

## Artificial Intelligence Updates on E-Administration

### مستجدات الذكاء الاصطناعي على الإدارة الإلكترونية

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#### Abstract :

Electronic administration in our time is generally associated with applications provided by artificial intelligence technology that created a distinct digital environment for research, processing, and storage of information. As AI has proven to be effective in many areas of our lives such as industry, communications, trade, transport regulation, and other areas, it can also be an effective tool for the development of public administration, especially after the development of expert systems that have been emerged as a human consultant in many areas. This raises the possibility for a future administration to be hypothetical, especially if we take into account the data of future philosophers who expect the next phase of humanity to be the phase of biological and technological convergence. This leads us to look for the potential to leverage AI technology in the development of public administration, and know the prospects of this use in light of the accelerating developments of AI to reach the added value that AI can provide to the public service.

**Keywords:** artificial intelligence; Electronic management; electronic agent; The electronic transaction, the electronic portal

#### ملخص:

ترتبط الإدارة الإلكترونية في عصرنا بشكل عام بالتطبيقات التي وفرتها تكنولوجيا الذكاء الاصطناعي التي هيأت بيئة رقمية متميزة للبحث ومعالجة المعلومات وتخزينها، وبما أن الذكاء الاصطناعي قد أثبت فعاليته ونجاعته في مجالات عديدة من حياتنا مثل الصناعة، والاتصالات والتجارة، وتنظيم النقل وغيرها من المجالات الأخرى، فمن الممكن أيضا أن يكون أداة فعالة لتطوير الإدارة العمومية، خاصة بعد تطور النظم الخبيرة التي حلت كمستشار بشري في كثير من المجالات، الأمر الذي يطرح إمكانية أن تكون الإدارة في المستقبل افتراضيا، وبالأخص إذا وضعنا في حسابنا معطيات فلاسفة المستقبل اللذين يتوقعون أن تكون المرحلة المقبلة من البشرية هي مرحلة اللقاء والاندماج بين البيولوجي والتكنولوجي. وهو ما يقودنا إلى البحث عن إمكانية الاستفادة من تكنولوجيا الذكاء الاصطناعي في تطوير الإدارة العمومية، ومعرفة آفاق هذا الاستخدام في ضوء التطورات المتسارعة للذكاء الاصطناعي، لنصل إلى القيمة المضافة التي من الممكن أن يوفرها الذكاء الاصطناعي للخدمة العمومية.

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## Introduction

The advent of the computer revolutionized information, and talk began about an information society while there was a belief that we were on the cusp of a whole new civilization in which the information society prevailed as an alternative to the industrial society. This society is based on the transformation of data that are intangible. After a combination of computer technology and communications technology, the resulting technology reached the possibility of connecting several computers via the Internet, which has made the world one village where all the traditional blocking methods and barriers have collapsed in its diameters. The computer has already produced new patterns of contracts and a variety of means of exchanging Contracting partys' will. The Internet has become a common means of concluding contracts, both public and private, as a result of this rapid contracting on the one hand and the possibility of bringing as many customers as possible, especially during electronic advertising of contracting on the other.

E- Administration was a paperless administration and a new mechanism for modernizing public administration to reach high-end principles, most notably transparency in management. Electronic Public procurement are a reflection of e-administration based on the need for an electronic portal to exchange information in an electronic way through competition litigation and sending offers in an electronically, especially as we face the imperative of the distancing imposed by the coronavirus crisis, as telecommuting has become in all fields including public deals. Between the activation of the electronic portal of Public procurement and the need for a high degree of equality, transparency, and freedom of competition<sup>1</sup>, what mechanisms are there to ensure this especially in the face of the infertility of regulation and its inadequacy in many articles? The contracting services are called upon to keep abreast of current changes and technological developments in order to combat all forms of corruption, fraud, and transaction crimes in all their forms.

The introduction of information and communication technology is a real revolution in the world of management, namely the transformation of traditional administrative business and services into electronic business and services, the emergence of electronic management that works to protect the administrative entity and improve its performance, and the achievement of the optimal use of services at high speed and accuracy.

To improve the public service provided to citizens and economic operators, as well as to establish transparency, integrity, and democracy in all administrative, social, and even economic transactions in all fields, the most important of which is the field of Public procurement, which is an important pillar for building the national economy and modernizing and establishing its basic structures, the Algerian government has issued a

decision establishing an electronic portal for procurements to facilitate the provision and offer of services in the field of public procurements.

Therefore, we ask the following main problem: **What is the added value created by the use of AI in the public sector to develop public service?** The problem is divided into the following sub-issues:

- What is artificial intelligence?
- What is the impact of the use of artificial intelligence technology on a public administration?
- How does Algerian legislation regulate contracting provisions through the automated electronic agent and what is its legal nature?
- What are the implications of electronic transactions on the quality of public goods?

**Objectives of the study:** This study seeks to achieve, inter alia, the following benefits:

- Defining artificial intelligence, automated electronic agent, and Public procurement portal
- Identifying the concept by dematerializing Public procurement.
- Indicating the pros and cons resulting from electronic contracting in the field of public transaction contracts.

**Importance of the topic:** The importance of the study lies in the fact that it is based on one of the latest technical fields of artificial intelligence and its impact on electronic administration, its development, and modernization. Artificial intelligence technology has become one of the nerves of the modern world, especially in the field of administrative management. Its uses are shown in the process of archiving, accounting, auditing, financial aspects, running of working times, transactions, meetings, seminars, conventions, and administrative advertising. Even the administrative reporting process has become carried out electronically according to smart software based on algorithms in accounting methods comparable to human intelligence, but without effort, wasting time, and in a more organized manner. Shortly, we may witness an administration that practices its administrative work, including decisions and contracts, electronically, and from here we may witness the death of paper administration and its replacement with electronic one through artificial intelligence technology.

**Study approach:** In this study, we relied on the analytical descriptive approach as the most appropriate method for analyzing the phenomenon intended in this study, since the nature of the topic required us to follow this approach. Through this approach, we seek to study the phenomenon as it is and to express it adequately, thus demonstrating its reality and importance, which will enable us to submit proposals commensurate with the results achieved. We also discussed in part of this study the reality of artificial intelligence in the Algerian public sector, analyzing the most important legislative texts issued in this regard.

## **I -The general framework of artificial intelligence and its impact on traditional administration**

Artificial intelligence is represented by replacing manual labor with mechanization, as it represented a comprehensive scientific renaissance that had a great impact on economic life through the development of industry significantly. At present, we are embarking on a major multi-directional technology revolution that has contributed significantly to the development of many sectors. Artificial intelligence is perhaps one of the most important forms of it. It represents certain behavior and characteristics of the programs that make them emulate human mental abilities and patterns of their work. Artificial intelligence is a challenge and inspiration to philosophy because it claims to be able to recreate the capabilities of the human mind. In the 21<sup>st</sup> century, artificial intelligence research became highly specialized and technical and divided into profoundly independent subdivisions. Artificial intelligence has many uses in the development of computer applications in diagnosis and the development of cognitive simulation, using computers to test theories about how the human mind works and the functions it performs, such as recognizing familiar faces and activating memory, as well as developing video games that simulate reality more than old games.

Artificial intelligence has witnessed great development in its work until it became able to smell smells, perform many activities, help analyze problems using logic, recognize sounds and speech, process a huge amount of information, find solutions to unfamiliar problems using cognitive abilities, as well as the ability to move things. Today, we need such applications to develop the various sectors that are experiencing a clear deterioration in most developing countries.<sup>2</sup>

In the present era, the use of artificial intelligence began in a simple way, starting in the service sector through the use of a fingerprint which is one form of artificial intelligence. Previously, financial benefits from employees' salaries and others were received manually but after the use of artificial intelligence, receiving financial benefits became easier and safer. Furthermore, in terms of shopping and obtaining goods, as well as accounting for them, it has become easier to price products as well as sell them faster, safer, and less expensively by relying on computer-linked devices that contribute to easily calculating the price list. It was also used in previous parliamentary elections through the electronic ballot box, as the voter performs the voting process, so the device works by reading the ballot paper and knowing the candidate who obtained the voter's vote, and so on to the rest of the voters. When the ballot is completed, the counting process is done electronically rather than manually, which previously required a large number of workers and a large salary. In the use of intelligence, counting and sorting processes have become faster, safer and less expensive. This is why decision-makers should adopt these modern concepts and technologies, especially the industrial sector, which contributes to the

production of high-quality and low-cost products that help them to create a competitive advantage that achieves a market share leading to achieve its objectives.<sup>3</sup>

The definitions of artificial intelligence differ. Some believe that computer software can solve an issue, or make a decision in a situation based on the description of this situation. The software itself finds a way to resolve the issue or to reach a decision by reference to the many various evidentiary processes that fueled this program. Artificial intelligence means a branch of computer science that can perform intelligent tasks. The latter are those actions that require man's intelligence in solving a problem in one area. This definition shows that the main task of AI scientists is to simulate "human intelligence" by designing and building packages of software that would qualify the machine, such as a computer, to deal with different situations intelligently.<sup>4</sup>

Artificial intelligence has three branches, the first of which is Machine Learning, which is concerned with designing and developing algorithms and techniques that allow computers to have the property of learning, as software applications are more accurate in predicting results without programming them explicitly. The second branch is Deep Learning, which is based on several techniques such as artificial neural networks that simulate neurons in the human body; the more their number, the deeper the network. The third branch appears in the so-called Distributed Artificial Learning -DAI- aimed at establishing decentralized systems capable of collaborating and coordinating to address and solve large and complex problems.<sup>5</sup>

### **1 – 1 Impact of artificial intelligence on public administration:**

The use of artificial intelligence in management generates the production of expert systems, which are one of the most important types of knowledge-based systems because they are based on a knowledge base and techniques that represent and retrieve the specialized knowledge in a particular field of knowledge and its applications in the combination of artificial intelligence technologies on the one hand and knowledge in various fields of application. This has prompted public institutions to organize, manage, and employ the expertise, and explicit and implicit knowledge accumulated by their employees, and to work to reflect them in a usable manner in solving various specific problems. Different knowledge management processes are considered to contribute in some way and differently to the production of expert systems. Furthermore, knowledge polarization reflects the importance of technologies that help the knowledge engineer obtain knowledge in a programmable environment. Knowledge storage technologies contribute to the design process of expert systems and enable knowledge transfer technologies to deal with knowledge in a programmable form for the design of expert systems.<sup>6</sup>

As an embodiment of Algeria's orientation towards "e-Algeria" in 2013, by digitizing everything related to that, starting with the digitization of administration, most institutions

have benefited from information and communication technology in their administrative practice. The introduction of technology is a real revolution in the administration's world. This evolution has led to a shift from traditional management practices to modern practices in all functions of the Organization. Among the functions that have benefited from information and communication technology, we find the human resources management function that digitizes most of its functions.<sup>7</sup>

The importance of management has increased in recent decades, with the proliferation of enterprises, the increase of their transactions, the expansion of their business and the improvement of competition among them on the one hand, and the use of electronic means and technologies with all that is required by practice on the other. This has led to the emergence of a growing and urgent need for these departments to look for a way to keep abreast of these developments. This way enables them to provide better results and develop future plans and some kind of control over all activities. E-administration was an attempt to meet the objectives the enterprise.<sup>8</sup> The term "electronic administration" is one of the terms developed for that purpose and so far no precise definition has been reached.

Electronic administration is an integrated electronic system that aims to transform the normal administrative work, i.e. manual administration, into an automated using the computer by adopting strong information systems that help in making administrative decisions quickly and at the lowest costs, as well as the use of computer networks and the Internet. It is the sum of technologies and practices related to the possibility of learning and orientation to it in order to achieve various administrative tasks through Internet services and call centers, that is, it is each process based on the distinct capabilities of the Internet and business networks in planning, directing, and controlling the resources and core capabilities of management and others without limits in order to achieve administrative goals.<sup>9</sup>

### **1 – 2 Benefits of applying artificial intelligence and shifting towards e-administration:**

Although the term "electronic government" contains the word electronic, it is not only a technical term, but an administrative term that expresses the radical shift in cultural, economic, social, and marketing concepts, and the relationship of individuals/institutions and institutions with each other. The application of artificial intelligence and the adoption of e-government in state administrative facilities have many benefits:<sup>10</sup>

**1- Speed of completion:** There is no doubt that it takes only a few minutes to complete transactions electronically, saving time and effort at the same time. The e-government provides service to the citizen quickly online, without standing in a row.

**2- Increased proficiency:** Electronic service delivery is typically more accurate than manual delivery, and it is subject to easier and more accurate control than that imposed on a staff member performing his duties under traditional administration.

**3- Cost reduction:** There is no doubt that the establishment of an electronic management system requires significant funds for the procurement of hardware and equipment, software preparation, and worker training, but performing services electronically is less expensive than performing them traditionally.

**4- Simplify procedures:** Eliminate bureaucracy through online interaction with the government via the information network, allowing for quick completion of tasks while saving time and money. This leads to reducing expenses with the possibility of terminating the transaction or service by one employee without resorting to his superiors or co-workers by using the database prepared in advance in his administration, which is a mandate for the employee to make his decision based on it.

**5- Administrative transparency:** When the electronic transaction is conducted without direct contact between the person concerned and the competent employee, there is no room for bribery, manipulation or mistreatment of persons concerned, which helps to combat the offences of occupational corruption and to avoid friction between the provider and the claimant, thereby increasing the existence of equality between the beneficiaries of the public utility service.

## **2 - Results of Introducing Artificial Intelligence into Electronic Administration**

Perhaps the most important consequences of the introduction of artificial intelligence in the field of public administration are what is termed the automated electronic agent, electronic Public procurement, and the use of the electronic portal of Public procurement. The dramatic development of the telecommunications and information revolution has led to the emergence of an automated electronic agent in electronic transactions, which has become permissible, and has already become possible to conclude an electronic contract between a human and a machine or between a machine and another. As a result, some Arab and foreign legislations in various countries of the world intervened, especially the countries that have issued a law regulating electronic transactions and exchanges, where the law regulating electronic commerce contracts has included texts that define what an electronic agent is, and indicate its characteristics and limits of its transactions and attribute these transactions to a natural person, the Computer programmer.<sup>11</sup>

### **2 – 1 Role of Automated electronic agent:**

As a result of the spectacular development of the digital network, this has allowed the electronic administration to issue administrative decisions and conclude electronic contracts of various kinds between the administration and others, as technologies or programs belonging to public administrations have been designed and developed to facilitate their establishment and implementation of their administrative work. This program has become an executing deputy for the tasks entrusted to it.<sup>12</sup> The term “automated intermediary” is new in Arabic, meaning an electronic agent or agent in online transactions. Its use first appeared in documents of the United Nations Commission

on International Trade Law (UNCITRAL) issued in Arabic, and then used by some laws of the Arab countries concerned with electronic transactions, including the Dubai Law on Electronic Transactions and Commerce (Article 2, Article 15/b), as well as the Jordanian Law on Electronic Transactions (Article 2). While we find some laws did not use this term, such as the Egyptian Electronic Signature Law of 2004, and the Tunisian Law on Electronic Trade and Commerce of 2000.<sup>13</sup>

Electronic secretions are one of the products of the technological information revolution, and this has given a different concept at the traditional level, especially with regard to the issue of expression of will. The Automated electronic agent is a computer system that performs the task of action and contracts via the Internet network using its features, where it is characterized by initiative, autonomy, and ability to communicate. The electronic agent has caused a stir in the scientific and legal community and has been questioned as soon as it appears. Many researchers tried to define it and extract its characteristics, its advantages and also know its use, especially in the field of trade and services, where many definitions were said about the smart agent. This can be attributed to the novelty of the topic and its non-link to a certain extent. This field is witnessing a continuous and remarkably increasing development that makes every researcher in this field look at it with a particular perspective, as well as the diversity of forms of a smart agent, and its versatility that extends to various areas including education, medicine, and services.<sup>14</sup>

The Law of the Emirate of Dubai in Article (2) defines the automated electronic agent as “an electronic program or system of a computer that can act or respond to an act independently, in whole or in part, without the supervision of any natural person at the time the act is made or responded to.” This law also defined automated electronic transactions as “transactions that are concluded or executed in whole or in part by electronic means or records, in which these acts or records are not subject to any follow-up or review by any natural person, as in the ordinary context of establishing and executing contracts and transactions.”<sup>15</sup> It should be noted that the broker or the automated electronic agent was defined in the commercial field before it was used in administrative transactions, and for this, we find several definitions in the commercial electronic legislation, unlike the administrative legislator, which is still conservative towards controlling and organizing it despite its actual and application and adoption in public administrations. Hence, we can give a set of definitions to the electronic agent in comparative law, including:

The U.S. Commercial Code (UCC) in Article 2 and the Uniform Electronic Transactions Act (UETA, Article 2/6 of Section 104) defines it as follows: “Electronic agent means a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in

whole or in part, without review or action by an individual.” Furthermore, the United Nations Convention on the Use of Electronic Communications in International Contracts defines an electronic agent in article 01 as follows: “Computer program or an electronic or other automated means used for an action or to respond in whole or in part to data messages or their executions, without review or intervention by a natural person each time a system uses an action or generates a response.”<sup>16</sup>

Despite the different definitions mentioned earlier, we find that they pour into basic points that make up the most correct definition of an automated electronic agent.<sup>17</sup> An automated electronic agent is a program for an automated device with the ability to communicate socially; that is, a program specially designed to work instead of a human employee in conducting administrative transactions remotely. It communicates with other intelligent agents or with human beings through a special communication language, where the agent shows a kind of social interaction that exists in mankind since the smart agent has experiences that allow him to interact with others whether it is a human being or another intelligent agent that he encounters in the course of its mission. The seller smart agent may negotiate with the buyer smart agent to conclude a deal<sup>18</sup>.

The Automated electronic agent also operates automatically i.e. a group of means that work automatically through a pre-prepared program and does not require that the owner of the device be the preparer of the program, but the administration is satisfied with installing the program on the computer to work automatically. It can be said that this smart agent has the right to initiate and determines on its own when it can make the decision and carry out its mission, enabling it to act when the appropriate conditions are available for that.

The automated electronic agent acts as an independent mechanism; it is an electronic software that allows it to act or respond in an automated and independent manner simultaneously, whereby all computer software is prepared by a specialized person in the software. Each program has certain inputs that it works on and achieves as a result of certain outputs. Moreover, the smart agent works without direct intervention from humans or the administrative employee; this independence allows him to make the appropriate decision after estimating the information in his possession.

In terms of the legal nature of the automated electronic agent, there are many different viewpoints among those who grant it legal personality and those who refuse to grant it because they see it as merely a means of communication.

### **2 – 1 – 1 Automated electronic agent’s Legal Personality:**

The original is to be the legal personality of the natural person alone, but as economic and social life evolves, legal personality has to be granted to entities where a total of people and funds are meeting to pursue a common goal, which is called moral personality. Since it was a supposed idea, some went to suppose another hypothetical idea related to

the electronic person, considering that the legal person meets with the electronic person, so to speak, about the lack of physical existence. Since the electronic agent has a free and independent will, it may be very close to the natural person from the legal person because of its independence and freedom of action in concluding contracts, and hence the automated electronic agent can be considered a legal person with the capacity to conclude actions.<sup>19</sup>

### **2 – 1 – 2 Electronic agent’s lack of legal personality:**

The supporters of this opinion consider the electronic agent as merely a means of communication and to say otherwise, the Contracting party may bear the consequences of errors and defects of this program, including errors in the programming and operation of the electronic program during the contracting, and therefore the electronic software is not intended to replace the agent in the physical world. Hence, it does not have a moral personality, does not acquire rights, and does not assume obligations, but rather a reliable means to transmit a message to another or to receive a message from another and everything it makes is attributable to the originator of the message i.e. the user.

### **2 – 2 Dematerialization of electronic contracts “public transaction as a model”:**

The development of digital technology has contributed to the prosperity of electronic contracts in various spheres of life, facilitating the conclusion of public transaction contracts via electronic portals, which in some comparative legislation has been termed “dematerialization of Public procurement.” The study found that many legislation had embraced the dematerialization of Public procurement and had taken practical steps to keep abreast of global developments in the field of electronic contracts, in the light of model laws prepared by the United Nations Commission on International Trade Law (UNCITRAL). For Algeria, although the legislature has adopted the regulatory framework for electronic transactions under the 15-247 Legislative Decree on the Regulation of Public procurement and Public Facility Mandates, it still lacks practical mechanisms to enable contracting interests and economic dealers to practice electronic transactions in Public procurement.<sup>20</sup>

The jurisprudence has affirmed that the electronic contract is “an agreement in which the offer meets acceptance through an international network of remote communication through audio or video that allows interaction between the offeror and the acceptor, as the Model Commercial Law for Electronic Commerce considered "UNCITRAL" in Article 02, paragraph 01 thereof, and as a reference to the formation of the electronic contract through data messages.” Data message means information produced, sent, received, or stored by electronic, optical, or similar means, including but not limited to electronic data interchange (EDI), e-mail, telegram, telex, or telecopy. In France, Order 741/2001, on remote sales, states: “The provisions of this section shall apply to any sale of money or performance of a service concluded without the contemporary physical

presence of the parties, between a consumer and a professional, who use one or more means of telecommunication to conclude this contract”<sup>21</sup>

Many countries in the world were quick to harness information and communication technology in the field of public procurement. This was first reflected in the directives of the United Nations and then in the European Union’s laws and instructions. As part of the United Nations’ efforts to combat corruption and standardize international practices for its prevention, the United Nations Commission on International Trade Law (UNCITRAL) was established by United Nations General Assembly resolution No 2205 of 17 December 1966 to carry out a number of tasks associated with the preparation of model laws in the context of commercial transactions and to promote cooperation and exchange of practices among States to harmonize their national legislation in accordance with those laws, in cooperation and coordination with other organizations active in the field of international trade law. In 1994, UNCITRAL promulgated a model law on public procurement rules, which it updated in 2011 chapter VI of which set out the modalities for the organization of electronic reverse auctions<sup>22</sup>, “which means that Contracting party interests and candidates for Public procurement can be contracted electronically, either through electronic correspondence, or through the use of private websites and portals.”<sup>23</sup>

The texts governing the process of dematerialization of Public procurement in Algeria contain modern terms in the field of legal sciences in general, and administrative law in particular, including the term “dematerialization”. Comparative legislation has varied over the adoption of this form of modern procedures in the administrative arena. Some countries have adopted direct electronic data, such as France. Algeria and Tunisia have only adopted the procedure for the exchange of information leading up to the electronic process. French jurisprudence has pointed out that dematerialization is intended to “move the procedures for concluding these contracts from physical means of information to digital handling in the form of electronic portfolios, allowing the electronic management of data and documents that can be exchanged between the parties using information and communication technologies.”<sup>24</sup>

In the field of electronic Public procurement, the Algerian legislature has merely made electronic exchanges of information, which constitute a set of mechanisms used to exchange working information between the administration’s computers and operators in an electronic manner that does not rely on paper. This is in order to reduce administrative expenses and reduce the effort spent in dealing with documents and mail business, in addition to reducing the expenses spent on managing these documents, and transferring information faster.<sup>25</sup>

Electronic dealing in this area will value rules that encourage competition freedom by establishing mechanisms that enable transparency in the preparation, conclusion, and execution of transactions, such as the obligation of the entrepreneur to ensure appropriate

and equitable information to all competitors. One study noted that among the most important advantages of electronic transaction in the field of Public procurement is that it can reduce the total costs of public purchases by about 50% and reduce the costs of commercial transactions by between 50% and 80%. In addition, small and medium-sized enterprises can benefit from easy access to public procurement markets.

One of the advantages of electronic contracting of Public procurement is that economic statistics of public demand help to control and understand the mechanisms and practices of this sector, and that statistical studies and analyses of markets are necessary to ensure the effectiveness of how competition takes place. This is in addition to the contribution made by the process of establishing an electronic portal for Public procurement in support of the competent organs for the conduct of the economic statistics of public demand, which the system in Algeria attributed to the authority to control Public procurement and facility mandates. As is the case in France, which in turn adopted the function of the General Economic Statistics of Public Demand, and assigned it to the Economic Observatory of Public Demand, currently the French regulator OECP, which was established on November 10, 2005, by the decision issued on April 12, 2017.

### **2 – 2 - 1 Using the online portal for Public procurement:**

The portal means a database that facilitates access to information and services related to the sector. It also allows the collection of information relating mainly to the following: contracting interests, economic dealers and their administrative files, Public procurement declared with the identification of important dates related to the transaction, public student's economic statistics cards, exchange of documents and information between interests.<sup>26</sup>

Our definition of electronic public procurement does not differ in terms of elements and effects from ordinary public procurement. The difference appears in the method of conclusion, which was done in a traditional paper form, so it became done electronically. Therefore, the electronic public transaction is only a contract of electronic administrative contracts concluded with economic operators by legally qualified persons, termed the contracting interest in the legal text by an electronic method, whether at all stages of the conclusion of the contract or at one stage (the stage of declaring and receiving offers, the stage of receiving offers, the stage of studying offers or the stage of conclusion), in accordance with the conditions stipulated in the law regulating public procurements in order to meet the needs of the contracting authority in the field of works, supplies, services, and studies.

Principles to be respected when designing a Public procurement information system, The Public procurement Information System must be designed with respect for the following principles:

- Electronic Document Integrity: The formulation and digitization forms of written documents must ensure that their integrity is not compromised.
- Signing documents by secure electronic method while respecting applicable legislative and regulatory provisions.
- Identification and verification of the identity of economic dealers.
- Confidentiality of documents exchanged by electronic method.
- Documents exchanged by electronic method are protected by the document coding system while respecting applicable legislative and regulatory provisions.
- Tracking events through creating an event newspaper that allows for tracking information exchange by electronic method.
- For each electronic offer, a receipt indicating the date and time of receipt must be delivered.
- Compatibility of information systems (adopting standards that allow different information systems to communicate in order to exchange data).
- Secure digital document archiving by electronic method.<sup>27</sup>

## **2 - 2 – 2 Implications of electronic transactions on the quality of public goods:**

The challenge for public authority is to achieve the economic and social effectiveness of Public procurement as the most important channel for public money disbursement, implementing development plans and, meeting public demands. Therefore, Algeria must provide a favorable environment for the economic dealer, who is a partner in development, conditions that make him reassure and expedite the conclusion of the transaction. This is in the legislature's belief that electronic management is one of the most important requirements by providing its techniques for transparency in performance, reducing expenditures, and streamlining procedures. Amendments were introduced in the Public Procurements Law, including the digitization of procedures for concluding public procurements, and perhaps the beginning was the introduction of a chapter in Presidential Decree No. 10/236 on the organization of public procurements entitled "Communication and exchange of information by electronic means". The dematerialization of public procurements was confirmed in Presidential Decree No. 15/247 regulating public procurements and public utility mandates, and this was evident through its support for electronic transactions in the field of public procurements through the so-called electronic portal that is evident in government projects.

## **2 - 3 The importance of e-portal for Public procurement:**

The portal plays a major role in the field of electronic contracting, especially in the field of Public procurement, which is considered as a real guarantee to bring the largest number of competitors who meet the legal requirements.<sup>28</sup> This will be achieved only with the means of "e-mail" and "website", but the application of these means may be

reflected positively or negatively, which we will address by mentioning the most important positive and negative points of electronic transaction.

The online portal of Public procurement is a positive picture of the attempt to reform and improve the public service under electronic administration, which will bring public administrations closer to citizens and economic dealers and enshrine the principle of transparency and integrity in the dealings of public administrations, especially in the field of Public procurement. However, it is considered to be a dead letter for the time being although Presidential Decree No. 10-236 contains articles 173 and 174 providing for electronic exchanges for Public procurement and was issued on 7 October 2010, in addition, the resolution on the electronic portal of Public procurement was ratified on 17 November 2013 and was issued in the Official Gazette of the Republic of Algeria only on 9 April 2014. This delay in the establishment of the portal is therefore a point that is not in favor of the Government, which seeks to digitize all its administrative work on the one hand, and improve the public service on the other.<sup>29</sup>

#### **2 – 4 Evaluation of the electronic portal of Public procurement:**

One of the advantages of electronic dealing is that it works to achieve the principle of competition and principle of publicity in the field of Public procurement. E-transaction enhances transparency in a sensitive sector and eliminates favoritism, nepotism, and bribery. It can also accelerate the pace of procedures and audit operations and save time, effort, and money and bring the distances between administrations and their clients.<sup>30</sup>

However, each procedure has a negative aspect that can be identified in the field of dealing via the website in the conclusion of transaction contracts and its impact on competition, which may raise the risk of information leakage and exposure to electronic piracy, especially in light of the terrible development in this field. Electronic contracting has many difficulties at the practical level. It is no secret to everyone how late and heavy the electronic network is. Algeria's electronic flow continues to face many obstacles, such as the hacking system and other obstacles.<sup>31</sup> Whenever hacking methods appear, it is difficult to survive and avoid them. The normal method imposes the existence of an envelope on which a phrase is written (does not open) and in which the references to the request for proposals are indicated, where it is opened only in a public session and in the presence of the Contracting parties themselves or their representatives. How can we ensure the confidentiality of the offer if the Contracting party is dealing electronically? Especially as we have recently witnessed, with the coronavirus crisis at the end of 2019, a visible spread of such transactions offset by a wider spread of cybercrime.

The answer to this undoubtedly requires a robust, non-penetrable information system that will ensure the confidentiality of offers, the confidentiality of responses, and the protection of Contracting party's, all in order to achieve honest and legitimate competition.

## **Conclusion:**

Electronic means and their use have made many changes in the areas of life in general and the law in particular, where we see their impact on the general theory of the contract. They have demolished the antiquated traditional principles of contracting and its formula and mechanisms. The automated electronic agent may be one of the modern contracting formulas that will form the focus of extensive discussion in legal studies. The permissibility of contracting electronic agent despite human non-interference at the time of concluding the contract does not mean that the will is attributed to the computer, but the will is attributed to the originator of the computer. From here arises a new principle brought by electronic contracting, which is the obligation to assign the will in electronic contracting to the natural person as he is the reason for the existence of automated media, as well as the fact that the validity of contracting with the electronic agent finds its legal basis in the legislative treatment of legal actions referred to by many legislations, which we referred to in this research.<sup>32</sup>

Among the most important findings:

- Electronic Administration.
- We have initially accepted the idea of the automated electronic agent, but it remains only a means in man's hands to facilitate transactions and cannot amount to a real agent in the legal sense since it does not have any legal personality, it is only a means of communication.
- The automated electronic agent can be regarded as a specific computer programming, which automatically concludes the electronic contract once it connects to another computer, programmed for the mission going, without the need for human intervention. The will is expressed by it through the data message, which is information of an electronic nature, which includes an explicit expression that may constitute an offer or acceptance of this offer. It can also modify or cancel the content of another message. The legislation has granted the client using modern means of communication to deal electronically, the freedom to agree to exclude dealing with these means, and has also excluded some transactions from electronic contracting due to the privacy that characterizes it.
- Public procurement have been one of the most important means for the State to achieve its objectives. They cannot remain isolated from the rapid and successive developments in communication and information technology. Therefore, it is necessary to dematerialize the process of concluding Public procurement because of the speed and cost reduction they provide. Accordingly, the means of advertising have expanded, to add in addition to the written means, other less expensive electronic means via the Internet, which has had a positive impact on increasing transparency and attracting the number of competitors

wishing to contract, especially since the electronic contract is often international. The recent Decree 15-247 confirmed the electronic method and established an electronic portal for public procurements.

Despite the organization of electronic communication and exchange of information in the field of Public procurement since the issuance of Presidential Decree 15-247, and the issuance of the Minister of Finance's resolution specifying the content of the electronic portal of Public procurement and how it is conducted and how information is exchanged electronically, the process of concluding Public procurement is still carried out through traditional methods. There is also no indication of the mandatory nature of electronic publishing, which makes it permissible, and we call here on the Algerian regulator to benefit from the experiences of other countries that have taken significant steps in this field, for example, France, Morocco, Tunisia.

As a proposal, we can emphasize the opening of competition at the international level and its strict regulation that does not allow for interpretation or doubt. Because modern methods of work have not yet been operationalized, the Algerian regulator should have indicated how the declaration is made at the international level, for example through the embassies or consulates of foreign States in Algeria, by notifying the operators of the type of activity that is the subject of contracting in those States.

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