

**THE PROGRESS AND OBSTACLES OF IMPLEMENTING AND IMPROVING E-
GOVERNMENT IN IRAQ**

By

ALAANY, Saif Saad Abdaljabbar

Thesis

Submitted to

KDI School of Public Policy and Management

in Partial fulfillment of the requirements

for the Degree of

MASTER OF DEVELOPMENT POLICY

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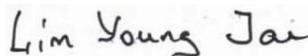
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Approval as of December, 2016

ABSRTACT

THE PROGRESS AND OBSTACLES OF IMPLEMENTING AND IMPROVING E- GOVERNEMNT IN IRAQ

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ALAANY, Saif Saad Abdaljabbar

The improvements in information communication technologies (ICTs) enable people to cooperate across vast geographic distances. However, challenges exist in knowing which ICTs best replicate the advantages of traditional face-to-face communications while enabling team members to cooperate virtually. The purpose of this thesis is to study progress of e-Government and identify obstacles of implanting and improving e-Government in Iraq. Also identify various obstacles, therefore; the e-Government in Iraq is said to be in interactive stage of the United Nations e-Government maturity stage. In addition establishing more reliable and active e-Government initiatives, plans and strategies which will enhance e-Government project, on the other hand understanding the needs for Iraqi citizen participation and understanding, because they are the main important part of the process of developing e-Government in Iraq.

국 문 초 록

이라크 전자정부(e-Government)의 구현 및 개선에 대한 진행상황 및 장애요인 연구

알라니 사이프 사드 압달자바르

ALAANY, Saif Saad Abdaljabbar

정보통신기술(ICTs)의 발전은 광대한 지리적 범위를 넘어 많은 사람들의 협력을 가능하게 하였다. 그러나, 팀원들의 가상공간에서의 협력이 가능하게 됨과 동시에 어떤 정보통신기술이 전통적인 면대면(Face-to-Face) 의사소통의 이점을 가장 잘 구현해낼 수 있을 것인가에 대한 과제는 여전히 존재한다. 본 논문은 전자정부(e-Government)의 진행상황과 이라크 전자정부의 구현 및 개선에 제약이 되는 장애요인을 연구하는 데 목적을 둔다. 또한, 이라크 전자정부는 현재 국제연합(UN)의 전자정부 성숙단계(e-Government maturity stages) 중 상호작용단계(Interactive stage)에 있다고 이야기 되는 상황에 맞춰 보다 신뢰성 있고 활발한 전자정부의 개시 및 전자정부 프로젝트를 증진시킬 계획과 전략을 만들어냄과 더불어, 이라크 시민들의 참여와 이해에 대한 니즈(Needs)를 연구한다. 그것이 이라크 전자정부 발전 과정의 가장 중요한 부분이기 때문이다.

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
e-Government	Electronic Government in Iraq
MOFA	Ministry of Foreign Affairs in Iraq.
ICT	Information and Communications Technology.

1: INTRODUCTION

It is known that Iraq is one of the countries with poor Information and Communication Technology (ICT) utilization. The current barrier to the successful implementation of e-Government in Iraq is due to the weaknesses of ICT infrastructure. For achieving this, the country needs to use electronic system, which would be primarily accessible to government offices. Iraq government is in the special position of developing an e-Government project in an environment that is receptive to innovative ideas; these information ideas will be catalysts of a positive and good future (Sharief, Graul, & Ian, 2007). Due to the current situation of security since 2003, Iraq finds itself coming to terms with how to progress to be in way of development. However, United States Agency for International Development (USAID) and Iraq Ministry of Science and Technology put a strategy from 2007-2010 to develop Iraqi electronic government project as it show in figure (1). The e-Government Strategy will have the best possible chance of success if the process moves forward with high-level support and sponsorship. Government sector delivering integrated services and improved opportunities for community participation. Still these are several challenges, which are exist during development and implementing process. Generally, in this research we intend to identify the various challenges applications that can benefit from e-Government, assess its consequences particularly on individual privacy. We also study how the system can be applied with the current ICT infrastructure. One of the most important policies for democratic governments all over the world is to decrease the administration procedures and costs and to increase the functionality and effectiveness of the

government structure. This is the main goal of behind the research activities within governments for arranging the new methods and technology.

Following attempts at government improvisation that came along the difficult process, the Iraqi government is more or less poised to enter the next phase of its democratic evolution. That brings with it ever increasing responsibilities for the government along this track. To achieve this, the range of services offered by the government has had to evolve into an enormous bureaucratic behemoth. It is composed of a raft of ministries, institutions, agencies and departments. Some of which have been devolved and some remain centralized.

Given the size and complexity of the government, one can imagine the logistical obstacles that the government must overcome as it goes about the process of fulfilling its governance mission.

With the advent of the Internet, Skype, multiple chatting platforms, social media and advanced mobile technology, people now communicate and collaborate across vast distances and multiple time zones, creating a 24/7 platform for the exchange of ideas. Information and Communication Technology (ICT) – defined as “all technical means for processing and communicating information” (World Bank, 2011; 2) – has enhanced the lines of traditional collaboration and what is possible to achieve with a team. In today’s world, the role of ICTs is vital to the success of any state entity.

In several jurisdictions, this catalogue of infrastructure has ushered in a dispensation of efficient governance collectively dubbed as e-Governance. So this study seeks to look at the real and perceived implications of this era for Iraq’s experimental and improvisational governance process and how that fits into its overall quest for development. The mere existence of these technologies, however, does not guarantee their effective implementation and usage, and much

work remains to be done if Iraq is to leverage the power of ICTs in a way that is efficient and responsive to its specific needs as well as of its governance spectrum.

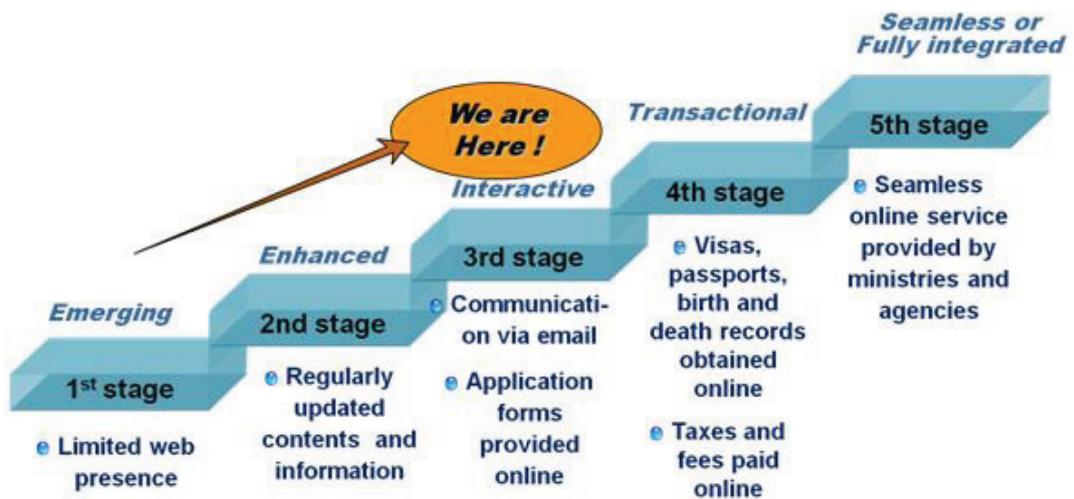


Figure 1: Iraqi Strategy to Develop e-Gov. 2007-2010ⁱ

1.1 Research Problem Statement

Recently in Iraq, we have several challenges and barriers faced in implementation of e-Government system in terms of political, safety, technology, ICT experts, communication and electricity. These challenges and barriers considered very serious and require urgent solutions for the e-Government project as a technology platform for the administration of service delivery by government. Most of the developed countries are implementing very strong and advanced system for their e-Government project and some other countries, are in the process of establishing it.

1.2 Purpose of This Thesis

The purpose of this thesis represented as follow:

- 1-Understanding how the e-Government in Iraq is established and implemented in order to improve the effectiveness in the government performance, services, and actions with government departments and Iraqi people.
- 2-Specify the obstacles of implementing, and improving e-Government in Iraq.
- 3-Study the current and future plans of Iraq towards e-Government.

1.3 Research Questions

The aim of this thesis is to provide comprehensive study of e-Government overview, and the e-Government obstacles of implementing and improving it in Iraq. In addition to that this thesis aim to study how e-Government can be feasible and used to develop the government performance and actions within the country. At the end of the thesis, we can see how the e-Government will be able to develop the e-Government in Iraq, and also what would be the future

activities towards implementing and developing e-Government in Iraq, therefore, we can see that the research question is as follow:

RQ 1: What is the progress of e-Government in Iraq?

RQ2: How Iraqi ICT enhances the development of e-Government in Iraq?

RQ3: What are the obstacles of implementing and developing e-Government in Iraq?

RQ4: What would be the near future activities towards developing e-Government in Iraq?

1.4 Iraqi e-Government an overview

In the period of information technology, e-Government is used as a tool to make the government work much more convenient to develop the economy of the country. Iraq had put a lot of efforts to develop the e-Government system but still limited. E-Government is part of a strategy to bring Iraq to the information age and become develop country. Iraq has suffered for a long time of isolation, damage of infrastructure and decreasing resources. A large number of Iraqi scientists and engineers left the country, and most of the country's higher education and research institutions are not fully working with proper functioning. Technology in most of economic sectors, including the oil sector, which is neglected. While the updating of technology has been a national priority, so the transfer of scientific knowledge and technology has been obstructed, negatively impacting the quality of life, and limiting the country getting more benefits from scientist discoveries.

Years after the start of the 2003 conflict, Iraq as a state and its government are facing enormous governance challenges. The internal challenges aside, the government seeks to strengthen its engagement with the rest of the outside world as the regional security threats continue to loom large. For very practical reasons, the cohesiveness of the government through coalition arrangements remains driven by sectarian and factional strife. Many of its citizens have consequently fled, many remain internally displaced and the entire Levant region remains volatile. Since the outbreak of the 2003 conflict, nearly 17 per cent of Iraq's total population has fled their homes – 50 per cent of them children. Out of an estimated 4 million displaced Iraqis, approximately 2.5 million have sought refuge inside Iraq (around 700,000 in 2011 alone) and 3.2 million have crossed the border into neighboring countries according to the UN High Commissioner for Refugees (UNHCR).

More than 750,000 Iraqis have sought safety in Jordan and over 1.25 million in Syria but were forced to flee once again with the country's ongoing civil war and many face an uncertain future. Iraq's institutions have become casualties of a quarter of a century of conflict and deprivation. Despite a strong response from the international community, the needs of Iraq's fragile governance systems are quickly outstripping available help. Regional resources to cope with the influx are being stretched to the limit. Inside Iraq, conditions for locals and the communities hosting them are grave. Most displaced families are living in communities that are already poor and often also badly hit by violence and insecurity. Approximately 45% cannot afford their own homes. They have no choice but to move in with extended families or even occupy public buildings – adding to the strain on local resources.

1.5 Primary Experiments

In June 2004 -The United Nations offer to the international society to help the new Iraqi government in order to create the basic requirements of e-Government, therefore Iraqi government signed with the Italian government agreement to enhance and develop this sector, by the Iraqi Ministry of Science and Technology and Italian Ministry of ICT, therefore provided financial and technical assistant for the creation of network to connect Iraqi ministries with each other (Al-Dabbagh, 2011).

After 2008 few Iraqi ministries started using some of e-Government symbols such as Ministry of Interior (MOI) and Ministry of Municipalities and Public Works (MMPW). To be more detailed, ministry of interior provided a passports system and driver licenses.

The most important question, are people going to accept the service of e-Government? People actually use it when it is consider much secured to them, for example; companies will benefit from these services, but people will need some time to accept the service of e-Government, because of their limited education and knowledge about this kind of service. The government services sites should be related in nature with people in order to guarantee success, and the best way to do that is by adopting the e-mail applications, that will ensure and establish a close relationship between the people and government departments, and in spite of that, we can see that many of these departments use the Internet sites freely or develop its services through the Internet for the benefit of people.

The technology cannot be solve all the issues and become as substitute of human, government services cannot be implemented on the network because it requires a personal identification card and signature and bring witnesses to the work accomplishments, such as issuing passport or registration issue. The application of e-Government system by the public

administrations must be coming gradually toward the reestablishing the infrastructure and framework for electronic government.

Iraqi people need to know how government is working and organized and who provides the information and services they need; assist to develop and create cultural integration and cooperation within and between government; make easier access for Iraqi people to get involve in government decision-making; Also give great chance and choice for Iraqi to get the information and services that are suitable for them and their circumstances; allow and make it easy for Iraqi to access information and services all the time easily and within a safe environment; make the government agencies deliver information and services more effectively. Connecting the digital device through ICT structure will improve the network connection and allow all Iraqi get equal access to government and information services.ii The adoption of e-Government innovation and strategic planning will bring a lot of advantages to the government in terms of delivering the information and service effectively to Iraqi people which can be summarized as:

- 1- Government ICTs Services – developing the government information network will support information service to all government agencies and that will result improving the public services for all citizens. The main work should be: the depending on developing the main infrastructure represented by communication services that connect users to a government information network.
- 2- Coordination with all level of government by working with and between all local governments to arrange activities. It can be successful implementation when all citizens have access to basic ICT facilities.

- 3- Creating secure national data center containing basic information of Iraq, evaluation the knowledge to information storage and access will help dealing with critical information. The most important thing to provide information security elements to get complete protection of the collected data.
- 4- Work on developing a cultural integration and cooperation within and between all levels of government in Iraq.
- 5- Allowing easier access for citizens to participate in government decision making by receiving the basic services required to function within this newly forming society.
- 6- Allowing citizen get free choice to access the type of information and services that might assist them to get what they need for their life.
- 7- Establishing new environment for suppliers and government to get involve together represented by online trading and get most of the work paperless which is relating to orders and payment.

2: LITERATURE REVIEW AND BACKGROUND

2.1 e-Governments

We can find that most of the explanation about e-Government almost the same, According to Silcock (2001) e-Government's definition depends on the several expectations of the people. e- Government is generally defined as a method used by governments to give better services to people and businesses for better work environment by using the most innovative information and communication technologies, mainly depending on web-based Internet applications. E-Government is also a new way in providing services through information technology which reduce the time of getting the services. Also according to Silcock (2001) the advanced technology has changed the life style and how people behave, work and the business of companies. The World Bank refers to e-Government as the wide use of information technology represented by using wide area of network, represented by internet, and all the network service which have the ability to transfer the service and relations with people, businesses, and other sectors of government. These technologies can help to serve a variety of different ways: Represented by better delivery of government services to citizens, improved interrelation with business and industry, empower citizen through access to information through the best management. The resulting benefits will be efficient, with great advantages, and cost reduction. There are many definitions of e-Government, which involve using Internet as a method for many activities such as e-Consultation. E-Government is similar to the use of ICTs in government. While the concentration is generally on the delivering and proceeding of services. Also Its defined as a ability to move and transfer public administration through the use of ICTs or used to explain the new form of government made around ICTs is coming from the fact of using information and communication technologies, and particularly the Internet, as the best way and

method to achieve better government. So that one of the most important factors of e-Government is how it make people and businesses closer to their governments. There are eight different possible types of e-Government system that is very important to define the key factors of e-Government studies: Government-to-Citizen (G2C); Citizen-to-Government (C2G); Government to-Business (G2B); Business-to-Government (B2G); Government-to-Government (G2G); Government-to-Nonprofit (G2N); nonprofit to-Government (N2G); and Government-to-Employee (G2E). iii Incorporating and promoting the effective use of ICTs into a vast institution such as Iraqi governmental departments is not easy. Tusubira and Mulira (2004) reviewed the common challenges in implementing an ICT or ICT strategy. Among the challenges they highlighted are buy-in (especially from senior and mid-level executives); the role of ICT (having ICTs support an organization's mission, not determine it); systemic implementation (i.e. having an implementation plan before the technology is introduced); Ownership (having everyone agree and use the systems); sustainability (in maintenance costs, training, etc); and resource management (assuring the technology works consistently and reliably) (Tusubira and Mulira, 2004; 6-7).

The authors make a strong case for ICT being an integral part of an organization from the start, and should not be used simply to compensate for perceived shortcomings or deficiencies in communication. In order for an organization to be effective in implementing new practices for its clients, it must first become more effective in using these practices internally. Therefore, before MOFA can support ICTs on the end-user level, it must first utilize and become comfortable with the technology within the organization in the early planning and collaboration phases. These planning phases include physical and virtual meetings, workshops, and conferences. Integrating

ICTs may enhance the collaborative process and improve the quality of the MOFA's services to intended recipients.

Increasingly, no organization, government or company can hope to work efficiently without the use of ICTs. While these technologies are now found and are applicable in most fields (government, development, education, and health to name a few), research is still catching up on how these technologies are used in each situation and what the most effective use of these technologies are, both internally and externally. However, some best practices are common across these fields. A similar World Bank evaluation on ICT collaboration in e-Governance, highlights the need to make ICTs appropriate to national contexts and ensure sustainability and stakeholder buy-in "so as to avoid waste and ensure enhancement across government" (World Bank, 2011; xix). It is also important to highlight the supporting role of ICTs to a company's mission, and not as the dictator of its priorities, as can easily happen when integrating new technologies.

It is not only applicable to private sector and development agencies, organizations or companies, but is also true of government. A study by the law firm of Lawrence Graham on implementation strategies for e-Government proposes four guiding principles: 1) Government services should be citizen focused; 2) Government services should be accessible; 3) Government services should be inclusive, and 4) Information Management is crucial (Riley et al, 2002; 5). Ultimately however, whether it is a national government, development agency or financial institution the principles of access, customer-oriented service and information management is becoming increasingly crucial as the sources and quantity of data around the world grows exponentially, and as data-driven research for funding and budget allocations take a more prominent role.

So far, I have introduced the concept of ICTs and the importance of their thoughtful implementation in an organization or government. It is also important that we consider the purpose and ways in which people share knowledge. Here, the work of Wenneker et al is especially useful. In their study *The Role of ICT in Organizational Knowledge Sharing Process: An Exploratory Study*, the author's center around three types of knowledge sharing: donating knowledge, acquiring knowledge and exchanging knowledge. While the first two usually are uni-directional (this is, they flow in one direction, from the individual to the organization or the organization to the individual), the third is where knowledge sharing is at its most effective, because constituencies can learn from each other and communication is bi-directional (Wenneker, et al, 2007; 1381). What is interesting about this study is that it concludes that face-to-face communication remains very important, and while other forms of communicating and interacting may be more efficient or effective for some things, face-to-face, or as near to it as possible is still extremely important in shaping teams and working in a collaborative setting (Wenneker, et al, 2007; 1382).

2.2 Previous Study of e-Government Project

The importance of e-Government has been discussed in numerous articles from newspapers or magazines that have expressed personal opinions and feelings about e-Government For instance; The Electronic Privacy Information Center (EPIC) lists a number of relevant news articles on the subject since September 2001.

Many governments have initiated e-Government system and many others are considering the e-Government program one core project (e.g., Italy, Spain, Belgium, Hong Kong, Singapore, Malaysia, etc.) Several literatures have been published on e-Government projects. Charles

Pearson (2010) and others have stated that the most valuable ways to help people use e-Government project system to be one of the most important part that helps to solve the problems between governments and people.

However, in many other countries the national governments have initiated numerous investigations about the profitability and sometimes established project committees to begin performing on actual proposals of a national dedication. A number of them already utilized such system response to the events of 9-11, 2001. (Thien-Loc Nguyen, 2003). In other hand there's robust opposition against such initiatives, and there are several groups warning of the failure of e-Government projects in their countries. Wherever they will look down upon them from one national database which within the absence of protecting laws and a bill of rights, Identity cards are about to be used as a weapon against minorities (Goldman, 2004; Griswold, 2001; Hunt, 2002; kill, 2000; Matthews, 2002; ganoid, 2004). Many researchers agree that governments are not providing sufficient information for e-Government and on national ID program agendas, implementation strategies, and future applications. The literature specifies that governments are not making necessary effort in developing a clear framework to demonstrate how they will achieve their objectives, nor have they provided empirical evidence to assist research in this field (Privacy International, 2004). Opponents are using such aspects to attack and defeat government attempts to launch such projects. However, many countries seem to be going about the implementation of e-Government project with a great deal of enthusiasm despite the criticism. Governments around the world have been very active in promoting their nationality schemes and responding to oppositions and public concerns by drawing attention to the advantages of such programs through public debates, periodical reports and white papers. Cragg Ross Dawson (2003) Stated that the government is considering introducing identity cards to help combat the

people who immigrate illegally and working, reduce identity fraud and other crime, It is worth highlighting that the total value of Identity theft crimes reached US\$56.5 billion In 2006 In USA alone (Privacy Rights Clearing House, 2006). They also cite crime, terrorism and Immigration control as other reasons for implementing such programs. Pushed by technology solution providers with aggressive marketing, governments seem to be convinced that unlike traditional Identification documents such as passports or driving licenses, the new generation of ID cards and documents are being developed with security features that virtually defy counterfeiting and tampering. They employ sophisticated verification systems that can read, decode, process information and review certain relationships and security elements buried in the card to validate authenticity (Bates, 1998; Zalud, 2003). Whether or not the proposed technologies will work in a national ID scheme Is one matter. The problem area as researchers and opponents of the scheme point out is that governments have an appalling track record In IT projects (Gardiner, 2007). Large government projects usually fail because too many objectives are bundled into one project (Gardiner, 2007).Recent studies have shown that it is very costly and time consuming project and why governments don't come out with other plans. Others estimated the cost of implementing this type of large e-Government project to be of multi-billion pounds (sterling) level (Fontana, 2003). The UK e-Government project and ID project for Instance is projected to cost more than ES. 6 billion to set up and run over the next 10 years, according to the latest Home Office figures (Simpson, 2007). The nature, size and complexity raise the failure probability of these projects (Hencke, 2005).

2.3 The e-Government Service and Types

Types of e-Government can be classified into eight (8) types which are:

1- Government-to-Citizen (G2C)

Providing full online service for the public service, by using the electronic service delivery to offer information and communication.^{iv}

2- Citizen-to-Government (C2G)

Put public service online, by using electronic service for exchange information and communication.^v

3- Government-to-Business (G2B)

Its actively work to make e-Transaction initiatives such as e-Procurement and the development of electronic market for government business work and purchasing; and make government procurement bidding projects through electronic methods for exchange of information and commodities;^{vi}

4- Business -to-Government (B2G)

Its actively work to make e-transaction initiatives such as e-Procurement and the development of electronic market for government business work and purchasing ; and make Government procurement bidding projects through electronic methods for sale of goods and services;

5-Government-to-Employee (G2E)

That will facilitate the management of the service and communication with governmental employee in order to make most of the application and processing system more efficient in e-Office. ^{vii}

6- Government-to-Government (G2G)

Provide the Government's departments with online communication based on a huge government database to make effective work; also include internal exchange of information.^{viii}

7- Government-to-Nonprofit (G2N)

When the government provides information and communication to the organizations which are non profit, political parties and social organizations.

8- Nonprofit-to-Government (N2G)

Transfer of information and communication between government and nonprofit organizations, political parties and social organizations.^{ix}

2.4 e-Government Stages Progress

ICTs in Iraq will encourage modern innovation practices and play an important role to enhance the role of universities and public research organizations in economic growth and help the transaction of research knowledge to create different economic activity through innovation and make the process easy for economic development. The main elements of development the e-Government application can be summarized as follow:

- 1- Creating new regional development model ,the main objective of this stage consist of informal interaction between different factors such as university, local government, research labs, large and small firms, these activities include primary services for early startup companies ,basic activities and other services .^x
- 2- It's the accomplishment and implementation stage, it means starting of new activities which aim for appropriate e-Government infrastructure to assist new e-Government

applications. The stage includes establishing network for entrepreneurs, and making new educational and social activities.

- 3- It is the stage of promotion and strengthening stage and make commitment for future studies, the main objective of this stage is to increase the effectiveness of the system, this increase make the local actors cooperate to strengthening the effectiveness of resources, and also to get the best result for the e-Government activities. These processes consist of forming new network plans and network enhancement. It also includes meeting between actors to make the role of each party clear.
- 4- Includes creating endless redevelopment stage by creating strategic choices and visions, the main objective of this stage is to renew the system by making new areas of development related to new research and creating new activities, this stage concentrate on the highest level of system linked with power.^{xi}

Iraqi government has made great efforts to deliver service to citizens in terms of ICTs. Through a many delivery agents, also some projects still under research. These efforts can be clearly seen within the financial institution, legal services and banking sectors. Great efforts had been applied in this field which are represented by reorganize the tools of the workforce, and prepare it for the demands of a new society. Most of these workforces have ICT as a major contributing factor. The dramatic development in cell phone usage considered the best example for connectivity. Key levels of government institutions development are best described by the Gartner 'Characteristics of the five levels of e-Government' service transformation model. The development of an organization can be established in each level which acts as organizational improvements are built into each stage which acts as a building method for the proceeding one^{xii}.

The key factors of the five phases are simply explained how the Iraqi public sector will develop and move to be a transformational model of government service delivery. That will be done at the national level when each ministry will be developed according to its major and ability to get involve to the current situation and requirements of citizens. There are no different sectors between phases, and ministries can process and develop its capabilities to more complicated levels in some ways, but keep on dealing with other internal issues from a previous phase.^{xiii} According to Siau & Long, 2005 e-Government model stages consist of five stages which are web presence, Interaction, Transaction and e-Democracy Anderson & Henrikson, 2005.

Phase One: Web or Online Presence; This phase is characterized by making the government sectors work on provide the public awareness and knowledge of the key purpose and service the web or online presence might provide. Government department main service that should be offer, represented by the services type provided and some detail specifications related to the method of operations. Information is also provided to make citizens be able to ask about further information through the contact point. The citizen cannot communicate without using the traditional methods and channels of service delivery.

Phase Two: interaction this phase is considered first step towards the development of people interconnecting with government through online means and which will make citizen order their service online. This phase in Iraq considered being very difficult due to the security situation and not easy to access through. Therefore; most of citizen still access to information and service through the traditional methods, like telephone or do their daily requirements in person.^{xiv}

Improving the technological and communication infrastructure decide the success or failure of this phase. This is considered problem in Iraq these days. The use of information database and method of finding information increase people and government interconnection during this phase. The move toward this in (2007-2010) which is very important step, as people need to be provided by much access options when dealing with government service facilities. As it can be expressed on a stable infrastructure to make the progress and access of G2C interconnection. This phase also introduces the key option of creation and common entry points which reduces the need for Iraqi people to understand government structures before they access government services.^{xv}

Phase Three: The transaction move from phase 2 to phases 3 will be a very important factor in the recent history of Iraq, as in this phase, people feel free to choose their favorite method to access to government services. This can be using the online, wireless technologies for example. In phase three, government department increase their business process reviews in order to offer services through a variety of channels. The increase in shared services and cooperation between department lead to great information sharing and service applications. Undertake the management and security issue are managed in very effective way to be managed. So that e-Government service delivery is effective and efficient. Making service more personalize in term of delivery and the added value to ensure services. Communication between people/business and government developed into direct understanding to fulfill market demand.^{xvi}

Phase Four: transformation or transforming the systematic mechanisms of e-Government: is hidden from the public, as it offer works smoothly with the existing system. Connectivity is completely converted or transformed as the service delivery model are completely integrated connecting citizens, government and business with minimal contact. Also there are multiple service delivery agents who are available and it's relatively expanded. The systematic mechanism of e-Government considered part of the daily life.^{xvii}

The factors for ICTs strategic management represented by the best Sharing of ICT infrastructure, Broadband, Cloud, Open data, Government Data Portal, Innovation infrastructure (e.g. innovation labs) and Affiliated R&D projects between industry, academy and government. With reference to the nationwide education of computer use School, Shared service across the public service (e.g. e Procurement) and sharing the IT services. With paying much attention to the institutional, legal and regulatory framework Act on information, e-Government act which can deal with Security and Privacy issues. Raising and sustaining supply of Development Fund.

Phase Five: Collaboration between citizen and government service policies: This is very important stage for e-Government development which mainly concentrates on the collaboration between citizen and government service polices using advance technology like the communication methods to make the contact easy and reach all people.^{xviii} We are going to summarize the five stages as in the following figure:

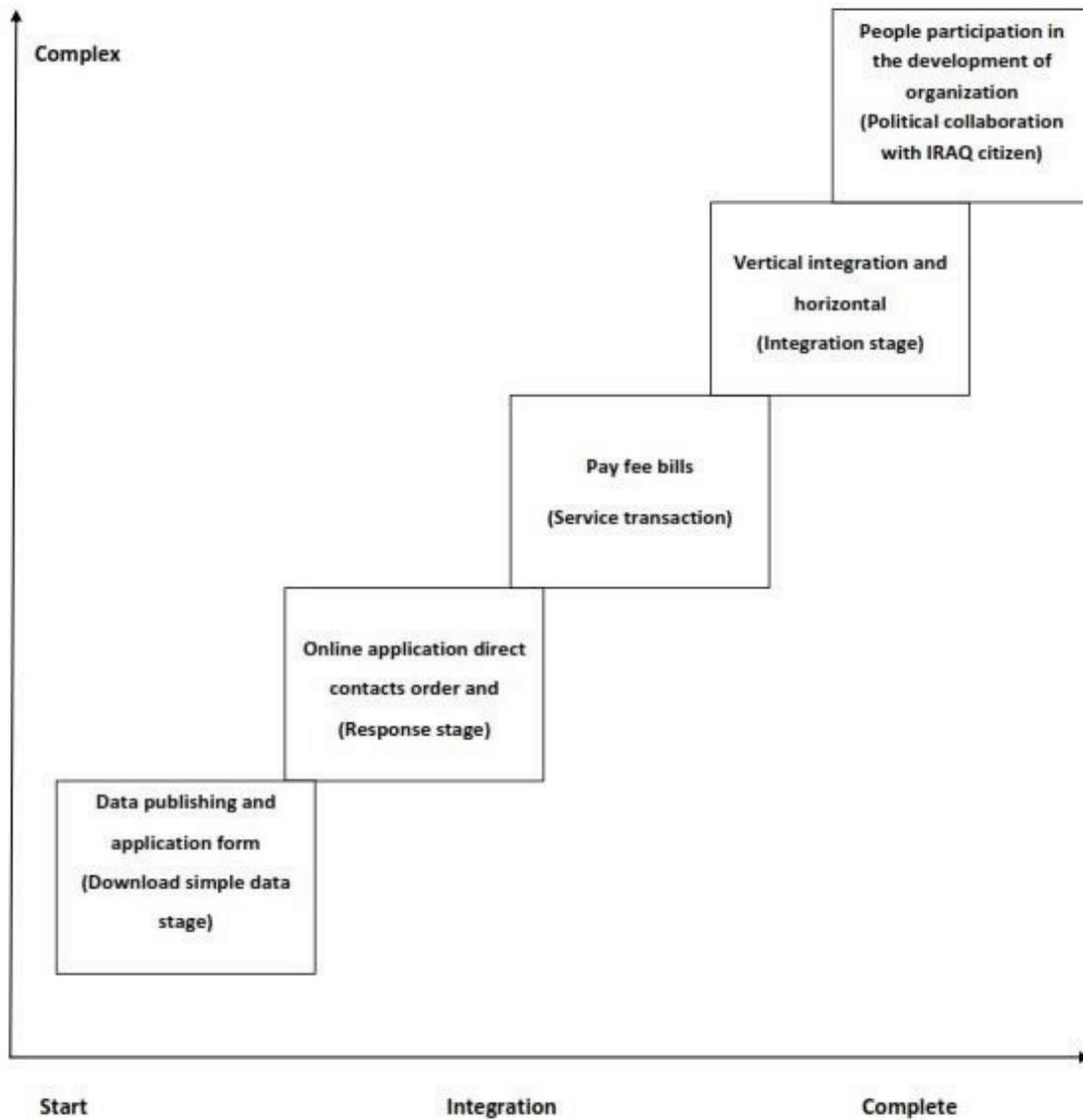


Figure 2: e-Government Development Stages

2.5 e- Government Roadmap in Iraq

E-Government in Iraq need to take many steps in order to succeed requires for example how it handles information, and how government employees do their jobs and communicate with Iraqi citizen. The success e-Government system requires collaboration among government, people and the privet sector.

According to Pacific council for international policy in 2002, the framework for e-Government in developing countries should consist of government management in which we must ask them before establishing e-Government project^{xix}:

- 1- Why we need e-Government?
- 2- Do we have a clear vision for e-Government?
- 3- Which kind of e-Government we are ready for?
- 4- Is there any sufficient political will lead the government efforts?
- 5- Do we choose the government project in the best way?
- 6- How should we plan and manage the e-Government project?
- 7- How to overcome resistant within the government?
- 8- How can we evaluate the progress? and how do we know if we fail
- 9- What should be our relationship with privet sectors (businesses)?
- 10- How e-Government can improves citizen participation in public affairs?

2.6 Characteristics of e-Government

The characteristic of e-Government is based on three factors Information, Communication Online and Transaction. E-Government is considered to be limited in the use of ICTs in the internal woks which related to government work. The objective of using e-

Government is very important in the way of improving the life of people and their participation of the public service in a legal way. These activities can be realized in different methods like administration and improving the access to public service activities and making the service given to citizen more effective and without corruption. According to silcock (2001) the advanced technology has changed the life style and how people behave, work and the business of companies.

E-Government provide people, businesses, and government department to access to all the available government information all the time, which play very important part to improve the quality of these services. The implementation of e-Government which will make the cost less and increase the efficiency levels of organizational processes by re-organizing and operating procedures. Moreover, the using of e-Government systems will improve the work activity of government organizations and that it will make the service of the public service effective and efficient for all people. In addition, e-Government has great benefits regarding improving governments service operations, including high level of efficiency, reduced commissions cost, increase the transparency and increased all kinds of services for citizens. Furthermore, e-Government have very important role by reducing the time for all of customers and organizations, effort and costs beside the improvement of service provided to people. Also the people satisfaction increase with the use of ICT skills also using the internet and getting full knowledge about computer usage will create of new business and create more work opportunities.

2.7 e- Government Benefits

The main stakeholders of e-Government are the citizens of Iraq, government agencies, the private sector and political leaders those are the key stakeholders of e-Government. Most of Iraqi ministries are already know the cultural transformation that needs to take place in the minds of their leaders. This is seen through working with the private sector to develop the government's drive to begin along the way in order to achieve the required goal. E-Government program enhancing long-term investment in basic and early- stage of applied technological research and to work on eliminating the difficulties and try to transform the research results into new products, industries, and jobs.xx

The government will need to pay more attention to a comprehensive assessment ICTs sector, supported with policies, programs. The need for strengthening capacity in technological research for sustainable development and benefiting from innovation can only be addressed within a comprehensive framework of science and technology.xxi

The benefits of e-Government and the adoption of its strategic planning will bring a lot of benefits for government in term of delivery more effective and efficient information and services for Iraqi people.

3: ICT IN IRAQ: POLICIES, STRATEGIES AND PROGRAMS

Iraq tried to implement ICT strategy for developing policies and strategies, ICT in Iraq can reduce corruption by promoting good governing system. Also encourage reform initiatives which will lead reduce corruption. The main objective of this policy option is to (enhancing long-term investment in basic and early- stage of applied research and work on eliminating the difficulties and try to transform the research results into new products, industries, and jobs.^{xxii}

In today's world, innovation is the main driver of economic development, but Iraq is behind other developed countries with regards to productivity, so that some of the suggested initiative to encourage Iraqi ecosystem innovation which can be operated within four main pillars represented by:

- Government and organization reforms, it should make organization improvement which includes, reform the current universities system and take required actions represented by find connection with international organizations to diversify knowledge and education.

- Organization reforms, Iraqi government can benefit from the programs which are sponsored by international organizations such as the United States programs to encourage Small Business Innovation Research (SBIR) grants program, which reduce the risks for capitalists and enhancing capital fund development.^{xxiii}

- Policy reforms which include review policies authorities and regulations, checking out the policies effecting and reform the policies which effecting resources and R&D activities for example contracting, intellectual property, financing and regulation of R&D. Business incubators are one of the most important activities that can help make strong relationship with small business and encourage its activities.^{xxiv}

-Combination of national strategies and National Development Plan (NDP), which include R&D priorities taken from ND priorities, also NDS should include S&T sectors on its own, setting goals in ICT capacity represented by its infrastructure, human resources, keeping the growth and development of innovation clusters and strengthening incorporation between universities and businesses activities that can help spread the research initiatives into market actuality. All that will produces knowledge that will leads to new products, new businesses opportunities, and new industries. Briefly, discovery and inventions do not happen without learning and expertise from R&D and experimentation.

-Develop funding mechanisms that guarantee funding for the most necessary areas according to MERIT and non-organizational association. Outside of bank lending this might help to establish great business opportunities for innovation practices.xxv

The comprehensive role of government should be controlling and enhancing all the aspects of the innovation ecosystem. Furthermore; Continuing the R&D and updating information which can be received from other regional partners which is considered very important to increase the understanding of the policy development which enhance the regional innovation and productivity outcomes. In addition there are difference between small business companies and large –high growth companies, so that the small companies wants to develop and grow which is called innovating, which clear the way for creating new job opportunities. Innovations take place in an environment which encourage R&D experimentation and understand failure as normal part of the process.xxvi

3.1 Iraqi Model

Abdul Rahman Al-Naqib established the Iraqi government in (1920), Iraqi government was consists of nine ministries which are (Interior, Education, Finance, Health, Defense, Religious Affairs, Justice, Commerce) the government type at that time was royal government. In 1958, has been changed to the republican government and this system still until the present day. At this time the Iraqi government is made up of 22 ministries and three independent institutions these ministries are (M. of Interior, M. of Defense, M. of Industry, M. of Higher Education, M. of Commerce, M. of Finance, M. of Labor and Social Affairs, M. of Oil, M. of Transportation, M. of Science & Technology, M. of Foreign Affairs, M. of Culture, M. of Migration and Displacement, M. of Electricity, M. of Religious Affairs, M. of Education, M. of Human Rights, M. of Housing and Construction, M. of Health, M. of Justice, M. of Environment and M. of Communication). We will summarize the way how the ministries work and the services that provided by each ministry to the citizen. The figure below shows the Iraqi ministries and the interaction between them.

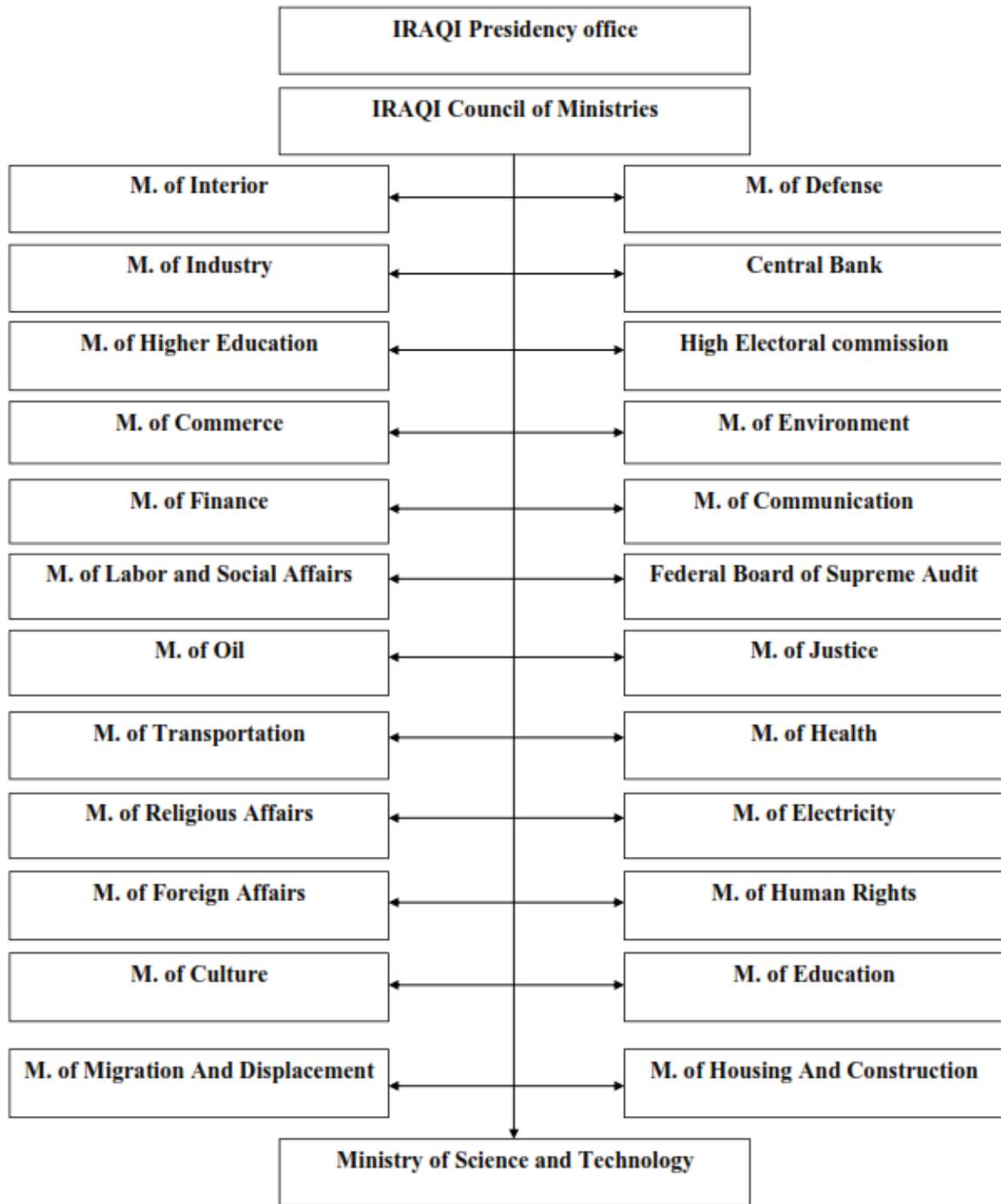


Figure 3: Iraqi Government Ministries

After 2008 few Iraqi ministries started using some of e-Government signs such as Ministry of Interior (MOI) and Ministry (MOI) provided a passports system and driver licenses. As well as the state Ministry of Foreign Affairs has a critical role in Iraqi governance in facilitating the foreign affairs direction of the government sectors and civil society organizations and ICT. Also the MOFA reached the centers of decision-making and to the summit of Iraq's political process. In light of all this still features the participation of Iraqi staff in the effectiveness of the program in e-Government remains much undeveloped.

We will explain in details how e-Government work in Iraqi ministries and the stage of services provided such as:

1-Ministry of Interior:

This ministry main duty is to provide security for Iraqi citizen as well as issuing official documents for Iraqi citizens. ^{xxvii} So we can summarize that the e-Government initial implementation in this ministry represented by the service provided which are represented as follow:

G2G service

- 1- Provided in directorate –general for communications and information in charge of provide information to the competent authorities for all Iraqi ministries.
- 2- Provided in directorate identities and licenses which is in charge of provide licensing of the political blocs to all the political blocs.

G2B services

- 1- Provided in directorate of identities and licenses which is in charge of providing and granting of work permits inside Iraq to Iraqi companies and businessmen.
- 2- Provided by general directorates of passports which is in charge of granting visa for foreign companies and employment to foreign companies and businessmen.

G2N Service

Provided by directorate identities and licenses which are in charge of providing licenses to establish demonstrations and licensing of civil society organizations to nongovernmental organizations.

G2C services

- 1- Provided by directorate general of nationality and civil status, central office of information, general directorate of passports, general directorate of traffic, federal police directorate and directorate of civil defense which are in charge to provide services to Citizens.

2-Ministry of Finance:

This ministry aim to plan the financial framework for all Iraqi government institutions, major activity of the e-Government activities can be explained as follow:

G2G service

Ministry of finance providing financial budget of the country and public financial reports services to all Iraqi ministries.

G2B services

General authorities for customs, tax office and free zone office which are in charge of providing and obtaining amount of customs from the import companies and most of tax and customs work.

G2 C service

General insurance company, general retirement and general commission for taxes which are in charge of providing insurances mechanisms to life and property, salary pensions for retirees and information and obtaining taxes from citizens .these institutions providing service to citizens.

From the above two ministries we can notice that all of institutions of Iraqi government provide many kinds of services to all like (Iraqi people, business and governmental institutions) but most of the services provided are very early stage of e-Government application which are depend mainly on the traditional method more than to be technological .

3.2 e-Governments Project in Iraq

Since 2003, Iraq was trying to get involved with the ICT development and specially e-Government project and that is because it's very important for the development of government administration process, beside the important part of the citizen to the success of this project, the official and government management consider the most important, in addition to the adoption of the citizen on this project in the completion of its own official we will explain in details what is the current status of e-Government project in Iraq and in which stage of e-Government

development process, in addition to examine which sector should be starting with to make sure that will lead to long term and continuous progress of the project. ^{xxviii}

3.3.The Reality of e-Government Project in Iraq and e-Government Initial Implementation

After many years from the time that Iraqi project of e-Government started in Iraq and in spite of the plans and efforts to ensure getting good result of e-Government but it still in the initial stage (interactive stage) because the success of this project need urgent government changes and administration structure in the Iraqi government institutions .as well as the urgent need to the basic steps for good governance before the start in the technological changes.

After that serious actions was taken to establish (Iraq e-portal) beside design the framework to connect Iraqi e-Government departments and develop their architecture design and most of government organizations. However, the new system for IRAQI portal links will help to lead and assist the users to use the sites of ministries on the internet; these sites show the details of the information that describe how the program works in that ministry and the new system of e-Government tasks, as well as downloading most of the official forms, such us getting passports or renew old documents. It can be shown that if we want to apply the (European Model) to check the level of IRAQI portal which consist of five stages, the e-Government in IRAQ still in the (publication stage) which considered the initial or first stage of one communication stage, second stage according to European model. So all kinds of efforts and budget which are spent by IRAQI government to develop this sector was not enough to make it guarantee success of this project. This stage considered to be not satisfactory, because of many reason first was the poor security situation which make the government give this the most necessities or priority. In spite of this entire obstacle the IRAQI government continues to work on the project of e-Government

by establishing new methods, and improving the ICT staff to create the suitable society for this project. All that taken place in the interactive process when the IRAQI government develops the clear vision in 2010 for e-Government project.

The IRAQI vision for ICT development tends to improve certain factors and strategies represented by establishing good governance, which is mainly concern about encourage public participation, social development creating equality and general development for most of Iraqi institutions, so that in order to achieve all these strategies objectives.^{xxix} IRAQI government should follow five strategies^{xxx}:

- 1- Get good interaction between Iraqi people and government in order to make civil society participation in public affairs more active and successful and the result will be social integration.
- 2- Establish and enhance new service for e-Government program within each of the Iraqi provinces so that all citizens can access to it and get equal opportunities to use it.
- 3- Increase the government institution responses through using advanced technology of ICT to achieve good government management.
- 4- Create suitable environment to get economic development.
- 5- Spread knowledge and information to achieve good understanding for technological methods.

3.4 Future of e-Government Project in IRAQ

Iraq goals to reach the highest stages of development to e-Government project as being aware of its important and impact to make the country get rid of most of the administration corruption and increase the citizen satisfaction as a result of fast and effective methods to do their

administration work. So that to allow and make these action take into quick implementation, there are certain elements should be take into consideration which are represented by:

- 1- Create high level of awareness, communication, and willingness.
- 2- Build and develop the human resources for that sector.
- 3- Enhance the ICT infrastructure.
- 4- Change the management of institutions.
- 5- Create and enhance the law for ICT methods.
- 6- Communication infrastructure.
- 7- Management of the budget for ICT development.
- 8- Evaluation the work in ICT sector.
- 9- Good delivery of technological service for people.
- 10- Develop the data and ICT system.

The best result which can be achieved from e-Government project can be depend on the support and assistant by Iraqi political leaders, this support require long term commitment and willingness taken seriously by the Iraqi decision makers. This is very important in order to move to the transaction process and get their support to overcome the difficulties which might face the e-Government project. Also the communication between government and people very important because they are the most important part in the e-Government project. So it's very important to know the cooperation of all stakeholders is very important to make this project succeed. Furthermore it's very important to plan new strategy of communication that requires action like e-Education to raise the awareness of people for this project. ^{xxx}

3.5 Challenges of e-Government Development in Iraq: Challenges Facing e-Government Applications

The application of e-Government system can improve the service performance of citizen and how can it work, we can find also that there are some limitations and constraints that can be summarized as follows:

-Political situation challenges

After 2003 Iraqi government work hard to make serious change to most of the management system which were used before, that was change from central government system to democratic system, but that system was not applied in its actual meaning because of many factors mainly as a result of the lack of clarity of the application provided which effect on the functionality of the government institution negatively. One of these systems was e-Government project which was originally new project and require many steps to be applied perfectly. ^{xxxii} A comparative study done by (Hani, 2012) found that Iraq and Somalia are only two countries from the whole Arab region that does not have an electronic citizen identification system in place. Since 2003, Iraq has suffered political incompatibility and instability. Such circumstance is reflected in its performance of the government in providing services to the citizen. The importance of having the citizen identification initiative appear as the number two in the top ten lists of a critical government project, the progress in the system implementation have yet to be at par with the importance. It was estimated that the system be completed in 2009-2010. However, at the moment the system is still not in place.

-Security situation challenges

One of the biggest challenges that face e-Government development in Iraq has been the security situation. E-government can be applied and possible when the members from government department have the opportunity to meet with each other and discuss topics of the project in common sense. Online and offline connectivity are essential to the success of advanced technology. This can be seen starting from an organizational level down to the general working aspects of the government employees. The key point for e-Government success is the transformation which will need to happen at every level of government in Iraq. The government of Iraq should put up with IT development in the public sector as a major factor that make knowledge-based economy possible, also increase the people in IT literacy. This will make them able to deal with government departments and ministries, and being able to access to ICTs Services. Also the limited access to internet and lack of eclectic make people contact with government department not active enough.^{xxxiii}

-ICT infrastructure challenge

Iraq need to develop internet services including the main database for all Iraqi ministries and institutions which should be connected perfectly, as well as link it to the main data center. Iraq ranked third in terms of fixed line growth with a rate of 11.11% and the Internet users rate = 5.6% also the average households with Internet access at home rate equal to 7.5% and the fixed-telephone subscriptions rate is 6.0%. The government of Iraq wishes to deliver basic services to all citizens, and make it easy and able to be received by people. ICT are now considered one of the basic drivers of national

economic development and one of the key contributors to poverty reduction. All over the world scientists agree that technology plays a significant role for the development and well-being of society. New business creation is one of the most important factors for the economic growth, social development and competitiveness of countries (Wennekers, Thurik, 1999; Wennekers et al., 2005; Audretsch, Keilbach, 2004; Stelet al., 2005). E-Government application emphasizes the position and roles of local and public sectors in developing the country.^{xxxiv} Iraqi ICT infrastructure has suffered for a long time of isolation, damage of infrastructure and decreasing resources. A large number of Iraqi scientists and engineers left the country, and most of the country's higher education and research institutions are not fully working with proper functioning. Technology in most of economic sectors, including the oil sector, which is neglected. While the new advance technology has been very important factors, so the transfer of scientific knowledge and technology has been obstructed, negatively impacting the quality of life, and limiting the country getting more benefits from scientist discoveries. The primary goal for Iraqi government is to introduce some of ICTs policies to achieve development in Iraq through the use of e-Government application.^{xxxv} There are many problems in Iraq in terms of technical infrastructure such as, internet connection, lack of IT experience and skill of the government employees. There is also a lack of communication with poor awareness with the government and among the IT managers. The citizen still has problems to get connected, wither the connection is bad or it is so expensive to get a high speed connection. Infrastructure is very weak in Iraq at present that electricity does not reach citizens for more than a few hours a day. Furthermore, policies to control the information sharing are vague (Ignaish, 2008).

Year	Internet Users**	Penetration (% of Pop)	Total Population	Non-Users (Internet less)	1Y User Change	1Y User Change	Population Change
2016*	4,892,463	13 %	37,547,686	32,655,223	7.5 %	339,539	3.09 %
2015*	4,552,924	12.5 %	36,423,395	31,870,471	14.2 %	567,042	3.26 %
2014	3,985,882	11.3 %	35,273,293	31,287,411	27 %	848,004	3.42 %
2013	3,137,878	9.2 %	34,107,366	30,969,488	34.1 %	797,887	3.49 %
2012	2,339,991	7.1 %	32,957,622	30,617,631	46.9 %	746,603	3.42 %
2011	1,593,388	5 %	31,867,758	30,274,370	106.5 %	821,684	3.24 %
2010	771,704	2.5 %	30,868,156	30,096,452	142.9 %	454,015	2.99 %
2009	317,689	1.1 %	29,970,634	29,652,945	8.9 %	26,055	2.77 %
2008	291,633	1 %	29,163,327	28,871,694	10.3 %	27,294	2.6 %
2007	264,339	0.9 %	28,423,538	28,159,199	0.1 %	378	2.55 %
2006	263,961	1 %	27,716,983	27,453,022	8.6 %	20,802	2.59 %
2005	243,159	0.9 %	27,017,712	26,774,553	2.6 %	6,275	2.65 %
2004	236,885	0.9 %	26,320,530	26,083,645	54 %	83,102	2.69 %
2003	153,783	0.6 %	25,630,426	25,476,643	23.3 %	29,064	2.75 %

Table 1: Internet Users in Iraq^{xxxvi}

The table above shows the internet users in Iraq after the war in 2003 and how its percentage increases but still one of the prime losses is the damage to the infrastructure.^{xxxvii} The main use for internet is for social media communication. The Iraqi citizen very interested in the programs of social media and communications.

-Social situation challenges

Iraqi society is like any other society in the world diversity is one of its characteristics. The country location and culture all these things effect on how people might think and accepts the new system like the e-Government project. The most important question is the people are going to accept the service of e-Government? People actually use it when it is consider much secured to them, for example companies will benefit from these services, but people will need some time to accept the service of e-Government, because of their limited education and knowledge about this kind of service. The government services sites should be related in nature with people in order to guarantee success, and the best way to do that is by adopting the e-mail applications, that will ensure and establish a close relationship between the people and government departments, and in spite of that, we can see that many of these departments use the Internet sites freely or develop its services through the Internet for the benefit of people. The technology cannot be solve all the issues and become as substitute of human, government services cannot be implemented on the network, because it requires a personal identification card and signature and bring witnesses to the work accomplishments, such as issuing passport or registration issue. The application of e-Government system by the public administrations must be coming gradually toward the reestablishing the infrastructure and framework for electronic government.

-Governmental legal challenges

There are many regulations in each institution of the Iraqi government which can be considered as internal framework and system in that institution, so when we think about changing this legal framework totally or partially to make it move to electronic system (e-Government system that make it not easy and require a lot of change and establishing new laws make it applicable in these institutions.) Finding of the study by Al-dabbagh (2011) the poor resource planning is a major problem within the e-Government project since, people play an influential role in the success of any e-Government project. However, in the case of Iraq, could be a massive challenge in obtaining the people overboard with the project. This can be as a result that Iraq has yet to handle the difficulty of the great digital divide: the gaps between the people are advantaged to have access to the internet and people who don't. Those disadvantaged of the access will fall behind in the gaining of the necessary computer skills and the information that can provide economic opportunities. Thus, may not have a good share of the benefits that e-Government has to offer (Takeoka, and Alhujran, 2009).

-Information technology system challenges (Planning, Management and Implementation)

ICT technology should be done in regular ways which mean it should be updated and choosing the best methods to make the project of e-Government work regularly and systematically, because we can see that there are many projects failed in Iraq or not working well as a result of lack of updating and new technological methods. Those make us look deeply of how to manage the technological project in the perfect way which may

make this project move for the benefit which used for. Also the poor implementation stage of the projects according to the timeframe may affect on the project success. So that all these actions require deep preparation and a lot of feasibility studies to make it achieve the goal. xxxviii

-The willingness and the ability to do projects Challenges

Most of Iraqi citizen use the internet mainly for the program of social networks like facebook and other social network programs or to search about some information but there are no uses for any other internet applications like paying tax online or do the e-Payment for any kinds of purchasing staff. Furthermore there are many people who might think it's not safe and unsecure to do the financial transactions online. Beside that high prices of internet service connection is another reason which make people unable to get it. Also in the countryside it's not possible to find the internet connection. xxxix

Solution for e-Government Challenges

So that as a result of the depth study for this problem, we can find a number of solutions to the challenges that face the application of e-Government in Iraq, we can introduce these solutions as follow:

- 1- Work on establishing databases for all the Iraqi organizations and institutions for all kind of documents and put in electronic data system and connect it to a unified data center for each ministry.
- 2- Establish central information center (ICT data center) and connect all centers into one main for the purpose of providing e-Service in a perfect way. Then find the best way to

connect these institutions and ministries among themselves by establishing a network (wired or wireless) for the purpose of information and data share and exchange of information.

- 3- Create efficient system or law for ICT and authorize most of e-Government members to make and take the necessary actions which might be required in the institutional and organization structure in order to guarantee the success of e-Government project in Iraq.
- 4- Re-design the government websites and establish good management websites to be more organized and developed in term of management's contents.
- 5- Work on establishing and providing very active e-Services to encourage Iraqi people to trust the e-Service which is provided by government, for example spread this kind of e-Service in terms of make application for universities and jobs.
- 6- Make the e-Service available in all Iraqi governorates in order to make all people able to access to the e-Services provided by different ministries.
- 7- Link all the websites to the world wide website that use more advances ICT methods instead of the fixed web pages.^{x1}
- 8- Increase the number of training courses and workshops for Iraqi citizens in general to make them fully understand and get use to this kind of services and try to reduce any kind of problems and obstacles that might rise in case Iraqi people didn't understand the system.
- 9- Establish (ICT organization) which will be in charge of arranging all the legal, financial, structure, technical issues which might a raise among Iraqi citizen in term of e-Government system.

3.6 Benefits from the Successful e-Government Applications in Developed Countries

Most of the developed countries put its great efforts in the field of e-Government and ICT sector in order to solve most of the problems which e-Government projects suffered from in developing countries. The United state government put its greatest efforts on two important factors in order to encourage people to use e-Government project, the first thing is to put too much concentration on the democracy which is very important for all people and tempt them that e-Government will enhance this side and make e-Government effective. Also the other factor put too much effort on developing the commercial and financial transaction easy and active, intending to make financial and business process much easy through the use of ICT methods, which it's very easy and convenient. So that most of developed countries like Australia developed new methods and strategies for e-Government based on the collaboration and cooperation between various departments in order to give the best service. Also the use of Mobile e-Government play an important part to make and complete the transaction much more easier specially in a countries or places which lake to internet facilities everywhere, that's what happened in India. The main idea of mobile e-Government is the use of car containing computer connected to internet used by specialist person in ICT to assist people to do their transaction easily. Also in Australia a number of universities have begun to utilize a specific ICT platform, Blackboard Collaborate, in order to create a teaching environment across distances. The University of Notre Dame in Australia used the tool to teach nursing in the Australian outback and found that the program was able to maintain an authentic face-to-face environment through a virtual interface. Noticing that current students spend less time in libraries than in the past, the University of Northern British Columbia (Canada) used Blackboard Collaborate to launch an electronic library system (Nielsen & McCabe, 2012). The University of Bradford (U.K.) utilized

a number of ICT tools – including Moodle, Blackboard Collaborate, Skype, and Blogs – to teach a postgraduate certification course to students in Pakistan and Singapore (Stewart, 2012). All three programs found ICTs effective in conveying information and encouraging collaboration.

Although ICTs were found to engage the students, university programs are mainly unidirectional teaching programs where knowledge is primarily transferred from the teachers to the students. Institutions like the MOFA, however, rely on teams of equals to share knowledge and develop projects with a multidirectional flow of information. These teams depend on true collaboration, which includes trust in each other's competence and ability to effectively complete projects in time. Collaborators working in a virtual environment must trust in their teammates without being able to be physically close to them. Jarvenpaa and Leidner (2006) found that trust between members of virtual teams is fragile and temporal. Thus, collaborative tools like Skype and Blackboard Collaborate face the challenge of maintaining trust for virtual teams to be effective.

Virtual teams must often utilize a number of ICTs in order to share knowledge, discuss proposals and challenges, and coordinate project deliverables. Although some research has been conducted on the use and benefits of ICTs, there is a dearth of data on which package of ICT tools best facilitate the work of virtual teams. One of the key questions is how could a huge and geographically dispersed organization such as the MOFA, for example, package a suite of ICT tools to best enable its working groups to accomplish their missions?

This is where the concept of a collaboratory is very useful. The term was first used in 1989 by William Wulf as “a center without walls, in which the nation's researchers can perform their research without regard to a physical location, interacting with colleagues, accessing instrumentation, sharing data and computational resources [and] accessing information in digital

libraries” (Wulf, 1989). In the past decades, this term has expanded far beyond just a nation’s researchers, and can now connect people around the world with a common purpose to share resources and information, ultimately producing policy or guidance for an organization, community or development field. This new space of worldwide collaboration also includes, “social processes, collaboration techniques, formal and informal communication, and agreement on norms, principles, values and rules within the network” (Cogburn, 1998).

4: E-GOVERNMENT POTENTIAL FUTURE WORK

E-Government project in Iraq can do more experimentation with collaborative technologies and their use across a variety of fields and organizations. Given recent interest of governments, donor agencies and multinational organizations in ICTs and their potential - a very rough estimate suggests that developing countries spent 840 million dollars on ICTs in 2007 (ICTs for Development, 2009), stakeholders will continue to demand more and more customized tools to remain in communication and produce their work in a timely, effective and efficient manner with teams and team members across the world.

So that as a result of ICT poor infrastructure we think that the best thing to enhance this is by making the Iraqi government follow certain action plans represented by the following :

1- Establishing The Project of e-Government in One Ministry and One Governorate Project (All Stages)

As we mentioned before that Iraqi government institution started the application of e-Government project, but the main problem of this application, it's without central database which can be cited to when we data or information needed by Iraqi citizen or Iraqi government organizations., so that in order to get successful result we suggest to apply e-Government project to one ministry and when the application is well done completely to (all stages) and most of Iraqi people can access to it electronically and successfully ,then we can make this as basic or rule for all Iraqi ministries and try to follow that accurately. The best Ministry which we can start with is ministry of interior as it's very important in Iraq current situation by establishing the national ID projects as large management initiatives it will assume that may facilitate the community. The only way states to control populations, crimes or law-breaking acts and managing police

territories is taken into consideration for several observers argue (Friedman, 2005) that the globe is neither flat or not borderless that government can't control however, the other is that they can stay robust.

The establishing of this program should be based on the following points but not limited to:

- Establish central data system containing the record and specific number for every Iraqi person, this record must contain full information about the person.
- Connect all the ministry of interior institution and department to this central data base that I mentioned above.
- Establish easy and developed website by ministry of interior very easy to be used to most of Iraqi citizen in order to encourage them use the website and get the information that they require and do their daily applications for the official documents that they require.
- Using advance technology to raise the awareness among Iraqi citizen.

5. CONCLUSION

As can be seen a growing number of countries in the world are introducing an integrated e-Government project with biometrics support like a fingerprint, Iris scans, etc. That the use of e-Government project might provide to Iraqi citizen, therefore, it is important to consider in the feasibility and possibility of applying it as it serves the purpose. There are numerous benefits will come up with the successful implementation of e-Government system. It is needed to point out that the entire bad situation what is happening now in Iraq is the causes of anger, discrimination, power and bad attitude. Another problem is; there is no discipline in Iraq. By implementing e-Government project the major and ground level problem will be solved, those are; attitude towards people, society, nation and constitutions. Now it is a matter of time to implement e-Government project in Iraq. After words the advanced ICTs Technology for ex. ID card system will be the proof document of citizenship and can be used routinely in banking, education and credit applications. Although these business agencies do not have a legal entitlement to such information it will become common place and people already will assume their identity card is required in order to access those services (Kenday; 2012). There will be a time when an identification requirement might affect the political process, as it might have a chilling effect on some forms of political action. The regime will be well maintained by law enforcement, benefit and supportive tax administrations (Michael; 2001). It is not a simple job due to the high volume of time consuming and costly that many countries governing bodies took time to give their decision. And it takes so long time to get approval after facing a lot of debates, It is because; the budget allocation with appointed a big workforce and develop a new network infrastructure for the communication and data management.

E-Government function is not restricted to the use of information and communication technology to transfer services to citizens; but it is rearrangement of the institutions system in a new form with administrative, social and political. It is also not limited on the providing the technological service to stakeholders, but also provide very advance technological way to get the work done in the best way inside and outside the government departments. In this regard we reached the following conclusions and recommendations:

- 1- Develop and reform the governmental organizations and departments because; if we apply the e-Government project on with the current institutional structure it's not going to be successful.
- 2- Emphasize innovation in ICT as a policy priority and implementing new programs which aim to enhance the capabilities of researchers by training them continuously in all aspects of ICTs.
- 3- Apply the good governance program in all the Iraqi ministries and organizations in order to make the process of e-Government program successful.
- 4- Make scientific cooperation between universities and R&D centers in Iraq and international R&D centers in the field of ICTs and e-Government applications.
- 5- Organize special kinds of e-Government project workshops which concentrate on the planning and methodologies including SWOT techniques to spread the awareness among people in Iraq about the importance of e-Government to raise the standard of service provided to Iraqi citizen.
- 6- The application of e-Government project all over Iraq will bring many challenges, so we think that the application of this project should be applied first in one ministry or one of the Iraqi provinces and check how this will example will be success, after that try to

apply it to the all the government institutions.

- 7- As its difficult to deliver government service all over Iraq, so that we suggested the use of another kind of technologies such as the mobile government.

Therefore; this study is able to satisfy its objectives by looking into the possibilities of leveraging technologically enhanced communication assets to galvanize Iraqi ministries and departments within the context of the distributed collaboratory structure to facilitate effective implementation.

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