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Legal Mechanism for Digitizing e-government in Algeria's Public Service

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Abstract

The tremendous worldwide development of information and communication technology has had a clear impact on the quality of service delivery to individuals. Driven by the urgency of global developments and globalization, new mechanisms of public governance have been devised, including e-government, which is one of the modern modes of governance. It has become both a bet and a challenge of globalization, given its rapid delivery of services and its contribution to developing the public service. Algeria is one of the developing countries striving to establish and develop e-government in light of the current challenges of e-governance. The article also updates the legal framework in light of the most recent Algerian legislation.

Keywords: e-government, electronic public service, improving public service.

1. Introduction

The world today is witnessing rapid developments in the field of information and communication, reflected in changes brought about by the application of modern technologies, especially the use of electronic means such as computerized information systems and wireless communication networks. With the spread of Internet technology and the State's strengthening of this area in particular, the possibility of correspondence between public services and remote areas has increased. This is no longer limited to large companies and enterprises, but is accessible to all individuals, facilitated by low prices and ease of use.[1]

As electronic systems, information and communication evolve dramatically, there is an urgent need for States to restructure their public institutions in line with the requirements of the digital revolution and the age of speed, in order to create an information climate in an increasingly competitive digital economy and to modernize administrative, educational, health, economic and other public services. Consideration therefore began to be given to the shift towards e-government in order to move away from the Government's traditional performance and adopt a modern pattern through the introduction of modern techniques in the internal and external management of the public service in Algeria, so that the service can be provided as quickly as possible, at the lowest cost, saving effort and money and bringing the public service closer to the citizen.

From this point of view, the following research questions can be raised: what is Algeria's legal framework for e-government? What are the scope, fields and constraints of its application in Algeria's public service?

2. First section: What is e-government?

2.1 First requirement: Definition and importance of e-government.

Algeria, as part of this world, is not far from these developments: its public policies include programs that seek to focus on information and communication technology with a view to building the information society. This is evident through official discourse and development efforts following the country's economic transformation and institutional restructuring in the 1990s, particularly in the postal and communications sector, where reform efforts since 2000 have focused on developing ICT infrastructure. Algeria subsequently launched its electronic initiative in 2008, entitled "Electronic Algeria" (2009-2013). More recently, the National Digital Transformation Strategy "Algérie Numérique 2030", presented in May 2025 under the High Commission for Digitalization, has become the national reference framework for the digital transformation process. Various thinkers have proposed diverse definitions of e-government:

One view holds that it is a means of improving the public and government sector; others define it as a means of achieving reform and changing the processes, structure and culture of government; others focus on improving communication with citizens and achieving greater democracy; and finally there are those who see it as a commercial matter of increasing returns and improving the performance and competitive standing of government bodies and departments.[2]

It has also been defined by some as the virtual version of the real government, in that e-government lives in the Internet's data centers and emulates the traditional business of government, which is genuinely and materially present in state organs.[3]

Dr. Ahmed Al-Qarai's definition is: a hidden government embraced by the legitimate government in the State, i.e. it acquires it and does not own it. The citizen is the master of his decision. All means of communication and information are employed to serve him. The Government must fulfill his wishes wherever he is at home, on the street, inside or outside the country[4].

E-government is the comprehensive and integrated framework for e-government applications in the administrative field at the level of all parties of the administrative process. This means that applying the e-governance method precedes applying the e-government method in government agencies.

In building e-government, everything that the government practices in the real world is taken into account, whether in its relations with the public, the relations among its institutions, or its relations with internal and external business entities.[5]

In the last decades of the twentieth century, e-government applications began in different ways and forms, limited to the use of computer software for statistics or for showing the results of countries' budgets, their distribution and items.[6]

Section I: The concept of e-government

The opinions of scholars on the definition of e-government have differed because of the different focus of each jurist's interest, and at present e-government remains a relatively amorphous concept, as it is still largely at an early stage of development.[7]

It is defined by some as: (synonymous with streamlining government procedures and facilitating the bureaucratic system for citizens through the rapid and equitable delivery of services to them, within a framework of integrity, transparency and government accountability).[8]

It is defined as: (the ability of sectors to exchange information and provide services among themselves and to citizens and business sectors with high speed and accuracy at the lowest possible cost, while ensuring the confidentiality and security of the information in circulation, at any time and in any place).[9]

It is defined by some as: (the use of digital information technology to deliver administrative transactions, provide public services and communicate with staff more democratically).[10]

In the view of some, e-government means: "the ability of government sectors to exchange information and provide services among themselves, to citizens and to business sectors with high speed and accuracy, at the lowest cost via the Internet, while ensuring the confidentiality and security of the information transmitted. It is based on two principles: a technical principle (electronic preparation of information, Internet transmission, accuracy and confidentiality) and a procedural principle (the implementation of remote transactions and services while ensuring their validity and credibility)."[11]

It is also defined as: (reinventing government business through new ways of integrating and combining information and providing access through a website).[12]

Through the previous definitions of e-government, we draw the following:

- E-government is closely linked to the management of the public service and government institutions.
- E-government relies on information from the public service as its primary resource.
- E-government relies on digital technology and modern means of communication.
- E-government exists in a digital virtual environment and is projected onto reality.
- E-government cooperates with all parties to bring citizens closer to the public service.

Section II: The importance of e-government

The importance of e-government stems from the fact that today's world judges a society to be advanced or not according to three basic conditions: accountability, transparency and good governance, which are also the pillars of e-government.[13]

E-government emerged from the persistent manifestation of administrative and financial corruption in society and its institutions. The requirements of administrative reform oblige government institutions to be transparent and clear in their working methods and to give citizens genuine access to information on their actions, not only in response to requests but on their own initiative.

Direct services are part of the comprehensive redesign of the delivery of government information and services. For government agencies, delivering information and services entails managing multiple channels of transport and delivery. Although information and services continue to be delivered through traditional methods such as telephone, fax or manual means, the overall objective is to improve services.

The fundamental and effective basis of e-government is that it is an important factor in reducing suspicious and illegal relationships between officials and employees, because it means above all the free flow of information, openly circulated through various means of communication, which facilitates the tasks required against various forms of corruption and gives citizens access to decision makers and practitioners, motivating them to fight corruption.[14]

2.2. Second requirement: The objectives and principles of e-government in the development of the public service

Section I: Objectives of e-government

E-government generally aims to take advantage of the main benefits of its application, which are, directly, the speed and accuracy of transaction delivery and the reduction of time, effort and cost, and, indirectly, other benefits such as preventing overcrowding in government offices and eliminating the problem of paper overload and other drawbacks that will gradually disappear as the e-government system is applied to administrative processes.[15]

Some of the objectives of e-government can be mentioned as follows: [16]

1. Achieving speed and transparency in accountability: the reflection of e-government on the work of internal government institutions that is not visible to customers is the achievement of speed, transparency, accountability, efficiency and effectiveness in the processes and procedures of government administration. This trend contributes substantially to reducing the cost of business and service delivery.

2. Meeting the needs of society: e-government is geared towards meeting the needs of society satisfactorily by streamlining interaction and dealing with the many services available through the means of communication. That is, investment in establishing e-government must provide tangible returns, whether in the form of real cost reduction, increased efficiency and productivity, or improved services provided to society.

3. Bringing the administration and the public service closer to citizens by bridging the digital divide in society, investing in advanced ICT to deliver government services to citizens and businesses that need them regardless of where they are or when they apply.

4. Administrative and economic reform of the public service: promoting and strengthening opportunities for development and for administrative and economic reform. E-government can assist enterprises, especially small and medium-sized ones, by moving their services and requirements onto a network.

5. Raising the level of innovation and creativity: achieving lifelong learning and training to increase innovation and creativity in society so that it can compete and be present in a rapidly changing world.

6. Activating and restructuring government activities: this is not limited to changing the methods of providing government transactions, services and public benefits to citizens, but extends to the re-engineering and restructuring of government activities, processes and actions themselves in support of the development and the administrative and economic reform pursued by different governments.

This is in addition to other objectives that may be mentioned below: [17]

- E-government contributes to enhancing transparency by providing highly reliable information and a strong commitment to disseminating and circulating it.
- Improving the Government's responsiveness to the needs of beneficiaries by providing them with adequate information and devising new methods of interactive engagement that bring beneficiaries together with government departments, bodies and agencies.
- Saving the effort, money, time and resources used by the government in improving its relations with citizens, business owners and investors. This goal is achieved through the direct positive impact of e-government on government performance.
- E-government projects seek to improve the quality of public services provided to beneficiaries, in light of objective quality-measurement criteria for public administrations.
- Creating a positive impact in society by promoting and developing IT knowledge and skills among its members.[18]

Section II: Principles and characteristics of e-government

The Council for Excellence in Government in the United States of America has developed seven guiding principles for e-government:

1. Ease of use: demonstrated by connecting the public with their national, regional or international governments according to their needs and wishes, through access to the electronic public service even in the most remote places in Algeria.

2. Accessibility for all: it must be accessible to all individuals and groups of society, so that everyone can communicate with e-government from any site that suits the user.

3. Privacy and security: appropriate standards of privacy, confidentiality, security and credibility are imperative, leading to growth and development in the field of public services, so that everyone's secrets are kept safe within the public service.

4. Innovation and focus on results: keeping pace quickly with recent and sophisticated changes and developments in technology.

5. Cooperation and participation: through the participation of all active organizations in society, whether governmental, non-governmental or private, in order to develop societal and sophisticated solutions based on their experience and expertise.

6. Low costs: through investment strategies that lead to efficiency and continuous performance, which in turn reduces costs, especially for individuals and for those with limited mobility, in order to meet needs such as the electronic signature.

7. Continuous change: the Government's approach is not merely to finance currently applied practices, but to work towards the use, application and realization of technology at the level of the individual.

The different management patterns, from the traditional to the e-governance model, based mainly on the use of ICTs, give e-government its distinctive characteristics, which can be summarized as follows:[19]

1. Managing and monitoring the various departments of the institution as a central unit, which reinforces the principle of control of the service.

2. Concentrating the decision point at the points of action, giving greater support to their monitoring.

3. Consolidating data from their original sources and reducing decision-making constraints by providing and linking data.

4. Providing information technologies to support and build positive institutional confidence among all workers.

5. Continuous learning and knowledge building, providing immediate information to beneficiaries, increasing coherence between workers and senior management, and following up and managing all resources.

6. Quality of permanent communication: it is a timeless administration that operates 24 hours a day, ending individuals' suffering in waiting lines and increasing the quality of services provided to citizens.

7. Organizational flexibility, reflected in the nature of networking and smart enterprises, as they depend on the knowledge industry.

The application of e-governance also lends flexibility to administrative management, provides services directly, eliminates dependence on the nature of the public or private sector and even of the services, and, thanks to its mandated tasks, allows e-governance to digitize all documents, achieve high-quality data processing and reduce the number of critical elements needed for limited services.[20]

E-governance thus creates greater coherence in transaction delivery and in the performance of administrative functions, in a manner that fosters greater partnership between the various sectors of government and promotes greater credibility in the delivery of the civil service, and it complements the transparency component when the State's relationship with the citizen is strengthened through electronic public services. Additionally, e-governance is an integral entry point for investing effort and time, enhancing service and ensuring satisfaction for all, as well as ongoing work.[21]

Government administration is characterized by reduced expenditure in following up the various management processes, fewer obstacles to decision-making by providing a database linked to decision-making centers, and the use of information technology to support and build a positive institutional culture among all employees.

2.3 Third requirement: Skills to activate e-government[22]

To develop e-government and link it with the public service, the following skills are needed:

1. Analytical skills: interpretation and analysis skills, which are basic skills required at each stage of an e-government project's development, as will be reviewed later.

2. Diagnostic skills: these begin with identifying problems, describing their symptoms, detecting the policies, processes and practices that cause these symptoms, and analyzing users' needs and requirements

and the flow of information and business; they also require in-depth research, surveys or diagnostic studies.

3. Information and knowledge management skills: this set of skills rests on treating knowledge and information as an essential resource of high value and added value. It must ensure that the content and quality of data and information are sound and compatible with other data and information.

4. Technical skills: these are exercised through designing and implementing information systems compatible with the existing infrastructure, developing user-friendly interfaces acceptable to end users, and converting data from one system or form to another within the management information system (MIS).

5. Communication and marketing skills: this set of skills is used to market the e-government project and attract the necessary support from all parties involved.

6. E-government project management skills: this skill set aims to recognize the impact of the ICTs used on the business structure and on the services provided to citizens, to plan the e-government project well, to build the project structure, and to apply methods of monitoring project quality and measuring e-government performance.

2.4 The fourth requirement: Advantages and disadvantages of e-government

Section I: Advantages of e-government

1. Fast service performance: by replacing the traditional manual system with the computer, the provision of service to citizens has evolved and the time taken to perform a service in the public service has been reduced.

2. Cost reduction: performing administrative work in the traditional way consumes very large quantities of paper, documents and writing materials, and requires a file to be submitted to more than one staff member for consultation and signature before being forwarded to another.[23]

3. By contrast, under the e-government system the cost is much lower, owing to the use of the computer, which replaces writing materials and paper, and to the reduction in the number of staff, which leads to faster performance of services.

4. Shortening administrative procedures: traditional administrative work is undoubtedly characterized by many administrative complexities, as it often requires several approvals from an administrative body for the work required.

5. Eradicating bureaucracy in the public service: by following the e-government route and streamlining administrative procedures, one staff member can complete the required transaction without returning to superiors for approval, relying instead on a predetermined database that serves as authorization for the staff member.

6. Accuracy and quality of the service provided: the e-government system relies on computers supplied with information and data on all services, and therefore errors in the work performed by electronic devices are greatly reduced.

7. Reducing administrative corruption: since e-government completes transactions electronically, service applicants can, by visiting the administration's website, identify the required service and its stages and procedures. There is therefore no direct relationship between an employee and the applicant, and the chances of corruption such as bribery are reduced.

Section II. Disadvantages of e-government

1. Unemployment: the application of this system may increase the unemployment rate, since all services become accessible electronically and there is no longer a need to recruit new staff.

2. Public health: using the Internet to access all services for long periods affects the health of the individual user, especially eyesight.

3. Prolonged use of such networks also reduces the opportunity to adapt to the surrounding community, owing to self-imposed isolation.

4. Infringement of the right to privacy: this is one of the most important rights that most laws are keen to regulate and protect, and many texts have been issued on it, most recently Law No. 18-07 of 10 June 2018 on the protection of natural persons in the processing of personal data, as amended and supplemented by Law No. 25-11 of 24 July 2025.

5. Security risks: electronic transactions expose users to significant security risks, notably in transactions made by credit card.[24]

3. Second section: Scope, fields of application and constraints of e-government in Algeria

3.1 First requirement: Scope of application of e-government[25]

Section I: Impact of e-government on administrative decision

It is recognized in administration that there can be no development without decisions, nor can decisions be made without adequate information and data on the matter in question.

The e-government system, including its use of state-of-the-art technology, whether computers or otherwise, undoubtedly plays an important role in the administrative decision-making process necessary for the public interest and benefit, as shown by the stages of decision-making:

- **Phase I:** it relates to identifying deficiencies in performance and the problems involved. The computer-based information system stores vast amounts of information that can help the decision maker do this easily, and by presenting data on the service it can identify the problems hindering it. The system also contributes to problem-solving by providing information covering all activities in the organization, integrating the different functional information systems, thereby helping to identify and understand problems, their size, the factors causing them and their structure, which are necessary to find an appropriate solution.[26]
- **Phase II: it concerns studying and examining the** alternatives available for solving the problem. The model system, which performs the required analysis of the problem, offers a range of alternative solutions and ranks them according to service performance and cost.
- **Phase III:** it involves choosing the best alternative for solving the problem. All alternatives are assessed quantitatively, and the outcome is examined and checked for consistency with the nature of the problem. This is done by examining information and data on all alternatives.
- **Fourth and final phase:** decision-making, where the administration draws on all the data and information on the computer to bring the decision into line with the problem presented and to remove existing obstacles. This is mainly due to the accuracy of the information and data presented, the speed of delivery and the quality of performance, which ultimately leads to excellent service for the public as quickly as possible and at the lowest cost, which is the goal of e-government and one of its most important features.

Section II: Impact of e-government on the public service

Public services play an important role in people's lives, as they provide the services on which people's lives depend, and it is therefore of great importance that the service continue to perform its work regularly and steadily.

We will therefore demonstrate the impact of the e-government system on adapting the interpretation of the general principles governing public services to the electronic system.

The principle of the regular and continuous functioning of public services means that public services keep operating regularly to satisfy the general needs of individuals, since the essential services they perform are largely tied to the organization of people's lives. Hence, disruption of these services disrupts citizens' lives, as when water or electricity is cut off from homes. This principle also has several important consequences, including the prohibition of strike action, the regulation of staff resignation and the theory of exceptional circumstances.

This system supports this principle better than the traditional system, since it helps both individuals and contractors to access the website to obtain services, and it also helps to mitigate the consequences of any breach of the principle of continuity of services. Even if employees go on strike, a person can obtain a service through the website's enquiry features or by e-mail, and university students can enroll at a university or learn the enrollment conditions by visiting its website.

It can be argued that this system leads to the elimination of bureaucracy at work, including slow procedures and increased burdens and costs.

The principle of equality before public services aims to treat equally individuals wishing to benefit from the services of a particular public service, or to bear the burden of using them, without distinction as to sex or otherwise.

This principle dictates that those wishing to benefit from the services of the public service have the status specified by law or by the regulations of the service, meet the conditions necessary to use those services so that they may benefit from them, and bear their costs on an equal footing without discrimination.

The application of this system undoubtedly affirms and supports the principle of equality to a very large extent, in terms of the automatic or electronic provision of the service, which makes no distinction between individuals in accessing it. Anyone who can use a computer can obtain the required service, provided that digital access is available to all.

On the other hand, the use of the system helps to eliminate nepotism and intermediation in service delivery, which discriminated between individuals according to their relationship with administrative leaders.

3.2 Second requirement: Fields of application of e-government

Section I: Administrative contracts.[27]

Administrative contracts are those to which the administration is a party, which are governed by administrative law and subject to the supervision of the administrative judiciary in view of their administrative nature; accordingly, one of the parties is a person of public law, such as the State or a ministry, and the contract relates to the activity of a public service, such as supplying water, electricity and gas to the administration or importing equipment. Such contracts are concluded by methods other than those of private law, in which the administrative authority manifests the attributes of public authority, and they therefore contain terms that are unfamiliar in private-law contracts.[28]

One form of such contracts is the public service concession, whereby the contractor undertakes to perform a public service at its own financial responsibility for a period of time in exchange for a particular fee, as well as the public works contract and the contract for construction, supply or transport, without excluding unnamed contracts to which the administration is a party as a public authority.

But with the administration's transformation into an e-government system, new patterns of administrative contracts have emerged, namely online contracts under electronic commerce. This type of contract, whatever its subject matter, requires a prompt and comprehensive review of the rules governing administrative contracts in their traditional general framework. For example, Sweden has adopted a government initiative to manage and regulate government inventory and procurement through the Internet

with a view to reducing government storage operations.[29] In Algeria, Law No. 23-12 of 5 August 2023 laying down the general rules relating to public procurement, which replaced Presidential Decree No. 15-247, substituted paper-based procedures with a digital exchange of information through a national electronic public procurement portal.

Section II: E-learning

Through the e-government project, many benefits have been achieved that are very important for education. The systems of educational institutions and their teaching methods have evolved, and the Internet has become a necessary means in schools and universities, providing the pictures, experiences, research, information and other things students need.[30] This network has achieved important communication between student and teacher, as the student can ask about unclear matters in a subject, bringing the distance between teacher and learner closer.

Distance education is an alternative to traditional education owing to population growth and universities' inability to absorb the enormous numbers, and research has shown this type of education to be on a par with, or superior to, the effect and effectiveness of the traditional system when all techniques are used efficiently.

It should be noted that the use of the Internet in learning has led to rapid and spectacular development in the educational process and has influenced the way teachers and learners perform.[31]

3.3 Third requirement: Legal initiatives to lay the foundations of Algeria's e-government

In many legal texts, Algeria has tried to keep pace with the development of information and communication technology with a view to building the knowledge society through the enactment of many laws, which are part of the mechanisms that establish the idea of e-government, including:

1. Regulatory framework:

- Executive Decree No. 98-257 of 25 August 1998[32], which defines the conditions and procedures for establishing and operating Internet services, ended the State's monopoly on the Internet sector and allowed new public and private providers to emerge.
- Executive Decree No. 2000-307 of 14 October 2000[33], amending and supplementing Executive Decree No. 98-257, which sets the conditions and criteria for regulating and utilizing the Internet, the rights and obligations of service providers and the procedures for obtaining and withdrawing a licence, also provided for the establishment of a licensing committee for Internet services.
- Law No. 2000-03 of 5 August 2000 laying down the general rules relating to post and telecommunications led to the reorganization of the Ministry of Post and Telecommunications and the creation of Algérie Télécom and Algérie Poste. It established a legal framework for an independent regulatory authority (ARPT), opened the door to private investors and entrusted the authority with licensing the private sector for mobile and fixed telephony, Internet service provider licences and call centers. This law has since been repealed and replaced by Law No. 18-04 of 10 May 2018 laying down the general rules relating to post and electronic communications, under which the regulator is now the Postal and Electronic Communications Regulatory Authority (ARPCE).[34]

2. Digital trust: it is defined as an information environment that enjoys the characteristics of trust that characterize the paper environment,[35] including electronic certification and the electronic signature.

To complement the legislative arsenal of digital trust within Algeria's e-strategy, the Algerian legislator has enacted a series of laws, including:

- Recognition of the validity of electronic writing: Law No. 05-10 of 20 June 2005 amended and supplemented the Algerian Civil Code (Ordinance No. 75-58 of 26 September 1975), moving the rules of evidence from the paper-based system to the electronic one, so that electronic writing has a place

within the rules of evidence. Under article 323 bis of the Civil Code, proof by writing results from a sequence of letters, characters, numbers or any other signs or symbols with an intelligible meaning, whatever the medium and means of transmission, and article 323 bis 1 gives electronic writing the same probative value as writing on paper, provided that the identity of its author can be duly established and that it is created and preserved in conditions that guarantee its integrity.

- Electronic signature: the Algerian legislator adopted the electronic signature in article 327, paragraph 2, of the Civil Code, as amended by Law No. 05-10 amending and supplementing Ordinance No. 75-58, which provides that: "An electronic signature shall be recognized in accordance with the conditions set out in article 323 bis 1." This framework was later detailed by Law No. 15-04 of 1 February 2015 laying down the general rules relating to electronic signature and certification, which has now been updated by Law No. 26-02 of 17 February 2026 on trust services for electronic transactions and electronic identification (Official Gazette No. 14 of 18 February 2026). The new law recognizes electronic documents as equivalent to paper ones and provides for a unified National Electronic Certification Authority.

3. Electronic certification: the activity of electronic certification service providers was initially governed by Executive Decree No. 07-162 of 30 May 2007, which required a licence granted by the Postal and Telecommunications Regulatory Authority (ARPT), attached to a book of specifications defining the rights and duties of providers and users. Persons who could legally engage in this activity had to meet the same conditions as for the Internet service activity. Certification service provision was thus an economic activity subject to commercial registration under commercial law, and the electronic certifier was responsible for authenticating the electronic contract, a role comparable to that of an ordinary notary. This regime has since been replaced: Law No. 15-04 of 2015 created national, governmental and economic electronic certification authorities, and Law No. 26-02 of 2026 now regulates qualified trust services, including electronic signatures and seals, under a unified National Electronic Certification Authority.[36]

4. Electronic payment: Algerian law contains provisions on electronic payment systems. In 2003, formal recognition of electronic means of payment began with Ordinance No. 03-11 of 26 August 2003 on money and credit[37], article 69 of which provided that: "Means of payment are all instruments that enable any person to transfer funds, regardless of the medium or technical method used." This ordinance has since been repealed by Law No. 23-09 of 21 June 2023 on the Monetary and Banking Law, which adopts the digitalization of payments, and online payment is also regulated by Law No. 18-05 of 10 May 2018 on electronic commerce.

5. Cybercrime: in the face of a legal vacuum in the field of cybercrime, Law No. 04-15 of 10 November 2004 amending and supplementing the Penal Code was promulgated. It provides penal protection for information systems by criminalizing all kinds of attacks on automated data processing systems, such as unauthorized access to information systems to alter or destroy data. In 2009, the cybercrime law, Law No. 09-04 of 5 August 2009 laying down special rules for the prevention and combating of offenses related to information and communication technologies, was enacted. It contains 19 articles in six chapters, and is complemented by the personal data protection framework (Law No. 18-07 of 10 June 2018, as amended by Law No. 25-11 of 24 July 2025).

3.4 Fourth requirement: Obstacles to the application of e-government in Algeria

The e-government system faces some obstacles that tend to eliminate or reduce its advantages, which can be summarized as follows:

I. Administrative constraints: The following are:

1. Complexity of administrative procedures and lack of flexibility of organizational structures. [38]
2. Lack of planning for e-government programs.

3. Concerns among senior management leaders in some countries about implementing the e-government project.[39]

4. Lack of coordination between the various government departments.[40]

II. Human constraints: the following:

1. Weak technological expertise and low efficiency in service delivery.

2. Insufficient training for employees on electronic devices.

3. The methods of selecting electronic devices do not evolve.

4. Weak service-delivery methods among human staff.

5. Lack of awareness of the importance of technology and its applications, and even negative attitudes toward them.

III. Financial constraints: the following:

1. Lack of financial resources to provide infrastructure, procure hardware and application programs, develop computerized systems, create websites and set up networks.

2. Insufficient financial allocations for the training of personnel in information systems.

3. High maintenance costs for computer systems and a shortage of specialists to run such services.

IV. Technical and legal constraints: The following are:

1. Failure to keep up with technical progress in the field of computing.

2. Lack of established specifications and standards for the computer equipment used in service delivery.

3. Non-adoption of electronic documents as an alternative to traditional documents in conducting transactions, whether relating to contracts or to the documentation of rights and obligations. (This obstacle has been addressed in principle by Law No. 26-02 of 2026, which recognizes electronic documents as equivalent to paper ones.)

4. Increased volume of infractions and offenses against information, including theft of e-mail, credit card theft and theft of electronic signatures.

5. Absence of appropriate and clear legal texts establishing the e-government project. (This obstacle has been partly overcome by the recent legislation cited in section 3.3.)

Hence, it can be argued that the e-government system faces some obstacles, and if these are overcome, e-government will in practice emerge successfully, bearing in mind that the transition to e-government is now an urgent and irreplaceable necessity.

4. Conclusion:

By examining the issue of e-government in Algeria between reality and prospects, I reached a series of conclusions and proposals.

I. Results:

1. E-government is the result of many developments, to which ICT has contributed most, and it performs the same functions as traditional government but through a standardized electronic pattern.

2. The application of these modern technologies focuses on reducing administrative complexities in the traditional public service and on enhancing transparency, speed and accuracy in transactions with individuals.

3. Basic infrastructure must be provided, such as telecommunications networks and computers, along with expanded Internet penetration and quality, and the enactment of relevant laws and regulations.

4. Qualified human resources must be prepared, with more outreach and awareness-raising on the importance of this project, activation of knowledge management, and the necessary support regarding the prices of electronic equipment, telecommunications devices and others.

5. At the time of the original study, telecommunications infrastructure was incomplete, Internet penetration was limited and laws governing this area had not yet been fully enacted; significant progress has since been made (see section 3.3).[41]

6. The association of public administration with the development of information and communication technology has produced so-called "e-government", an urgent need for all governments to keep pace with progress in the field of management and to improve the level of service in the public service.

7. To keep pace with global development, Algeria has launched a series of projects to link e-government to the public service, most recently the National Digital Transformation Strategy "Algérie Numérique 2030".

8. Many public institutions in Algeria offer e-services to citizens, such as the financial services of Algérie Poste, banks and e-justice services such as the justice newspaper, the Chifa card service, education services and others, but Algerian citizens and the business sector aspire to more services, showing that Algeria's e-government applications are still at an early stage.

9. Algeria must harness its human and material potential and make good use of it to have positive effects on the electronic public service project through a sound vision of e-government.

10. The success of the e-government project depends on promoting its advantages in relation to the public service.

II. Recommendations:

1. The infrastructure necessary for building a strong e-government capable of developing the electronic public service must be provided, which requires increasing Internet bandwidth and providing laws and regulations that support this modern technology.

2. Citizens should be made aware of the benefits of these modern technologies, and the necessary government support should be provided for the development of science and communication technology in the public service.

3. These technologies should be exploited and the digital economy engaged, thanks to its ease and speed in conducting domestic and international transactions with minimal effort and cost.

4. Solutions to the constraints must be found urgently, particularly given Algeria's prospective accession to the World Trade Organization and its promising aspirations for multiple European and regional partnerships.

5. E-government must take into account the specificity, needs and capacities of society to increase the project's chances of success.

6. Intensify efforts to overcome illiteracy, including digital illiteracy, in Algeria as one of the biggest challenges facing the electronic public service project.

7. Information security for the electronic public service must be ensured through cooperation and coordination among the various sectors of the State and by drawing on international experience in this field, as well as by addressing security issues related to the citizen in order to earn his confidence.[42]

8. Spread the Internet throughout the country, improve the quality of electronic services, and provide free Internet, especially in the education and health sectors.

9. Intensify awareness-raising campaigns on the importance of modern information and communication technologies and their benefits to individuals and institutions, in line with the principle of bringing the electronic public service closer to citizens.

10. The need for attention to the human component as the instrument that contributes to the implementation of the e-government program through intensive training and awareness-raising programs for staff and managerial leaders.

11. The need to activate e-government in Algeria, especially given Algeria's aspirations and objectives in the economic sphere, through the economic digitization of many ministries, such as the Ministry of Commerce, to prevent speculation and traders' monopolies and protect the consumer, and the Ministry of Agriculture, through a complete electronic inventory of all agricultural products for export, working in coordination with the Government to ensure food security.

12. The need to strengthen the work of e-government, especially in light of the COVID-19 pandemic and for any future health emergency, by coordinating the means of communication and activating them between different sectors, especially the Ministry of Health and Hospital Reform, the Ministry of the Interior and the Prime Minister's office up to the Presidency, in order to control and eliminate the health crisis through the exchange of information and means of communication and the analysis of statistics and data, so as to obtain information and make correct and effective decisions as quickly as possible to protect citizens and the State.

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