

Strategies for Implementing Administrative Digitization in Algeria: Models and Obstacles

Bramgui RADHIA¹, Trifa MOHAMED²

¹University Center Tipaza, (Algeria), bramgui.radhia@cu-tipaza.dz,

²University of Mohammed Seddik Ben Yahia Jijel, (Algeria), mohamed.trifa@univ-jijel.dz

Received: 09 /16 / 2024 ;**Accepted:** 11 / 25/ 2024 ;**Published:** 12 /16 /2024

Abstract:

The purpose of this study is to investigate Algeria's administrative digitalization implementation strategies and challenges. It aims to elucidate the notion of administrative digitization and the conditions for its execution, while accentuating the key administrative digitization models in Algeria and the impediments impeding the digitalization of administration. The study included Algeria's future digitalization as well. After evaluating the literature using a descriptive analytical technique, the research produced a set of conclusions and suggestions. Adopting different legislative and security steps to reduce the hazards related to administrative digitization was one of the main conclusions. As part of this, cybersecurity safeguards are being put in place to increase confidence in electronic administrative processes. The report offers a thorough assessment of the accomplishments to date as well as the problems that still need to be overcome, providing insightful information on the present and potential future states of digital transformation in Algeria's public administration.

Keywords: Administrative Digitization, Digitization, Models, Obstacles, Strategie

Jel Classification Codes : XN1 ,XN2

How to cite this article by the APA method:

Bramgui radhia, trifa Mohamed (2024), **Strategies for Implementing Administrative Digitization in Algeria: Models and Obstacles**, Economic Researcher Review, Volume 12 (2), Algeria: University of skikda, pp 258 -272.

1. Introduction.

Given the changes and the acceleration in the production of information occurring worldwide, we are compelled to keep pace with events and align ourselves with the trends of the era. In this context, digital transformation has become an inevitable necessity, requiring adherence to its rules and compliance with its conditions, especially in light of the increasing complexities of the modern organizational environment and the challenges it imposes on institutions in enhancing their efficiency and improving their performance. This situation has led to the need to eliminate the negative aspects of classical bureaucracy and to streamline administrative processes at all levels by shifting from traditional management practices, which rely on conventional methods, to the use of technology in administration. The goal is to provide services that are aligned with technological advancements. Based on this, most countries have moved towards digitizing administration.

In the pursuit of improving service and simplifying administrative processes, Algeria has worked towards transitioning to a digital environment by modernizing its administration and linking it to both the external and internal world via the internet. Consequently, several changes were made to the classical organizational structures, aiming at fostering national development by focusing on the individual and reducing bureaucratic procedures, starting from the year 2013.

From the above, the research problem can be outlined as follows:

What are the most important models adopted for administrative digitization in Algeria under the digital strategy of 2013?

To answer the main research question, the following sub-questions were posed:

- What is meant by administrative digitization, and what are the reasons for its adoption?
- What are the most important models that the Algerian state has digitized to enhance administrative digitization, and what are the obstacles to its implementation?

1.1 Objectives of the Study

The main objective of this study is to highlight the models of administrative digitization in Algeria and the obstacles to their implementation by:

- Establishing the theoretical foundation by providing definitions of the key concepts related to the study (administrative digitization);
- Identifying the importance of administrative digitization models in Algeria based on the 2013 digital strategy;
- Recognizing the obstacles to implementing administrative digitization in Algeria;
- Highlighting the future of administrative digitization in Algeria.

1.2. Study Methodology

Given the various aspects covered in the study and to answer the main research question and analyze the points included in the study topic, the descriptive and analytical approach was adopted to extract the most important models and obstacles hindering the implementation of digitization in Algerian administration, aiming to reach conclusions and provide recommendations.

1.3. Study Sections

To deeply investigate the subject under study, it was divided into two sections: the first one covers the reasons for transitioning to administrative digitization, and the second covers the models and obstacles to implementing administrative digitization in Algeria.

1.4. Previous Studies:

- **Study by Khadija Qamar (2023), "Administrative Digitization in Algeria – Between the Necessity of Transition and Implementation Barriers," *Al-Mufakkir Journal*:** This study aimed to highlight the importance of administrative digitization in improving public administrative work by generalizing the use of information and communication technology in administrative management. Using an analytical, inductive, and deductive approach, the study analyzed the reality of digitization in Algerian administration. It concluded that several legislative and security measures must be implemented to avoid the risks of administrative digitization, particularly through cybersecurity, to build trust in electronic administrative transactions.
- **Study by Abdel Karim Ashour (2021), "The Role of Administrative Digitization in Improving Public Service: The Algerian Model," *Research Journal*:** This study aimed to clarify the extent to which administrative digitization contributes to the development and improvement of public service delivery in Algeria. The study focused on case models such as civil registration, social security, and Algeria Post. The study concluded that the development of public service mechanisms and the enhancement of the services offered depend on digital mechanisms that allow the transition from slow, routine, and bureaucratic procedures to new concepts associated with responsiveness and transparency.
- **Study by Zhang et al. (2021), titled "How Does Digital Transformation Improve Organizational Resilience? Findings from PLS-SEM and fsQCA":** This study aimed to explore the impact of digital transformation on organizational resilience with innovation as a mediating variable. The study distributed 339 questionnaires to a Chinese company and concluded that digital transformation contributes to improving organizational resilience. Furthermore, both exploitative innovation and exploratory innovation have a positive impact on organizational resilience.

2. First Section: Reasons for Transitioning to Administrative Digitization

The tremendous technological advancement witnessed globally in economic, social, and political fields has resulted in smart innovations that have allowed the emergence of what is known as digitization.

2.1. Definition of Administrative Digitization

The concept of administrative digitization is closely related to electronic administration and is defined as relying on various modern technology applications in the field of administration and organizations to facilitate and expedite tasks. It involves transitioning from traditional work, which requires the presence of service applicants and their direct contact with administrative bodies, to a new model that includes remote communication and virtual service requests through various available networks (Achour, .2021, p. 282)

It has also been defined as a modern technique for processing information, where data is converted into digital signals by being captured by a converter device that translates them into binary data accurately. It has also been described as "the process of transforming all traditional administrative tasks and services into electronic tasks and services that are executed at high speed, with utmost precision, and without the use of paper." (El Hamza, 2009, p.21). Another definition is "the process by which information is converted from its traditional form to a digital form, whether that information is images, textual data, audio files, or any other form." (Hafdaoui & El Hamzaoui, 2016, p. 5). Additionally, it has been defined as "an administrative strategy for modernizing information, aimed at providing better services for citizens and institutions, with optimal utilization of available information resources through the deployment of available material, human, and moral resources, within a modern electronic framework to make the best use of time, money, and effort, while meeting the targeted demands and achieving the required quality." (Zinhom, 2006, p.46).

From the above, it can be concluded that administrative digitization is the digital space that contributes to standardizing electronic work procedures and norms, regardless of the form, type, and nature of the organization.

2.2. The Difference Between Digitization and Digital Transformation:

Digitization and digital transformation are often used interchangeably, but in reality, there is a significant difference between the two concepts. Digital transformation involves converting analog data into digital formats and improving the flow of operations through information technologies, optimal data use, and their re-engineering and analysis for decision-making.

On the other hand, digitization is related to fundamental changes in the behavior of citizens, organizations, and governments due to digital technologies. It is a process of deep reorganization of the workflow of existing functions, with the widespread use of digital tools to execute them. This leads to a significant improvement in their characteristics (e.g., reducing execution time, lowering resource consumption for tasks), as well as the emergence of fundamentally new features and properties (Chenoufi, 2009, p. 4).

The table below outlines the key differences between the two terms:

Table 1: Key Differences Between Digitization and Digital Transformation

Element	Digitization	DigitalTransformation
Scope	Data and information	Processes and business operations as a whole
Range	Converting data only	Redesigning business models
Goal	Improving access and storage	Enhancing efficiency and fostering innovation
Technologies	Data scanning tools	Advanced technologies such as AI
Impact	Improving access to information	Changing how organizations operate entirely

Source: Prepared by the authors.

2.3. Importance of Administrative Digitization

Modernizing administration and transitioning from traditional to digital administration and effectively utilizing modern technology will inevitably lead to a strong administration that organizes and rationalizes its daily operations expenses. The main reasons for adopting administrative digitization include:

- Improving the quality and level of required services;
- Overcoming bureaucratic complexities and routines;
- Reducing service delivery costs;
- Ensuring transparency and reducing bureaucratic ailments such as favoritism and bribery;
- Enhancing speed and accuracy in administrative work and service delivery;
- Reducing excess human resources;
- Ensuring equality among citizens in service delivery.

Overall, the importance of electronic administration lies in improving performance efficiency and decision-making by providing information and data to those who need it and facilitating access to it with minimal effort through available automated search tools and the ease of holding remote meetings.(Mawazi, October 2021, p. 372)

2.4. Reasons for the Transition to Administrative Digitization.

Globalization and the advancements occurring in developed societies have led to the emergence of administrative digitization, which was introduced to achieve better performance. This includes simplifying procedures, eliminating bureaucracy, and rethinking the relationship between citizens and the administration to provide services at any time and wherever they may be. Administrative digitization represents one of the new methods for developing administrative work and advancing it in various fields. Many countries have come to realize the necessity of change and keeping pace with globalization by transitioning from traditional administration to electronic administration, aiming to bring about transformations and benefit from technological advancements to save time and effort, while building trust between citizens and the government. However, this transition has been slow due to certain obstacles that hinder its proper implementation, such as a lack of material and financial resources, a shortage of specialized human resources, and technical barriers that undermine the administration's ability to maintain information security. All of these factors have prompted the shift towards administrative digitization.

a. Increased expectations and pressure from citizens:

There is a growing demand for better and faster services, especially as citizens become more aware of their rights to access information and understand administrative mechanisms.

b. The growing role of information networks:

These networks have established new values such as transparency, accountability, review, and participation.

c. Global trends towards openness, interconnectedness, and integration among different human societies:

The global movement towards interconnectedness and integration supports the need for administrative digitization.

2.5. Requirements for Administrative Digitization.

To construct a comprehensive system based on data digitization, the following elements are essential:

a. Software and Networks: Software comprises the set of programs used to operate computer systems and utilize their various capabilities. Networks, on the other hand, are the electronic connections extending across the communicative fabric of internet networks and extranets. The internet network represents the value network for the organization and its electronic administration (Kassimi Nasser, 2017, p. 235)

b. Computer Hardware: This represents the "brain," providing logical databases that facilitate the documentation and circulation of data and information (Nawi Taha Hussein, 2018, p. 134)

c. Human Resources: This is the principal actor among these elements, as without it, no administrative process within the organization can occur. Human resources play a vital role in innovating and developing computer systems, as well as in developing various modern software applications suitable for each technological advancement.

3. Second Section: Models of Administrative Digitization Application in Algeria and Its Obstacles

3.1. Algeria's Digital Strategy

Prior to 2013, Algeria did not have a clear strategy to catch up in terms of digital transformation, except for some sectoral policies specific to the postal and information technology sector. These policies aimed to prepare an infrastructure conducive to strategies and a legal and structural environment supporting various digital transformation projects. To address the delay in the country's global competitiveness, the Algerian government developed a strategic project in consultation with various administrations, public bodies, private operators, and social partners. This project is the first

of its kind since independence, with clear and precisely defined objectives to reach a knowledge society and knowledge economy. This strategy revolves around 13 tracks as follows (El-Akel Abdelghani, 2022/2023, pp. 210-211):

- a. **First Track:** Accelerating the use of information and communication technologies in public administrations. This will necessitate rethinking structural, organizational, and service aspects in terms of time and place for information availability and access to online services, relying on the Internet.
- b. **Second Track:** Expediting the use of information and communication technologies in institutions and companies by integrating technology into the economic sector to increase performance and competitiveness, and improve relationships with stakeholders.
- c. **Third Track:** Developing various incentive measures and mechanisms to enable widespread utilization of technological equipment and resources by citizens.
- d. **Fourth Track:** Promoting and developing the digital economy by enhancing entrepreneurship and encouraging technology and content industries. This includes establishing technologically-oriented cybernetic parks such as those in Sidi Abdallah, Oran, and Annaba.
- e. **Fifth Track:** Strengthening high-speed communications infrastructure to include elements of quality, speed, and security, as it hosts services directed to stakeholders online.
- f. **Sixth Track:** Developing and enhancing digital human skills through technology use training.
- g. **Seventh Track:** Supporting research, development, and innovation to create added value in the field of information technology.
- h. **Eighth Track:** Developing the national legislative and legal framework to encompass various issues raised by technology.
- i. **Ninth Track:** Information and communication through increasing awareness of the importance of information and communication technologies.
- j. **Tenth Track:** Valorising and enhancing international cooperation through acquiring new technologies, knowledge acquisition, and improving the country's image and competitiveness.
- k. **Eleventh Track:** Evaluation and monitoring mechanisms through credibility and effectiveness, with periodic evaluation based on a system of standardization and indicator monitoring.
- l. **Twelfth Track:** Organizational frameworks characterized by restructuring the Ministry of Post and Information and Communication Technologies, in addition to establishing a digital committee.
- m. **Thirteenth Track:** Identifying priorities with economic impact and exploiting all available funding sources with detailed evaluation.

3.2. Models of Administrative Digitization in Algeria

Improving the quality and standard of services provided to citizens, while enhancing and developing public facilities, is the aim of public policy. Algeria has begun to move towards administrative digitization. The following presents the most important models of administrative digitization in Algeria. (Bouras Abdelkader, 2018, pp. 126-127)

a. Digitization of Civil Status Service

A web application has been created that allows the input of Algerian citizens' data, including civil status contracts and documents, into an advanced database. This database is stored on main devices for later retrieval, either to obtain accurate information through a search conducted by a municipal employee, or to enable the civil status officer to display electronic copies of citizens' civil status documents and contracts on the internet, allowing them to be saved or printed.

b. Digitization of Passports (Biometric Passports)

This document has received the lion's share of attention from the Ministry of Interior and Local Communities, due to its paramount importance to citizens. A special section on the electronic website is dedicated to it, specializing in electronic passport applications. This section includes all necessary information, from the application form and required documents to the necessary photo standards, as well as the ability to track the stages of obtaining this document.

c. Digitization of National Identity Card (Biometric)

The Ministry of Interior and Local Communities in Algeria has implemented a series of procedures and techniques to enable the acquisition of the biometric national identity card. This is achieved through a unified electronic application developed by the ministry. Citizens can complete the procedures for obtaining this document, starting from downloading the application form, tracking its processing stages, to knowing when it's ready for collection, all through this electronic application.

d. Digitization of Banking Services

The banking sector has witnessed a shift towards electronic banking, which involves banks providing services through what are known as electronic communication networks. This is evident in electronic payment messages, credit cards, Visa cards, Master Cards, etc.

e. Digitization of Judicial Services

The justice sector aims to provide the highest quality and best services to citizens in real-time while ensuring the confidentiality and security of information to protect individuals' privacy. This has focused on three main areas:

- Personalization of electronic signature chips
- Establishment of a call center
- Online extraction of criminal records and nationality certificates

This project is considered technically secure, confirming the Ministry of Justice's determination to enter the world of digital justice by generalizing the extraction of all documents online. Public administrations can also use the technical system to request specific documents or information, as well as to verify the authenticity of documents submitted by citizens through a system that the Ministry of Justice will provide.

In the same context, a call center has been established with a free green number (7810) available to citizens, lawyers, and judicial officers to raise their concerns and receive guidance. Thus, the justice sector has also received its share of administrative digitization.

f. Digitization of the National Social Insurance Fund for Salaried Workers

The National Social Insurance Fund has been digitized through the "Espace El Hanaa" service, which offers several services including (Achour, .2021, p. 287):

- "My Reimbursements" Service: This allows for reimbursement of all medicine-related expenses, specifying the beneficiary (the insured, spouse, or child), treatment date, payment date, amount, as well as prescription details including types and quantities of medicines.
- "My Requests" Service: This electronic section includes applications for health insurance cards, sick leave requests, and death grant applications.
- "Notifications" Service: This relates to medical control summons lists and contains reasons for control invitations or rejection warnings.

The Social Security Fund for Workers also provides reception, communication, and social listening cell services through an electronic form (purpose of communication, nature of deposit, date of deposit, organization's response).

g. Digitization of Algeria Post

Algeria Post has been digitized through the following (Achour, .2021, p. 282):

- Account Statement Request: This allows account holders to check their financial balance (previous and current). It also shows the account holder's last transaction, associated fees, and the transaction code.
- **Postal Check Request:** Through an electronic form, customers can request their postal checks, specifying the number of checks they wish to obtain. They are required to include their personal

phone number in one of the fields to receive notification when the postal check arrives at their affiliated post office.

- **Account Statement:** This service allows customers to view the number of account transactions (withdrawals and deposits) that their postal account has undergone during a specific time period chosen by the customer when filling out the electronic request form.

- **SMS Service:** Through this service, customers receive text messages notifying them of payments or deductions from their current postal account.

- **ATM Services and Gold Card:** The Automated Teller Machine (ATM) provides the opportunity for 24/7 cash withdrawal services. It also allows for the payment of certain bills such as water, electricity, and gas.

h. Digitization of the Higher Education Sector

The features of digitization in the higher education and scientific research sector emerged through the preliminary draft of the Higher Education Orientation Law, held on October 22, 2020. In terms of digitization, it included a framework for higher education institutions to join the digital technology era through (El-Akel Abdelghani, 2022/2023, pp. 210-211):

- Dissemination of education via digital platforms as a tool to support students;
- Training on the use of modern academic research tools;
- Development of institutional capabilities in terms of human resources, infrastructure, and digital equipment.

The aforementioned project is considered preliminary because subsequently, a clear roadmap with specific time-bound programs was developed on October 24, 2024. This took the form of the Digital Master Plan (SDN). The general framework of this plan aims to prepare the digital future for higher education institutions and allocate the necessary digital tools and means to implement projects according to a timeline from 2022 to 2025, encompassing 13 strategic tracks.

3.3. Obstacles to Implementing Administrative Digitization in Algeria

There are several obstacles that complicate the application of administrative digitization in institutions, including :(BouadiFatna, p. 2)

a. Technical and Technological Obstacles:

These include weak infrastructure, insufficient spending on research and development, inability to ensure the provision of administrative digitization requirements for all service recipients due to weak electronic awareness or high acquisition costs, as well as insufficient communication lines and slow internet speeds.

b. Organizational and Administrative Obstacles:

These include lack of knowledge and skills among human resources in institutions regarding electronic information exchange systems, weak experience in real-time problem-solving, and the dominance of bureaucratic thinking. This leads to resistance to change due to fear of losing previous privileges, infringement on authorities, potential accountability, or even job loss, given the transparency that characterizes administrative digitization.

c. Legislative Obstacles:

- Difficulty in legal prosecution of information hackers and forgers.
- Challenges in creating a legislative and legal environment compatible with digital work, which requires significant effort and time.

d. Security and Social Obstacles:

Administrative digitization requires facilitating information exchange and immediate access upon request. However, several issues complicate this, including:

- Hacking: Attacks on and infiltration of websites.
- Viruses: Programs with destructive aims that cause significant damage to systems, both software and hardware.

- Electronic Espionage: Following the information and technology revolution, developed countries have reduced their reliance on human elements in favour of technology for espionage.

When countries adopt digitization systems, they convert their archives to electronic format, exposing them to significant risks of espionage, disclosure, transfer, and even destruction of documents related to individuals, institutions, administrations, and even states.

e. Human Obstacles:

These include:

- Shortage of human competencies necessary for using technologies.
- Conflict between individual needs and desires.
- Low uptake of available training methods to improve human resource performance.

f. Financial Obstacles:

These include:

- High costs of providing infrastructure, including purchasing hardware, application software, creating websites, and network connectivity.
- Investment in information technology is very expensive and requires continuous maintenance, which means most developing countries struggle to allocate budgets of this size.
- Insufficient financial allocations for training and qualification processes to implement digital projects.

3.4. Addressing the Theory-Practice Gap in the "Digital Algeria" Project

To realize the "Digital Algeria Strategy" in practice, there is a need to reconsider the formulation of this strategy while providing periodic follow-up on administrative digitization steps within public administrations and institutions. It is necessary to attempt to develop precise solutions for various obstacles to the development of information and communication technology programs, especially concerning digital content development, and to provide legal and legislative frameworks that guarantee the protection of the transformation process. This can be achieved by following a precise methodology to deal with the theory-practice gap on one hand, and to advance the use of information technologies in Algeria on the other.

a. Addressing the Theory-Practice Gap in the "Electronic Algeria" Project

The gap between theory and practice in the Digital Algeria strategy, which refers to the difference between the characteristics of the proposed model and the reality that does not meet the ambition of this project, can be addressed through the following two methods (GachiKhaled, 2013, pp. 107-108)

- **First Method: Modifying the Theory and Proposed Model to Become More Compatible with Reality**

This involves focusing on digital services in areas with appropriate infrastructure, or concentrating on fewer essential public services, instead of distributing efforts in digitizing services that cannot be dealt with according to the available capabilities in reality. According to experts, the main reason behind the delay in the Digital Algeria strategy was its engagement in many details that require more than five years to implement.

- **The Second Method: Changing Reality to Become More Compatible with the Proposed Theory and Model**

The process of addressing the funding shortage issue is accomplished by introducing another government sector with greater financial and funding capabilities to contribute to the development and construction process. Experts have revealed that the reason for the failure of Algeria's digital strategy was the lack of participation from various ministerial sectors in coordination with the

Ministry of Post and Information and Communication Technologies in implementing the project. They noted that the project was very broad and included minor details that caused delays in its execution. The experts pointed out that a project of the magnitude of "Digital Algeria" should not be entrusted to the Ministry of Post alone, but rather all sectors should be involved in its implementation.

b. Advancing Information and Communication Technologies in Algeria:

Advancing information and communication technologies in Algeria requires a set of fundamental elements, which include (Meziane Mohammed Toufik, 2018, pp. 114-116):

- **Generalizing Internet Usage:** The widespread proliferation of the Internet, its increasing use, and its emergence as a foundation for digital commerce have helped make it the most cost-effective and efficient way to access national and global markets. Therefore, Algeria must include in its upcoming and urgent projects the necessity of expanding Internet usage and improving networks. This can be achieved through upgrading outdated telephone lines, adopting new advanced systems and networks in the telecommunications sector with high speed, efficiency, and responsiveness, maintaining a balance between Internet service prices and income levels, making these costs reasonable and accessible to the majority of citizens, as well as establishing public Internet access points based on high-bandwidth technology.

- **Liberalizing the Telecommunications Services Market:** One of the factors limiting the development of information and communication technologies in Algeria is the closure of competition in ICT service markets. Therefore, it is necessary to reduce the role of the public sector and expand the liberalization of these services from monopoly, in order to create a competitive environment and market with equal opportunities. This will serve as an incentive and encouragement to develop and expand telecommunication networks, increase penetration rates, reduce service acquisition costs, and improve quality and standards.

- **Creating a Local Information and Communication Technology Industry:** Developing an Algerian ICT industry is considered one of the fundamental pillars in the future of Digital Algeria. Reliance on importing ready-made technology should be avoided; instead, efforts should be made to establish a local industry for producing IT equipment and software. This industry can be developed through adopting a set of measures, such as stimulating local and foreign investments, entering into partnership projects with global companies to establish specialized factories in the field of telecommunications devices and accessories, and regional and international cooperation in building the necessary capacities and cadres to develop this industry.

- **Improving Access Opportunities to Information and Communication Technologies and Developing Them:** New economies rely on increasing investments in ICT due to their strong and multiplier effect on the economy as a whole. Scientific and technological knowledge now represents 80% of advanced world economies, while the remaining 20% is the share of capital, labour, and natural resources. Therefore, working on improving access opportunities to ICT in Algeria will increase the creative and cognitive abilities of workers in Algerian institutions and create positive changes in the work environment and production methods.

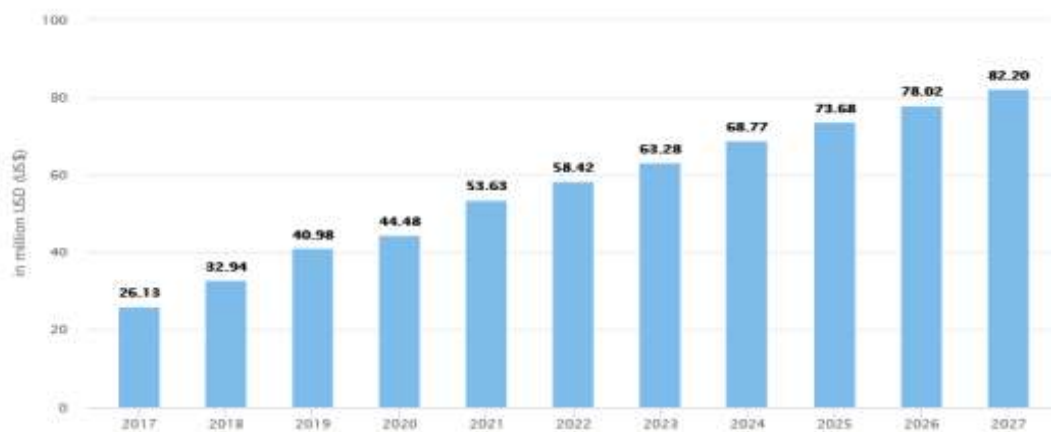
- **Supporting Small and Medium-Sized Enterprises' Ownership of Information and Communication Technologies:** Algeria can benefit from developing and growing information technology to increase company performance and competitiveness in the business field. To achieve this, it should support small and medium-sized enterprises' ownership of ICT, develop or import applications for commercial use, and expand the scope of online service provision by institutions.

- **Activating Partnerships with Foreign Investors:** To exchange expertise and train personnel in software and systems design, and to modernize and update electronic payment methods, partnerships with foreign investors should be activated, especially with countries leading in e-commerce. This can be done through adopting credit cards and smart cards, adapting Algerian society to these types of tools, considering them as mandatory and essential for advancing and developing the banking sector, as well as creating a business climate in Algeria to attract and stimulate foreign direct investments.

3.5. Digital Transformations in Algeria :

It is expected that the value of transactions in the digital transfer market in Algeria will reach USD 63.28 million in 2023. The compound annual growth rate (CAGR) for the period 2023-2027 is projected to be 6.76%, leading to an expected total amount of USD 82.20 million by 2027. In the digital transfer market, the number of users is expected to reach 27 thousand users by 2027. The average transaction value per user in the digital transfer market is anticipated to be USD 3.97 thousand in 2023.

Figure 1 : Value of Digital Transfer Transactions in Algeria for the Period 2017-2023 with Projections for 2027.



Source: Statista. (2023, April). Digital Payments Algeria. Retrieved from Statista:

<https://www.statista.com/outlook/dmo/fintech/digital-payments/algeria>

3.6. Strategic Plan for Administrative Digitization in Algeria in the Upcoming Phase

Algeria intends to generalize and accelerate the process of digital transformation in the country's economy and social scope. In order to achieve this ambitious and strong leadership goal, it has become necessary to develop a strategic plan for digitization in the upcoming phase, with a global dimension. This plan will outline the means of implementation to achieve the opportunities and goals set for the future. The strategic plan is based on a set of concepts, including: the state, the Algerian platform, big data, digital economy, business intelligence, information systems security, and more.

Officials and experts have drawn the outlines of Algeria's digitalization program for the coming phase, which is represented in an action plan that includes exploiting technological applications that enable citizens to address their concerns in various sectors with the click of a button. This is possible due to Algeria currently having 420 digital platforms, which is part of the strategic project for "Electronic Algeria."

The key elements of this strategy have been defined as follows :

- **Promoting digitization** by mobilizing economic institutions, operators, startups, research, and training institutions in the process.
- **Allowing all Algerians** access to information and communication technologies, including networks and services.
- **Enhancing capabilities in information and communication technologies** and promoting their use in various fields of life.
- **Strengthening e-government** and improving the digital ecosystem, as well as establishing general principles for digital trust.

- **Instilling a digital citizenship culture**, which would serve as a cornerstone for the success of this desired transformation.

On the other hand, the Ministry of Post and Telecommunications has confirmed its readiness to cooperate with all partners, investors, professionals, and experts to achieve a rapid digital transformation in the country, through its presentation of the Ministry's action plan, which we summarize in the following points :

- Generalizing the use of information and communication technologies.
- Increasing the opportunities for citizens to integrate into the information society.
- Expanding the range of internet frequencies.
- Modernizing transportation and access by increasing internet bandwidth and multiplying it.

Therefore, there must be a rapid initiation of digital transformation and the introduction of artificial intelligence technologies and big data analytics over the next five years, in all sectors that involve public-benefit tasks, such as higher education, health, transportation, energy, industry, housing, and public administration.

3.7. The Future of Administrative Digitization in Algeria

In light of technological change and the continuous development of various communication devices, data transfer and exchange over the Internet, and reliance on intelligent programs, change has become more than necessary to face these challenges for organizations that rely on digitization in their transactions through securing this data and information.

This was pointed out by researcher David Gelernter, who stated that "the form of technology after half a century will depend on the programs we invent." (Brockman, (2009), p. 180) Gelernter attributes this development to competition in developing electronic program structures. Therefore, institutions in the midst of the technological revolution in various fields constantly seek to renew knowledge to control these technologies, in order to maintain their stability, growth, and decision-making independence.

Algeria is among the countries seeking to create an organizational climate to develop itself by investing in human resources through internal and external training and development, aiming to improve the performance of its institutions, whether civil, governmental, private, or security-related. This is achieved through the following: (El-Darraj Zerig, 2021, p. 188)

- Increasing the role of digital information and communications;
- Raising corporate spending rates on research and development in information and communication technologies;
- Enhancing the role of ICT in improving individual productivity;
- Spreading the phenomenon of remotely managed organizations due to the use of local, wide, and global computer networks, with an expected increase in alliances between institutions, customers, and suppliers;
- Increasing reliance on intelligent system programs to support collective decision-making.

In this theoretical framework of the electronic administrative model, actors within decision-making institutions must move to the field and extend all instructions and material and moral incentives to the class responsible for developing this new model to ensure its success. This is done through the commitment of all active parties in this process to citizenship values that prioritize work perfection, time respect, solidarity, and participation in making certain decisions as a support for institutional development and goal achievement. It also involves reconsidering human resources, training, and development by opening new specializations within universities that align with the modernization of all sectors. Focusing on scientific research, encouraging innovation, benefiting from expertise both domestically and internationally, and creating a suitable climate and environment for

scientific research will provide sources of information, creative ideas, and projects beneficial to society.(El-Darraj Zerig, 2021, p. 188)

4.Conclusion.

In conclusion of our study, we found that administrative digitization is one of the crucial issues in the development of the Algerian government towards achieving digital transformation and improving services provided to citizens. The effective use of digital technology in Algeria is essential for achieving transparency, efficiency, and effective interaction between the government and citizens. Therefore, for the success of this new administrative model imposed by technology, it is necessary to overcome the obstacles to implementing this administrative digitization by selecting human resources with professional competence and providing an appropriate organizational climate for work and integration to ensure the success of this administrative model.

4.1. Results:

Based on the above, we derived the following results:

- Weak technical capabilities and infrastructure to support digitization processes, especially in remote areas;
- The slow pace of the digitization process in general in Algeria compared to other countries;
- Lack of qualified personnel in the field of information technology and management information systems;
- The Algerian experience known as the E-Algeria 2013 project faced many obstacles;
- Among the models studied, it was found that despite the digitization of services affecting various sectors, they are still characterized by slow procedures, which is incompatible with the characteristics of digital administration;
- Electronic illiteracy among many individuals and difficulty in communicating through modern technologies;
- Resistance to change in national institutions by workers against modern technologies, fearing for their positions and professional future.

4.2. Recommendations:

Based on the results, we arrived at a set of recommendations, the most important of which are:

- The need to develop digital training programs that enhance the skills and expertise of employees in the areas of digital transformation, encouraging their active participation in these programs.
- The need to activate the role of digital administrative oversight to monitor departments and services within organizations, analyze negative aspects, and implement corrective actions to improve performance in the labor market.
- Attracting qualified human resources eager to engage with new technologies.
- The necessity of engaging external experts and consultants to complement the digital transformation team within the organization. There are many companies that offer consulting and services for digital transformation.
- Working on adopting a national transformation program, aimed at developing the necessary infrastructure and creating an environment that enables both public and private sectors, as well as non-profit organizations, to achieve the program's objectives.
- Establishing mechanisms to implement and execute the policy of transition to digitization;
- Providing communications infrastructure by improving the internet network;
- The transition to administrative digitization in Algeria requires necessary political support for the project;
- Updating and modernizing laws and legislation in line with ensuring the protection of digital information from breach and violation;
- Relying on methods that use less personal information of citizens when formulating digital services;

- Working to encourage scientific research in the field of computer science and its programming to reach locally developed protection programs;
- Conducting awareness campaigns that explain the advantages of remote services.

5. References

- 1-Achour, A. (2021). The role of administrative digitization in improving public service: Algeria as a model. *Abhath Journal*, 6(2), 282.
- 2-Ait Mahdi, A. (2017/2018). *Humanresource management in light of electronic administration* [Doctoral dissertation, University of Mohamed Lamine Debaghine], p. 30.
- 3-Bouadi, F. (2020). Application of electronic administration for the modernization of public management: The experience of the justice sector in Algeria at the level of Bechar Municipality. *Journal of Studies in Economics*, 7(1), 2.
- 4-Bouras, A. B. (2018). The inevitability of transition to electronic administration to improve public service in Algeria. *Algerian Journal of Law and Political Sciences*, 3(5), 126-127.
- 5-Brockman, J. (2009). *The nextfiftyyears* (F. Ghoneim, Trans.). Abu Dhabi Authority for Culture and Heritage. (Original workpublished 2002).
- 6-Chinoufi, N. D. (2009). *Public management: Target audience for the position of administrator* [University of Continuing Education, Algeria], p. 4.
- 7-El-Akel, A. (2022/2023). Establishing smart e-government by benefitingfrom the experiences of some countries [Doctoral dissertation], pp. 210-211.
- 8-El-Darraj Zerig, A. L. (2021). Electronic administration in Algeria: Between obstacles and future stakes. *Journal of Human and Social Sciences*, 5, 188.
- 9-Gachi, K. L. (2013). ElectronicAlgeriastrategy 2013: A gap betweentheory and practice. *Journal of Management and Development for Research and Studies*, 107-108.
- 10-Haftawi, S., & Hamzawi, S. (2016). Digitalization and its impact on organizational effectiveness. *The Social Researcher Journal*, 12, 5.
- 11-Hammad, M. (2007). The impact of electronic administration on public utility management and its applications in Arab countries [Master'sthesis], p. 12, University of Ben Youssef Ben Khedda.
- 12-Hamza, M. (2009). *The digital library in supporting training and scientific research at the Algerian university* [Master's thesis, Emir Abdelkader University of Constantine], p. 21.
- 13-Kassimi, N. (2017). *Basic terminology in sociology, media, and communication*. Office of Publications, p. 235.
- 14-Lindgren, I., Madsen, C. Q., Hofmann, S., & Mellin, U. (2019). Close encounters of the digital kind: A research agenda for the digitalization of public services. *Government Information Quarterly*. Retrievedfrom<https://www.administrationnumerique.chaire.ulaval/ca/print/pdf/node50>

- 15-Mawazi, I. L. (2021, October). Digitization of public utility services in Algeria : Reality, prospects, challenges. *Arab National Center for Strategic Political and Economic Studies*, p. 372. Germany/Berlin.
- 16-Meziane, M. T. (2018). Development of modern information and communication technologies in Algeria :Between reality and aspirations. *Journal of Administrative and Financial Sciences*, 1, 114-116.
- 17-Munir, A. H. (2009/2010). The digital library in supporting training and scientific research at the Algerian university [Master's thesis], p. 21, Emir Abdelkader University of Constantine.
- 18-Nawi, T. H. (2018). The role of information and communication technologies in improving the quality of public service. *Journal of Contemporary Economic Studies*, 5, 134.
- 19-Radwan, R. (n.d.). *Electronic administration*. Cairo: Information Center and Decision Support.
- 20-Zinhim, S. (2006). *Digital libraries and archives for planning, building, and management*. Al-Nass Printing Company, p. 46.
- .