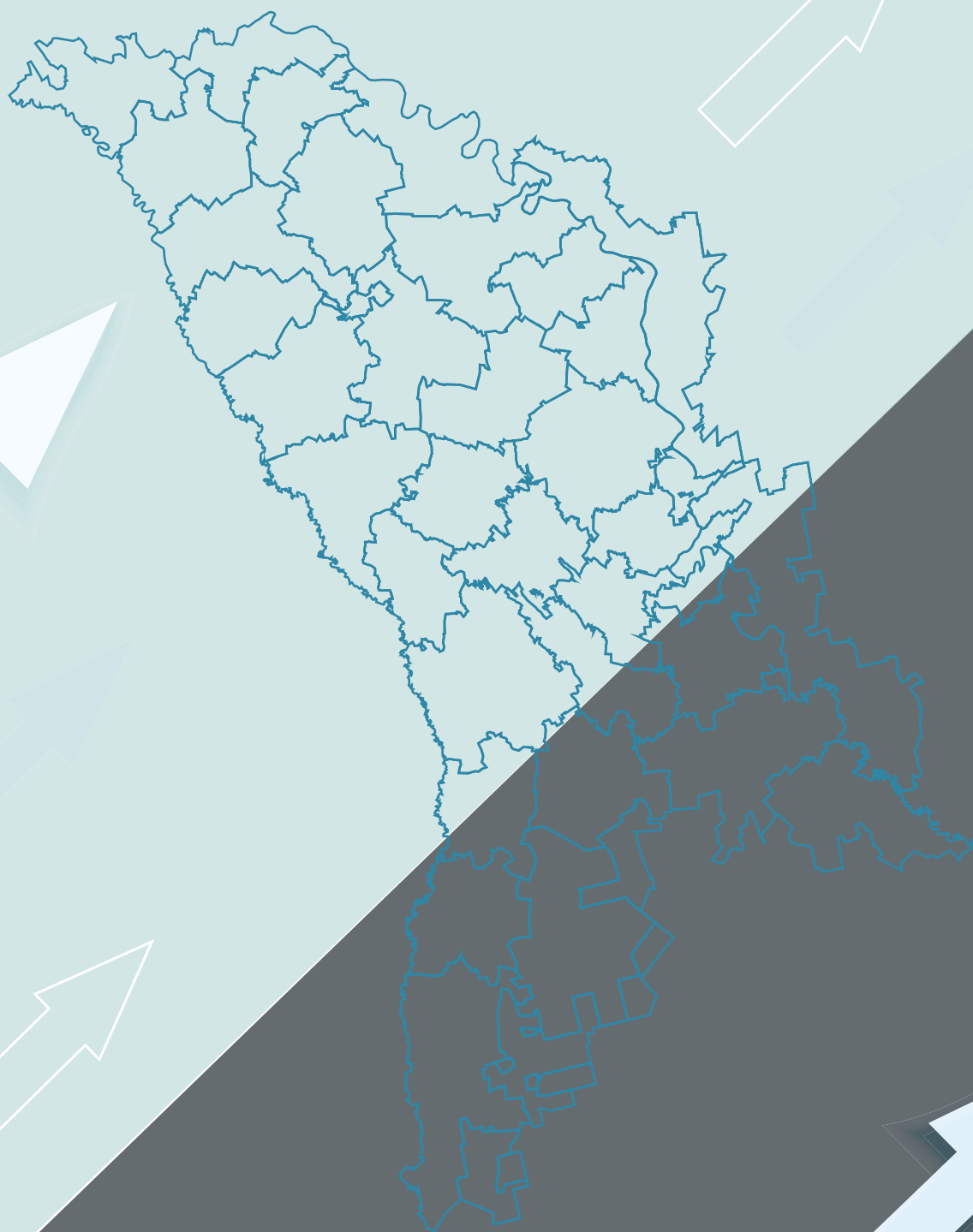


RECOMMENDATIONS FOR MOLDOVA TO DEVELOP AND IMPLEMENT A DATA GOVERNANCE STRATEGY

Executive Summary



Public sector data can lead to better development outcomes by improving governance and creating economic activity

through enhancing public service delivery, informed decision-making, supporting business optimization, innovation in the private sector and meaningful job creation. Robust data governance frameworks and a greater use of public sector data are a key element to support the digitalization efforts of Moldova and achieve objectives of the country's recently launched Digital Transformation Strategy (DTS) 2023-2030.

As can be seen from the DTS, Moldova recognizes that establishing a system to manage their data resources effectively is fundamental to providing a sustainable, secure, and prosperous future for its citizens, setting a high-level vision for leveraging data to achieve its development priorities.

Consequently, a sub-council on Data Governance and Artificial Intelligence (AI) has been announced under the National Digital Transformation Council (leading entity for the DTS implementation and coordination) to spearhead the data agenda. It has become clear for the government that previous siloed approaches to data management need to be revised: data should be shared and used across disciplines, sectors, and platforms. Furthermore, in the longer-term, the implementation of a data governance framework will also enable the development and adoption of emerging data-intensive technologies such as artificial intelligence (AI) and machine learning.

For more than a decade, the country has made significant investments to establish and enhance its digital public infrastructure (DPI) and e-government architecture through interoperable, cloud-based platforms for the public sector.

DPI includes trusted digital identity (ID), payment, and data sharing capabilities that are fundamental to enabling service delivery at scale and supporting innovation in the digital economy. DPI provides reusable and foundational digital platforms that allow public- and private-sector service providers to build and innovate their products and services. In recent years, high-level decrees enabled the beginning of a smooth rollout of functional data flows and exchange among state agencies through

a single and interoperable platform, MConnect, and public sector computing infrastructure MCloud. The government is in the process of deploying proactive public services, based on the existing infrastructures, that will support event-driven data exchanges that optimize service delivery for citizens. This includes leveraging the e-signature service MSign utilizing digital ID, Public Key Infrastructure (PKI)-based authentication service MPass, and government payment system MPay, as well as the soon-to-be-launched EVO mobile app, an integrated application for public services (including digital ID and digital documents wallet, integrated with MPay). Thus, ensuring that these existing and new systems are enhanced to function at the highest level while encouraging their robust, safe and increased use through adequate data governance is of imminent priority.

Despite these efforts, interoperability among various data systems within the government is yet to be streamlined and Moldova is lagging behind in utilizing data for development purposes to its full potential.

The transition to cloud services and the data exchange process have encountered fragmentation and challenges. Ministries, departments, and agencies (MDAs) are mandated to be connected to the government cloud and exchange data¹, but need better data quality and reliability. Data duplication and reluctance to share data also prohibit the initialization of permanent and standardized data flows within the government. It is observed that most MDAs still work in silos with their own agenda, budgets, priorities, and databases. This leads to each institution choosing different tools to automate its activities in different sectors, which may not be interoperable. These various technologies then require additional technical solutions to combine and consolidate information flows. In addition, the Government Open Data Portal supported by the Semantic Catalog is still lacking in its use and needs further enhancement. Moreover, the expansion of government cloud and data exchange mechanisms to Local Public Authorities (LPAs) is limited and requires further efforts and optimization.

Limited data sharing and use in the public sector is underpinned by factors such as limitations of key enabling policy and legal frameworks as well as the absence of a designated authority that owns the data governance agenda.

¹ Mandated through the following: Gov. Decision No. 128 of 20-02-2014 on the shared government technology platform (MCloud) - see article 4.1 - HG128/2014 (legis.md). Law No. 142 of 19-07-2018 on data exchange and interoperability - see art. 6.3 - LP142/2018 (legis.md)

Sharing data requires a dedicated data governance framework that supports classification of data assets and determines who has access and the method of processing before sharing. Generally, MDAs need more unified data management and data sharing standards. There is currently no standardized method for reviewing and classifying data given the lack of a government data classification policy, legislation, or directive. Even in cases when data exchange mechanisms have been established, there are no working mechanisms to prevent third-party government or private institutions (such as banks, for instance) for asking for paper-based copies of respective data. Globally, it is seen that such changes require strong championing of the data agenda at the highest levels of government to build and sustain cross-government collaboration.

When it comes to data legislation and regulation in Moldova, a national legal framework is underpinned by an overarching data protection law that facilitates the establishment of safeguards.

In recent years, Moldova made a good progress in aligning national law with the EU General Data Protection Regulation (GDPR). For instance, recent amendments solve fundamental discrepancies between the Moldovan and EU laws in terms of controlling, processing, and cross-border transmission of personal data. Still, cross-border data flow regulations are nascent and primarily focused on social protection. Given Moldova's recognition as a candidate for EU membership, the legislation should ensure complete alignment with the EU's data provisions. In particular, the legal framework has seen limited implementation and is yet to be fully compliant with EU regulations for emerging technologies (such as blockchain or AI), which may lead to uncertainty regarding their use.

The regulatory framework for data governance can be improved, along with harmonizing with EU on areas such as the Data Governance Act, Digital Services Act, and eIDAS2 on digital ID.

Only personal data protection and access to information are covered. For instance, Moldova needs a clear framework to address data classification and to standardize formats in which government datasets and data tools must be available. Before advancing to the next stage of data maturity, priority should be given to the implementation of the legal frameworks on e-signature and the regulation of emerging technologies such as AI, cryptocurrencies, and blockchain. Furthermore, only some efforts around open data are in place today. A factor that remains

critical to the success of embracing open data is the political support from the senior leadership. At the same time, data governance at the sub-national level is rudimentary because of the absence of local institutions and officers responsible for data and limited funding.

The Moldova DTS has highlighted the complete interoperability of platforms and seamless data exchange as key directions for improving data flows, efficiency, and data security.

This paves the path for a strong momentum to improve data governance structures in Moldova. The institutional framework laid out in digital transformation strategy, led by the Ministry of Economic Development and Digitalization (MEDD) and the National Digital Transformation Council (NTDC) and supported by the E-Governance Agency (EGA), Center of Information Technology and Cyber Security (CITCS), Public Services Agency (PSA), and newly created National Agency for Cyber Security, can be leveraged to build on the data agenda as well. Despite their efforts being welcomed and recognized, there needs to be more coordination between the entities leading on digitalization and with other government bodies. The Moldovan institutional framework needs a network of chief data officers (CDOs) across MDAs both nationally and sub-nationally, and strong ownership of the data agenda will provide a strong impetus to move forward and ensure implementation. The transition to the next level of data maturity is also slowed by the low involvement of municipal authorities in the ecosystem. To further progress with a national data ecosystem, Moldova would benefit from developing a framework to overcome these challenges. Additionally, it is recommended for the private sector, academic institutions, NGOs, and public at large to be more connected to policy discussions and collaboration activities on the data agenda to build trust and ensure data infrastructure meets the needs of data users.

The following set of **interdependent recommendations** could be considered for **priority action by the MEDD and NDTC** when implementing the DTS. Recommendations focus on completing the fundamentals to ensure **trust** in and **equal access** to the country's data resources and on initiating the data flows, which would unlock and optimize the **value** of these key resources. With an overarching data governance framework in place, underpinned by a strong DPI, Moldova could be among the leaders in Europe by 2030 in data-driven, AI-enabled development and citizen-centric digital public services, as envisioned by DTS.

LAWS AND REGULATIONS

1

Develop and approve a **National Data Governance Strategy** and associated enabling legislation, with the overarching objective of leveraging Moldova's data to accelerate its EU membership, viewing and managing it as a public good, and highlighting coordination between public and private sectors. It would also be crucial to a coordinate review of legislation pertaining to but not limited to data protection, data communications, electronic identification and authentication, e-signature, and regulations related to digital financial services provision and e-commerce including for cross-border trade. Updates to these laws should also ensure EU alignment.

2

Develop a **Data Governance Framework**, with a first set of interoperable sector-specific data spaces (e.g., health, skills, or public sector) and associated data infrastructures prioritising collaboration between business, government, and academia. Moreover, a multi-annual Action Plan to build, support and sustain the Data Governance Framework would benefit from detailing clearly defined outcomes; targets; and ring-fenced funding for the delivery of the necessary institutions, laws, economic policies, infrastructure, and human capital.

3

Adopt a **National AI Strategy and associated enabling legislation** as a key foundational component of Moldova's Digital Transformation Strategy 2023-2030 emphasizing the ethical use of trustworthy data and aligned with the EU's declaration on Digital Rights and Principles that will shape Europe's digital future and issue guidelines for the use of data-driven AI in the public sector highlighting security, privacy, and interoperability. An essential first step towards AI-powered Government.

INSTITUTIONS

1

Ensure the **Sub-Council on Data Governance and AI** has high-level political leadership with representatives of all sectors of the economy and civil society to oversee the development of the Data Strategy and Framework. Additionally, aligning with the ongoing Open Data Program and ensuring leadership on and political buy-in for delivering on the agenda across the public sector would be key to implementing necessary developments. Furthermore, international cooperation on data issues should be a priority including regional collaboration in the context of EU integration, and bilateral collaboration particularly with Romania and Ukraine on cross-border data flows and interoperable digital public services.

2

Mandate and resource the **E-Government Agency** to implement the Data Strategy developed as part of above recommendations, including centralised control of expenditures and data governance initiatives in the public sector to ensure the enforcement of data standards and semantic interoperability across ministries and agencies. Moreover, a network of chief data officers (CDOs) across MDAs both nationally and sub-nationally, coordinating with EGA, will provide a strong impetus and ownership of the data agenda to move forward and ensure implementation.

3

In line with Moldova's application for EU membership, complete a **whole-of-government** analysis to identify data-related initiatives "to enhance public and private investments in strategic infrastructure, education, and innovation"² with an emphasis on integration with Trans-European Networks (TEN) and participation in sector-specific Common European Data Spaces.

² https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_3801

DIGITAL DATA INFRASTRUCTURE

1

Mandate the EGA to develop a **public sector data architecture** implementing modernized base registries (e.g., persons, land, businesses), master data, reference data, APIs, and open data based on Moldova's interoperability framework and the Semantic Catalogue to enforce the 'Once-Only' principle³, optimize data quality and enable data sharing and reusability.

2

Upgrade the **foundational data infrastructure**, including MCloud services (hybridization and further enhancement of MCloud by leveraging EU-based hyperscale offerings) and network connectivity which should be prioritized and integrated with the EU's CEF-Digital investment program to support the expected data volumes and data flows associated with the rollout of the data governance framework underpinned by the DPI and to cope with the increase in machine-generated data from AI applications and the IoT. Harmonize infrastructure with EU, including through bilateral collaboration with Romania and other countries, including on data exchange, recognition of digital IDs under eIDAS.

³Once-Only principle states that citizens and businesses provide their data only once in contact with public administrations and should not be forced to provide information to authorities if another authority already holds that information in electronic format.

HUMAN CAPITAL

- 1 Review and update conditions for **public sector IT and other relevant staff** including recruitment, pay and personnel management while balancing the aspirations and career trajectories of modern digital talent with the need for permanent in-house architectural expertise to ensure continuity and the sustainable evolution of digital public services culminating in **HR policies** for a public sector that is fit for purpose in the digital age and is agile, human centric, data-driven and AI enabled.
- 2 Embed a **data culture in the public sector** emphasizing data governance, data quality, data protection, and data ethics. Launch multi-stage training and awareness programs (including essential and advanced courses) in digital literacy, cybersecurity, data protection, data management, data analytics, and project management for public sector staff and plan for the recruitment of staff with data profiles. Actions to upskill the public sector workforce would aim to improve data use and reuse, enabling use of data analytics for decision-making.
- 3 Prioritize multi-stage **digital and data literacy** programs for citizens to address digital/data divides along social, age-related, demographic, and geographic lines, which risk minimizing the benefits of a national data ecosystem.

