

E-Government in Morocco: Realities, Challenges and Prospects



LAKIR Radouane¹, HABBOUB Soukaina²

¹Researcher professor, ENSA Berrechid, Hassan 1st University of settat

²Doctoral student, faculty of economics and management, Hassan 1st University of settat

ABSTRACT: In a global context characterized by a digital revolution, digitalization is a growing worldwide phenomenon of the computerization and digitization of the objects or public services that surround us, our professions, or our activities. Digitization offers fast, efficient services that optimize time and costs, reduce regional and social inequalities, and enhance transparency and integrity. It also enables effective and efficient management of public services through access to information, simplification of administrative procedures, and improved relations between the public administration and citizens. In this context, Morocco sees digital technology as a necessary tool for the development of public administration, especially in light of the latest health crisis, which is accelerating the digital transformation of public administration. The aim of this article is therefore to highlight the position of digital administration in terms of digital evolution at the national level and to clarify the prospects for digital development in the Kingdom.

KEYWORDS: digitalization, public administration, morocco, citizen, e government.

I. INTRODUCTION

"The digital revolution is happening so fast that even those who are a little ahead are behind".

Richard Descoings

Digital revolutions are shaking up the economic sectors of the 21st century in much the same way as the Industrial Revolution did in the 19th century. Technical progress, which is opening up new economic prospects, is giving rise to new products, services, and working methods: digitalization.

In this context, digitization, on a global scale, has become an engine of growth for economies and trade of all kinds, as well as a determining pillar for the success of a country's overall socio-economic transformation.

In this context, the Kingdom also sees digital technology as an essential vector for the inclusive development of the Moroccan economy, given its important role in modernizing public services, attracting investment, and creating jobs.

In addition, digitization provides efficient and rapid services to all stakeholders (citizens, businesses, etc.), optimizing efforts, costs, and timeframes, consolidating transparency, combating corruption, and reducing social and territorial disparities. It also enables effective and efficient management of public services by improving the relationship between the public administration and its various stakeholders, providing access to information, and facilitating administrative procedures.

As a result, Morocco has implemented various strategies and plans to upgrade its digital transformation, notably "Morocco Numeric 2013" and "Morocco Digital 2020". It has set up specialized bodies, in particular the Digital Development Agency (ADD). To this end, several programs have been launched, including online payment of taxes (vignette, IR, IS, VAT, etc.), the "Chikaya" portal (complaints), the "Idarati" portal dedicated to administrative procedures, RAMED monitoring, the "TELMIDTICE" platform (distance learning), the "PortNet" one-stop shop, and other public service programs. During the health crisis, these initiatives helped Moroccans to cope better with the constraints of confinement.

However, despite the efforts made by the Kingdom, there is still a real digital divide, which was highlighted by the health crisis and, above all, had the effect of excluding around one Moroccan in six from the digital transformation [1]. In addition, Morocco was ranked 106th out of 193 countries in the E-Government Development Index (EGDI) drawn up by the United Nations in 2020. While equipment, tools, and infrastructure are necessary for digital transformation, our country was ranked 100th out of 176 countries in the ICT (Information and Communication Technology) index drawn up by the International Telecommunication Union (ITU) [2].

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As a result, the kingdom has put forward various initiatives to support the development of digitalization within national administrations. But obstacles remain, slowing down public administration's full entry into the digital age. With this in mind, the kingdom, under the impetus of His Majesty, aims to give new impetus to digital transformation and to promote a proactive and ambitious growth of digital administration. As the world prepares to move into the 5th generation, this development will enable a profound change in the way we communicate, produce, and exchange information. So, what is the position of public administration at the national level in terms of digital evolution? And what are the challenges and prospects for the development of electronic public administration in Morocco?

II. LITERATURE REVIEW

Globally, digital is currently identified as the fourth industrial revolution, creating major economic and social opportunities while also bringing unprecedented transformations and improvements.

Today, digitalization is mandatory for any type of organization (business, public administration, etc.). Indeed, it applies to all fields and can even become a competitive advantage in those fields because it ensures the optimization of time and money by automating increasingly complex tasks.

Over the past few years, digital technology has brought about increasingly rapid change, offering excellent opportunities to certain economic players, often at the expense of traditional sectors. The habits of citizens and businesses have changed, creating a demand for a major transformation of the global economy and society.

The digitalization of public services is enabling public authorities to rethink the way they operate and interact with citizens.

A. Digital transformation

The concepts of digitization and digitalization initially had the same meaning, but today, digitization has a different meaning than digitalization. Digitization is the conversion of physical information into information. It is the act of transforming a material element into a digital format thanks to digital technologies (such as scanning physical papers into PDF format). Digitization also means integrating digital technologies into all activities and creating new ones to diversify. It enables us to rethink the entire organization of a private or public structure in terms of both human exchanges and tools. Consequently, digitization is a preparatory transition to digitalization. Digitization has a particularly technical aspect, whereas digitalization is a more cultural and organizational digitization initiative. [3]

Digitization is the process of converting a process, an object, a tool, or a profession into computer code to replace it and make it more efficient.

Since the beginning of the Internet, digital transformation has begun to replace mail with e-mail, trade shows with web forums, and stores with e-commerce sites. Digitization has thus become a natural phenomenon, combining the emergence of the Internet with the daily progress of information technology.

Digitization refers to the process by which the use of digital or computer technology is adopted or developed to encourage new ways of working, educating, and enjoying benefits that go beyond the digitization of current processes.

Reis et al. identify aspects of digital transformation in three different categories:[4]

- A technological aspect in which digital transformation is based on the use of new digital technologies such as mobile technology, social networks, and analytical or integrated tools. [5]
- An organizational aspect of this digital transformation calls for improved operational processes or the creation of new business models. [6]
- Finally, there is a social aspect in which digital transformation is a phenomenon that affects all aspects of human life. [7]

Roughly speaking, digitalization is the growing phenomenon of computerization and digitization of the objects and services that surround us, our professions, and our activities. It also enables us to adapt to the new realities of our country's environment and, in particular, to the expectations of its customers and citizens.

B. E-government :

Electronic administration is also known as online administration, e-administration, or e-government. E-administration is the provision of public information and services to citizens through the application of ICT and the Internet.

The World Bank (2004) defines e-government as "the use by public bodies of information technologies with the potential to transform relationships with citizens, businesses, and other public bodies. These technologies can serve several different purposes, including improving the delivery of public services to citizens and improving communication with the government and civil society. The result can be a reduction in corruption, an increase in transparency, an increase in user convenience, an increase in revenue, and/or a reduction in costs."

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In parallel, e-government can be defined as the use and application of information technology within government to simplify and integrate workflows and processes, effectively manage data and information, improve the delivery of public services, and develop communication channels for the mobilization and empowerment of people [8]

Online administration plays an indispensable role in:

- Of faster services: better electronic transmission of information and shorter processing times.
- A better managed service: better understanding of costs and sharing between provinces and territories.
- More efficient services: elimination of repetitive tasks.
- An approach that includes all administrative access points: phone, counter, and computer.

At the same time, the implementation of e-government will help to improve the performance and efficiency of public sector governance and achieve the following key goals:

- The birth of an open, modern, and citizen-oriented administration;
- The dematerialization of administration-user data and electronic access to public services and benefits
- Optimizing costs and increasing the efficiency of public administration;
- Simplification of procedures and improvement of public service (to citizens and businesses);
- Optimizing travel and waiting times at counters
- Differentiation of communication channels with citizens, businesses, and between different administrations.
- Service is available 24/7
- Fighting corruption

Furthermore, "e-government is a particularly promising area of ICT application for developing countries. It enables more efficient and transparent administration at a lower cost, promotes wider public participation, and helps to facilitate access to government services for the poor and give them a voice in decisions taken by public authorities" [9].

Accordingly, e-government refers to the provision of public services to users through the use of the Internet and ICTs. The public organization, the citizen, the company, or any other member of the state represents these users. In addition, it is a vehicle for state reform and the modernization of public services based on the potential of innovation and technology. The latter must therefore bring fluctuations that have a positive impact on the user, especially the citizen.

III. E-ADMINISTRATION IN MOROCCO: THE CURRENT SITUATION

Over the past few years, the Kingdom has embarked on a process of in-depth reform of how public administration operates, with a particular focus on e-government. This reform aims to reinforce transparency and good governance in public management. It is a constant reminder of the need to modernize, rationalize, and facilitate public management methods, and to place the citizen at the heart of the Moroccan Public Administration's activities while taking into account financial security, which is a mandatory condition, and the promise to provide citizens with information on the costs and results of its services.

In this context, before presenting the current state of e-government, we will analyze its historical and legal context.

A. Historical background :

For the past 20 years, the technology sector has been evolving in line with political will. A brief historical overview of the measures taken by the government in support of technology sector development in Morocco can be presented as follows [10]:

1956: Established by the Ministry of Posts and Telecommunications.

1984: Established the National Department of Posts and Telecommunications (NDPT).

1995: Introduction of the Internet in Morocco.

1996: "Competitive Morocco" initiative, implementation of a strategic action plan to develop emerging clusters (electronics, information technology).

1997: the Ministry of Commerce and Industry set up an Information Technology Working Group and organized the first national seminar on the "development of teleservices in Morocco". The same year also saw the launch of the first stage in the liberalization of the telecommunications sector, with the promulgation of Law 24-96.

1998: Creation of the Prime Minister's Secretariat of State for the Post Office and Telecommunications and Information Technologies (SEPTTI). Creation of a public-private committee to monitor information technology (CSTI).

1999: Distribution of a license for a second GSM network

1999-2003: the determination to make the development of telecommunications, information and communications technologies (ICT) a national priority and a strategic option for Morocco's economic, industrial, and social development.

In this context, in the light of the royal speech of 2001, "...The strategic importance of the sector for the new economies, combined with the profound and rapid changes taking place in it, as a prelude to the emergence of the knowledge and

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communication society, imposes on us a duty to upgrade, enabling us to equip our country with the capacity to master the new technologies of this society, and to exploit, in an optimal way, the vast possibilities they offer us. Our wish is to ensure the comprehensive and integrated development of our great people, enabling Morocco to take its rightful place in a world transformed by the ongoing digital revolution..." [11]:

2001: Following the royal speech, the government signed a progress contract calling for a "positive break" with the association of ICT professionals and the Association des the Association of Equipment Manufacturers and IT Office Professionals (APEBI).

2003: Establishment of the National E-Gov Committee, which issued the Moroccan e-government plan (2002-2007).

2004: Law 24-96 was amended and supplemented by the new telecommunications law n°55-01. In addition, the process of liberalizing the audiovisual sector was launched, and a vision for the development of the telecommunications sector was put in place (2004-2008).

2005: Development and launch of the "E-Maroc 2010" strategy. This strategy benefited from the consensus of several players in the ICT sector (government departments, existing committees, the private sector, and civil society). It also aims to develop the Information Society and the Knowledge Economy.

2009: Implementing the plan "Digital Morocco 2013", establishing the National Council for Information Technology and Digital Economy, and establishing the National Committee for the Control of Personal Data Protection (CNDP) (law 09-08),

2011: Establish a center to monitor, detect and respond to computer attacks. And the appointment of Barid al Maghreb as certification service provider,

2012: Publication of the national cyber security strategy,

2016: Elaboration of the Maroc Digital 2020 strategy.

2017: Establishment of the Agency for Digital Development (ADD). Issued by Dahir n°1-17-27 and published in Official Bulletin No.6604 of September 14, 2017, law 61-16 establishing the Agency for Digital Development (ADD) was born.

2018: National Plan for Administration Reform and Study on the maturity of online services.

2019: Legal framework for e-government and simplification of administrative procedures. The Head of the Government assigned the Digital Development Agency the mission of developing a document to submit to the Government the direction for digital development until 2025.

2020: Master Plan for the Digital Transformation of Public Administration

B. Legal context :

Today, the dematerialization of public administrations represents a strategic challenge for the development of administrative organizations. Indeed, digital technology is playing an increasingly important role in exchanges and services. The socio-economic development supported by this conversion is only possible if there is a climate of trust for all digital services. Consequently, administrative authorities, public sector bodies, and businesses need a reassuring legal environment to trigger new services, and citizens need to feel legally protected to progressively carry out online transactions.

In this context, as a result of the constant modification of procedures required by the national and global socio-economic context, legal texts at the national level have been adapted to the needs of dematerialization, based on a multitude of texts, in particular:

➤ Law n°53-05 relating to the electronic exchange of legal data, which gave legal recognition to electronic procedures and organized their use.

This law was published in 2007 to establish the regime for electronically exchanged legal data (cryptography) and electronic signatures. It also establishes the legal framework applicable to electronic certificate transactions, and the rules they must follow [12]:

In parallel, the first legal and regulatory framework on the use of electronic certification had already been established in 2007, at the same time as the entry into force of law no. 53-05 on the electronic exchange of legal data. However, this overly rigid framework failed to achieve the expected results and, consequently, did not meet the expectations and needs of citizens and economic players.

It was, therefore, necessary to develop this legal framework to better meet these expectations and offer alternatives, regulated by law, to the "secure" signature alone that existed at the time, which was too restrictive to be extended to all users.

Furthermore, Law 53-05 did not specify the probative value of electronic certificates used for signatures when they were not "secure", nor did it cover all trust services.

There's no doubt that the COVID-19 pandemic accentuated this need, and as a result, public and private online services had to be developed rapidly so that citizens could continue to use them while remaining at a distance. This situation was imposed on all stakeholders to help accelerate the development of many teleservices and thus Morocco's digital transformation.

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➤ **Law no. 55.19 on the simplification of administrative procedures and formalities (Dahir no. 1-20-06, 2020),**

This law came into force on September 28, 2020, to define the principles and reference standards for the management of public services, facilitate and reform citizen and user access to public services, and oversee relations between the administration and users through precise formalities and procedures.

➤ **Law no. 43-20 on trust services for electronic transactions,**

This law was published in Official Bulletin No. 6970 dated 4 Shaaban 1442 (March 18, 2021). Its purpose is to establish the applicable mode:

- Trust services for electronic agreements;
- Cryptology means and services;
- The activities carried out by escrow service providers and the standards that they and the owners of electronic certificates must respect.

As a result, law n°43-20 has enhanced the legal framework, which is now comparable to that of international economic partners but also better adapted to use while guaranteeing user protection.

It also defines the rules applicable to trust services for operations carried out by service providers and the rules to be respected by service providers and holders of electronic certificates.

It also defines the prerogatives of the National Trust Services Authority concerning electronic transactions.

At the same time, this law aims to put in place a more appropriate and less restrictive legal framework than that of the previous law (law no. 53-05), to promote the digitization of low and medium stakes (simple and advanced regimes), while maintaining a legal regime adapted to stakes requiring a significant level of security (qualified regime)

C. The various e-services applied in public administrations:

National public administration has been oriented toward the digital shift to make life easier for citizens and businesses in their interactions with the state [12]. Indeed, in recent years, this transition has begun within the Moroccan e-administration, particularly with the "E-Morocco 2010" strategy, followed by the "Digital Morocco 2013» plan, which set the first milestones with a view to attracting change to the national public administration and followed towards digitalization thanks to the "Morocco Digital 2020" strategy during the health crisis. The latter enabled the creation of a transparent, citizen-user-centric electronic public administration.

The development of digital transformation within the Moroccan public administration, with the selection of digital tools and solutions, creates a lever for social inclusion and human development. To this end, Morocco has implemented digital initiatives in a spirit of national cohesion to improve the quality and efficiency of public services.

The Ministry of Justice has officially launched new digital services to simplify access to its various services for all citizens. These e-services include the electronic criminal record, which has been improved and updated to meet the requirements of court users thanks to the digitization of the application and document collection circuits. He also launched the digital referential portal for judicial personnel, which includes a database of all lawyers, experts, translators, and notaries, among others, and enables Moroccan citizens and legal professionals to enjoy a reliable and up-to-date reference. For traffic offenses, the online payment of fines detected by fixed radar will be equipped with the possibility of consulting recorded offenses from the national identity card, as well as a call center service to ensure effective communication between Moroccans and all players in the justice system, directing them to several services provided by this ministry.

At the same time, the Ministry of Economy and Finance has drafted a digital communication strategy as a key component of its institutional communication policy. Indeed, it is implementing the modernization strategy by adopting the digitization of its services and communication tools with citizens and various stakeholders. This strategy underpins the company's commitment to transforming its administrative reform to better meet the expectations of citizens and socio-economic players in terms of anticipatory and regular access to information relating to its areas of intervention and the electronic services produced by its various structures. In particular, the payment of taxes online thanks to the electronic declaration and payment system, the dematerialization of customs procedures such as the clearance of goods via the BADR system and the ADIL, as well as complaints and suggestions from users via the adoption of a specific decree and the launch of the portal ([www. cikhaya.ma](http://www.cikhaya.ma)).

Furthermore, during the COVID-19 pandemic, the Digital Development Agency has accelerated the implementation of digital solutions that allow the dematerialization of remote procedures in administrative agencies, especially simplifying the physical exchange of administrative documents that pose a real risk factor for COVID-19 infection, while also supporting the Moroccan authorities in adopting this form of working from far away. It has also created a platform enabling public administrations to set up digital order desks to manage incoming and outgoing mail flows electronically, a "tele-reception" platform, and an e-signature.

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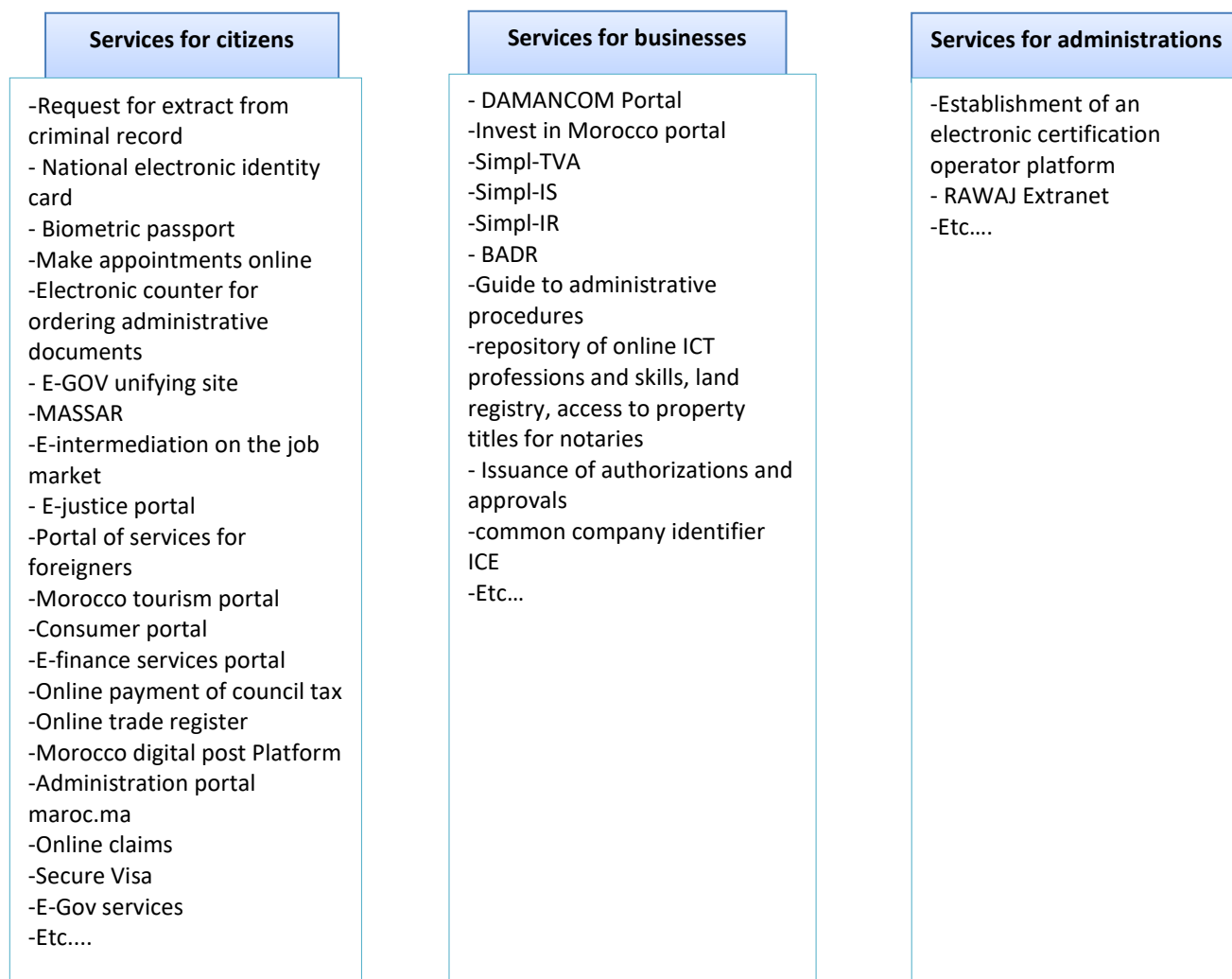
On the other hand, the Ministry of the Interior has created a CRI-Invest platform from its Digital Factory, which digitalizes the investor's path by providing several services, including making appointments, tracking investment documents, or accessing deeds and authorizations online.

In addition, the Ministry of National Education, Vocational Training, Higher Education, and Scientific Research (MENFPESRS) implemented urgent measures during the health crisis to ensure continuity in teaching and learning at school. To this end, it launched the "TELMIDTICE" digital platform for distance learning on TV channels. The Digital Development Agency has also created a Moroccan digital training program called «digital generation », designed to integrate new skills and innovative initiatives into all cycles of education, continuing education, and scientific research. This program has been implemented in collaboration with the Ministry and the various public and private players in the sector.

Furthermore, the health sector also launched a series of initiatives, such as a remote medical consultation website and the creation of a COVID-19 exposure notification application called "Wiqaytna".

Generally speaking, digital technology plays a crucial role in the development process of the public sector during the COVID-19 health crisis, such as encouraging teleworking for public administrations and remote meetings by preferring videoconferencing solutions to exchange information and ensure the continuity of public services rendered to different users (citizens, companies, and administrations).

Figure 1: The various e-services established by Moroccan e-government



As a result, dematerialization is an important lever for the development of Moroccan public administration, helping to deliver high-quality services to a wide range of users, simplify administrative procedures, connect a direct relationship between the administration and the citizens, maintain traceability of various operations, and combat corruption. Despite the efforts made by our country, its position remains almost unchanged in the United Nations ranking. In addition, the health crisis has provided a new opportunity to accelerate public services and the E-Gov program up to 2025.

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IV. CHALLENGES AND WAYS TO IMPROVE E-GOVERNMENT IN MOROCCO

As mentioned above, the Kingdom is transforming its various public services from the traditional physical environment into services that can be accessed online, thanks to the efforts of several public and private players to improve the relationship between the administration and the user. This relationship is governed by various legal and regulatory texts, such as Law No. 53-05 on the electronic exchange of legal data, Law No. 55.19 on the simplification of administrative procedures and formalities, Law No. 43-20 on trust services for electronic transactions, Law No. 61-16 creating the Digital Development Agency, and other texts specifically for e-government.

Consequently, these laws aim to promulgate the general principles and procedures that the administration must follow to promote trust between administrations and users, to provide a framework for the digitization of public services according to transparent procedures and well-defined standards, on the one hand, and to encourage the digitization of administrative procedures and processes, on the other.

A. The challenges of dematerializing public administration in Morocco

The Kingdom has opted for various national programs to develop digitization. These programs have created significant momentum in both the public and private sectors and have resulted in many achievements. This has led to advances for Morocco, such as bringing several e-administration services online, upgrading the productivity and competitiveness of small and medium enterprises, and creating certain prerequisites for strengthening digital confidence.

Nevertheless, putting the e-administration reform into practice has presented challenges and responsibilities, including:

- Legal barriers preventing the effective implementation and widespread use of digital platforms
- Weak digital infrastructure. Indeed, despite the efforts made by the kingdom, there is still room for improvement due to the white zones still to be covered, poor data flow, and low use of data centers.
- A lack of an integrated digital transformation strategy, resulting in a partial response to the needs of all stakeholders (citizens, businesses, etc.).
- Poor quality of service for users
- A lack of digital profiles on the national market
- The culture and mentality of digital users are still divided between the various players (such as public administrations, citizens, businesses, etc.), and the management of the transformation is insufficient, with the challenge of improving the skills of public administrators and democratizing the use of digital technology;
- Each administration has its own independent solution and cannot offer an integrated service due to the lack of a collective repository for processing administrative procedures, enabling a portal for citizens, and avoiding unnecessary efforts by each administration.
- Insufficient financial support
- The absence of a clear and effective public data governance strategy to put digital programs into practice

As a result, digital as a technological lever should not only guarantee the current level of service but also develop and facilitate it.

In this regard, to achieve the goal of producing online public services that are reliable, efficient, simple, and responsive to user needs, digital technology aims to transform working methods in public administration by educating digital mindsets and overseeing the integration of digital culture. Achieving this vision will be possible through the implementation of digital standards and best practices that have been agreed upon and integrated into administrative systems.

As part of the process of creating technical standards for digital services, the digital development agency has created a best practice guide for administrations in the design and digital transformation of public services based on the main international experiences and practices.

B. Areas for improvement :

The adoption of digitalization by the public administration is still a long way off. It requires a set of tools and resources for effective implementation. Some countries without others have been able to excel, yet developing countries are still at the beginning of the road. The cost of information systems, training human resources and preparing them for change, installing NICT, and other challenges are holding back the rapid and effective automation of public services, even if the efforts are deployed, especially in times of health crisis and post-COVID-19.

In this context, the kingdom faces some responsible challenges that remain to be tackled to enable a more efficient digital transition. These challenges have been defined by DDA in its General Guidance Note (NOG), which sets out areas for improvement in the digitalization of public administrations by 2025. [14]

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➤ **Digital government at the service of citizens and businesses**

Public administrations are striving harder to produce better-quality services. One of the main aims of public administration reforms is to improve the quality and efficiency of public services.

According to the survey in the general guidelines for digital development in the Kingdom by 2025, Moroccan citizens spend an average of 50 hours a year interacting with the various public administrations. Businesses, on the other hand, spend an average of 200 hours a year in contact with public services. As a result, citizens and businesses alike are not satisfied with the quality of public services, despite the various e-government initiatives that have been put into practice in recent years.

However, the e-services on offer have not yet met the expectations of Moroccans and businesses due to the lack of end-to-end digitization and the inadequate ergonomics of the sites.

To this end, DDA, in collaboration with the government, aims to improve the satisfaction rate of public service quality through three key aspects:

- Set up an innovation project to broaden the scope of digital initiatives structuring the kingdom's digitalization and to drive forward the transformation of public e-services.
- Implement a general plan for effective interoperability of administrations (shared services, etc.) and fundamental prerequisites (electronic signature, etc.).
- Optimize the public service experience by placing the citizen at the heart of this digital transformation.

➤ **Developing productivity and competitiveness in the digital economy**

A competitive economy thanks to performance benefits driven by a digital ecosystem and innovation. According to the note, between 2000 and 2015, the digital economy's productivity improvement was achieved mainly through the accumulation of fixed capital. To this end, it is becoming essential to seek productivity gains to fix and activate growth in the Moroccan economy. In this context, DDA considers digitalization to be a real asset for wealth creation and economic competitiveness. As a result, the agency also stresses that digital transformation allows Morocco to position itself as an "African digital hub to attract innovative digital companies, investment in digitalization, and talent from all over the African continent, and to bring together Morocco's technological offerings and entrepreneurial ecosystem".

➤ **A pillar for social inclusion**

DDA points out that digital could open up new perspectives by helping to reduce social inequalities by extending Internet access, and also be a vector for the development of rural regions. Indeed, digital will be dominant in the field of education thanks to the use of new technologies to develop access to education and training throughout the kingdom, especially in rural areas. Healthcare could also benefit from telemedicine and access to care, especially in regions with low medical capacity, to achieve a territorial rebalancing. Last but not least, this approach can even improve access to social support and financial inclusion for vulnerable citizens.

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In addition, to ensure full mobilization of the potential of digitalization within public administrations and also in Morocco's development projects, it is necessary to put into practice the main recommendations, which are as follows:

- Complete the regulatory framework: This involves drafting laws and decrees consolidating both the legal and technical aspects essential to the development of electronic exchanges and transactions through the electronic signature and the unique digital citizen identifier while respecting guarantees on the protection of personal data.
- Upgrade the digital infrastructure: the kingdom must continue to improve existing infrastructure and create advanced ones. We need to launch a very rapid broadband distribution operation across the whole of Morocco, including white zones, to combat the digital divide exposed during the COVID-19 pandemic and provide access to the entire territory, especially in rural areas, to a quality connection with sufficient bandwidth for users who have become essential, such as distance learning. It is also recommended to consolidate the level of competition in the fixed and mobile broadband markets via the entry of new Internet service providers or infrastructure operators under the effective control of the national telecommunications regulatory agency. Finally, it is recommended that infrastructure be shared between players, including fiber optic networks owned by public companies.

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- Upgrading human capital: the kingdom needs to implement a national digital training program at all qualification levels to tackle the human capital challenge;
- Improving digital platforms: it is necessary to advance the digitization of Moroccan administration through the development of a single digital platform for all services to citizens, businesses and a participation platform at a territorial level to facilitate public administrative services in a faster timeframe.

V. CONCLUSION

Digital technology is seen as an undeniable lever for the kingdom's economic and social development. Indeed, on several occasions, the royal authorities have stressed the need to make the digital transition a catalyst for structuring change to improve the quality of services rendered, increase efficiency, boost the economy, and generally give Morocco a new lease of life in terms of development.

In this context, His Majesty the King has stated in his speeches that the use of new technologies helps to promote the accessibility and quality of services rendered to citizens. In this respect, he insisted on the need to generalize e-administration according to an integrated approach, enabling the different services to have collective access to information and improving the relationship between the public administration and its users, as well as rebuilding the confidence of Moroccan citizens.

In parallel, the covid 19 health crisis has also advanced the development of digitalization within public administrations to simplify and bring services closer to citizens, businesses, and even between public services.

Consequently, the kingdom has been no exception to this profound change in the international marketplace. Several strategic initiatives have been launched in various fields, such as tax payments, online applications for administrative documents (e.g. criminal records), payment of offenses, online complaints, distance learning and working, etc.

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Despite these efforts by Morocco to develop the digitization of public services, the delays accumulated by previous strategic programs have widened the "digital divide", which remains substantial in the kingdom and is consequently leading to a gradual decline in international rankings because, according to most experts in the sector, several initiatives have failed or been abandoned altogether due to the various threats that are holding back progress towards digitalization, such as problems identified at the level of steering and public governance, illiteracy, a poor legal framework, a lack of advanced digital infrastructure, and timid competition between operators.

In general, successful digital development in Morocco requires a well-developed, integrated digital architecture. In fact, this architecture focuses on the preparation of a short, medium, and long-term roadmap where the various sectoral digitalization plans towards citizens, businesses, and users are assembled and completed, based on a unified, stakeholder-centric approach founded on the pillars of digital administration, notably: digital skills, good governance, interoperability, efficient piloting, infrastructure and common platforms carried out in a coordinated way, advanced regulation, and data management.

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