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# Evolution of Digital transformation in the public sectors in Morocco.

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**Abstract:** This article presents a state-of-play analysis and an overall assessment of Morocco's development and historical evolution in terms of digital transformation in the public sector. This historical overview will lead us to identify the significant achievements made at all levels, as it allows us to pinpoint the failures and difficulties that hinder the smooth running of this process launched several years ago as part of a global transformation driven at the highest level of the State. Our approach emphasizes the digitalization process of human resources in Morocco. On the other hand, we introduce the artificial intelligence impact technologies towards intelligent and relevant digitalization and the perspectives of our research work.

**Keywords:** *Next Generation Digital Systems - digital transformation - public sector - private sector - HR - AI.*

## Introduction

"The use of new technologies contributes to facilitating the citizen's access, as quickly as possible, to services, without the need for frequent trips to the Administration and friction, as this is the main cause of the spread of the phenomenon of corruption and influence peddling"<sup>1</sup>, King Mohammed VI declared in a royal speech in 2016. This statement underlines the importance of digitalization in the public sector and its crucial role in improving the efficiency, transparency, and accessibility of administrative services.

Digitization in the public sector refers to the use of information and communication technologies to transform processes and services within the public sector. Its aim is to modernize working methods, enhance transparency, combat corruption, facilitate access to services and comply with international standards. However, this transition to digital administration is not without its challenges. Issues such as limited infrastructure in some regions, resistance to

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<sup>1</sup> From the speech delivered by M IV the King at the opening of the 1<sup>st</sup> session of the 1<sup>st</sup> legislative year of the 10<sup>th</sup> legislation, on 14 October 2016.

change, and lack of employee training, as well as data security and privacy protection needs to be taken into account and overcome.

Despite these challenges, digitalization also offers vast prospects for Morocco. It enables the strengthening of e-governance and online services, the development of innovative digital platforms, collaboration between the public and private sectors to stimulate innovation, and the promotion of citizen participation and participatory democracy. By adopting a strategic approach and overcoming obstacles, Morocco can fully exploit the potential of digitalization in the public sector and foster sustainable, inclusive development.

In this summary, we address the key issues raised by digitalization in the public sector in Morocco, based on several articles. Our aim is to provide an informed response to the question of digitalization in this field and to explore its implications for the contract between citizens and the state in the digital age.

## **The evolution of digitalization in Morocco's public sector**

### **Morocco's History of digital transformation**

The "Maroc Numeric 2013" program<sup>2</sup>, launched in 2009 with a budget of 5.2 billion dirhams, aimed to develop digital technology in Morocco.

The program had several key objectives, including modernizing Morocco's technological infrastructure by improving broadband Internet access, developing telecoms networks, and strengthening data infrastructures to provide a solid foundation for the country's digital transformation. The program also targeted the development of digital skills, with an emphasis on

strengthening the digital competencies of the Moroccan population. This included training young people and workers in information and communication technologies, to foster their employability in an increasingly digital world.

The promotion of e-government was also part of this program, which aimed to promote the use of digital technologies in public administration, by encouraging the introduction of online services, the dematerialization of administrative procedures, and the improvement of the transparency and efficiency of public services.

This is also the case for the development of the digital economy, with the aim of stimulating the development of the digital economy in Morocco by encouraging entrepreneurship, supporting start-ups, and promoting technological innovation. The aim was to create an environment conducive to the emergence of innovative companies and job creation in the technology sector.

However, in February 2014, the Cour des Comptes published a report evaluating this strategy and highlighted a considerable delay in relation to the predefined objectives, with only a third of the targets achieved<sup>3</sup>.

Faced with this observation, the new government, through the Ministry of Industry, Trade, Investment, and the Digital Economy, presented the broad outlines of the 2020 digital strategy in July 2016. The ambitious aim of this strategy is to anchor Morocco decisively in digital emergence.

One of the first actions undertaken as part of this strategy was the creation of the Digital Development Agency (ADD), dedicated to government digital initiatives. This agency was officially established in

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<sup>2</sup> Special report n°05/13/CH IV evaluation of the "Maroc numeric 2013" strategy, Cour des Comptes February 2014.

<sup>3</sup> Special report n°05/13/CH IV evaluation of the "Maroc numeric 2013" strategy, Cour des Comptes February 2014

September 2017 thanks to Law 61-16, promulgated by Dahir n°1-17-27 and published in Bulletin Officiel n°6604.<sup>4</sup>

In January 2019, the head of government entrusted the Agence de Développement du Digital with the task of drawing up a note proposing guidelines for the development of digital by 2025. This note constitutes a strategic roadmap for the country's digital transformation. It focuses on several areas of action, such as developing the digital economy, promoting e-governance, digital inclusion, and encouraging innovation. The planned measures aim to stimulate entrepreneurship and innovation, facilitate access to online public services, reduce the digital divide and encourage collaboration between the public and private sectors. The aim is to strengthen Morocco's competitiveness on the international stage and create new job opportunities in the digital sector while improving citizens' quality of life through more efficient and inclusive digitalization<sup>5</sup>. (A. Bachar, 2022).

### The current state of digital transformation in the public sector

In the article "A l'ère de la digitalisation: Le Maroc, une smart nation en 'loading'", written by Abdelghani Bachar, the author highlights the current state of digitalization in Morocco. Based on various digital indicators, he highlights the progress made in various key areas.

According to the reports presented, Morocco is showing a significant improvement in its digital engagement. The author underlines the importance of digital transformation in the current context, marked by the Covid-19 pandemic. He

highlights two essential dimensions for achieving this transformation: the digital ecosystem and the country's mindset. Morocco thus ranks among the countries that have seen the greatest improvements in these two dimensions.

The Digital Competitiveness Index reveals that Morocco occupies an important place within the Middle East and North Africa group. The article mentions that Morocco is ranked 4th, with 99 points, just after Egypt and ahead of Kuwait. The author also points out that the country leads the region in terms of its digital ecosystem, with a score of 63 points.

With regard to the digital quality of life index, the article states that Morocco ranks 70th worldwide and 3rd in Africa. The author points out that the country scores well in areas such as cybersecurity, digital infrastructure, and Internet quality. However, improvements are still needed in terms of Internet affordability.

The Digital Readiness Index assesses Morocco's digital readiness and readiness. The author mentions that the country ranks 86th in the world. Although challenges remain, Morocco ranks 4th in Africa, reflecting its efforts to strengthen its digital readiness.

Finally, the digital evolution index ranks Morocco 50th worldwide and 2nd in Africa, behind South Africa. The author underlines that the country is considered a "challenger", i.e. a country that is implementing the necessary means to catch up and progress in the digital field.

In the article, Abdelghani Bachar highlights the current state of digitalization in Morocco, based on various digital indicators. He highlights the progress made, but also the challenges that remain. These

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<sup>4</sup> A.Bachar "A l'ère de la digitalisation : Le Maroc, une smartnation en loading", GGI Journal, March 2022, P 326.

<sup>5</sup> Agence de développement digital " note d'orientation générales pour le développement du digital ", [pour-le-developpement-du-digital-a-horizon-2025](#) ,consulted on 20.05.2023

results demonstrate the country's commitment to becoming a smart nation and fostering its socio-economic development in the digital age.

## Challenges and avenues for improvement

### The Challenges of Digitalization in Morocco

As part of the digitization of the public sector in Morocco, a number of significant advances have been made, as highlighted by the authors in this article. However, despite this progress, challenges remain.

Among them:

#### • Limited Internet access:

Limited Internet access is a major challenge for digitalization in Morocco. According to ( O. Brahim, S. Oukhit, and O. Rahaoui, 2021 ), confirmed that "despite the progress made in terms of infrastructure, there are still gaps in terms of Internet access, particularly in rural and less developed areas. This hinders the widespread adoption of online services. To remedy this situation, it is imperative to further develop Internet accessibility to ensure wider adoption of digital services."<sup>6</sup>

#### • Insufficient network coverage :

Inadequate network coverage is another challenge highlighted by the authors. They point out that adequate network coverage is essential to enable all citizens to access digital services. However, disparities persist in this area. In order to reduce the digital divide, efforts must be focused on developing network coverage throughout the country.

#### • Lack of digital skills :

The lack of digital skills is a major challenge in the digital transition of the public sector in Morocco. According to the authors, it is crucial to develop training and skills-building programs to bridge this gap. It is therefore necessary to implement initiatives aimed at developing the digital skills of local professionals. This will enable the effective implementation of digital projects and promote the adoption of new technologies.

#### • The illiteracy of some citizens:

Illiteracy represents an obstacle to the adoption of online services for some citizens in Morocco. The authors highlight the need for specific initiatives to make digital services accessible to illiterate people. They suggest the use of user-friendly interfaces and adapted solutions to facilitate access to online services. It is essential to take into account the needs of this population and ensure their inclusion in the digital transition.

#### • Regulatory and legislative framework :

Strengthening the regulatory and legislative framework is essential to fully support the digitization of the public sector in Morocco. According to the authors, it is important to establish clear and effective laws and regulations on personal data protection, cybersecurity, and digital governance. A solid regulatory framework will foster an environment conducive to the development and use of digital technologies while ensuring citizen confidence in the use of online services.

#### • Access and control of personal data:

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<sup>6</sup> O. Brahim, S. Oukhit and O. Rahaoui, "le

The preservation of personal data and the confidentiality of identifiers are considered cornerstones in the digitization of any service. Hence the need to establish a data exchange system that protects the citizen. With this in mind, the CNDP (Commission nationale de contrôle de la protection des données à caractère personnel) has given its consent to the government, as stipulated in article 27 of law 09-08, and is continuing its work to develop the constituent elements of an appropriate legal framework that clarifies and standardizes the implementation of an identifier architecture, in compliance with constitutional provisions, and reconciling the deployment of inclusive policies and respect for citizens' privacy. This approach is only just beginning to be implemented and extended to all Moroccan administrations and services while relying on the principle of openness to all players in society, in order to understand their expectations and the constraints linked to the inescapable nature of the digitalization they face.

## Avenues for improvement

### • Human capital and online services:

Developing human capital and improving online services are key issues in the digitalization of Morocco's public sector. The authors stress the importance of developing specialized skills and attracting investment in the digital sector. This will strengthen the country's human capital and improve the quality of online services offered to citizens. It is, therefore, necessary to set up training and skills development programs to enable local professionals to master digital technologies and actively participate in the digital transformation of the public sector. By strengthening human capital, Morocco will be able to take full advantage of the

benefits offered by digitalization, such as more efficient public services, simplified administrative procedures, and better interaction with citizens.

## The HR and AI function

Since its inception, digitalization has brought many significant advances to various management services, including its strong presence in human resources. HR departments have benefited greatly from the integration of technology in the digitalization of their management aspects and operational methods.

The automation of major HR tasks is one of the major advances made by digitalization. The integration of ERP and management platforms into HR departments has facilitated the sharing of administrative documents, applications, payroll management, employee tracking, and, in some cases, resource allocation. The seamless use of these platforms has led to a move towards centralization and sharing on a large scale, i.e. the introduction of digital services in the cloud.

HR professionals have progressively exploited HR-cloud services in data storage, organization, and logging while benefiting from its confidential and secure aspect. On the other hand, this centralization of data has opened up the possibility of exploiting and analyzing previous data to derive reports, predict new HR department behaviors, and draw effective, relevant decisions to strengthen human capital.

### Conclusion:

a complex process that requires a thorough understanding of all its aspects. So, in Morocco, we have to overcome existing challenges, such as electronic

illiteracy, the weakness of our communications infrastructure, and the lack of awareness of the importance of electronic management in improving the quality of our services. Internet access plays a crucial role in the success of e-government. We must therefore take steps to encourage wider access by reducing the cost of Internet use. In addition, it is essential to develop a solid, affordable infrastructure that enables all citizens to access online services conveniently and reliably. Another essential aspect is the establishment of a solid legal framework to secure electronic transactions and protect users' rights, particularly in the field of financial services. It is crucial to establish appropriate laws and regulations that inspire confidence in electronic exchanges and ensure the protection of personal data and privacy.

The digitization of public administrations in Morocco represents a major challenge in the digital age. Looking closely at the "Maroc Numeric 2013" program and its implications for e-government, it is clear that concrete steps need to be taken to overcome the challenges identified and facilitate a successful transition to a more efficient and accessible administration.

To make this transition a success, we need to take concrete steps. First of all, it's important to recognize that e-management is more than simply converting our work and service systems to electronic versions. It's a Thus, the digitization of public administrations in Morocco represents a complex process.

To succeed in this transition, we need to take concrete steps by addressing current challenges, developing our infrastructure, and establishing a solid legal framework. By implementing these recommendations, we will be able to fully exploit the potential of digitalization to improve the efficiency, accessibility, and quality of our administrative services. This will strengthen the contract between citizens and the state in the digital age, offering concrete benefits for all.

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