

Modernization of public human resources management in the digital era: challenges of equity, performance and social responsibility — the case of Algeria

CHEREF Chahinez
Maitre de Conférence classe B
École Supérieure du Matériel
cherefchahinez79@gmail.COM

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Abstract:

Digital changes are really shaking things up in HR at public offices, creating both new opportunities and some tough challenges. This paper examines how Algerian public agencies constantly strive to balance various regions, connect people with jobs, and fulfill their social responsibilities within their HR strategies, all while making the most of the tech available to them. When we talk about diversity, we are referring to the range of skills, work backgrounds, and regional origins (wilayas) of government employees. Embracing this diversity and getting people employed is not just a moral obligation rooted in Islamic values like fairness and equality; it is also a smart move to attract top talent, inspire fresh ideas, and build public trust. Additionally, when public offices acknowledge their societal responsibilities, they help ensure that their HR practices align with long-term goals and the pressing needs of the country. However, these significant changes also raise genuine concerns: issues like algorithmic bias, resistance to change, a lack of digital skills, and questions about data ownership. By closely reviewing existing literature and official Algerian sources, this paper aims to explore how to fuse new technology with social equity and organizational effectiveness. It also emphasizes that these advancements need to be in line with the nation's core laws and its ethical, cultural, and religious values—particularly the importance of rewarding hard work and avoiding nepotism.

Keywords: digital transition; public human resources; territorial equity; social responsibility; Islamic values; Algeria.

Résumé :

Le numérique induit des changements rapides et profonds dans la gestion des ressources humaines dans le secteur public. Cette évolution permet l'émergence de nouvelles opportunités, tout en posant des défis considérables. Dans le présent article, nous allons examiner la manière dont les administrations publiques en Algérie réussissent à concilier diversité régionale, intégration des employés et responsabilité sociale dans la gestion de leurs équipes, tout en exploitant les outils numériques à leur disposition. La diversité, telle qu'entendue dans le contexte organisationnel, se caractérise par la présence de fonctionnaires aux compétences, parcours et origines géographiques hétérogènes, en provenance de diverses wilayas. Cette diversité, associée à l'insertion professionnelle, ne relève pas uniquement de considérations morales, mais s'inscrit également dans un contexte de justice et d'équité, caractéristiques des valeurs de l'islam. Cette démarche s'inscrit dans une logique de stratégie visant à attirer des talents, à stimuler l'innovation et à renforcer la confiance des citoyens. Par ailleurs, lorsque les administrations assument leurs responsabilités sociales, cela leur permet d'aligner la gestion de leur personnel avec les objectifs de développement durable et les priorités nationales. Cependant, ces changements s'accompagnent de défis majeurs, notamment la présence de biais dans les algorithmes, des résistances au changement, un déficit de compétences numériques et des interrogations quant au contrôle des données. L'objet de cette étude est de comprendre les modalités d'association entre innovation technologique, justice sociale et performance organisationnelle. Pour ce faire, une analyse qualitative a été conduite. Il souligne également que cette modernisation doit être en accord avec les principes de la Constitution ainsi que les valeurs éthiques, culturelles et religieuses de l'Algérie.

Mots clés : transition numérique ; ressources humaines publiques ; équité territoriale ; responsabilité sociale ; valeurs islamiques.

Introduction

Human resources management in the public sector in Algeria is undergoing a rapid digital transformation. This evolution is driven by national ambitions and technological progress. It is part of the 2030 National Digital Transformation Strategy. The Ministry of the Interior recently launched a centralized human

resources management platform, called GRH-Intérieur. Public administrations are increasingly using advanced technological tools. These tools range from artificial intelligence to anticipate skills to integrated platforms for talent management and the analysis of large amounts of data.

The objective is to modernize recruitment methods in a fair way. It is also about supporting continuous professional development and retaining the country's civil servants. Currently, there are 2.45 million civil servants in Algeria. Human resource management procedures were often cumbersome and paper-based. Diversity and inclusion in the workplace are now priorities. Diversity encompasses a variety of skills, career paths and geographical backgrounds. These objectives aim to attract talented young people from all regions. They thus bring different perspectives within the administrative teams. This fosters innovation in bureaucratic structures and strengthens citizens' trust in the administration.

The concept of social responsibility of public administrations provides a framework for fair and sustainable governance. This is in line with the global Sustainable Development Goals. The social responsibility of public administrations resonates with deep values in Algeria, such as national solidarity, social justice and amana. Amana is the sacred mission of public service.

However, rapid digitization poses some problems. It raises challenges, such as the risk of bias in algorithms. Algorithms can reproduce inequalities during selections. There is also resistance to change within organizations. Many public officials lack digital skills. There are concerns related to the sovereignty and security of public data. It is essential that technological innovations respect constitutional principles. Constitutional principles include equal access to public service. Equal access to public service is guaranteed by article 50 of the constitution. Technological innovations must also respect fundamental Islamic values, such as human dignity, justice and equity. These values guide society and professional practices in Algeria.

Problem

This research aims to explore how the digital transformation in public human resources management in Algeria can contribute to better organizational performance, while ensuring social equity, such as territorial diversity and inclusion at work. It also examines how this can be reconciled with social responsibility, while remaining consistent with the principles of the Constitution and the cultural and Islamic values of the country.

Methodology

This study is based on a literature review that mixes several disciplines, such as management, public administration and digital ethics. It is always accompanied by a qualitative analysis of official documents in Algeria. These include laws, notably Law No. 18-07 concerning the protection of personal data, as well as ministerial reports and national strategic plans such as the 2023-2027 Plan and the 2030 Strategy. There are also publications from official institutions, such as the National Statistics Office and the National Agency for Information Security. The method adopted is mainly qualitative and descriptive, which helps to understand the phenomenon in its context. Enriched by an in-depth study of concrete cases, it highlights the ongoing transformation, such as the GRH-Interior platform and the extensive digital recruitment campaign orchestrated by the Algerian Post in 2025. The conclusions of this analysis are always verified by taking into account the Algerian constitution as well as the ethical and Islamic values that govern public administration, so that the recommendations are both scientifically sound and adapted to the reality of the country.

Overlay

This article is organized into three main parts, then it concludes with a summary of the key points and gives some suggestions for the next steps.

- Chapter 1 will examine the technological foundations and organizational implications of the digital transformation of public human resources, including the essential human dimension of change management.
- Chapter 2 will explore how digital tools can be used in a targeted way to promote territorial diversity and professional inclusion as strategic objectives of the Algerian public service.

- Chapter 3 will analyze the institutionalization of social responsibility and equity within digital HR frameworks, proposing a concrete roadmap for future actions.
- The conclusion will summarize key arguments, reiterate challenges, and offer specific recommendations to policymakers for building a sovereign, equitable, and accountable digital public service by 2030.

1. Digital transformation of public human resources

This first chapter aims to set the technological and organizational stage that impacts the modernization of human resources in the public sector in Algeria. It will start with a discussion on the innovative technologies that are at the heart of this evolution, illustrating their direct influence on human resources activities. Afterwards, it will highlight the concrete benefits of this digitalization while addressing the main challenges encountered. Finally, a section will be devoted to the human aspect, often forgotten, exploring how the principles of change management adjust to the cultural and structural specificities of Algerian public administrations. The goal is to offer a global perspective that helps to understand both the opportunities and challenges of digitalization in the public service.

1.1. Emerging technologies and their effects on public human resources

The digital transformation of human resources in the public sector is based on the adoption of various innovative technologies that challenge traditional management methods. At the heart of this evolution is artificial intelligence, particularly machine-learning algorithms, which are fundamentally transforming talent recruitment and management. These algorithms are capable of analyzing large volumes of data about candidates, examining their skills, experience, and suitability for a position, often with a precision and speed that surpass those of conventional human approaches. This allows a selection that is more based on concrete facts and data, far from the usual subjective judgments.

Integrated talent management platforms complete this picture. Mainly inspired by international solutions, there is a growing desire in Algeria to develop and host more autonomous systems locally. These platforms bring together all

information on the country's 2.45 million civil servants, offering HR managers an up-to-date overview of available skills, career paths and internal mobility opportunities in the public sector, accompanied by interactive visual tools to facilitate decision-making. In addition, the application of big data analytics to human resources provides significant strategic lessons. By observing major trends such as workplace performance, absenteeism, promotions or participation in training programs, public managers can better anticipate their needs and adjust the development of skills to national priorities, such as economic diversification or regional development.

These advances have concrete and varied impacts. On the operational level, one of the first consequences lies in the automation of repetitive and time-consuming administrative tasks. Operations such as the initial matching between applications and vacancies, the digital management of schedules or holidays, as well as the automatic monitoring of mandatory training are now often managed by software. This allows HR managers to save time and focus more on strategic missions with high benefit. In terms of strategy, these tools are redefining the HR function from being a mere administrative service to becoming a key player in public governance. In Algeria, for example, the GRH-Interior platform, launched gradually since 2023, is a good illustration of this transition. By facilitating the digitization of procedures related to appointments and transfers at the Ministry of the Interior, it has helped reduce delays and enhance transparency. This initiative is part of the 2023-2027 National Digital Transformation Plan.

1.2. Performance benefits and structural challenges

The benefits of digitizing human resources for organizational performance are well established. When predictive algorithms are well designed and tested, they can really improve the quality of recruitment in the public sector. By relying on clear skills and success indicators, they help reduce the costs related to the turnover of new agents and make it easier for people to adjust to their positions [Gartner, 2024]. Moreover, digital platforms that encourage collaboration play a key role in facilitating the sharing of best practices among officials from different ministries and regions [Deloitte, 2023]. Not to mention that real-time performance tracking systems help more easily align individual and collective

efforts with national goals, while making the management of training budgets more efficient [McKinsey, 2023].

That said, moving toward digitalization also brings serious challenges that must be managed carefully. Biases in algorithms pose ethical and practical risks. For example, systems that rely on old HR data can reproduce inequalities by favoring mainly candidates from urban areas [UNESCO, 2021]. Another concern is the general lack of digital skills [Ministry of the Public Service, 2024]. Sometimes, union resistance complicates things even more. In addition, the protection of agents' personal data remains a major concern, governed in Algeria by the law of June 10, 2018 and highlighted by ANSSI Algeria (2024). Addressing this dual challenge – between performance gains and challenges related to social and organizational aspects – requires a balanced approach. For this, it is necessary to establish a solid training program, with strict ethical rules that respect national and Islamic values such as transparency, justice and the elimination of favoritism (*muhābāt*), as well as change management that is adapted to the local context.

1.3. Change management and the human factor in Algerian administrations

The successful integration of digital HR technologies is not only based on the complexity of the tools, but above all on managing both human and organizational transitions. Change management is essential to ensure smooth implementation and sustainable results. Often, neglecting the human aspect is the main reason for failures in large IT projects, especially in public administrations around the world. In Algeria, with well-established hierarchical structures and a strong culture, it is imperative to implement a tailored change management strategy. Classic approaches, such as the 8 steps of John Kotter, can serve as a reference: it is necessary to create a sense of urgency and to build a strong steering team bringing together policy makers, senior civil servants, union representatives and technical experts from ANSSI.

The challenge lies in managing resistances. Public officials may fear that automation will replace them. An effective strategy must address these concerns through varied communication, open meetings, workshops and pilot projects. The Islamic principle of *shūra*, or consultation, can strengthen this

approach culturally: by involving agents in the design and testing of tools such as HRM-Interior, we ensure that we have a product truly adapted to their needs. Finally, it is crucial to invest heavily in training: starting from the basics of digital technology, strengthening skills for those who use HR modules, and offering in-depth training in data analysis and digital ethics. By relying on Algerian universities and the National School of Administration, we could ensure that these courses are of high quality and in line with the national context.

2 .Territorial diversity and professional inclusion as objectives of digital tools

Building on the technologies and organizational challenges discussed in the previous chapter, this second chapter focuses on a key objective of public-sector modernization: promoting equity. It examines in particular how recent digital tools can transform the concepts of diversity and inclusion at work, by making them evolve from great ambitions towards tangible and measurable results in the management of public human resources in Algeria.

2.1 .Key concepts and strategic levers

In this study, and in accordance with the Algerian national values, we focus specifically on diversity within human resources in the public service. This actually encompasses the many professional characteristics of civil servants in our country: differences in age, types and lengths of experience, academic backgrounds, specialties, and above all, geographical origins, such as wilayas. This definition deliberately moves away from certain ideas coming from outside. In short, promoting diversity means ensuring that public administration truly reflects the diversity of our nation, both human and geographic. The territorial aspect is extremely important, especially when one thinks of the socio-economic imbalances between the northern coast, the highlands, and the vast southern Sahara

Moreover, professional inclusion is seen as a concrete and dynamic process. It is evaluated through three essential axes: agents' equitable access to career opportunities, their active involvement in decision-making, and a sense of belonging and psychological safety. This vision is in line with the Islamic

values of “adl” (distributive justice) and qist (equity), which demand evaluation on the basis of merit (kafa'a) and firmly reject favoritism (wāsiṭa).

Adopting these perspectives responds to real strategic imperatives. Indeed, geographical diversity enriches the quality of public policies, as agents from the Saharan regions bring valuable expertise in the face of southern challenges. An administration that displays visible diversity attracts more public careers and strengthens the legitimacy of the state. As for inclusion, it optimizes organizational performance. Ultimately, this program puts into practice the promise of Article 50 of the Algerian Constitution, which guarantees equal access to public service.

2.2 .Digital tools in the service of equity (recruitment by AI, training)

Artificial intelligence is really transforming public hiring, thanks to three features that enhance fairness. First, there is the algorithmic anonymization of applications, which eliminates hidden biases during preselection by masking details such as name, age or even precise location. Second, matching algorithms evaluate candidates based on their recognized technical skills, thereby expanding the pool of qualified talent. Finally, recommender systems play an important role in identifying candidates from under-represented areas, which enhances territorial equity.

Talent management platforms are translating these ideas into dynamic equity dashboards. These real-time interfaces display data such as integration rates by region, promotion distribution, access to continuing education, mobility between regions and retention rates. Thanks to this detailed vision, it becomes easier to set acceptable thresholds and receive automatic alerts when these thresholds are exceeded.

The GRH-Interior platform, launched in 2023, is a good example of this approach: its geolocation module allows you to visualize each candidate's region of origin. With regard to training, modern learning management systems (LMS) make certifying courses more accessible. In addition, digital mentoring programs facilitate exchanges between Algiers and cities like Tamanrasset or Illizi. The fully digitized national recruitment campaign, organized by La Poste algérienne in October 2025, managed to mobilize 182,014 candidates while

neutralizing 13,397 real-time fraud attempts. This really shows how technology transforms territorial diversity into a concrete and administrative reality.

2.3 .Contextualization with regard to constitutional, cultural and Islamic realities

The integration of digital tools in human resources in the Algerian public sector is based on Article 50 of the Constitution, which guarantees equal access to public employment. Before digitization, recruitment commissions had to screen a large number of paper applications, often sent by candidates mainly from major cities, which disadvantaged remote regions. Today, thanks to algorithms such as those of GRH-Intérieur, tens of thousands of applications can be processed anonymously and fairly, thus fulfilling the promise of equality enshrined in the Constitution.

This approach is aligned with Islamic ethical principles. On the one hand, there is the principle of merit (*kafa'a*), which condemns nepotism and privileged relationships (*wāsiṭa* and *muhābāt*). A verifiable algorithm presents itself as a technological remedy against nepotism. In addition, performance evaluation systems can incorporate coefficients that take into account the particular challenges faced by isolated Saharan wilayas.

On the cultural level, this progress also brings benefits. Geolocation algorithms may favor local candidates with traditional skills that are not necessarily documented. For new agents, there are digital onboarding modules that give them an overview of local administrative practices. This shift from a paper-based, often subjective record to a transparent algorithm represents a step forward in fulfilling the constitutional guarantee of equality and the ethical mandate of justice (*adl*) and fairness (*qist*).

3 .Social responsibility and equity in digital HR

Building on the technologies discussed in the first chapter and the advances concerning territorial equity of the second chapter, this third chapter examines how digital tools are used to strengthen public administrations' social

responsibility (CSR). This concept is really changing the way human resources work, from being a mere administrative management to playing a central role in national development.

3.1 .Integration of SRPA and SDGs into public governance

The SRPA is a governance concept that aims to better align our management practices with key sustainable development priorities. This fits well into the Islamic principle of *amana*, which evokes a sacred public mission and responsible management of resources for the benefit of current and future generations. The seventeen Sustainable Development Goals (SDGs) are essential here, especially Goal 8 (Decent Work), Goal 10 (Reduction of inequalities), and Goal 16 (Peace, justice, and effective institutions).

For Algeria, the integration of the SRPA is based on three main axes. First, it is essential to direct recruitment towards promising sectors, such as digital engineering, renewable energy, sustainable agriculture, or water management. Next, we need to rethink ongoing training to give agents “green skills,” including everything related to the circular economy, water conservation, or low-carbon management. Finally, it is necessary to review our evaluation systems to better value social and environmental initiatives: this includes the digitization of counters, the reduction of our paper consumption, energy optimization, and the creation of local partnerships to promote social inclusion.

All of this is transforming the civil service into a key player in the country’s strategic priorities. A manager trained in green budgeting can really contribute to effective economic management. Similarly, an engineer specializing in climate-resilient infrastructure reinforces Goal 9. By aligning human resources management with the SDGs, the Algerian administration positions itself as a strategic partner for sustainable development.

3.2 .Digital best practices (ethical monitoring and reporting)

Digital platforms are really changing how governments monitor and report on their social responsibilities, including through SRPA dashboards that assess environmental and social impact almost in real time. These tools help track

things like electricity consumption, water, waste and carbon emissions from official travel. This transforms environmental management from a reactive approach to a much more proactive one.

Traditional reporting is evolving towards continuous and interactive systems. Indicators such as low-emission vehicles, recycled IT equipment, circular economy programs and planted trees can be integrated into a portal that citizens can access. This radical transparency aligns well with the Islamic principle of *istikhlāf*, which highlights our sacred duty to preserve creation.

Beyond environmental indicators, these digital systems also strengthen ethical compliance through regulatory monitoring modules, such as the ISO 26000 standard. The digitalization of public procurement ensures that social criteria are met, for example, in terms of a "zero single-use plastic" policy, a traceable supply chain, and respect for workers' rights. In addition, recognition systems can highlight socially responsible initiatives: digitization of archives, installation of solar panels, training of local artisans and support for the professional integration of people with disabilities.

3.3 .National experiments

The Algerian administration has already made progress. Since 2019, the Integrated Human Resources Management System (IHSMS) is being implemented and includes several essential modules such as career tracking, internal mobility, and payroll management. To go even further, a well-structured operational program around four complementary axes is necessary.

First, it is important to strengthen our digital sovereignty by making a gradual transition to local platforms based on a secure national infrastructure. Then, it is essential to launch a vast project of digitization of HR archives on paper, with a precise schedule for each ministry and wilaya. Third, it would be beneficial to develop and make public HR performance indicators that are common and standardized at the national level. Finally, establishing continuous training on digital tools and data ethics, in collaboration with universities, engineering schools and national institutes, is essential. By combining this four-pronged approach with the recruitment model of La Poste algérienne, we could really facilitate a modernization that respects our constitutional principles of fairness.

3.4 .Operational roadmap and indicators for 2030

To achieve our strategic vision by 2030, a multi-stage operational plan is essential. Here is a proposal in three phases:

Phase 1: Basic infrastructure and capacity building (2024-2026). Actions to be taken: finalize the deployment of HRM-Interior at the national level; start digitizing paper archives (target of 30% in priority ministries); establish a "Single Digital Public Officer Folder"; launch a certificate of "Digital citizenship for public servants" (50% target); create a national steering committee. Key performance indicators: percentage of operational wilayas; volume of digitized archives; number of certified agents; and reduction in average processing time.

Phase 2: Integration, optimization and equity analysis (2027-2028). Actions to be carried out: ensure interoperability between HRM-Interior, SIGERH, and other platforms; deploy advanced equity dashboards; use AI-anonymized pre-selection for 50% of competitions; train 2,000 managers in HR data analysis; and publish the first annual report on "The state of digital HR in Algeria." Key performance indicators: territorial distribution index; percentage of recruitments via AI; agent satisfaction; and number of certified HR managers.

Phase 3: Advanced analysis and institutionalization of the SRPA (2029-2030). Actions to consider: develop predictive workforce planning modules for five years; integrate SRPA dashboards into the platform National HR; impose at least one SRPA target in the annual evaluation of senior managers; launch a "Sovereign HR-Tech" incubator; and aim for 90% digitization of HR processes. Key performance indicators: accuracy of predictive models; reduction of carbon footprint; number of innovative projects; and integrated local software solutions.

Conclusion:

The digitalization of human resources in the public sector in Algeria is not limited to a simple technical update. It is also a unique and historic opportunity to align organizational performance objectives with those related to territorial equity and social responsibility. It is crucial to anchor this evolution within the

framework of the national constitution, while honoring fundamental Islamic values such as justice, fairness and public trust. The analysis showed that emerging technologies, such as artificial intelligence, integrated platforms and big data, offer concrete solutions to improve the recruitment process, facilitate access to training, and ensure the monitoring of societal commitments. The management of human resources within the Ministry of the Interior and the complete digitization initiative of The Algerian Post planned for 2025 is a good example. That said, there are still many challenges to overcome: bias in algorithms, lack of advanced digital skills, resistance to change in organizations and national sovereignty over data. To address this, here are some recommendations for Algerian decision-makers:

First, it is crucial to invest significantly and regularly in training public officials, focusing not only on learning digital tools, but also on data ethics, privacy, and the responsible use of algorithms.

Second, an independent body should be set up to regularly check the algorithms used for recruitment and promotion in order to avoid any discrimination.

It is also necessary to accelerate the update of the legal and technical framework to protect data, respecting law no. 18-07 while encouraging sovereign hosting.

Furthermore, it is important to align human resources policies with the Sustainable Development Goals (SDGs), by integrating SRPA indicators into institutional objectives and publishing an annual report on public administration's social responsibility.

Finally, it is essential to engage in this modernization with a renewed public ethic, inspired by our national and Islamic values, to ensure that the quest for efficiency never compromises the dignity of officials or the trust of citizens.

By 2030, the challenge for Algeria will be to build a digital public service that is sovereign, fair and accountable, capable of meeting citizens' needs while respecting the ethical principles that support the legitimacy of the state and the social contract.

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