

Requirements for the Digitalization of Public Institutions and Administrations and Their Role in Modernizing Administrative Activity and Achieving Good Governance

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Abstract:

The use of modern technologies in the management of public administrations and institutions has intensified since the beginning of the current century, particularly the introduction of digitalization as a tool for modernization and administrative reform in line with the global changes taking place. This research paper aims to highlight the concepts related to digitalization, its objectives and requirements, while shedding light on its positive impacts on improving administrative performance, bringing public administration closer to citizens, and enhancing transparency and good governance.

The study concludes that digitalization contributes to improving service quality, rationalizing public expenditure, increasing tax collection, attracting investment, and achieving e-governance in support of economic and social development.

Keywords: Digitalization, Administrative Management, Administrative Reform, Modernization, Governance.

Introduction:

Algeria has recently witnessed a significant awakening and advancement in the use of modern technologies, which have emerged from the convergence of information and communication systems. This convergence has given rise to the Fourth Industrial Revolution based on digital technologies and has served as a catalyst for initiating administrative reform aimed at achieving administrative development, which in turn supports economic and social development.

The establishment of an e-government project in Algeria has become, in the eyes of policymakers, a primary objective. Its foundations have begun to take shape through a well-structured strategic plan that focuses on integrating digital policy into the administrative activities of public institutions and administrations, facilitating a smooth transition from the outdated traditional administrative system toward a system characterized by flexibility, speed, trust, initiative, competition, and the exchange of ideas and expertise.

The central administration has promptly issued a set of instructions emphasizing the need for careful preparation to implement digital administration in multiple phases, mobilizing all material and human resources and providing moral support to create a conducive environment and remove obstacles that could disrupt the process. Simultaneously, public awareness campaigns have been emphasized, highlighting the importance of digital transformation, as there can be no e-government without an engaged digital public.

To advance this initiative optimistically, the Algerian state has undertaken a clear strategic plan with defined objectives to achieve the effectiveness of digitalization and ensure adaptability to rapid changes, meeting the aspirations of society's various segments seeking a true modernized administration. This aligns with the concept of "post-bureaucratic administration," underpinned by a growing societal awareness and a strong belief in directing administration toward a future of "connected administration that transcends physical presence."

Significance of the Study:

The topic of digitalization and digital transformation holds considerable importance for policymakers, administrators, business leaders, and researchers in administrative development due to its role in establishing e-administration founded on digital administrative innovation. This innovation directly contributes to quality and excellence, the adoption of modern organizational approaches, and the ability to adapt to evolving international environmental factors. Moreover, it enhances administrative empowerment by engaging employees at all levels in decision-making, monitoring, and directing administrative activities, relying on data provided by digital systems in accessible and usable formats.

Objectives of the Study:

This study aims to address the following points:

- Explore the concept of digitalization and related notions, clarifying the relationship between digitalization and digital transformation while resolving existing ambiguities between the two.
- Identify the main objectives of adopting digital policy within the administrative work system of public institutions and administrations.
- Highlight the key material, human, moral, logistical, and legislative requirements that support the advancement of digital administration.
- Examine the positive impacts of digital transformation and digitalization on society, administration, and the economy.
- Emphasize the pivotal role of strategic digital frameworks in designing effective and sound governance for the public administrative sector.

To thoroughly study this topic, the following research question is proposed:

What are the essential requirements for implementing digitalization in the administrative system of public institutions and administrations?

To answer this question, the study employs a descriptive approach to address the key concepts of the topic, supplemented by an analytical method to investigate the effectiveness and significance of digitalization and to briefly analyze relevant legal texts.

Accordingly, this research is divided into two main sections:

Section One: Requirements and objectives for implementing the digital approach in public institutions and administrations.

Section Two: Positive impacts of digitalization implementation in public institutions and administrations and its role in achieving good governance

Section One: Necessities and Objectives of Implementing the Digital Approach in Public Institutions and Administrations:

Modern technologies have played a significant role in modernizing and developing administrative activity, in line with global developments resulting from digital transformation and the digitalization approach. The subject of digitalization has received considerable attention from decision-makers, who have worked on building its components and preparing the tools

and infrastructure to make it a means for achieving administrative reform and fostering smart governance.

This axis addresses the concept of digitalization and related terms in the first section, while the second section highlights the main requirements for the effectiveness of the digital approach in public administrations and institutions.

I. Concept of Digitalization and Related Terms:

The development brought about by information and communication technologies in administrative environments has given rise to several closely related terms in the form of administrative-technical vocabulary, such as digital transformation, digitalization, and automation.

1. Digital Transformation:

The term “digital transformation” is broader than digitalization, as it refers to a comprehensive strategy linking all administrative processes and the operations of public and private organizations to technology. Many define digital transformation as a fundamental change in administrative operations. Some scholars describe it as: “a process aimed at fundamentally transforming work methods through investment and behavioral change, utilizing technological developments to deliver high-quality services quickly, flexibly, and efficiently.”

Digital transformation also implies a complete transition of the work system into digital form, allowing services such as specific administrative procedures, electronic purchasing or payments, and information access without the need to physically visit administrative offices.

2. Digitalization:

Digitalization is a recent administrative concept that has penetrated public sector organization, with varying definitions due to the lack of international standardization.

Professor Mohamed Fathi Abdelhadi defines digitalization as the conversion of printed texts, photographs, and maps into binary signals using scanners to display the results on a computer¹. The Digital Alliance Foundation defines it as the production and creation of digital files, either by converting analog materials or by using scanning devices to obtain a digital copy, referred to as a “digital object”².

Researchers generally define digitalization as a technical process aimed at achieving electronic administration by converting and transferring data, images, plans, and maps into a digital format that facilitates their use and accessibility.

3. Automation:

Automation refers to the automatic operation of computer devices and software to provide services efficiently and accurately. It is also known as mechanization³.

Automation can be defined as the optimal control of technological and electronic tools to carry out most tasks quickly and error-free, ensuring quality in administrative functions.

Objectives of Automation:

- To perform administrative and commercial tasks for organizations and public institutions efficiently, with minimal effort, in a short time, and without errors.

¹ Samir Chelghoum, Digitalization as a Mechanism for the Quality of the Educational Process, Proceedings of the Conference entitled: The Role of Digitalization in Quality in Higher Education, Faculty of Law, University of Algiers 01, March 1, 2020, organized by the Quality Assurance Unit of the Faculty of Law, University of Algiers 01, Algerian Journal of Legal, Political and Economic Sciences, Vol. 57, Special Issue, P150.

² Najla Ahmed Yass, Digitalization and Its Technologies in Arab Libraries, 1st ed., Al-Arabi Publishing and Distribution, Cairo, Egypt, 2013, p. 17.

³ Seddouki Ghrissi et al, The Reality and Importance of Digital Transformation and Automation, Ara'a Journal of Economic and Administrative Studies, an international peer-reviewed academic semiannual journal, Institute of Economic, Commercial and Management Sciences, Aflou University Center, Laghouat, Algeria, Vol. 3, No. 2, p. 150.

- To accelerate task execution, process large volumes of information, and enhance monitoring and control.

II. Objectives of Digitalization in Public Administrations and Institutions:

Digitalization has proven effective in improving administrative services and modernizing administrative and economic activities. Its advantages reflect the features of achieving smart electronic administration, including paperless administration, time- and location-independent management, and flexible organizational structures. These represent the ultimate goal of modernizing all public administrative facilities.

Digitalization also simplifies administrative procedures, enhances integrity and transparency, brings administrations closer to citizens, reduces centralization, expands decentralization, eliminates bureaucracy, ensures quality in administrative performance, and improves post-digital administrative, economic, and social conditions. Additionally, it supports the state's general objectives qualitative, quantitative, and temporal through data-driven planning and prevents the monopolization of information.

III. Requirements for Digitalization in Public Administrations and Institutions:

The Algerian state has expressed its desire to generalize the digital policy approach in line with aspirations for modernizing public sector administrations through a well-structured strategic plan, as reflected in the Algerian e-Strategy 2013.

Transitioning to e-government and achieving digital sovereignty is challenging without mechanisms and tools supporting its tangible implementation. This approach relies on advanced technologies, requiring expertise, skills, and various requirements suitable for the large and complex administrative workload to be converted into digital data.

Key requirements include:

1. Awareness of Digitalization in Administrative Activity:

The first step in implementing digitalization in public administrations is introducing the digital approach as a culture, explaining its concept, fundamentals, success factors, objectives, and value dimensions. Digital culture is defined as: "enabling all segments of society to efficiently use digital applications for their personal and administrative tasks, utilizing available tools to achieve interaction and communication."

Digital culture has transformed administrative staff from paper-based to digital workflows, allowing file reduction, modification, deletion, and addition of information according to digital administrative practices while respecting applicable laws and regulations.

2. Political Requirements for Digitalization and the Necessity of Digital Transformation:

Political will supporting electronic transformation through financial and moral assistance enhances the effectiveness of the digital process. Political will represents determination, decisiveness, independence of opinion, and the translation of legal provisions into practical actions. This reflects decision-makers' commitment to implementing and generalizing digital policies across all sectors, a priority for the highest authorities.

3. Legal, Legislative, and Institutional Requirements:

Building a legal environment for e-government leads to the achievement of the state's digital sovereignty. On this basis, it has become imperative to race against time in preparing a draft law on digitalization, with the participation of active stakeholders, experts, and specialized academics in the field of modern technologies, including artificial intelligence, with the aim of digital regulation that ensures the protection of society and its various segments from the

vulnerabilities of cybercrime. Cybercrime constitutes unlawful behavior committed through modern technological means and mechanisms, including computers.

Despite the laxity and stagnation that have disrupted the rapid conceptualization of a draft law while emphasizing the necessity of subjecting it to prior consultation and comprehensively addressing all aspects and consequences of its adoption in order to regulate the digital process, define its nature, dimensions, and mechanisms, and establish responsibilities related to data manipulation and secure data transfer—this does not imply that the legislator has neglected to impose penalties for crimes affecting automated data processing systems. Such crimes have been addressed in “Chapter Seven bis” of Law No. 24-06 amending and supplementing Ordinance No. 66-156 containing the Penal Code⁴, particularly Section Seven bis 01, Article 394 bis 01. This article stipulates imprisonment from six (6) months to three (3) years and a fine ranging from 200,000 DZD to 500,000 DZD for anyone who fraudulently enters data into an automated processing system, or fraudulently deletes or modifies the data contained therein. A reading of this provision shows that the Algerian legislator has described this category of crimes practiced in an unethical manner as fraud, and has imposed both financial and custodial penalties to curb the spread of fraud in automated information processing. Included within this category are data related to the digitalization of administrative processes, which constitute one of the legislative pillars in combating administrative corruption⁵.

The broad scope offered by digitalization in terms of transparency and access to information, and its availability to all, does not extend to all administrative actions and activities. Certain information and data remain subject to confidentiality and protection due to their sensitive nature. The right to privacy of both public employees and citizens with respect to their personal data is a right guaranteed under international conventions and national legislation.

It should also be noted that the Algerian legislator enshrined the right to access administrative information in the 2016 constitutional amendment⁶, specifically in Article 51, which provides for the right to obtain information, documents, and statistics and to transmit their content to citizens, among other provisions⁷. A brief reading of this article reveals that the legislator has elevated the principles of transparency in information and participation in decision-making to constitutionally guaranteed rights for all, without discrimination.

Despite the legislator’s attention to matters related to administrative information and data, criticism remains regarding the delay in enacting regulatory legislative texts that clarify cases of access to information while taking into account exceptions to the general rule of the right to access information. In parallel, exceptional rules should be enacted, framed by legal safeguards and disciplinary sanctions, as a preventive and precautionary measure to protect the entirety of administrative data produced by the digital revolution.

In the same context, and in view of the institutional role in protecting digital data particularly personal data the Algerian legislator introduced a new legislative instrument represented by Presidential Decree No. 23-73, which defines the tasks of the Executive Secretariat of the

⁴ Law No. 24-06 amending and supplementing Ordinance No. 66-156, dated April 28, 2024, corresponding to Shawwal 19, 1445 AH, containing the Penal Code, Official Gazette of the People’s Democratic Republic of Algeria, No. 30, issued on April 30, 2024.

⁵ Article 394 bis 01 of Law No. 24-06, previously cited.

⁶ Law No. 16-01, dated Jumada al-Awal 26, 1437 AH, corresponding to March 6, 2016, containing the Constitutional Amendment, Official Gazette of the People’s Democratic Republic of Algeria, No. 14, issued on Jumada al-Awal 27, 1437 AH, corresponding to March 7, 2016.

⁷ Presidential Decree No. 23-73, dated Rajab 23, 1444 AH, corresponding to February 14, 2023, defining the tasks of the National Authority for the Protection of Personal Data and the manner of its organization and operation, Official Gazette of the People’s Democratic Republic of Algeria, No. 10, issued on Rajab 24, 1444 AH, corresponding to February 15, 2023.

National Authority for the Protection of Personal Data, as well as its organization and functioning⁸. Article 5 of the aforementioned decree provides that the Executive Secretariat is responsible for establishing, managing, and securing information systems and databases⁹. In this regard, it remains incumbent upon the Algerian legislator to give greater attention to the legal dimension of digitalization, which has become a priority issue for the state amid current challenges that have compelled the international community to accelerate the dismantling of traditional administration and its fragile remnants, and to move decisively toward e-administration.

4. Necessity of Administrative Restructuring:

The process of digitalization in the administrative apparatus of the public sector requires starting from a major turning point based on restructuring administrative facilities in a manner consistent with the specific nature of the electronic environment, within the framework of reengineering administrative processes, a concept known as administrative reengineering.

Administrative reengineering, according to the authors Michael Hammer and James Champy in their book *Reengineering the Corporation*, is defined as the fundamental rethinking and radical redesign of administrative processes, aiming to achieve dramatic and substantial improvements rather than marginal or incremental ones, in a way that enhances performance and reduces costs in the execution of work and the delivery of services¹⁰.

The idea of administrative reengineering in public administrations and institutions is based on the radical reconstruction and reassessment of administrative activities, replacing traditional methods with modern ones, driven by the objective of achieving new improvements characterized by outstanding and distinguished performance. This approach responds to the requirements of modernization, innovation, and quality, and seeks to eliminate complexities and arbitrary procedures that hinder optimal administrative management, which is supported and reinforced by the digital approach.

5. Financial, Technical, and Human Requirements:

Digitalization in public administrations requires substantial budgets to support digital transformation projects, as well as infrastructure land, maritime, and satellite communication facilities capable of high-speed data flow, ensuring secure and high-quality information exchange¹¹.

Section Two: Positive Impacts of Implementing Digitalization in Public Institutions and Administrations and Its Role in Achieving Good Governance.

Algeria's commitment to adopting e-administration based on digital mechanisms represents a significant step toward modernizing administrative activity. This has been manifested through a series of advantages and transformations that have led to qualitative changes in administrative practices, laying the foundation for good governance in public institutions and administrations.

⁸ Article 5 of Presidential Decree No. 23-73.

⁹ Saddam Khamaysia, *E-Governance: The Path toward Administrative Reform*, Alam Al-Hadith for Publishing and Distribution, Jordan, 2013, p. 21.

¹⁰ Saddam Khamaysia, *E-Governance: The Path toward Administrative Reform*, Alam Al-Hadith for Publishing and Distribution, Jordan, 2013, p. 21.

¹¹ Mohamed El-Hadj Kassi, *Digital Transformation in Light of the Challenges of Digitizing the Economy and Public Administrations*, *Journal of Legal and Economic Sciences Studies*, Vol. 5, N° 2, University of Blida, Algeria, p. 105.

I. Positive Implications of Digitalization on the Activity of Public Institutions and Administrations:

The effectiveness of fully committing to the digitalization of the public sector is reflected in the objectives achieved, which constitute significant implications for administrative management at various levels. This contributes to creating a society where state functions are elevated, bridging the gap between traditional and modern administration and fostering integrated administrative development that, in turn, promotes economic and social development.

Key positive outcomes observed in certain public facilities include:

1. Enhancing Administrative Transparency and Accountability:

The state's determination to pursue administrative reform through building an informational society inevitably strengthens integrity and administrative transparency by ensuring access to information for all. Administrative transparency is defined as openness, clarity, and accessibility, in contrast to secrecy and opacity, achieved through providing information, clear legal frameworks, and simplified procedures¹².

Digitalization facilitates real-time electronic monitoring, supporting periodic accountability regarding services provided and tasks accomplished. This is a product of a culture rooted in transparent information, improved service levels, and combating administrative and financial corruption¹³. Practical examples are evident in most public facilities, especially local authorities, regarding public procurement.

This was further reinforced by Decree N° 15-274, concerning the organization of public procurement and public service delegations, which introduced a series of amendments to establish transparency and expand opportunities for attracting a larger number of competitors¹⁴. Legal codification of publicity in public procurement was achieved through electronic announcements, as well as the public procurement e-portal, serving as a guide to implement the fundamental principles: the principle of free access to requests, the principle of procedural transparency, and the principle of equality among candidates¹⁵.

According to Article 5 of the aforementioned decree, regarding the organization of public procurement, the Algerian legislator, in its pursuit of digitalizing public procurement, removed its physical/formal constraints by integrating electronic means into its execution. The purpose of this digitalization is to allow for the publication and exchange of documents and information related to public procurement.

2. Achieving Quality in Public Services:

The concept of quality has become the defining feature that distinguishes the standard of service in administrative organizations. The concept of quality was first introduced by the American engineer Frederick Taylor, the founder of scientific management, in his book Principles of Scientific Management. Researchers have approached the concept of public service quality

¹² Ibrahim Al-Khalouf Al-Malkawi, Governance: Concepts and Practices, 1st ed., Al-Warraq Publishing and Distribution, Amman, Jordan, 2023, p. 21

¹³ Saliha Hadouch, Mohamed Cherki, The Role of Local Administration Digitalization in Ensuring and Enhancing Transparency in Algeria, Sout Al-Shaab Journal, Vol. 4, No. 1, University of Djilali Bounaama, Khemis Miliana, Algeria, May 28, 2021, p. 1176.

¹⁴ Decree No. 15-247, dated Dhu al-Hijjah 2, 1436 AH, corresponding to September 16, 2015, concerning the organization of public procurement and public service delegations, Official Gazette of the People's Democratic Republic of Algeria, No. 50, issued on Dhu al-Hijjah 6, 1436 AH, corresponding to September 20, 2015.

¹⁵ Article 5 of Decree No. 15-247.

from various perspectives, with the French General Association for Quality defining it as the ability of an institution to meet the implicit and explicit needs of the public interest for citizens¹⁶. These needs, which must be reflected in the practical functioning of public facilities, include essential services that citizens require in their daily lives, such as electricity, education, and healthcare. Public facilities that have subjected most of their activities to comprehensive digitalization are better able to provide high-quality services to citizens.

3. Digitalization as a Tool for Wealth Assessment, Tax Collection, and Investment Attraction:

The central services of all ministries and their subordinate administrations have emphasized the necessity of digitalization in alignment with the requirements of administrative, economic, and social development. The state issued directives to accelerate the digitalization of the administrative aspects of vital facilities, organizing forums and consultative meetings to enhance service delivery through digital means. This initiative initially targeted the judicial system, universities, and local councils, followed by the tax sector, land surveying, cadastral registration, and state property management sectors that constitute the foundational pillars for ensuring an effective public service environment and compiling accurate data on real estate assets, which are essential for attracting investment and collecting taxes and revenues.

The primary objective of focusing on digitalizing the tax sector is to eliminate tax evasion. The absence of accurate tax statistics encourages non-payment, non-declaration of wealth, and underreporting of business figures and profits, thereby facilitating tax evasion. To address this, the state adopted digitalization as the basis for tax collection and bank reporting, reducing the need for direct engagement with the tax administration¹⁷.

Under the supervision of the Ministry of Finance, the General Directorate of Taxes established several electronic portals to support this process, the most notable being the “Jbaytik Portal”, an electronic platform for tax declaration and payment. This portal operates through automation to achieve the administration’s digital transformation objectives, ensuring faster, error-free accounting in the collection of taxes and public revenues¹⁸.

In parallel, with the aim of ensuring economic and social security and promoting sustainable development, the state, through the General Directorate of State Property, Land Surveying, and Cadastral Registration, began using technological applications in the real estate sector. The process began with the unification or merger of the Land Surveying and Cadastral Registration administrations. The first step was Executive Decree No. 21-251, dated June 6, 2021, dissolving the National Agency for Land Surveying and transferring its assets, rights, and employees to the Ministry of Finance. The process was completed with a second decree, No. 21-252, dated June 6, 2021, organizing the central administration of the Ministry of Finance.

This marked the official launch of the digitalization process. According to Article 1, paragraph 2, titled Administrative Structures, the decree established new central administrative structures. Notably, under item six, a new branch was created for the management of real estate assets,

¹⁶ Othmani Mohamed Abdelmalek, Azzawi Abdelbasset, The Impact of Administrative Empowerment on Improving the Quality of Public Service in Algeria: A Field Study of the Public Treasury of Tamanrasset, Al-Muntada Journal for Economic Studies and Research, University of Ziane Achour, Djelfa, Algeria, Vol. 7, No. 1, 2023, p. 42.

¹⁷ Gouadri Mohamed, Digitalization of the Tax System and Its Role in Supporting Tax Oversight in Algeria, Al-Muntada Journal for Economic Studies and Research, University of Ziane Achour, Djelfa, Algeria, Vol. 6, No. 1, 2002, p. 246.

¹⁸ Zohira Bouchmala, Saida Slimani, Digital Transformation of the Tax Administration as a Strategy to Improve Taxpayer Awareness: A Field Study of a Sample of Taxpayers in the City of Setif, Economic Studies Journal, University of Ziane Achour, Djelfa, Algeria, Vol. 17, No. 3, December 14, 2023, p. 203.

named the General Directorate of Digitalization, Informatics, and Economic Information Systems¹⁹.

The establishment of this new structure constitutes an official declaration, within a legal framework, of the necessity of digitalization in modernizing the management of real estate assets. On this basis, revising the organizational structure of any administration moving toward modernization and digitalization becomes imperative, as reengineering administrative procedures into a new structure is essential to meet the requirements of e-administration.

Following the completion of this restructuring, sector officials rapidly proceeded to digitize property registries and conduct a comprehensive survey of real estate assets within the cadastral register, with all collected data converted into digital form. This was facilitated through a dedicated program called “Modernization of Real Estate Registry Activities”, ensuring real estate security, providing owners with assurance about their property, and contributing to the stability of real estate transactions.

The process later extended to the creation of several digital platforms to facilitate access for real estate stakeholders, overcoming previous obstacles of rigidity and opacity. The most important of these platforms is the geographic portal “Espace Algérie”, which allows citizens to view the status of their real estate assets and survey plans, automatically and instantly obtain survey documents, request cadastral records, and track their preparation through the digital platform, thereby overcoming temporal and spatial constraints.

Given the importance of the real estate bank in attracting domestic and foreign investments, the state, under Law N° 22/18 dated July 24, 2002, concerning investment²⁰, established an investor platform to provide a certain level of credit on capital, enabling investors to participate in their desired type of investment. According to Article 23, paragraph 3, the platform also serves as a tool for guiding and supporting investments and monitoring them from registration through the exploitation period²¹.

This platform facilitates the attraction of both domestic and foreign investors, provided the conditions are suitable for capital investment in various sectors, by allowing investors to access information on the real estate assets involved and their physical components, ensuring transparency established by the digital real estate system.

4. Digitalization Ensuring Administrative Continuity:

The digital policy implemented across most public facilities has demonstrated the achievement of the highest objectives and conditions of public service, namely ensuring the smooth and continuous operation of public institutions. This has been practically evident on several occasions, most notably during the COVID-19 pandemic, when citizens could only access information through digital platforms and portals, as was the case for university, institute, and higher education students. This is particularly clear during university strikes, where university websites enable students to complete registration and understand the requirements through dedicated online portals²².

Furthermore, citizens and individuals can now submit inquiries and various concerns through multiple approved websites and digital platforms, and access the required administrative results

¹⁹ Article 1, paragraph 2 of Decree No. 21-252, previously cited.

²⁰ Law No. 22-18, dated 25 Dhu al-Hijjah 1443 AH, corresponding to July 24, 2022, concerning investment, Official Gazette, No. 50, issued on 29 Dhu al-Hijjah 1443 AH, and corresponding to June 28, 2022.

²¹ Article 23 of Law No. 22-18.

²² Amina Hamdi, Digitalization of Administration as a Mechanism to Improve Public Service in Public Facilities, Journal of Emir Abdelkader University for Islamic Sciences, Vol. 35, No. 2, Emir Abdelkader University for Islamic Sciences, Constantine, Algeria, October 1, 2012, p. 962

instantly and directly, without the need to physically visit public administrations or institutions. This mode of digital interaction helps overcome temporal and spatial constraints, reduces pressure on administrative facilities, shortens waiting times, and enhances the effectiveness of communication between the administration and citizens. Consequently, it positively impacts the quality of public services and reinforces the principles of simplification and transparency in administrative work.

II. Digitalization and Digital Transformation as Pillars for the Continuity and Governance of Public Institutions and Administrations.

Digitalization and digital transformation have become essential tools for ensuring the smooth operation and effective governance of public institutions, enabling them to meet modern administrative, economic, and social requirements efficiently.

1. Digitalization as a Guarantee for the Continuity of Public Administrations and Institutions:

The digital policy implemented across most public facilities has demonstrated the achievement of the highest objectives and conditions of public service, namely ensuring the smooth and continuous operation of public institutions. This has been practically evident on several occasions, most notably during the COVID-19 pandemic, when citizens could only access information through digital platforms and portals, as was the case for university, institute, and higher education students. This is particularly clear during university strikes, where university websites enable students to complete registration and understand the requirements through dedicated online portals²³.

Furthermore, citizens and individuals can now submit inquiries and various concerns through multiple approved websites and digital platforms, and access the required administrative results instantly and directly, without the need to physically visit public administrations or institutions. This mode of digital interaction helps overcome temporal and spatial constraints, reduces pressure on administrative facilities, shortens waiting times, and enhances the effectiveness of communication between the administration and citizens. Consequently, it positively impacts the quality of public services and reinforces the principles of simplification and transparency in administrative work.

2. Digitalization as a Pillar for Governance in Public Institutions and Administrations:

The use of data and analytics represents one of the most important aspects of the future of governance, requiring institutions to leverage data generated by digital technologies to guide their policies and strategies. Governance is a modern system for managing the administrative side of the public sector, originally emerging as an alternative to traditional management methods in organizations and companies. Its early manifestations were seen in the administrative processes of financial and business systems, particularly in response to major corporate scandals, such as the collapse of the American energy company *Enron* in 2001 and the Singapore Airlines case in 2004, which were caused by fraud and accounting failures.

These events necessitated the rapid adoption of a new regulatory framework to restore the stability of these companies, preserve their reputations, and prevent similar crises. This led to the development of the *good governance system*, which quickly gained international

²³ Amina Hamdi, Digitalization of Administration as a Mechanism to Improve Public Service in Public Facilities, Journal of Emir Abdelkader University for Islamic Sciences, Vol. 35, No. 2, Emir Abdelkader University for Islamic Sciences, Constantine, Algeria, October 1, 2012, p. 962.

recognition for its importance in the administrative management of companies, public institutions, and government agencies. Governments worldwide began adopting these principles in their economic, social, and administrative systems²⁴.

From an administrative perspective, governance is defined as a management system, whether public or private, that includes a set of rules, principles, and procedures aimed at achieving balance and alignment among conflicting stakeholders, based on the pillars of transparency, disclosure, accountability, and equality.

Given the widespread administrative corruption, the proliferation of narrow self-interests, the over-centralization of administrative power, and the absence of ethical restraint in institutional work environments, it became essential for states to integrate digitalization as a new model in modern administrative management. This serves as a transformative initiative to move from the classical administrative system whose methods have become outdated—to a digital governance system, which focuses primarily on enhancing transparency and facilitating procedures to provide highly secure and efficient public services.

Conclusion:

Digitalization is one of the most significant technological advancements of the 21st century, accelerating modernization and administrative development. Its effectiveness is evident, especially when supported by political will, strategic objectives, and material, human, and logistical resources, along with legislative measures ensuring data security.

Digital transformation has become a necessary administrative imperative, not merely a management innovation, contributing to ethical governance, combating corruption, ensuring the constitutional right to information, promoting quality management, developing robust administrative leadership, enhancing transparency, bringing administration closer to citizens, reducing administrative burdens, attracting foreign investment, ensuring tax collection, and securing real estate assets.

Despite the remarkable outcomes, challenges remain, including keeping pace with global technological advances, weak infrastructure, unqualified human resources, and incomplete readiness for digital transformation.

Recommendations:

- Organize public awareness days in institutions to educate citizens about digitalization and familiarize them with digital platforms.
- Provide intensive training for employees on modern information technologies to enhance understanding and adaptation to technological developments.
- Ensure regular funding for digitalization programs, with monitoring mechanisms to oversee progress.
- Identify and address obstacles in digital administrative processes to create an integrated information society.
- Learn from successful international digital governance models.
- Hold national and international academic conferences on digital transformation and issue recommendations to enhance practical digital administration.

Develop a legal framework for secure electronic interactions, including penalties for breaches and cybercrime.

²⁴ Ibrahim Al-Khalouf Al-Malkawi, Governance: Concepts and Practices, 1st ed., Al-Waraq Publishing and Distribution, Jordan, 2023, p. 30.

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