessible participation and a visible institutional response. Governments need to explain how data informs decisions, report on performance and demonstrate how feedback is considered. Participation and transparent reporting should therefore be embedded in implementation, with clear responsibilities for responding to concerns and explaining policy choices.

Building skills and institutional capacity

Effective adoption of data and AI depends on the people working within public institutions. New tools change established processes and may create uncertainty about roles, responsibilities and skills. Involving employees in design and implementation helps identify practical barriers, while training and change management support their ability to use new systems effectively.

Capacity-building should reflect different institutional responsibilities. Technical specialists need to manage data and develop reliable analytical tools; policymakers need to assess evidence, understand uncertainty and connect findings to policy choices; and leaders need to establish priorities, assign responsibilities and provide appropriate organizational support. Together, these capabilities enable institutions to question analytical outputs and apply them with informed judgement.

Skills must also be supported by the wider institutional environment. OECD research identifies governance, data, digital infrastructure, skills, investment, procurement and partnerships with non-government actors as interdependent conditions for responsible public-sector AI.[13] Technological investment should therefore include the resources, working practices and management arrangements needed to operate and maintain responsible AI systems.

Building this capacity requires sustained effort and access to expertise that may extend beyond individual agencies. Governments can draw on research institutions, training providers and implementation partners to address gaps and keep capabilities aligned with changing needs. Such support is most useful when organized around public objectives and integrated into longer-term institutional development.

13 Organisation for Economic Co-operation and Development (2025). *Governing with Artificial Intelligence: The State of Play and Way Forward in Core Government Functions.* Available at: https://www.oecd.org/en/publications/governing-with-artificial-intelligence_795de142-en.html

Enabling implementation through partnerships

Challenges remain in addressing data gaps across low-income countries, navigating regulatory requirements for AI deployment, creating incentives for private-sector data sharing, and enabling real-time policy monitoring, particularly in low-resource settings. Overcoming these barriers requires collaboration across government, academia and the private sector to translate data-driven approaches into practical policy solutions.

No single institution holds all the capabilities required for data-driven governance.

Governments contribute public mandates and administrative data, universities provide research and methodological expertise, and businesses offer technology and implementation capabilities. Governments can learn from the private sector, including agile experimentation, rapid data prototyping, and investment in scalable digital infrastructure. Public–private partnerships can act as accelerators of innovation, enabling governments to adopt advanced tools more rapidly. Experimentation can help assess whether a tool addresses a policy need before wider adoption. Academic institutions also connect methodological knowledge with practical government needs and help develop relevant skills. Curricula should keep pace with changing requirements in data science and AI, while collaboration with government and industry can support applied research and training.

The GKI recognizes the importance of these partnerships by incorporating indicators such as University-industry collaboration and Academic-corporate co-publications into its conceptual framework to assess and benchmark the performance of higher education and research, development and innovation (RDI) ecosystems.[14] However, partnerships require clear governance to ensure continuity beyond individual projects. Actors need to agree on their contributions, responsibilities for data access and oversight, arrangements for evaluating results, and how systems and outputs will be maintained. Appropriate incentives are particularly important when governments seek access to privately held data and vice versa, while clear safeguards help keep collaboration aligned with public objectives.

14 United Nations Development Programme and Mohammed bin Rashid Al Maktoum Knowledge Foundation (2025). *Global Knowledge Index 2025.* Available at: https://www.undp.org/arab-states/publications/global-knowledge-index-2025

Recommendations

These findings point to six priorities for translating data and AI capabilities into more effective, accountable and human-centred public decision-making.

1

Define the policy need and the outcomes sought.

Identify the public problem, the decision to be improved and the intended users before selecting data, analytical methods or technologies. Establish how implementation and outcomes will be assessed, including whether benefits reach different population groups.

2

Make data reliable, interoperable and reusable.

Prioritize data quality, consistent definitions and documentation alongside access. Apply FAIR principles and strengthen cross-government arrangements so that information can be discovered, combined and reused appropriately for policy purposes.[15]

3

Assign responsibilities and safeguards for data and AI use.

Establish clear institutional responsibilities for privacy, data protection, quality, representativeness and ethical use. Incorporate impact assessment, traceability, human oversight and mechanisms for reviewing decisions throughout the lifecycle of AI systems.[16]

4

Involve users and citizens throughout implementation.

Engage citizens, policymakers and the private sector in defining needs, designing tools and assessing their usefulness. Pair participation mechanisms with accessible information, transparent reporting and clear processes for responding to feedback.

5

Build capacity alongside each investment in technology.

Identify the skills required by technical teams, policy officials and institutional leaders. Include training, employee involvement and change management in implementation plans, and provide the resources needed to maintain systems and critically assess analytical outputs.[17]

6

Establish partnerships that can sustain results.

Use complementary expertise across government, academia and the private sector to support research, data sharing, skills development and technological innovation. Agree on responsibilities, safeguards, evaluation and continuity from the outset, including arrangements for maintaining outputs beyond individual projects.

15 Organisation for Economic Co-operation and Development (2019). *The Path to Becoming a Data-Driven Public Sector. OECD Digital Government Studies.* Available at: https://www.oecd.org/en/publications/the-path-to-becoming-a-data-driven-public-sector_059814a7-en.html; van Ooijen, C., B. Ubaldi and B. Welby (2019). A data-driven public sector: Enabling the strategic use of data for productive, inclusive and trustworthy governance. OECD Working Papers on Public Governance, No. 33. Paris: OECD Publishing. Available at: https://www.oecd.org/en/publications/a-data-driven-public-sector_09ab162c-en.html

16 United Nations Educational, Scientific and Cultural Organization (2021). *Recommendation on the Ethics of Artificial Intelligence,* 23 November. Available at: https://www.unesco.org/en/legal-affairs/recommendation-ethics-artificial-intelligence

17 Organisation for Economic Co-operation and Development (2025). *Governing with Artificial Intelligence: The State of Play and Way Forward in Core Government Functions.* Available at: https://www.oecd.org/en/publications/governing-with-artificial-intelligence_795de142-en.html

Conclusion

Data and AI can strengthen public decision-making when they respond to clear policy needs and are supported by reliable information, accountable institutions and skilled people. Advancing this agenda requires coordinated investment in infrastructure, safeguards and institutional capacity, as well as partnerships that sustain implementation. Ultimately, these systems should be judged by the policy outcomes they improve, with public value and human judgement guiding their design and use.



About this Policy Brief

This Policy Brief builds on discussions held during a policy roundtable convened as part of the Knowledge Summit 2025, organized by the United Nations Development Programme (UNDP) and the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF) in Dubai in November 2025. The roundtable was organized in collaboration with the Business Practice and Policy Initiative (BPPI) of the Suliman S. Olayan School of Business (OSB) at the American University of Beirut (AUB).

The roundtable brought together experts and practitioners from government, academia and the private sector. The Brief draws on their insights, perspectives and recommendations shared during the dialogue, as well as relevant literature on the subject.

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