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**Challenges and requirements of implementing E-Government in
the Republic of Yemen**

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Abstract

The study aimed to identify the obstacles and requirements for the application of e-government in Yemen, through a research method based on studies, reports, indicators and relevant international experiences. The study reached a set of results, the most important of which is that Yemen is lagging behind in this field and its ranking is low compared to many countries in the world that have implemented e-government according to the index of the development of e-government in the year 2022, which was implemented by the United Nations. Yemeni Government is still a traditional government, as a result of the political and economic situation in Yemen and the absence of a serious trend by the Yemeni government towards the implementation of e-government and the lack of awareness of the importance and benefits of e-government among senior leaders and its role in improving service delivery, combating corruption and developing government performance. The study recommended that the transition to the implementation of e-government requires: The belief and conviction of the Yemeni political leadership of the importance of e-government, and the need to expedite the establishment of an independent specialized institution responsible for leading the e-government project, which has a board of directors headed by the prime ministers and whose membership includes the concerned ministries, and provide the necessary resources for it so that this entity prepares the e-government strategy, follows up its implementation and supervises the e-government implementation projects, creates the legislative and legal framework, organizational structures and simplifies government work procedures. In addition to works to develop the communications and information technology infrastructure, build capacity and skills in the field of information technology, and enhancing studies in the field of e-government.

Keywords: Yemeni Government; E-Government

Introduction

E-government has become a tangible reality and a natural extension of the technological revolution that accompanied the knowledge society, especially the Internet. Many countries in the world have found new and innovative solutions in ICT to overcome the problems and obstacles that limit the effectiveness of development efforts and a new approach through which administrative reform of government organizations can be achieved and increase the efficiency and effectiveness of government performance. E-government has strengthened modern concepts in the science of public administration and contributed to improving transparency, accountability, and citizen participation in evaluating government performance, as well as changing political practices by switching to e-democracy and e-governance. Therefore, when applying e-government in practice, it is not limited to expanding the use of technological applications in the field of government work, but many administrative issues that contribute to achieving administrative reform and administrative development appear such as: efficiency and effectiveness, the quality of government services, measuring government performance, and re-engineering, which must be taken into account when implementing e-government¹.

The transition to e-government has become essential, crucial and important for Yemeni institutions and ministries, which are still traditional manual administration in the performance of government business and tasks and the provision of various government services, especially since e-government has become a means to improve government performance, increase efficiency, effectiveness and transparency, reduce corruption in the management of institutions, enhance citizen participation in decision-making and provide high-quality services in a short time and at the lowest costs to citizens, the business sector and others. Because of the importance of the topic and the need to study it, this study aimed, through the use of a qualitative methodology based on a review of previous studies, reports, indicators and relevant international experiences, to clarify the problem, its causes and impact, as well as identify the challenges and requirements of the transition towards e-government and develop the necessary solutions and recommendations for decision makers to work hard to move towards the application of e-government as a comprehensive administrative approach to develop government performance and public administration in the Republic of Yemen.

The first topic: Methodology of the study and previous studies

The first requirement: The methodology of the study: This part deals with the methodology used in the study, the formulation of the problem, questions, objectives and importance of the study.

First Section: The problem of the study

Today, Yemen is witnessing a state of political and administrative division with the presence of two governments, the Ansar Allah government in Sana'a and the internationally recognized legitimate government in Aden city, where the public administration apparatus was divided into two bodies, the first in Sana'a and the other in Aden, which weakened its ability to carry out its tasks at a minimum. In addition, the reality of public administration in Yemen still suffers from many imbalances and accumulated problems as a result of long periods of financial and administrative corruption, the complete absence of a performance evaluation approach, whether individual or institutional, the defect in the system of appointing administrative leaders and building their capacities, the control of political decision over administrative decision, the inflation of the job structure, the weak level of performance of human resources and the lack of capacity building², the weak interest in organizational development, the weak level of public service delivery. Therefore, the low institutional performance, the weakness of administrative and functional information systems and the low infrastructure of communications and information technology that can contribute to the productivity of the government apparatus and the provision of services with quality, speed, efficiency and effectiveness. The Yemeni government still a traditional government that continues to rely on manual management in the performance of works and tasks and the provision of various government services, as it is still a paper-based administration that focuses on procedures, not results and outputs, and has not shifted towards e-government and adopts it as a main approach and method and a serious orientation in the government's plans, programs and strategies as an entry point for administrative development of public administration in Yemen. This was confirmed by the e-government development index carried out by the United Nations in 2022³, to the decline of Yemen's rank in the e-government development index from 173 in 2020 to 178 place among the total countries of the world covered by the survey, and Yemen has a low score for the values of the e-government development index and reflects the weak availability of the infrastructure necessary for the implementation of e-government as well as the absence of a serious orientation towards the e-government project and that Yemen lags behind in this

field compared to many countries in the world that have implemented e-government.

Based on the above, the research problem is the following question:

What are the challenges and requirements for the successful implementation of e-government in the Republic of Yemen?

Second Section: Objectives of the Study

This study aims to answer the following two questions:

- 1-What are the challenges that stand in the way of implementing E-Government in Yemen?
- 2-What are the basic requirements for the transition towards E-Government in the Republic of Yemen?

Third Section: The Importance of the Study

The current study derives its importance from the importance of the topic it deals with, which is e-government, its concept, the elements of its application, and the benefits and advantages that accrue to the government and the citizen from its application.

A- Theoretical Importance

The study derives its importance from the novelty of the topic and its importance in developing government administration and improving the quality of services provided to citizens in Yemen. The subject of E-Government has not received the necessary attention by Yemeni researchers, and the study aspires to make a scientific addition in this field , contributing to the enrichment of the Yemeni and Arab library.

B- Scientific Importance

- Highlighting the issue of E-Government and the benefits and importance of its application in developing the performance of the Yemeni government, improving the level of providing services to citizens, developing the efficiency and effectiveness of government performance, and achieving administrative and comprehensive development.
- Providing a set of findings and recommendations for the benefit of public policy makers, decision makers and researchers related to the application of E-Government and its importance in increasing efficiency and effectiveness in the provision of government services and achieving citizen satisfaction

Fourth Section: Study Methodology and Data Collection Method

The study adopted a qualitative methodology through a review of relevant studies, literature, documents, reports and official statistics, as well as a review of previous government efforts and policies in this aspect, and international indicators reports on the subject of e-government.

The second requirement: Previous studies related to the subject of the study

In this part, we will review the most important previous studies; local, Arabic and foreign studies in English, related to the subject of the study that was reviewed and benefited from, arranged from the latest to the oldest as follows:

First Section: Local Previous Studies

1-(Dalal, 2021) study, entitled "a proposed model to assess the readiness of E-Government in the Republic of Yemen according to international indicators". This study aimed to build a model to assess the readiness of E-Government in the Republic of Yemen, and to identify the views of the respondents on the readiness of E-Government in the Republic of Yemen according to international indicators. The study reached the most important results that the readiness of E-Government in Yemen at the intermediate level, the weakness of the communication infrastructure significantly, the low level of access to government e-services, the weak government orientation and the support of senior leaders to move towards E-Government. The study concluded with many recommendations, the most important of which is that the Yemeni government should pay attention to the implementation of E-Government and provide all its requirements.

2- (Atef , 2019) study, entitled "The Framework for Adopting E-Government in the Republic of Yemen". The study aimed to develop a framework for E-Government and identify the factors that affect the adoption of E-Government in Yemen. The study found that there is no effective implementation of E-Government and there are deficiencies in several aspects. It recommended the need to make effective efforts to implement E-Government and provide the appropriate environment to ensure its success.

3- (Al-Baham, 2019) study, entitled " Integration of Information Systems as an Introduction to the Implementation of the E-Government Project in the Republic of Yemen": The study aimed to research the possibility of taking the integration of information systems as an input to the implementation of the E-Government project in the Republic of Yemen. The most prominent results of the study are that Yemeni government institutions suffer from the lack of requirements for the integration of information systems that are used as an entry point for the implementation of e-government. The study recommended that the state should analyze the current situation of the E-Government system.

4-(Al-Hammadi , 2018) study, entitled "The role of E-Government in combating corruption in the Yemeni government sector". The study aimed to research the importance of the relationship between E-Government in Yemen and combating corruption in the government sector. The study found a lack of support in the legal framework of the Yemeni government. The study recommended working closely with ICT professionals to ensure coordination with administrative and legal reform processes in line with e-government.

5- (Al-Lahji, 2017) study, entitled "Applying the methodology of re-engineering higher education services towards E-Government in Yemen". The study aimed to clarify how to apply the process of business re-engineering to improve higher education services towards e-government. The study found that current processes do not apply systematically to e-government. The study recommended the establishment of a specialized unit to review the construction work on the organizational structure of the public sector.

6- (Al-Aryani, 2010) study, entitled "A model for measuring the impact of culture on the e-readiness of the Yemeni government". The study aimed to build a model to measure the impact of community culture on e-readiness of E-Government in Yemen and to use the model to measure e-readiness in society. The study concluded that the level of e-readiness of society is (63.5%) and recommended the importance of understanding e-readiness for the success of citizens' interaction with e-government, and the formation of society.

7-(Al-Suhaibi, 2007) study, entitled " Implementation of E-Government in the Republic of Yemen: An empirical evaluation of technical and organizational readiness. The study aimed to assess the technical and organizational readiness to implement E-Government in the Republic of Yemen, identify the challenges facing the implementation process and provide appropriate solutions to overcome this modernization. The most important finding of the study is that all government activities need to be re-engineered, and the Government of the Republic of Yemen needs to conduct a periodic evaluation of its operations and the current technical and organizational situation. The study also recommended standardizing the use of information technology in ministries and standardizing the database associated with all government departments and ministries. The government must also ensure its citizens that they will have a high rate of security when conducting their transactions and exchanging personal information electronically .

Section II: Previous Arab and Foreign Studies

8-(Hussein, 2013) study, entitled "E-Government the study aimed to introduce the importance of E-Government and its concept and the importance of its application and to identify the experiences of many countries with a focus on Iraq's experience in e-government". The study recommended the need to adapt the requirements of

E-Government in line with the requirements of change and in line with the applications of E-Government projects and to develop the necessary plans for the rehabilitation and training of employees in line with the use of modern technologies and the application of the method of e-government. Providing data and information protection programs for citizens in all transactions through the development of the necessary legal legislation.

9-(Laila, 2015) study, entitled "Requirements for Establishing a Successful E-Government, Global and Arab Models and Experiences". The study aimed to study the experiences of some countries in e-government, such as South Korea and Bahrain, to benefit from them in the Algerian experience. The study concluded that it is necessary to prepare the vision and strategy of E-Government to overcome obstacles and achieve national development goals in Algeria.

10-(Al-Baz , 2003) study, entitled" E-Government and Arab Local E-Government". The study aimed to define the idea of E-Government and e-public organization in the field of local administration from a constitutional and legislative point of view. The study concluded that the term E-Government is incorrect and suggested that the term E-Government be used, as well as the term e-local administration, and that the application of the E-Government public administration system in the field of localities be started, and that the scientific preparation for the transition to the E-Government local practical management system be carried out through a detailed study of government agencies and services, and that this transition be carried out in planned stages.

11- (Evans , 2003) study, entitled "Implementing-Government: an executive report for civil servants, England". The study focused on the UK strategy to implement E-Government as part of the government modernization program explaining the reasons for the shift towards e-government, and how this transition occurs, with a review of multiple models and case studies. The study concluded that the use of information and communication technology is changing the system of government work, as governments today increasingly exploit the enormous opportunities offered by information and communication technology to provide services in a more efficient and effective way, and at a lower cost. The study showed many of the most prominent findings: The importance of information technology for the state in general, and its development and use as a tool for economic development and to increase productivity, speed and transparency in governance, and improve the quality of services provided, for the government to the citizen, and to the business sector.

The second topic: E-Government (definition, areas, benefits, objectives, and success factors)

The first requirement: Definition, areas, benefits and advantages of E-Government

First Section: Definition of E-Government:

There are many concepts about the definition of e-government, some of which have adopted the narrow concept by focusing on the technical aspect, limiting the definition of E-Government to the use of information technology and the Internet in the provision of services, and the direct benefits resulting therefrom; while some have tended to provide more comprehensive definitions, referring to the change taking place or expected in the management systems of government organizations. It defines E-Government as "the use of information technology, computing and mobile services to formulate and implement government policies with transparency, integrity and a high degree of accountability, with the aim of delivering the necessary services to citizens, business institutions and government agencies and facilitating the task of government agencies by increasing the efficiency of these devices and improving their performance while motivating citizens and business institutions to participate in connected governance."⁴

The World Bank (2005) has also developed a broader concept of E-Government as: "The process of government institutions' use of information technology (such as: broad information networks, the Internet, and mobile communication methods) that have the ability to change and transform relations with citizens, businessmen, and various government institutions. This technology can serve a large number of objectives such as: providing better services to citizens, improving dealing and interaction with businessmen and the industry community, and enabling citizens to access information, which provides more transparency and more efficient management of government institutions. The results of these applications can also reduce corruption, increase transparency, maximize the return as a whole, reduce expenses, and increase citizens' conviction of the role of the government institution in their lives⁵.

Second Section: Areas of E-Government

E-Government has several aspects and areas that can be recognized by users and the ways they interact with them:

1-Government-to-Citizen(G2C) : Provides services and information to citizens.

2-Government-to-business: (G2B) simplifies all forms of relationship and communication between the government and the business sector

3-Government-to-Government (G2G): Sharing information and cooperation within any government entity and between different government entities.

4-Government-to-Employee (G2E) coordinates internal procedures and improves productivity by improving communication between government employees.

Third Section: Benefits and Advantages of E-Government:

There are many advantages offered by e-government, including: raising the efficiency of government work and improving performance, increasing the quality and efficiency of the provision of government services, reducing the cost of providing them, reducing the administrative burden on citizens and the business sector, reducing the time to implement procedures, increasing citizens' participation in the decision-making mechanism, and improving transparency. On the other hand, E-Government contributes to building trust between the citizen and the government, by promoting direct interaction and making information available better and easier, knowing that trust between the citizen and the government is a component of good governance 6.

Table (1) Changes caused by the use of electronic services

From	To
Government Action	Government Action
Isolated procedures in each government agency	Interconnected Actions Offered as Services
Multiple Government Focal Points and Many Personal Reviews of Government Offices	A single government point of contact with an electronic outlet, which makes personal reviews of government offices unnecessary
Managing information sources at the level of each government agency, which leads to the repetition of information systems in different government agencies	Unified government management of information resources using unified standards

Source: E-government Policies, Strategies and Applications, ESCWA,2014.

The second requirement: The objectives, pillars and factors of the success of the implementation of E-Government

First Section: Objectives of e-government:

The objectives of E-Government are the same as those of governments, but by exploiting the modern technology available, the following are the main objectives of E-Government projects: improving the level of services provided to citizens and business institutions, raising the level of government performance, a successful tool to combat financial and administrative corruption, increasing transparency and credibility in government transactions, providing accurate and comprehensive information to citizens, business institutions or other government institutions, and

increasing the participation of citizens in development. The successful implementation of E-Government projects leads to the achievement of the following four objectives:

Providing government services electronically, a government that works with a minimum of paperwork, a transparent government, and a knowledge-based government. To achieve the four previous goals, work on the E-Government initiative must be launched at multiple levels, and there are three main tasks at each of the levels: innovation in services provided to citizens; innovation in services provided to the business sector; and innovation in the ways government works⁷.

Second Section: The basic pillars of the transition to E-Government:

There are nine main pillars of digital government transformation, according to the E-Government index report, United Nations 2020, as follows⁸:

- 1- Provide vision, leadership, mindsets: which leads to the promotion of transformational leadership, changing mindsets and digital capabilities at the individual level
2. Institutional and regulatory framework: by developing an integrated institutional ecosystem through a comprehensive legal and regulatory framework
- 3- Organizational Preparation and Supportive Institutional Culture
- 4-Understanding and integrating the system: Enhancing the understanding of systems and developing integrated approaches to policymaking and service progress
- 5- Data Governance: Ensuring the existence of strategic and professional management of data to enable the development of data-driven policies and access to information and open government data.
6. Availability of necessary and modern ICT infrastructure, accessibility and technology access
7. Resources: Resource mobilization and alignment of priorities, plans and budget, including public-private partnerships
- 8- capacity developers: Strengthening the capacity of public administration schools and other institutions.
- 9- Community Capacities: Developing capacities at the community level by leaving no one behind and by bridging the digital divide

Third Section: Critical Success Factors for Implementing E-Government

The shift towards e-government, like any other project or program, needs an environment conducive to the nature of its work in order to be able to implement

what is required of it and thus achieve success and excellence, otherwise it will be doomed to failure. Therefore, the E-Government project must take into account several necessary requirements, illustrated by the following figure:



Source: E-Government Policies, Strategies and Applications, ESCWA,2014 .

1. Vision, objectives and strategy: Having a clear vision, support from leaderships and formulating a long-term strategic plan based on a carefully formulated vision, effective support and citizen participation 9.

2-Laws and legislation:

The implementation processes of the E-Government initiative require dealing with a range of legal and legislative issues, so that laws designed to deal with a paper-based environment do not hinder dealing with e-services. Therefore, it is necessary to update existing laws or establish new laws that allow dealing with documents and electronic transactions.

3-Institutional arrangements: They are a set of powers, responsibilities and cooperation mechanisms that govern the behavior of individuals and institutions in a specific field. The right arrangements ensure the participation process and speed up the implementation process. In order to design effective institutional arrangements, the following points must be available: strong and determined leadership on the E-Government initiative; planning for IT management and planning for change management; preparing financial allocations and determining their spending mechanisms; coordination and cooperation; monitoring and performance evaluation; establishing a technical support institution; and public-private partnership .

4- Work procedures: E-Government is not just about converting work procedures from paper to electronic procedures, or providing services electronically. Rather, its

ultimate goal is to occur in the government. Therefore, the development of work procedures and their process is one of the most important pillars of E-Government success. The re-engineering of procedures is one of the techniques for developing administrative procedures, which enables the design of internal procedures within each government agency, and procedures between government agencies, with the aim of raising their efficiency by removing all low-efficiency steps.

5- Information technology: Technology is changing at a rapid pace, but the most important points to take into account while choosing technology and manufacturers are: the technical level of applications; network infrastructure; interoperability; standardization; human and technological capabilities.

The Third topic: The current state of E-Government in Yemen:

This section discusses the current reality of E-Government in Yemen and the readiness of Yemen to move towards the application of E-Government and a review of Yemen's rank from the E-Government survey report prepared by the United Nations, and the reality of the telecommunications sector, as well as a review of the efforts, policies and projects implemented by the Yemeni government in this field.

The first requirement: Assessing the readiness of E-Government in Yemen:

This part discusses the readiness of the E-Government in Yemen according to the indicators of the E-Government index, which was carried out by the United Nations in 2022, as well as reviewing the reality of the telecommunications sector in Yemen as follows:

First Section: Yemen's indicators in the E-Government Development Index Report, United Nations, 2022 in the world:

The E-Government Development Index Survey carried out by the United Nations in 2022 indicates that Yemen's rank in the E-Government Development Index fell from 173 place in 2020 to 178 place among the total countries of the world covered by the survey, which is (193) countries, which are the Member States of the United Nations. Yemen has a low score for the values of the E-Government development index and reflects the weak of availability of the infrastructure necessary for the implementation of E-Government as well as the absence of a serious orientation towards the E-Government project and that Yemen lags behind in this field compared to many countries in the world that have implemented e-government.

Table No. (2) Ranking of Yemen in the E-Government Survey 2020-2022

E-Government Development Index = 0.2899 Average						
Year	Rank	E-Government Development Index	E-participation	Telecom Structure indicator	Online Service Delivery Index	Human capital index
2020	173	0.3045	0.3095	0.1757	0.3235	0.4142
2022	178	0.2899	0.1932.	0.1671	0.3393	0.3633

Source: E-Government development index, United Nations, 2020, 2022.

The United Nations E-Government Development Index is a global report that assesses the state of development and evolution of E-Government in all countries of the world. It is also a reference and development tool for countries to learn from each other, identify areas of strength and challenges in E-Government and formulate their policies and strategies in this field. The index consists of three main axes that measure the level of E-Government development in any country: the Online Service Index, the Telecommunications Infrastructure Index and the Human Capital Index. Each of the three indicators mentioned includes sub-indicators.

Second Section: The Telecommunications Sector in Yemen

The ICT sector in Yemen represents an essential component of the country's infrastructure, and has an important role in economic growth. The telecommunications sector is one of the most important sources of revenue for the state, especially hard currency. Before the conflict, this sector ranked second after the oil and gas sector. During the period between 2015 and 2018, the ICT sector contributed about 7% of the real GDP, and contributes to the provision of many important direct and indirect job opportunities through its association with the rest of the national economy. The sector is also of great importance for social development and human capital. In addition to the economic and social importance of the telecommunications sector, the political, security and strategic importance of the sector cannot be overlooked, which has made this sector one of the tools of the conflict between the parties, as all parties to the conflict have directly targeted and destroyed the telecommunications infrastructure. At the same time, the political division has deepened the institutional division in the sector and hindered efforts to improve the level of services provided by the sector and maintain or develop its infrastructure. The sector faces a number of challenges, most notably : the inadequate legal environment and the division of the sector's institutions, a weak and fragile infrastructure in the provision of services, increased and

diversified government fees and the duplication imposed by the governments of Sana 'a and Aden, and the difficulty of importing modern equipment and technologies for this sector ¹⁰.

The following table shows the telecommunications infrastructure index in Yemen for the year 2022, according to the report of the e-government, the United Nations, and indicates that Yemen has a low score in this field. This requires more efforts and the development of plans and policies aimed at developing the telecommunications infrastructure in Yemen and making it keep pace with the application of e-government.

Table (3) Telecommunications Infrastructure Index in Yemen

Telecommunication Infrastructure Index = 0.1671 Low				
	Mobile subscriptions per 100 people	Percentage of individuals using the Internet	Wired static band subscriptions per 100 people	Active Wireless Broadband Subscriptions per 100 people
	50.89	72	1.31	5.53

Source :. E-Government Development Index Report, United Nations, 2022

Third section - Online Service Index in Yemen

Through the data of the following online service index, which is one of the indicators of the development of E-Government, Yemen's position in the online service index is at an intermediate level, and it is a catalyst towards the development of this aspect by the government and reaching an advanced level that suits the requirements of the transition towards E-Government in Yemen .

Table No. (4) Online Service Index – Yemen

Online Service Index = 0.3393 Average				
Institutional framework	Content Delivery	Service Delivery	e-participation	Technology
0.7308	0.6	0.3467	0.1932	0.1765

Source: E-Government Development Index Report, United Nations, 2022

The second requirement: Government policies, projects and efforts towards E-Government transformation:

The beginning of addressing the issue of E-Government in Yemen dates back to the end of 2001 , in a seminar organized by the Ministry of Transport at the time. Then, efforts were pursued towards preparing a document for the E-Government project, which was called (the National Program for Information Technology). The Council of Ministers approved this program in November 2002. Then ¹¹

,government efforts and policies aimed at implementing E-Government in Yemen by successive governments continued until this day.

The following addresses these efforts, policies and previous projects of Yemeni governments in the transition towards e-government:

First Section: Establishment of the National Information Center, which adopted many projects for the future transition to E-Government applications, the most important of which are: the National Information Strategy, the Government Information Network and the preparation of a research paper to the Shura Council in 2005 on the reality of E-Government and the expected objectives in the Republic of Yemen .

Second Section : The National Information Technology Program (2002-2010), which was previously known as the E-Government project in Yemen - a project aimed at enabling the implementation of government actions and procedures related to the relationship of the government with its departments and bodies in an electronic manner through the use of information and communication technology, and raising the efficiency of the performance of government agencies. What has been achieved from this project is the establishment of the Yemeni portal for the Internet and service providers and the network of data correspondence, as well as the design and launch of the Yemeni government website on the Internet in 2003 as an electronic portal for government agencies and others to provide and provide the necessary information. However, the project stalled for many reasons, the most important of which are 12:

the lack of clear vision and methodology for the E-Government project and not considering it a government priority, the failure to complete the requirements for legislation and laws related to E-Government applications that should be available , as well as the lack of coordination between information projects at the level of ministries and institutions. Today, after nearly twelve years, the previously unsuccessful E-Government transition initiative in Yemen needs to be reviewed and benefited from the strengths and weaknesses and lessons learned in the future when preparing and implementing the E-Government transition strategy.

Third Section: The axis of administrative development – administrative reform and institutional building in the national vision for building the modern Yemeni state – included the government of Sana'a, a strategic goal that calls for supporting the transition towards the application of E-Government to improve and simplify government services, rationalize administrative decisions, and increase the efficiency and effectiveness of government work.

Fourth Section: Building automated systems for transactions: The Yemeni government has taken care to include many automated systems for operations, service provision and transaction procedures in a number of ministries and government agencies as a step to prepare the transition towards e-government, the most important of which are the following¹³:

1-(ASYCUDA system): is an internationally known system, implemented by the Yemeni Customs Authority with the aim of simplifying customs procedures and the collection of duties and taxes associated with them , shortening the customs clearance time for imported goods and goods and linking all customs points to a unified network in the Authority , allowing the branches of the Customs Authority and importing traders to manage and conduct customs clearance operations electronically .

2-Accounting and Financial Management Information System (AFMIS) : This system was implemented by the Ministry of Finance , as it represented a critical step to automate financial and accounting processes and procedures in the Ministry of Finance and report on the operating budget and electronic government payment systems, in addition to linking the financial statements of various government agencies.

3-The electronic portal of the Ministry of Higher Education in Sana'a: In 2016, the Ministry launched the electronic portal to provide access to knowledge of the conditions and rates of specializations in each public and private university, facilitate the registration procedures for students, choose the specializations in which they go to any of the public or private universities, and pay the necessary fees electronically.

4-The existence of individual projects carried out by some government agencies to provide some of their services to the public electronically, such as: the Ministry of Interior, the Ministry of Industry and Trade, the Ministry of Civil Service, and the Tax Authority, and carried out by these agencies to simplify access to the services provided and to facilitate the collection of taxes and fees from the citizen, especially the revenue authorities that carried out these procedures .

The third topic: Challenges and requirements of implementing E-Government in the Republic of Yemen

This topic focuses on identifying the challenges that stand in the way of the implementation of E-Government and the basic requirements for the transition towards E-Government in the Republic of Yemen

The first requirement: Challenges of implementing E-Government in Yemen

There are many challenges facing the task of transitioning to E-Government at the current stage, foremost of which are:

- 1- The current conflict, the political division and the existence of two governments; the government of Sana 'a and the internationally recognized legitimate government in the city of Aden, all of this has led to the deterioration of the economic and living situation of Yemen, increased inflation, the decline of public resources and the disruption of the infrastructure and infrastructure of the national economy, and the repercussions of this on the priorities of development plans and programs and the costs of investing in E-Government projects.
- 2- Lack of serious orientation by the senior leadership and the Yemeni government towards the implementation of E-Government and lack of conviction in the feasibility and usefulness of E-Government projects .
- 3- The absence of government policies and programs aimed at shifting towards E-Government previously and currently and not considering it a priority for administrative development and poor awareness and awareness of the importance and benefits of E-Government among successive Yemeni governments.
- 4-The lack of an integrated legal framework necessary for the digital dealing environment for e-government, which includes information systems for electronic work, electronic financial and commercial transactions, providing electronic services and ensuring the rights of institutions and individuals to benefit from E-Government applications.
- 5-Weak communications and information technology infrastructure, its age, its need for modernization and development, and the low level of technology necessary for E-Government applications.
- 6-The absence of a unified and comprehensive national information system that includes all official data and information and the need to establish the Supreme Council for Information and Technology to undertake the task of developing and implementing policies and plans for informatics and technology in Yemen.
- 7- Administrative obstacles include: the traditional government administrative systems, the complexity of administrative procedures, the lack of flexibility, the lack of coordination between government departments, the lack of qualified human resources for E-Government projects, and the lack of technical expertise in the field of information and information technology.
- 8- Weakness of the internal institutional and structural structure of the administrative units concerned with informatics in various government institutions and entities and the low infrastructure of wide information networks that serve the trends of developing networked secure information exchange services between

different entities and institutions and between cities and rural areas in various governorates of the Republic¹⁴.

9-Lack of awareness of the culture of information, knowledge and electronic interaction among the community, the low level of use of information technology and the low educational and cultural level of Yemeni society, despite its remarkable rise in recent years.

The second requirement: The main requirements for accessing E-Government in Yemen:

The E-Government initiative is a long-term change process in which multiple government agencies participate and it needs dozens of interrelated programs and projects, which are implemented at consecutive or simultaneous times by different parties, so it is necessary to have a comprehensive strategic plan that ensures the harmony and consistency of the programs and projects that will be launched, and that all contribute to achieving a unified vision in Yemen based on the peculiarities of the Yemeni reality. Based on the basic requirements and elements of E-Government for the application of e-services , and taking into account the challenges of accessing E-Government in Yemen and taking advantage of successful international experiences and practices in this aspect, we can identify the requirements and tasks of work aimed at accessing E-Government in the following :

1-The E-Government project in Yemen is not a distant dream and needs the belief and conviction of the political and government leadership in the importance of E-Government and its role in simplifying procedures, providing services, combating corruption and administrative development.

2- Preparing and implementing a comprehensive strategic plan for the transition to e-government, aimed at creating the e-environment and integrating the E-Government project into the economic development plans and programs of the Yemeni governments, providing the necessary budgets, exploiting human capital, and developing creativity and technological innovation. This is what can be benefited from benefiting from the experiences of countries such as India and Sri Lanka, which faced great obstacles and challenges when implementing E-Government due to the weakness of its economy, the spread of poverty, the low level of services, and the high rate of illiteracy. However, these obstacles have been overcome .

3-The need for a specialized institution responsible for leading the E-Government project in Yemen, which shall have a board of directors headed by the Prime Minister and whose membership includes the concerned ministries. This body shall

formulate the policies and strategy of the e-government, follow up its implementation and supervise the implementation of the E-Government project¹⁵.

4-Preparing the legislative and legal framework for the transition towards e-government. Therefore, it is necessary to update existing laws or develop new laws that allow dealing with documents and electronic transactions. In 2009, ESCWA issued a template outlining the important topics for each cyberspace law to assist countries in developing their cyber legislation and in assessing their existing laws and identifying shortcomings. The model includes the following legislative axes:¹⁶ protection of personal data; freedom and confidentiality of information in electronic communications; intellectual and industrial property rights; electronic commerce; electronic transactions; cybercrime, in addition to laws and legislation related to change in business processes and information systems; laws related to IT architecture of e-government, and the establishment of an integrated government data center.

5- Developing government organizational and administrative structures with a focus on objectives and results, re-engineering processes, simplifying government work procedures, reducing their number, removing administrative bureaucracy, adopting the principle of transparency and effectiveness, as well as reducing legislation and laws governing the government's relationship with the citizen when providing service in a way that facilitates the process of building E-Government projects and upgrading the quality of government service delivery¹⁷.

6-Building and developing capabilities and skills in the field of information and information technology to ensure the availability of highly trained and qualified human resources on the use of information technology, which is one of the main pillars in creating new and innovative business models and ensuring the success of the application of e-government.

7-Building information systems in various fields of government activities in order to respond to the achievement of the integrated national information system and the creation of the necessary communication structure to ensure the regular operation of electronic applications.

8-Involving the private sector in achieving the directions and programs of transition to E-Government and motivating it to absorb the elements of participation in this field.

9-Spreading digital awareness and encouraging the use of E-Government- services among citizens, which will contribute significantly to their interaction and response with E-Government services and their development.

10-Enhancing studies in the field of E-Government so that they highlight the criteria for measuring E-Government and push competition between government institutions in this direction.

Conclusion

E-Government in the Republic of Yemen is still a distant dream, and this is confirmed by the report of the development of E-Government carried out by the United Nations in the year 2022 , that Yemen is ranked 178th out of the total countries of the world covered by the survey, which is a low degree that reflects the lack of serious orientation towards the E-Government project and that Yemen lags behind in this field compared to many countries of the world, although there are efforts, projects and attempts made to move towards E-Government by Yemeni governments, but here it remains simple, weak and fragmented that did not lead to the implementation of e-government.

The implementation of E-Government in Yemen faces a number of challenges, the most prominent of which are: the political division, the current conflict, the deterioration of the economic and living situation of Yemen, the limited resources, the weakness of targeted and continuous government policies and programs to shift towards e-government, the lack of consideration as a priority for administrative development, the weak awareness and awareness of the importance and benefits of E-Government among senior leaders, the weak communication infrastructure, the low level of necessary technology, the lack of the necessary legal framework for e-government, the complexity of administrative procedures, and the lack of necessary human resources. In order to achieve E-Government in Yemen, there are a number of requirements that must be met to achieve this trend, namely: the need for the belief and conviction of the political and government leadership of the importance of E-Government and its role in simplifying procedures, providing services, combating corruption and administrative development, the need to expedite the establishment of an independent institution responsible for leading the E-Government project in Yemen that has a board of directors headed by the head of government and whose membership includes the concerned ministries. This body prepares the E-Government strategy, follows up its implementation, supervises the E-Government implementation projects, prepares the legislative and legal framework, prepares government regulatory structures, simplifies government work procedures for the transition towards E-Government, develops the necessary communications and information technology infrastructure for E-Government applications, builds capacity and skills in the field of information technology, spreads digital awareness, encourages the use of E-Government services among citizens, and

engages the private sector in achieving trends and programs of transition to E-Government and motivates it to absorb the elements of participation in this field.

References

- 1- Abu Bakr Mahmoud Al-Housh, E-Government ,Reality and Prospects: Nile Arabia Group , Cairo,2006
- 2- Ali Mohammed Al-Khouri , Digital Government: Concepts and Practices, Arab Organization for Administrative Development,2021.
- 3- Alaa Abdul Razzaq Al-Salmi, Electronic Administration, Second Edition, Wael Publishing House, Amman, 2009.
- 4- Mohamed Sadeq Ismail, E-Government in the Arab Countries: Al-Arabi Publishing and Distribution, Cairo, 2010.
- 5- Saad Ghaleb Yassin, Electronic Governance and the Prospects of its Applications in the Arab Countries: Institute of Public Administration ,Riyadh,2005.
- 6- Amina Ben Hamed , Electronic Government – The Experience of Algeria , Master Thesis, 2013.
- 7- Bahjat Al-Ghafri, The Readiness of Palestinian Government Institutions to Implement E-Government, Master Thesis Published, Academy of Administration and Policies for Graduate Studies, Al-Aqsa University, Gaza, 2016.
- 8- Khaled Lid, Elements of the Successful Implementation of E-Government in Palestine, Master Thesis, Faculty of Economics and Administrative Sciences, Al-Azhar University, Gaza , 2016.
- 9- Sami Sidqi, Revenue and Cost Study for E-Government Projects, Research Submitted to the E-Government Symposium: Reality and Challenges, Arab Institute for Urban Development, Dubai ,2003.
- 10- Sahar Qaddouri Al-Rifai, E-Government and its Ways of Application: A Strategic Approach, Journal of Economics, Issue No. 7, University of Chlef, 2009
- 11- Abdul Salem Mohammed, International Experiences of Implementing E-Governance , The First Conference on E-Governance in the Jamahiri Society, Tripoli, 2010.
- 12- Ali Al-Otaibi, Obstacles to Implementing E-Government from the Perspective of Workers in the Jordanian Government Sector, Unpublished Master's Thesis, Amman: Mutah University, 2004.
- 13- Ali Lutfi, E-Government between Theory and Practice, 6th E-Government Conference "New Public Administration and E-Government". Arab Organization for Administrative Development, Dubai.2007.
- 14- Qidwan Al-Siddiq , Muammari Khayra , E-Government and its requirements in light of good governance, Al-Riyada Journal of Business Economics, Issue 4 , 2017.

- 15- Mohammed Abdullah Al-Baham, Information Systems Integration as an Introduction to the Implementation of the E-Government Project in the Republic of Yemen, Master Thesis, Yemeni Academy for Graduate Studies, Sana'a, Yemen, 2019.
- 16- Maryam Hussein, E-Government, Journal of the Baghdad College of Economic Sciences University, 2013.
- 17- Indicators of Good Governance, World Bank website , 2020.
- 18- Report on the Development of E-Government in the Countries of the World 2022, United Nations, seen on 30/8/2023, at publicadministration.un.org
- 19- Mutali Laila , Requirements for a Successful E-Government, Global and Arab Models and Experiences 2015, viewed July 2023,

[s://doi.org/https://doi.org/10.1007/978-3-030-53697-8](https://doi.org/10.1007/978-3-030-53697-8)

¹ Iman Abdel Mohsen, E-Government - An Integrated Administrative Approach, Egypt : Arab Organization for Administrative Development, 2009.

² Ahmed Al-Maori, "Public Administration Reform and the Challenges of Rebuilding the State in Yemen," Hakama Magazine, Issue 4 , Spring 2022 , Qatar , p. 56

³ E-Government Development Index Report, United Nations, 2022

⁴ Imad Abu Shanab , E-Government projects between theory and practice : Arab Organization for Administrative Development, Cairo ,2010

⁵ online at 6/5/2005 from: www.worldbank.org/publicsector/e.gov/defintion.hotmail.com

⁶ E-Government Policies, Strategies and Applications , ESCWA,2014, p.13

⁷ E-government: ibid , pg.

⁸ E-Government Development Index Report, United Nations, 2022

⁹ Previous source, 2014, p. 19

¹⁰ Mansour Al-Bashiri, Effects of Conflict on Yemen's Telecommunications Sector, Policy Paper, Sana'a Center for Strategic Studies and Applied Research Center, January 2021

¹¹ Documents of the Yemeni Launching Seminar towards Information Technology , Ministry of Transport, Sana'a, December 30-31, 2001,p. 2.

¹² Yahya Al-Rabboi , The Reality of the E-Government Project in Yemen , Working Paper, UAE : The Sixth E-Government Conference, 2007 .

¹³ Dalal Ahmed Dalal , A proposed model for evaluating the readiness of E-Government in the Republic of Yemen according to international indicators, Master Thesis , Sana'a University, 2021

¹⁴ E-Government- The specificity of the Yemeni reality and the methodology of achieving ambition, working paper submitted to the Shura Council, National Information Center, Yemen, July 2005

¹⁵ The Importance and Requirements of Establishing an Institution for E-Government Administration in Light of the National Vision, Policy Paper, National Vision Advisory Group, 2020.

¹⁶ Op. Cit., P. 39

¹⁷ E-Government as an Introduction to the Reform and Development of Public Administration in Yemen, op. Cit., P. 5