

The Role of Digital Governance in Supporting Public Data Management: An Analytical Study of the Case of Algeria

Dr. Fatma Zohra Benkaid¹, Dr. Riyad Bouaici², Dr. Mouna Gastel³,
Pr. Keltoum Bentameur⁴

*Received: April 27, 2026
Accepted: August 17, 2026
Published: September 20, 2026*

Abstract:

This study aimed to analyze the role of digital governance in supporting public data management through an examination of the reality in Algeria, focusing on the ability of the data management system to adopt effective digital mechanisms that ensure data transparency and quality, integration, security, and availability to support public decision-making. In our study, we relied on a descriptive-analytical approach by reviewing the conceptual frameworks for digital governance and public data management, and analyzing the case of Algeria in light of leading international practices.

The study concluded that digital governance and public data management are important strategic tools for achieving digital independence and enhancing the effectiveness of public administration. The study also found that Algeria has made notable progress in the digitization of public data and the development of digital infrastructure; however, it still faces challenges related to the limitation of open data and the absence of a comprehensive national framework for data governance. The study recommended that adopting a national framework for algorithms, establishing a governmental registry for them, developing ongoing training programs, and launching a national observatory for artificial intelligence would have a direct impact on improving the quality of public decision-making, enhancing system integration, and promoting digital sovereignty and governance.

Keywords: digital governance; public data management; digital transformation; digital government; Algeria.

JEL Classification: O32, O38, H83, M15, L86.

Introduction

Public data forms the foundation upon which government policies are built; the more accurate and reliable this data is, the greater the public administration's ability to make strategic decisions efficiently and effectively, which in turn enhances the government's capacity to address uncertain economic and social challenges.

Digital governance has emerged as a response to the accelerating digital transformation and technological advancements, becoming a cornerstone for restructuring and reorganizing data within

¹ Lecturer(A), University of Bordj Bou Arreridj, Algeria. fatmazohra.benkaid@univ-bba.dz

² Lecturer(B), University of Bordj Bou Arreridj, Algeria. riyad.bouaici@univ-bba.dz

³ Lecturer(B), University of Bordj Bou Arreridj, Algeria. mouna.gastel@univ-bba.dz

⁴ Prof, University of Bordj Bou Arreridj, Algeria. Keltoum.bentameur@univ-bba.dz

public administration to enhance its efficiency, and shifting from traditional decision-making models to those based on smart public data—thereby strengthening transparency and the quality of the state’s public policy-making.

In recent years, Algeria has undertaken fundamental reforms to modernize and streamline public administration by digitizing public services, updating administrative information systems, and improving the use of modern technologies in the management of public institutions—particularly in tax administration, education, and civil registration—in addition to developing digital platforms for public services. This reflects the state’s efforts to transition to a more efficient and transparent public administration. The reforms also encompassed the public data system, as the state has improved data collection, storage, and exchange among public sectors.

In this context, a research gap emerges regarding the relationship between digital governance and public data management, which reflects the extent of Algeria’s readiness to transition to a smart administration capable of making strategic decisions. The existence of public data as a strategic asset is insufficient if it is not governed and digitized in a way that enhances the quality of public policies and strengthens their responsiveness to rapid economic and social transformations.

Despite the existence of international studies on digital governance and public data management, most have focused on the technical and legal experiences of developed countries, emphasizing compliance with laws and ethical standards, or assessing the impact of artificial intelligence and algorithms on human rights. However, studies in the Algerian context have not received sufficient attention, particularly those linking the integration of various information systems with public data management and directly connecting digital transformation to the quality of government decision-making.

Based on the preceding discussion, we pose the following question:

How does digital governance contribute to supporting public data management and promoting smart decision-making in Algerian public institutions?

Sub-questions

- What is meant by digital governance, and why is it important?
- What is the definition of public data management, and how does it influence government decision-making?
- What is the relationship between digital governance and public data management?
- What are the challenges facing the implementation of digital governance in public administration in Algeria?

Hypotheses

- Digital governance contributes to strengthening data in public administration;
- The implementation of digital governance allows for the improvement of data, which in turn contributes to improving the quality of government decision-making;
- Weak integration among digital information systems limits the ability of digital governance to achieve public administration’s objectives in policy-making and strategic decision-making.

Significance of the Study

- The significance of this study lies in analyzing the relationship between digital governance and public data management, as a modern, smart approach to restructuring public administration toward building a smart model for government decision-making ;

- This study examines the existing gap in public administration and how data can be utilized to enhance the transparency and credibility of government decision-making;
- Enriching the scientific literature that links digital governance, public data management, and decision-making.

Research Methodology

The study adopted a descriptive-analytical approach, analyzing recent theoretical literature on digital governance and public data management, as well as examining the concepts and models used in the international literature through library references, scientific publications, and reports issued by international bodies and organizations, and a review of local laws related to reforms of the digital system in public data management in Algeria. The study also employed an interpretive approach to understand the relationship between the variables under study within the context of public administration in Algeria.

Previous studies

- Walid Darwish, Salim Qat; (2021) **Digitalisation of public administration as a mechanism for implementing modern public management. Emperical study of the municipality of khenchela:** The study attempted to determine the extent to which modern public management interacts with the digitization of public administration in Algeria, and concluded that digitization within the public administration, replacing paper transactions, requires modern digital practices and development in the public management sector.
- Alaa El-Din Khalil El-Sayed Rahma Riad Salama; (2025) **Digital Governance as an Approach to Enhancing the Quality of Government E-Services: A Case Study of the Palestinian Government Sector:** This study examined the role of digital governance in enhancing the quality of e-government services in the Gaza Strip. A questionnaire was designed and distributed to 174 employees working in the public information technology departments of government sectors. After statistical analysis, a strong and statistically significant positive correlation was found between all dimensions of digital governance and the five dimensions of e-service quality. Furthermore, the study demonstrated the impact of the digital governance dimensions on enhancing the quality of e-services.
- Sorin BURLACU and All; (2024) **Integrative Digital Governance: The Role of Public Administration in Promoting Sustainable Development amid Post-Pandemic Technological Innovations:** The study explored how integrated digital governance can support sustainable development in public administration. It highlighted the complexity of the digitization process, including the potential risks associated with digital technologies integrated into public administration systems. The study recommended the implementation of a collaborative strategy encompassing multiple sectors and levels of digital governance.
- Meijer, A., & Bolívar, M. (2016). **Governing the Smart City: A Review of the Literature on Smart Urban Governance:** This paper presents a comprehensive review of how emerging technologies, particularly Artificial Intelligence (AI), Big Data, and smart infrastructures, are reshaping school leadership and governance. The paper culminates in a set of policy proposals centered on strategic leadership development, ethical data practices, inclusive digital infrastructures, and participatory governance models. Emphasizing that digital transformation must be pedagogically grounded and equity-driven, the paper argues that AI in school governance should serve not merely as a tool for efficiency, but as a catalyst for ethical, inclusive, and adaptive educational change.

I. The concept of digital governance and digital data management

I.1 Definition and characteristics of digital governance:

With the rapid advancement of digital transformation and artificial intelligence, the concept of digital governance has evolved to go beyond that of traditional e-governance by placing greater emphasis on data, artificial intelligence, and institutional integration. Therefore, we will attempt to present some concepts related to digital governance and its characteristics.

Digital governance has become a technological mechanism that helps shape an organization's culture and strategy, and maximizes its impact on its beneficiaries. Digital governance is a framework for defining accountability, roles, and decision-making authority that demonstrates the extent to which digital transformation has been achieved within an organization, encompassing its websites, social media channels, and products and services available online and on the web. (Grigalashvili, 2023, pp. 1-25)

In her book "Managing Chaos: Digital Governance by Design", Lisa Welchman describes digital governance as a framework and methodology focused on establishing accountability in the development of digital strategies, policies, and standards. (Kaushal, 2020)

Digital governance is based on integrating digital technology into governance structures and processes and aligning them with the organization's objectives and core values. (Engvall, 2022)

The characteristics of digital governance can be examined from several perspectives, which we summarize in the following points: (Hanisch, 2023)

- Digital governance focuses heavily on digital technologies capable of processing data related to value-added exchanges, as well as on inferential methods that enable autonomous decision-making to support the continuity of such exchanges.
- Digital governance relies on information and communication technology and big data.
- Digital governance improves administrative decisions and policies by integrating complex data analysis, data modeling, data optimization, and data visualization into government and public administration processes.
- Digital governance emphasizes strengthening government administrative capabilities and improving the legitimacy, transparency, and responsiveness of good governance. All of this is aimed at better addressing social issues and serving all citizens. (Engvall, 2022)

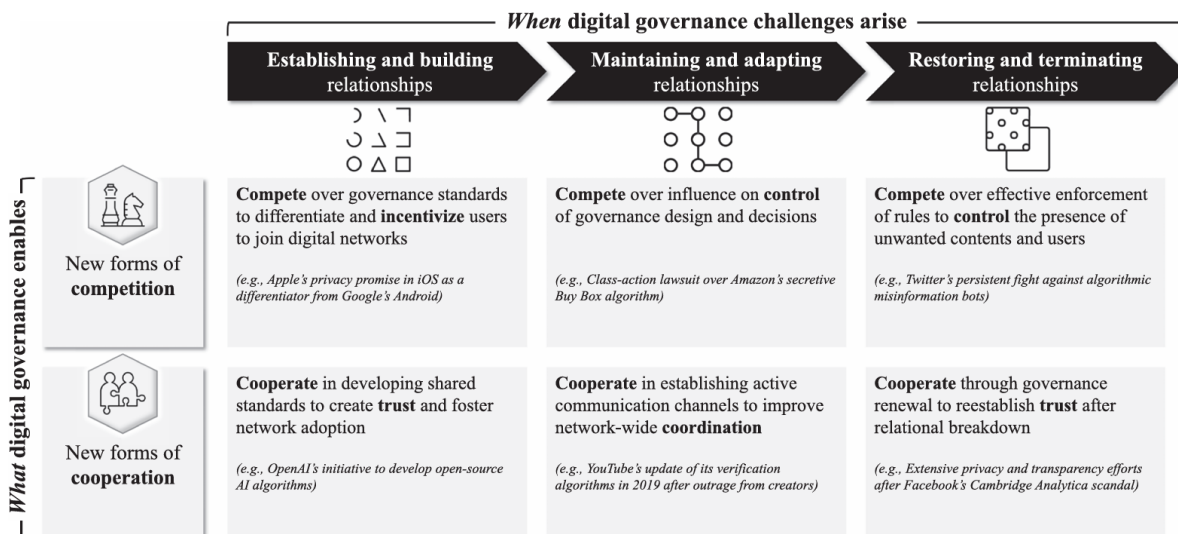
❖ Challenges of digital governance:

Governance theories should be revisited and developed to align with the digital age and adapt to the new challenges that are emerging. In the following section, we will explain how digital governance relates to current digital transformations: (Hanisch, 2023)

- Establishing, building, adapting, and maintaining digital relationships: Given that organizations rely heavily on the value of digital networks and recognize that governance affects the attractiveness of their networks, and with increasing competition over governance, organizations have begun to collaborate in this area by publishing and developing algorithmic protocols using open-source software such as: OpenAI, which has developed open-source artificial intelligence to promote transparency, while decentralized autonomous organizations (DAOs) publicly discuss algorithmic governance options on Discord forums.
- Adapting and Maintaining Digital Relationships: Maintaining digital relationships requires greater attention to governance frameworks, stakeholders, and the processes necessary for alignment. This is because a lack of alignment between participants in digital exchanges and governance frameworks leads to serious tensions, as occurred between Epic and Apple regarding pricing policies on the iOS platform.

- Restoring and Terminating Digital Relationships: Effective governance and increased trust among parties in digital platform markets lead to the elimination of platform intermediation, as users seek to bypass platform fees and continue their transactions.
- Furthermore, governance choices related to digital platform interoperability may raise coordination costs for developers and increase the likelihood of platform abandonment. The introduction of non-human factors through governance choices may alienate human participants. The use of algorithms to control the display of information on social media platforms poses challenges in designing governance mechanisms to avoid negative consequences and potential legislative interventions; therefore, preventing activities that alienate human participants is a critical challenge in digital governance.

Figure1: Challenges of digital governance



Source: Hanisch, M., Goldsby, C., Fabian, N., & Oehmichen, J. (2023). Digital Governance: A Conceptual Framework and Research Agenda. *Journal of Business Research* 162 <https://doi.org/10.1016/j.jbusres.2023.113777>, 1-14.

I.2 Definition of Public Data Management

Public administration refers to the methods associated with the administrative activities carried out by public organizations and administrative bodies to achieve the public good, and it has a direct impact on the interests and needs of individuals.

Public administration is also considered the mechanism through which the state provides public services to society and serves the public interest; as such, it acts as a link between the state's decision-makers and its citizens by implementing the various laws and policies issued by the state's highest authorities with the aim of promoting social welfare and improving the government's effectiveness in directing its programs and strategies. (Nasira, 2021)

The COVID-19 pandemic has brought about a profound shift in the government's transition to the digital sector, as it has restructured its traditional departments and adapted various processes to digital formats, making information accessible to everyone.

II. The General Framework for Digital Governance and Digital Data Management in Algeria (The Media and Communications Sector as a Case Study)

II.1 The Legal and Legislative Framework for Data Governance in Algeria:

Decree No. 25-320, dated December 30, marks a structural shift in the state's efforts to transition into a smart nation (from a document-based administration to one built on reliable data). Presidential Decree No. 25-320 included the following key points: (Hadeif, 2026)

- ✓ **A Philosophical and Legislative Shift:** The transition from paper-based or digital administration to a “data-driven state” based on comprehensive governance encompassing production, use, protection, and exchange.
- ✓ **Clear Responsibilities:**
 - **Data Source:** Legally responsible for the quality, reliability, updating, and classification of data.
 - **Data User:** Committed to using data only as authorized.
 - **Data utilization:** Covers the entire data lifecycle, with a focus on added value rather than mere storage.
- ✓ **National Interoperability System:** The backbone of digitization addresses data fragmentation and system isolation; Its objectives:
 - Unified and secure data exchange between departments and institutions.
 - Improving public services, reducing duplication, and accelerating decision-making.
 - Relying on a secure, closed national network to strengthen digital sovereignty.
- ✓ **Multi-level security governance:**
 - Security is a fundamental part of governance, not a technical add-on.
 - Classification and indexing according to a national reference to apply the “risk-based protection” principle.
 - A clear division of responsibilities among technical leadership, operational security, and the protection of individual rights.
 - Sovereignty exceptions for defense, security, and justice preserve the essence of digital sovereignty.

This system, in accordance with Articles 6, 7, and 9 of Presidential Decree No. 25-320 issued on December 30, 2025, is based on three fundamental and complementary pillars. The current version of this reference was published by Decision No. 67 of the Minister, High Commissioner for Digitalization, dated January 26, 2026, and is as follows: (<https://www.hcn.dz/projets/FondementTechnologique/IRIES> , 2026)

- ✓ **Data Classification Reference:** It defines the criteria and procedures followed to determine data sensitivity levels, areas of use, types of protection to be applied, and the security measures required for each type of data.
- ✓ **Data Source Cataloging Reference:** Establishes the standards and procedures adopted for compiling and identifying data sources through a standardized template, with the aim of organizing them, facilitating access to them, improving their quality, and reducing duplication of data and sources.
- ✓ **National Interoperability System:**

It is the backbone of the system, enabling secure, organized, and efficient data exchange between public institutions, departments, and public service agencies, in accordance with the Data Classification Reference and the Data Source Cataloging Reference, within a trusted environment.

When exchanging data within this system, the classification specified by the data publisher is observed.

The system serves as the exclusive framework for exchanging digital data via the secure national network infrastructure **IRIES**. Pursuant to Presidential Decree No. 25-320, issued on December 30, 2025, concerning the establishment of a national data governance system—and specifically Article 11 thereof—this network has been designated as an exclusive infrastructure for data exchange, separate from the Internet. The network operates in a secure and reliable environment, enabling the exchange of data between public institutions and administrations in an organized manner that promotes harmony and integration among them, while adopting a unified management model and an integrated technical framework, reflecting an advanced understanding of the importance of protecting digital sovereignty. This network also connects all ministerial sectors and public bodies to national data centers and is scalable to provide comprehensive and effective coverage, ensuring that it meets future requirements and supports the state's accelerating digital transformation.

(<https://www.hcn.dz/projets/FondementTechnologique/IRIES>, 2026)

Bodies and institutions responsible for public services may be integrated into the system as needed, if their data is required for processing, in coordination between the High Commission for Digitalization and the relevant sectors. The National Interoperability System serves as the exclusive framework for the exchange of digital data between public institutions and departments via the secure national network infrastructure **IRIES**. It enables the secure, organized, and efficient exchange of data among various public institutions, departments, agencies, and organizations responsible for providing public services, in accordance with the data classification framework and the data source indexing framework, within a trusted environment, while taking into account the classification assigned to such data by its originator. It also; Where necessary, public service agencies and institutions may be integrated into this system if their data is required for processing, in coordination with the High Commission for Digitalization and the relevant sectors.

II.2 The National Digital Transformation Strategy:

Algeria is firmly committed to the digital transformation process outlined in the “Horizons 2030” strategy. This transformation is based on an ambitious yet realistic vision centered on national aspirations and aligned with the values and principles of the Algerian state. This commitment reflects a deep understanding of the challenges and opportunities within the current national and international context. There has been a strong focus on the media and communications sector, as it provides vast amounts of data and information that the state can leverage in shaping its policies and strategies for the future. (Republic, 2024)

Key Pillars of the National Digital Transformation Strategy: The strategy comprises five pillars, each focusing on a specific aspect of digital governance in Algeria. We will focus on the pillars of digital governance and digital data management, as they pertain to our study:

- Basic infrastructure for information and communication technologies
- Human capital and training
- Digital governance
- Digital economy
- Digital society

A) Establishing a Digital Governance Framework

Digital governance is a key element in modernizing the management of administrations and institutions and keeping pace with the digital transformation; the digitization of public administration is the first step in this transformation and the cornerstone for establishing digital governance.

The digitization of public administration and the improvement of data and public service governance require the creation of an ecosystem for exchange and collaboration among all segments of society, particularly with the private sector, based on the integration and utilization of emerging digital technologies such as artificial intelligence and the Internet of Things.

❖ **Objectives of Establishing a Digital Governance Framework**

- Digitization of internal management in the public sector: through the digitization of administrative procedures related to various public sector structures
- Digitization of administrative procedures for citizens and institutions: This involves the comprehensive digitization of all administrative procedures from start to finish through the digital transformation of public administration, providing an opportunity to improve processes, reduce processing times, and create a reliable and transparent environment accessible to citizens and institutions
- Enhancing the Public Sector's Appeal to Attract Digital Talent: This enables the creation of a conducive environment in the public sector by recognizing and motivating the professionals and engineers responsible for sector-specific digitization projects
- Ensuring digital identity for citizens and institutions: by developing reliable digital means to identify natural and legal persons and facilitating access to online services while strengthening cybersecurity
- Establishing the principles of multisectoral cooperation: by fostering harmony between the government, civil society, and all public and private sectors, thereby enabling the creation of an inclusive digital environment commensurate with the country's social and economic progress.
- Establishing the principles of openness and data sharing: by developing a regulatory framework for data governance that regulates the collection, processing, and sharing of data, and defines responsibilities for its use, thereby creating added value both in terms of utilization and in terms of supporting decision-making based on digital trust.

B) Data Centers and Cloud Computing Services

The government has sought to develop data management by establishing specialized data centers and cloud computing services, with the aim of achieving the following objectives: (Republic, 2024)

- Establishment of national data centers compliant with international standards: Building data centers across the entire national territory to meet national needs for processing, storage, and localization, thereby strengthening technological independence and digital sovereignty
- Provide competitive service offerings to export high-quality cloud computing services, promoting data as an asset and resource for digital services, thereby strengthening international cooperation and the digital economy
- Promote the use of the national .dz domain to enhance the digital visibility of national entities on the internet and strengthen digital identity.

C) Information Systems Security

The provision of a digital data infrastructure and cloud storage for services will drive significant progress in the transition toward a knowledge-based economy and the development of a digital society. However, if regulatory frameworks and cybersecurity measures are not established for this data and information, it will pose a risk to users of digital platforms. Consequently, the Algerian government has

sought to develop its regulatory bodies and improve the quality of information systems to increase trust and strengthen digital sovereignty.

Information system security is of paramount importance to the success of the National Digital Transformation Strategy, through addressing requirements related to information system security. Accordingly, the High Commission for Digitalization ensures that the National Digital Transformation Strategy aligns with the requirements of the “National Information Systems Security Framework,” as the state’s instrument in this field. (Republic, 2024)

III. Models of Digital Governance in Public Data Management

III.1 The Models:

❖ New Zealand – Statistics:

New Zealand issued a voluntary Algorithms Charter in 2018, which had been signed by 27 government agencies by October 2021. New Zealand - Statistics New Zealand issued a voluntary Algorithms Charter in 2018, which had been signed by 27 government agencies by October 2021. The charter sets standards for the safe and ethical use of algorithms by public sector entities and provides guidance for achieving transparency and accountability. (OGP, 2023)

New Zealand - Statistics New Zealand issued a voluntary Algorithms Charter in 2018, which had been signed by 27 government agencies by October 2021. New Zealand - Statistics New Zealand issued a voluntary Algorithms Charter in 2018, which had been signed by 27 government agencies by October 2021. The charter sets standards for the safe and ethical use of algorithms by public sector entities and provides guidance for achieving transparency and accountability.

Principles for the safe and effective use of data and analytics: (N & All, 2019, pp. 1-92)

- Government use of artificial intelligence in New Zealand Trustworthy AI in Aotearoa - AI principles
- Open government partnership
- Data protection and use policy
- Privacy, human rights, and ethics framework
- Assessing likelihood and impact

❖ Netherlands:

In 2021, the Netherlands published a Human Rights and Algorithms Impact Assessment Tool and launched an online algorithm registry where government agencies publish the algorithms they use. The number of registered algorithms reached 109. This fundamental rights and algorithm impact assessment (‘FRAIA’) is a discussion and decision-making tool for government organisations. (OGP, 2023)

the FRAIA may serve as a tool for reflection. The discussion about the various questions should take place in a multidisciplinary team consisting of people with a wide range of specialisations and backgrounds. Per question, the FRAIA indicates who should be involved in the discussion. This tool pays attention to all roles within a multidisciplinary team. (Relations, 2022)

❖ Croatia:

As part of its implementation of the General Data Protection Regulation (GDPR), Croatia has committed to training relevant government employees and officials on personal data protection and how to properly apply the provisions of the Regulation. These courses include detailed lessons on the legal foundations of personal data processing, the roles of controllers and processors, remedies, and potential liabilities and penalties. (OGP, 2023)

❖ Uruguay - Establishment of an Artificial Intelligence

Observatory in 2022 dedicated to promoting the ethical, responsible, safe, and trustworthy use of artificial intelligence. This includes establishing an open platform for the exchange of experiences among various stakeholders, providing recommendations on the use and transparency of AI, and publishing case studies on the use of AI in the government sector.

Table1: International Experiences vs The Algerian Experience

International Experiences:	The Algerian Experience	The Gap	Opportunities for improvement
New Zealand: Algorithm Charter to Define Ethical and Legal Standards, Promote Transparency and Accountability	Netherlands: Algerian Decree No. 25-320 Regulates Data Governance	Croatia: The law also includes a formal national framework for algorithms	Uruguay: Establishment of a National Algorithm Charter to Promote Accountability and Transparency in Digital Decisions
Digital Registry of Government Algorithms Develop a registry of	Algeria has an interoperability system and the IRIES network,	but there is no registry of government algorithms or periodic assessment of their impact on rights	government algorithms and a tool for assessing their impact on fundamental rights
Establish a national observatory for artificial intelligence, a platform for sharing expertise, and disseminating recommendations and case studies	Algeria is in the process of building digital infrastructure and connecting public sector agencies;	there is no national observatory for artificial intelligence	Establish a national observatory for artificial intelligence to support the ethical and secure use of data and modern technologies
Issuance of Presidential Decree 25-320, National Interoperability System, IRIES Network, Basic Data Governance	Advanced data exchange infrastructure (IRIES) Data governance rules in place Interconnection between ministries and agencies	Lack of a national framework for algorithms Lack of impact assessment of algorithms on rights Lack of regular training programs Lack of an AI observatory	Adopting international best practices can strengthen digital sovereignty, public trust, and institutional efficiency while reducing value gaps.

Source: Prepared by the researcher based on international experiences.

III.3 The Extent to Which Algeria Can Benefit from International Experiences:

Drawing on these previous international experiences, and to enable Algeria to keep pace with rapid global developments—particularly the digital and technological transformation and artificial intelligence—and to implement best practices in these areas:

- Adopt an ethical and legal framework for algorithms and artificial intelligence in the public sector, with a focus on transparency and accountability, as well as cyber security.
- Establish a platform or registry for public algorithms and data to build trust and align with international standards.
- Train public sector employees on data protection, compliance with their legal responsibilities, and the implementation of digital best practices.
- Launch a national observatory for artificial intelligence and data to provide recommendations, monitor practical applications, and facilitate the exchange of expertise among all public administrations.
- Integrate and digitize various existing initiatives, particularly the National Interoperability System and the IRIES network, to enhance integration and digital sovereignty.

IV. Conclusion:

This study demonstrates that digital governance and public data management are strategic levers for digital sovereignty in general, and for Algeria in particular, and for supporting the effectiveness of public administration.

By examining international models (New Zealand, the Netherlands, Croatia, and Uruguay), it was found that these countries successfully digitized their public data by adopting four fundamental principles: the ethical and legal framework for algorithms, assessing the impact of technologies on human rights, training and developing staff, and establishing a national observatory for artificial intelligence and data.

Digital governance constitutes the framework that enhances and increases the effectiveness of public data management in terms of productivity, protection, use, and data exchange between departments.

Algeria faces various challenges in its journey towards adopting digital transformation and digital governance in its administrations, including: weak integration between different information systems despite the existence of the IRIES network and the national interoperability system; the absence of a national framework for algorithms and monitoring their impact on citizens' rights; and a lack of systematic training programs for public administration employees in the areas of data protection and the use of modern digital technologies.

The absence of a national AI observatory to support the ethical and regulatory assessment of digital technologies. Based on these findings, the following hypotheses can be assessed:

Hypothesis 1: "Digital governance contributes to enhancing data in public administration" is true, as Presidential Decree 25-320 and the National Interoperability System strengthen the data management infrastructure. However, full effectiveness requires support through ethical frameworks and training.

Hypothesis 2: "Implementing digital governance improves data, and consequently, improves the quality of decision-making" is partially true. Technical improvements are underway, but inadequate training and a lack of transparency limit its optimal use in strategic decision-making.

Hypothesis 3: "Weak integration between information systems limits the ability of digital governance to achieve public administration objectives" is true, as partial integration between ministries and agencies creates challenges in data exchange and integrated decision-making.

In conclusion, it can be said that Algeria has laid a strong foundation for digital governance and public data management, but fully benefiting from digital transformation requires bridging ethical, legal, institutional, and technical gaps. Adopting a national framework for algorithms, establishing a government algorithm registry, developing ongoing training programs, and launching a national artificial intelligence observatory will have a direct impact on improving the quality of public decision-making, enhancing system integration, and strengthening digital sovereignty. This underscores that digital governance is not merely a technical tool, but a comprehensive.

Bibliography

<https://www.hcn.dz/projets/FondementTechnologique/IRIES>. (2026).

<https://www.hcn.dz/projets/FondementTechnologique/IRIES>. (2026).

Engvall, T. &. (2022). Digital Governance as a Scientific Concept. *Scientific Foundations of Digital Governance and Transformation Volume 38* https://dio.org/10.1007/978-3-030-92945-9_2, 25-50.

- Grigalashvili, V. (2023). Digital Government and Digital Governance: Grand Concept, International. *Journal of Scientific and Management Research Volume 6 Issue 02*, 1-25.
- Hadef, A. (2026). *Data Governance in Algeria: Laying the Foundation for Digital Sovereignty and Advanced Management*. Algeria: <https://www.entv.dz/ar/news/> .
- Hanisch, M. G. (2023). Digital Governance: A Conceptual Framework and Research Agenda. *Journal of Business Research* 162 <https://doi.org/10.1016/j.jbusres.2023.113777>, 1-14.
- Kaushal, N. (2020). *MEANING, NATURE, SCOPE AND SIGNIFICANCE OF DIGITAL GOVERNANCE*. Lucknow. University of Lucknow: <https://www.lkouniv.ac.in/site/writereaddata/>.
- N, C. O., & All. (2019). *GOVERNMENT USE of ARTIFICIAL INTELLIGENCE in NEW ZEALAND*. Wellington: OTAGO University; [tps://data.govt.nz/assets/data-ethics/algorithm/NZLF-report.pdf](https://data.govt.nz/assets/data-ethics/algorithm/NZLF-report.pdf).
- Nasira, B. (2021). Public Administration Management in Algeria: Between the Specifics of General Management and the requirements of management. *Issue No. 3, dedicated to the proceedings of the International Conference on the Relationship between Public Servic.*
- OGP. (2023). *Digital Governance*. Algeria: commitments submitted as of June 30, 2023. As of this date OGP consisted of 76 national and 104 local members.
- Relations, M. o. (2022). *Impact Assessment Fundamental rights and algorithms*. <https://www.government.nl/site/binaries/site-content/collections/documents/2021/07/31/>.
- Republic, P. D. (2024). *Presidency of the Republic, High Commission for Digitalization, National Strategy for Digital Transformation in Algeria*. Algeria: High Commission for Digitalization, August 2024 edition, pp (1-24).