



# Analysis and modeling the electronic document management system of ministries of Iraq

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**ABSTRACT:** Nowadays, quantity and the volume of documents used in the modern world are growing. According to the statistics; the volume of corporate e-text information is doubling every three years. Document automation market in the world increased by about 20% per year, analysts said.

Currently, many countries in the world to create the preconditions for growth and the rapid development of this market segment constitute and implement the work of special legislative projects, which entail a more simple legalization of documents of electronic circulation.

A question about e-services activities within different countries revealed its responses to the diversity of e-services, with 63% of the participating countries saying they started e-business services, 57.9% said they provide e-government services and 50.9% provide electronic education services, and 22.8% reported that they do not provide any of the electronic services to their citizens.

Such acts and laws simplify operations associated with the exchange of necessary documents between government and business that contributes to good implementation of such systems in the further development of relations between these structures.

According to Forrester Research, 38% of the Fortune 500 believe that the acquisition of modern document automation is critical for the success of their business.

In accordance with the opinion of industry analysts, the benefits to business users when implementing the document automation sufficiently diverse. For example, according to Siemens Business Services, by using document automation.

- staff productivity increased by 20-25%;
- the cost of archival storage electronic documents by 80% lower compared to the cost of storage of paper archives.

With the introduction of document automation acquired both tactical and strategic benefits.

The object of scientific research is an electronic document management system.

The subject of scientific research is a technology for modeling electronic document management systems.

Purpose of work is development of technology implementation of the electronic document management system of the state institution of Iraq, Satisfying international standards and allowing improving the quality of the work of a public institution.

Scientific task – the development of the model of electronic document management system, Different from the known ones according to international standards.

The realization of the goal which accomplished by solving the following particular problems:

- analysis of existing electronic document management systems and their compliance with international standards; The development of a model of the electronic document management system for the state institution of Iraq;
- setting up the workflow of the state institution of Iraq, Using the electronic document management system Case.

Methods for solving scientific research problems: Methods of modeling and design of electronic document management systems.

Scientific novelty the technology of introduction of system of electronic document circulation of the state institutions of Iraq based on a universal model meeting the requirements of international standards.

Practical significance of the work

Application of the proposed model of the electronic document management system will improve both qualitative and quantitative characteristics of the management system of a public institution.

## INTRODUCTION

The choice of modern electronic document management system of the company are guided by a common development strategy, goals, the presence of a competitive environment, the desired structure and the expected economic effect from the introduction of such a decision. The electronic archiving system enables document archiving and retention in the form of electronic files, allowing for the utilization of space for the preservation of paper documents and their use for other vital matters called archiving, document management systems [4]. The objectives of the electronic document management (EDS) implementation include improved control of executive discipline, reducing the number of lost documents, coordination time and the number of errors in working with models. There are a number of key requirements for EDS function (ECM). From compliance with these requirements depends on the system's continued successful workflow optimization company. The process of matching documents and assigning tasks run faster. When moved from "paper" in electronic form, also reduced the time to process the documents and instructions, and it is possible to monitor the progress of the work with the document. When working with a system the performers will be notify automatically about new created documents and the processing time will be under control. The electronic storage had created for quick access to the documents easy retrieval and preservation of documents organized.

It is important that the right of access to protected data be delineate. Significantly reduces the time and auto-complete of standard documents of sections of the existing reference data. The head is important to have a convenient means of controlling the timing of execution of tasks and the consolidated accounts. To maintain the information content in the company of EDS should be easy to integrate with existing e-mail system and the existing company accounting systems (human, financial, accounting and performance management systems. There are more and more organizations pay attention to the possibility of remote operation system. Important criteria for evaluation of the system include the ability to generate reports on documents, artist, status of documents, etc.; the rapid implementation of the system; system installation and support costs; ease of system development; the possibility of using the system software solutions for additional tasks.

In addition, additional requirements:

- availability of streaming input documents into the system, the ability to work with the scanner;
- preconfigured contract management module;
- flatbed version;
- mobile clients.

Document management systems are electronic filing cabinets that provide a framework for organizing all digital and paper documents. These systems work in tandem with scanners, which convert paper documents into digital versions. Through sophisticated search engines, document management systems allow for quick access to any document or file.

The functions you can use these systems for include:

- Storing various document types, including word-processing files, emails, PDFs and spreadsheets
- Searching an entire library of files by individual keyword.
- Restricting access to certain documents.
- Monitoring who is viewing documents and when.
- Tracking edits been made to documents.
- Retrieving previous versions of edited documents.
- Controlling and regulating when out-of-date documents can be delete.
- Accessing, editing and sharing documents via mobile devices.

According to development of information technology in the modern world the introduction of electronic document management systems in government establishments is an urgent task. But it should be noted , that the effective implementation of the electronic document management system organizations of any level is impossible without the use of international standards in the field of records management. The review showed that for today , in today's world there are a large number of standards, in one way or another, described the significance of documentary maintenance organizations and their automation. ISO 9000 standards for quality products and services management includes a section dedicated to the value of the organization of documents. The ISO 14000 series on environmental management indicate the need to monitor the versions used in the workplace internal regulations, as well as for the organization of convenient access to them. ISO / IEC 17799 information security standard includes requirements for the protection of company documents. Thus, at the international level, it is officially assigned the important role of documentary maintenance of the organization, as well as the need for its automation. At present, more and more organizations are faced with the necessity of introduction of electronic document management systems. However, it should be noted that to ensure the effectiveness of this process is necessary to solve a number of tasks: to conduct a survey of the existing system of documentary maintenance organization; select the electronic document management system; develop a system setting rules; configure the system; to develop a set of documents (instructions, regulations); educate users; start the system in pilot operation; to consult users, to improve the quality of work in the system. The main problems encountered in the implementation and operation of electronic document management systems in government offices, as well as their solutions are described in In 2001 he published international standard for managing documentation ISO 15489 "Information and documentation - Upravleniedokumentatsiey» (ISO 15489-2001 Information and documentation - Records management), which contains the basic provisions, the implementation of which will ensure the effective implementation of electronic document management in government offices at all levels of the system

Given standard is composed of two parts:

- The first part - ISO 15489-1 - Standard, which formulated the most general, basic requirements and document management principles;
- The second part - ISO / TR 15489-2 - the application of the standard, which describes one of the options of implementing the provisions of the standard in practice (based on the Australian experience).

The standard specifies that the management policy and the preservation of documents to be adopted at the highest level in the organization and its operation should be extended to all employees, to create a document in the course of its work.

And also to define the responsibility of officials for any document in your organization. The primary responsibility for the organization of the document management process brings the organization's leadership, experts preschool have the primary responsibility for the implementation of ISO 15489-1, are responsible for all kinds of work with documents in the organization as a whole, develop and implement regulations to work with documents, monitor the current state of affairs and train users . In the technical report ISO 15489-2 states and on the responsibility of heads of departments for ensuring that the process of creating and saving documents has been an integral part of the work of their subordinates, and all actions in the field of office units have been agreed with experts preschool.

All employees are responsible for the accurate and complete documentation of their activities in strict accordance with established principles, policies, procedures and standards. Such distribution of responsibility raises the status of pre-school service, actually laying on her organization and coordination of all of the documentation, including electronic documents.

Conclusion: The study and use of international standards in the field of records management in preparation for the introduction of electronic document management systems in government offices can improve the efficiency of the process and avoid many problems.

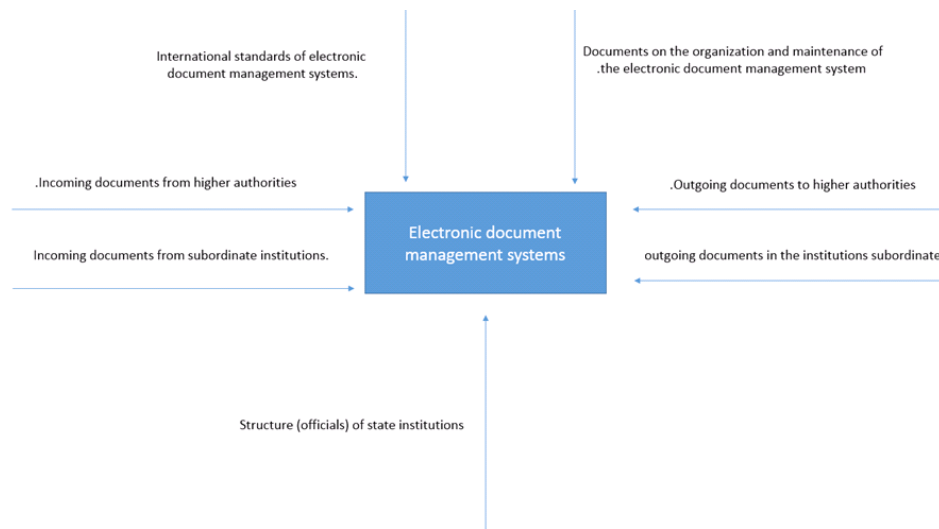


Figure 3.1 – Conceptual model of the system of electronic Workflow state institutions

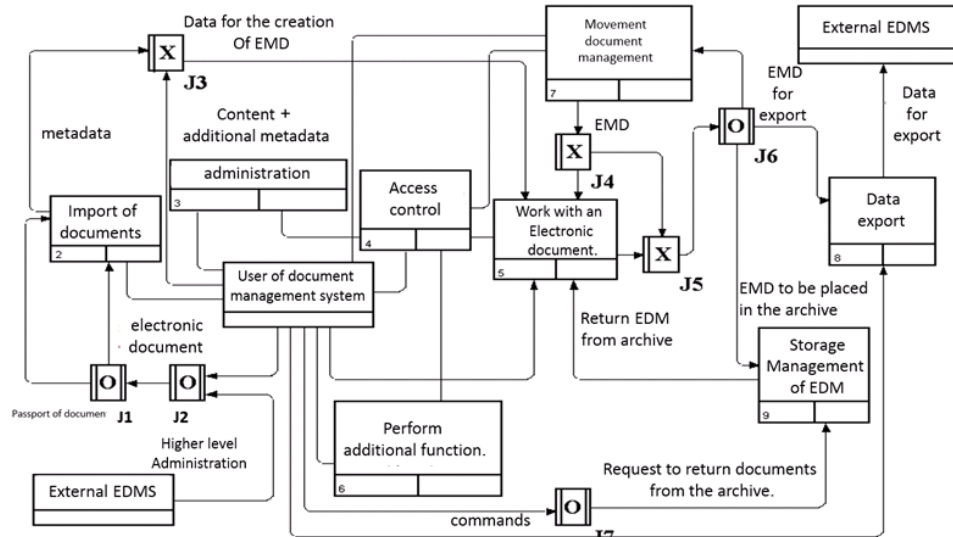


Figure 3.2 – The Functional model of the electronic document management system

## EXPERMINT

By using the program (BIZAGI), we can illustrate how the message following between the different departments as will illustrate in figure

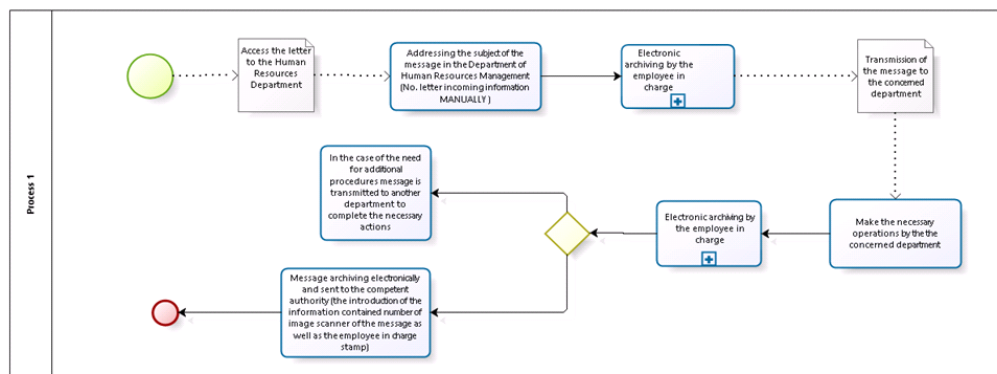


Figure 3.3 – Movement of documents in the Directorate General of sewage

In order to clarify the structure of the ministry. We will be using the program (DELO) its mean in English (DELO). Setting the program DELO for the Ministry of Municipalities and Public Works

The system of electronic document circulation "DELO" is a complex industrial solution that automates the processes of office work, as well as maintaining a completely electronic document circulation of the organization. The system is using both in small commercial companies, and in distributed holding or departmental structures.

The program DELO had released in 1996. In 1996, received a quality certificate of the State Standard of Russia, and in 2006 – a certificate of official registration in the register of computer programs. The system is constantly updating in accordance with accepted standards and users' wishes.

The system of electronic document management DELO functionally belongs to the class of corporate content management systems (ECM). It provides both automation of general document circulation procedures for the company, as well as automation of execution control of orders, as well as arbitrary regulated business processes.

The DELO system fully complies with the state normative and methodological requirements in the field of document management. The presence of open API-interface makes it possible to integrate the document management system of the enterprise DELO with any information systems and business applications used in the organization.

The first step for the installation of the program is installing the (SQL) and after that, we can installing the DELO program.

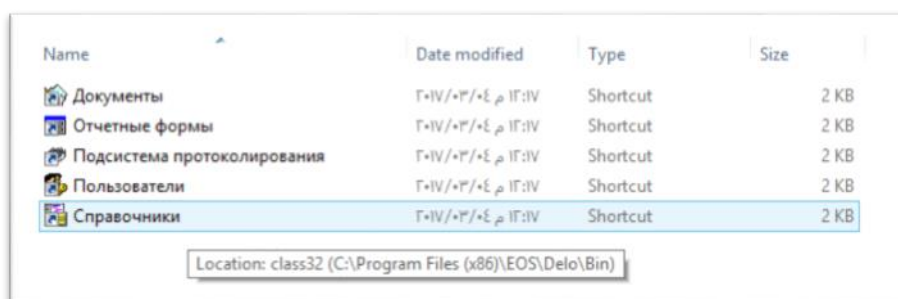
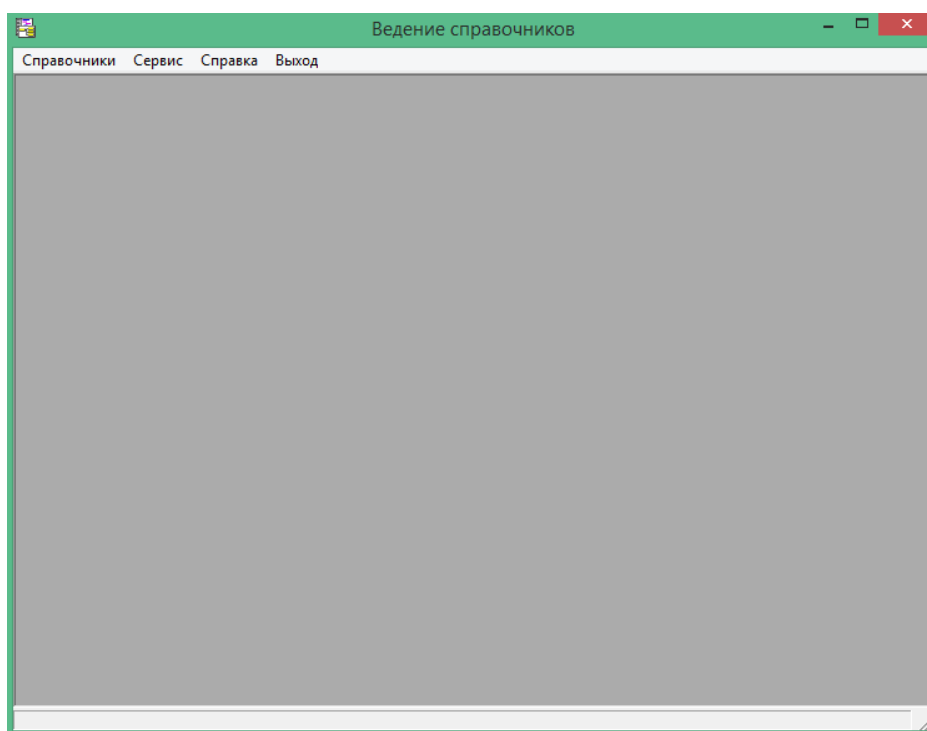
Now to build a structure of the ministry we have to press on the icon "справочники" in English "reference"

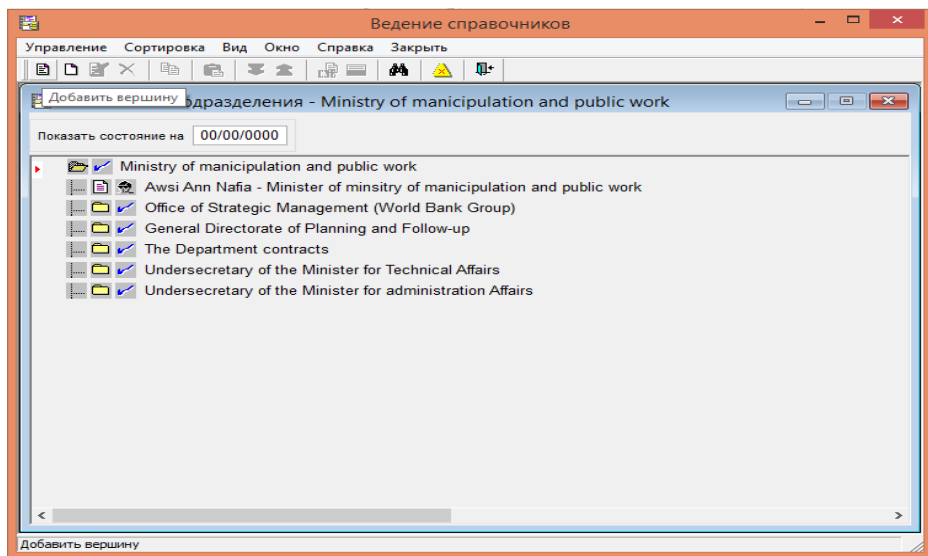
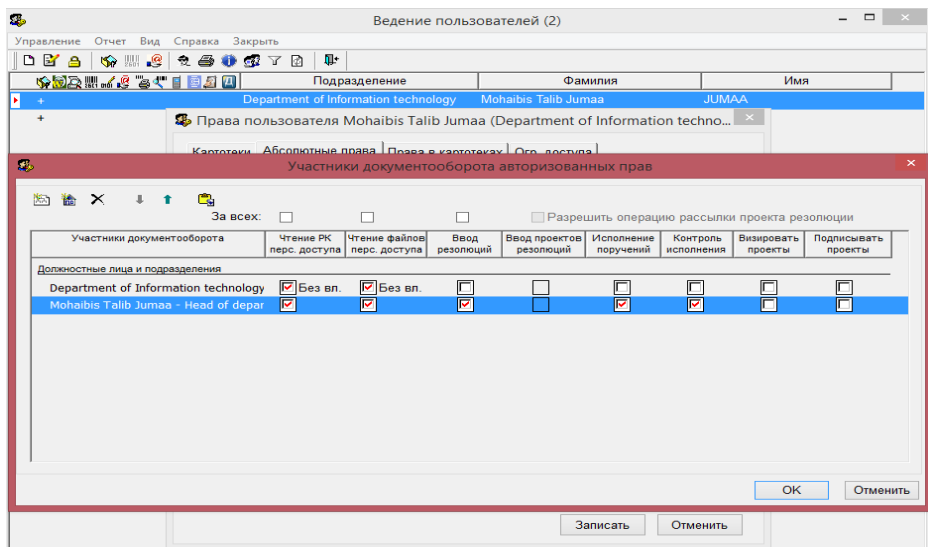
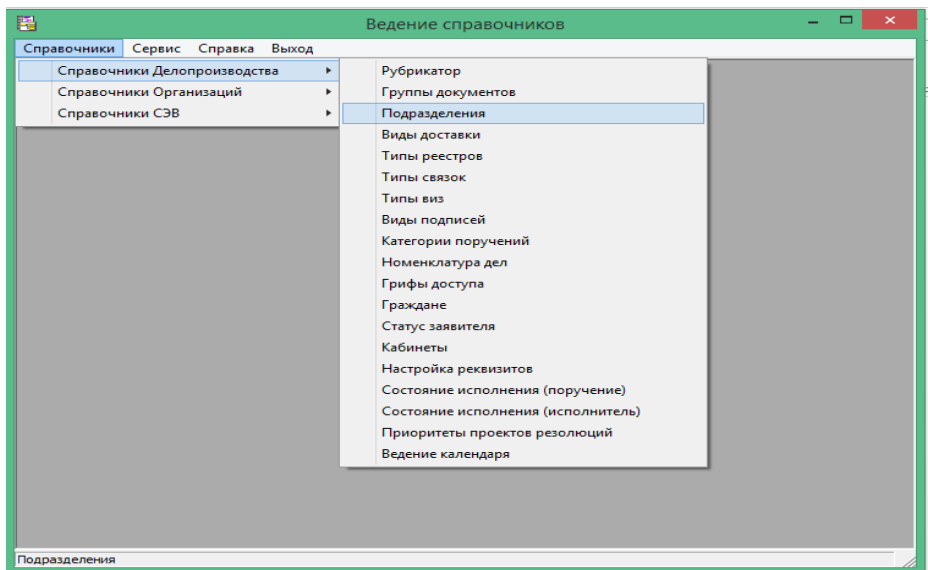
Now we will select "справочники делопроизводство" in English "Reference books office work" and selecting "подразделение" in English "subdivision" as will illustrate in figure 3.6

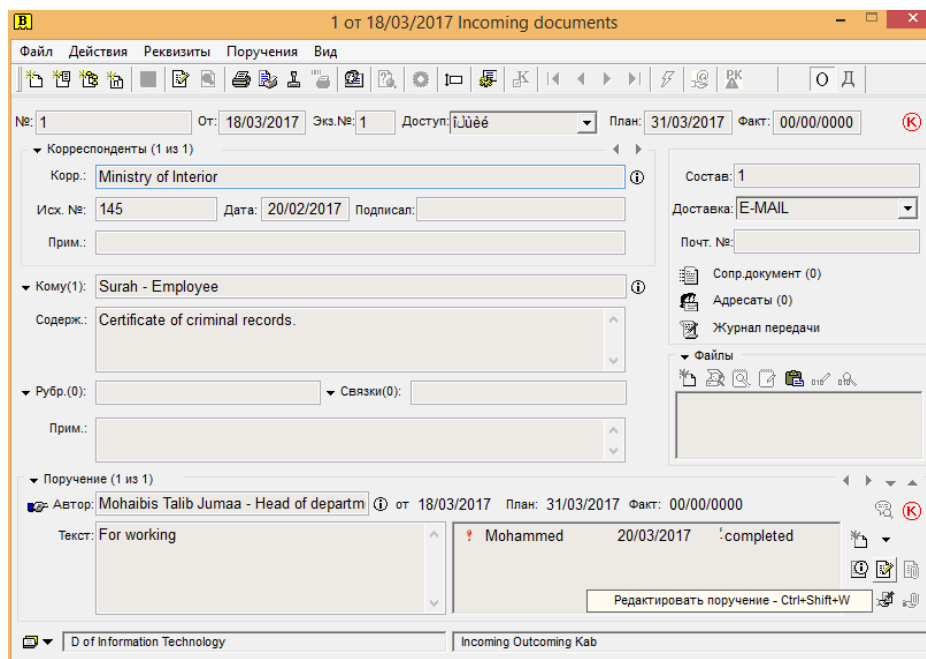
In order to start set a structure of ministry we have to divide the ministry by the departments and directorates. We will illustrate in the figure 4.

To create a new object we going to "Добавить вершину" in english " add top object" .

Now open a new windows which into we can edit the name and description in conversation box







## CONCLUSION

The lack of automated information systems in the activities of the Iraqi state institutions is today a big problem, as the processing of various requests from citizens expended large amounts of time. In this regard, the introduction of modern systems of electronic document circulation in state institutions of Iraq is an urgent task and a first step towards e-government that will significantly expand the channels of communication between government and citizens, improve its quality and thereby contribute to the strengthening of civil society and, consequently, the state as a whole. As example, the visa process in Iraq and Russia. Therefore, to get a visa in Iraq, you must applying at the visa application center. and wait until the response to the request from the visa center in the Ministry of internal Affairs of Iraq, which in turn sends a request to the Embassy of the country from which comes the citizen, to provide information about the citizen and the purpose of his visit.

Due to the lack of a unified information system, this process can take quite a long time.

In Russia, when applying through the Internet to the immigration office, within a few minutes the user receives the answer in a month will receive a notification about the possibility of obtaining a visa. It is very convenient and no need to go to other state institutions of Russia. It will also allow communication between agencies and timely exchange of information via secure channels of communication and facilitate the procedure for obtaining certificates and other documents of the Iraqi citizens. It will also allow communication between agencies and timely exchange of information via secure channels of communication and facilitate the procedure for obtaining certificates and other documents of the Iraqi citizens.

One of the steps towards creating e-government is the creation of a specialized system of information exchange, such as electronic document management system, which had designed to provide employees prompt, relevant and reliable information for making management decisions.

The creation of e-government will allow:

1. To search for and receive complete, accurate and up-to-date information from all public authorities, as well as reduce the number of errors that arise during its search.



2. To carry out interaction of citizens and organizations with the public authority. Allow citizens and organizations to request and receive on the Internet the necessary certificates or permits and to pass to the government authorities statutory reporting with the ability to monitor the status of requests.

## DISCUSSION

The first steps of developing EMD in Iraq:

One of the first steps of a nation as it becomes an information society is its presence on the Internet, in Iraq still they have problem with internet connection, citizen still have problem to get connection, wither the connection is bad or it is so expensive to get high speed connection. Infrastructure is very weak in Iraq at present that electricity does not reach citizens for more than few hours a day. Only one Internet service provider exists for Iraq, which lessens the coverage [21].

Iraqi government institutions rely on administrative systems dominated by the traditional side, which depends in most cases on the flow of information among its components on paper documents. It is therefore possible to identify a number of problems related to the administrative and technical systems in the Iraqi institutions as follows:

1. Excessive inflation of paper assets resulting from transactions and administrative correspondence. Thus difficult to organize, classify and archive them in the future.

2. The lack of unified electronic archiving systems, which leads to repeated efforts to organize paper archives in each of the administrative institutions. Meaning that there are a large number of duplicate copies of the document saved in different places.

3. The flow of administrative correspondence between the units depends on the organizational structure of the institution, resulting in the delayed arrival of the document to the concerned party at the speed with which the target is achieved.

4. Lack of correspondence and official books to a special coding system, which makes it difficult to follow up the documents and complicate the procedures for their preservation.

5. The lack of government databases on citizens leads to repeated requests for information, documents and documents from citizens.

6. Laws, instructions and level of powers are often the exclusive preserve of administrative leaders and are not announced despite the importance of their knowledge by the employees of institutions or access to them by citizens.

7. The community often lacks information about institutions because there is no way to identify the organization's information.

8. Institutions lack the principle of transparency in the announcement of tenders and auctions and the implementation of projects within the institution. And the difficulty of quickly checking the conditions and requirements for project implementation.

9. Completion of transactions in institutions often requires a personal presence to identify the requirements, conditions and documents required first. Because they are not advertised through the organization's websites.

Will be able to say that the success of any experience of e-governance should link to the existence of the system of electronic supervision. because the existence of an integrated archive system will open the way for citizens to obtain sufficient information to complete their administrative transactions, as well as the possibility of opening the service to a wider area of navigation.

The National Archives shall identify themselves and upload their documents required for the completion of special transactions such as promotion of the treatment of obtaining passports, paying bills, paying fines, etc. In order to achieve this efficiency, a series of practical electronic supervisory steps will have to implement that will have great benefits for electronic governance, which we include:

- The electronic archiving of the civil records and the unification of the identity papers of the citizen with a single card. In addition, accelerate the completion of the civil number project.
- Electronic banking supervision and expansion of credit card issuance.
- Electronic archiving of educational documents for various educational stages.
- Electronic supervision of real estate and private property bonds.
- Electronic archiving of health records and re-employment of family health cards.
- Electronic archiving of criminal records.

Electronic archiving of statistical records of various ministries.

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