

A General Framework for E-Government: Definition Maturity Challenges, Opportunities, and Success

Tamara Almarabeh

*Computer Information System Department, University of Jordan
Al-Jubeiha, 11942, Amman, Jordan
E-mail: t.almaraabeh@ju.edu.jo*

Amer AbuAli

*Philadelphia University, Jerash, Jordan
E-mail: drabuali@yahoo.com*

Abstract

With unprecedented breadth in the field of information technology, the world moved from the industrial age into the information age. The manifestations of this transformation and the emergence of the transition terms and concepts have become part of our daily lives, in the field of economics emerged concepts such as E-commerce, E-business and electronic money, In the area of contact: E-mail, E-learning, and in the area of public sector: E-government. This paper introduces a general framework for the E-government through discussing answers to 3 main questions related to E-government: What, Why and How E-government? The answers to these questions summarized in giving different definitions, maturity for E-government, addressing the challenges and opportunities for developing a successful E-government, and discussing different factors for achieving the success for E-government projects and the role of ICT.

Keywords: ICT, Citizen, Maturity, Readiness, Assessment

1. Introduction

E-government is an idea raised by former U.S. vice president (Al Gore), within his vision of linking the citizen to the various agencies of government for getting all kinds of government services in an automated and automatic way, in addition to the completion of the government working itself depending on information and communication networks to reduce costs, improve performance, speed of delivery and effectiveness of implementation.

E-government program seeks to achieve greater efficiency in government performance, through raising the performance of services for beneficiaries and investors from all segments of society easily and accurately and efficiently, to become a new type of performance of official governmental and governmental transactions. Online interactive services may include such facilities as petitioning, rate paying, licensing or information queries. There continues to be a diversity of implementation quality and levels for such services (Middleton, 2007).

To achieve this requires utilizing the latest means of technology, communications and follow-up to the rapid global developments and look at the reasons for the failure and the success of E-

government programs and to encourage the use of technology and increase the number of users of computers and Internet tools effectively, and these points what this paper tries to concentrate on.

2. What is E-Government?

For one to understand the idea of E-government, must first understand government in general. Government is actually a dynamic mixture of goals, structures and functions (Pardo, 2000). E-government is more than a website, email or processing transactions via the internet. E-government becomes a natural extension of the technological revolution that has accompanied the knowledge society. The E-government added new concepts such as: transparency, accountability, citizen participation in the evaluation of government performance (Mohammad,2009).

2.1. Definition of E-Government

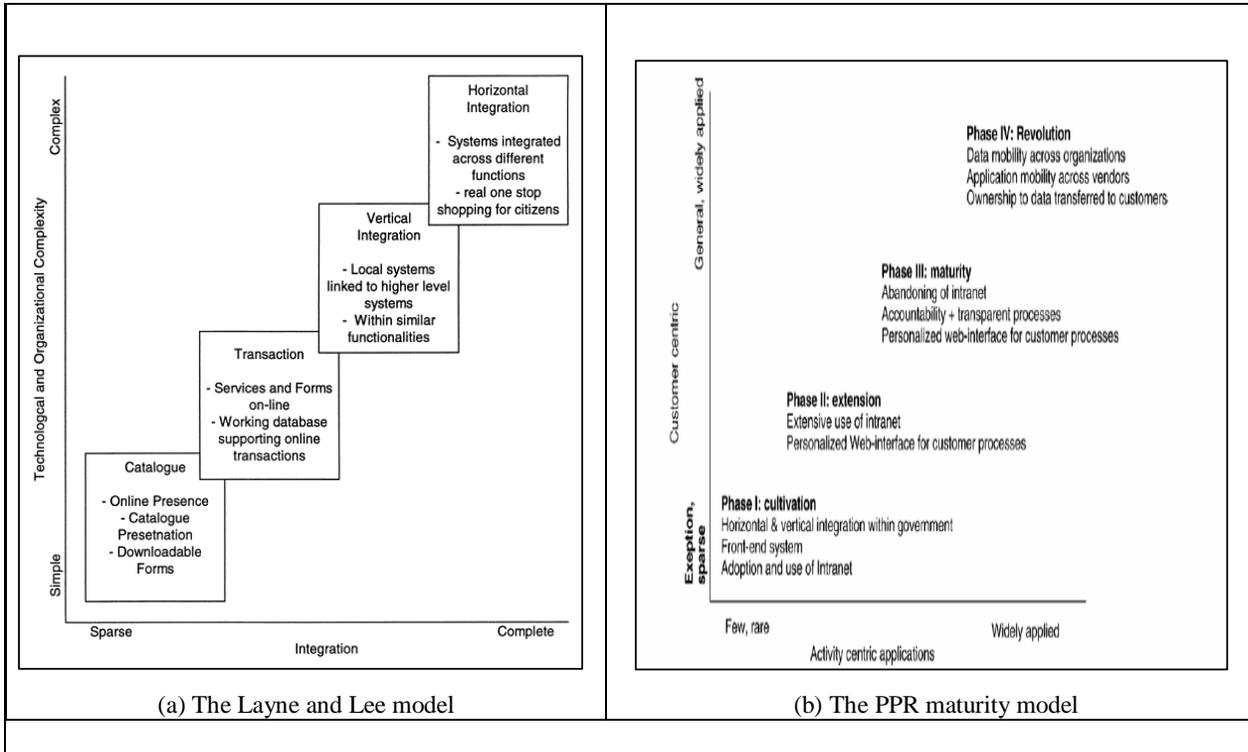
Like other concepts of contemporary there are multiple definitions of E-government among researchers and specialists, but most of them agreed to define Electronic government as government use of information communication technologies to offer for citizens and businesses the opportunity to interact and conduct business with government by using different electronic media such as telephone touch pad, fax, smart cards, self-service kiosks, e-mail / Internet, and EDI. It is about how government organizes itself: its administration, rules, regulations and frameworks set out to carry out service delivery and to co-ordinate, communicate and integrate processes within itself.

Another definition of E-government was presented by United Nation's website to be "E-government refers to the use of information and communication technologies (ICT) - such as Wide Area Networks, the Internet, and mobile computing - by government agencies". While OECD noted that Electronic government refers to the use of information and communication technologies, and particularly the Internet, as a tool to achieve better government (OECD, 2003).

2.2. Maturity of E-Government

In the concept of government in general, as well as of E-government, we can distinguish between 3 groups': citizens, businesses and services, and governmental departments of the country. And use abbreviations such as G2C refer to the relationship between government and citizen, G2B denote the transaction between the government and businesses and industrial departments, and G2G indicate the relationship between different government units. Most of the governments begin to provide information across direct on-line, but the public needs require quick more services and usually take this form gradually. E-government becomes more widespread; one is beginning to see the progress through six stages. Not all governments will reach all stages, and there will be much diversity within a government, with different agencies at different stages. The stages are: (1) Using internal network and setting up an email system; (2) Enabling inter-organizational and public access to information; (3) Allowing 2-way communication; (4) Allowing exchange of value; (5) digital democracy; and (6) joined-up government.

Implementing E-government is a continuing process, and most often the development is conceptualized in stages. The widely known maturity model suggested by Layne and Lee(Layne and Lee, 2001) who sees E-government as an evolutionary phenomenon, from which E-government initiatives should be derived and implemented. They assume four stages of a growth model for E-government: (1) Cataloguing, (2) Transaction, (3) Vertical integration, and (4) Horizontal integration as shown in figure 1.

Figure 1: The maturity models of E-government development

This model is developed by an increasing the level of complexity and integration from (1) to (4). Andersen and Henriksen (Andersen and Henriksen, 2006) complement the maturity model with strategic ambitions of governments' use of IT, and present what they call the PPR (Public Sector Process Rebuilding) model. They argue that the Layne and Lee model build on the same rationale that have dominated the traditional motives for IT adoption; increase in information quality, and efficiency and effectiveness. The PPR model expands the E-government focus to include the front-end of government. The major difference between the Layne and Lee model and the PPR model is the activity and customer centric approach rather than the technological capability.

2.3. Challenges and Opportunities for Developing a Successful E-Government

E-government initiatives aimed at raising the level of government performance in general, where the proper application of these initiatives lead to upgrade the governmental services provided to citizens and the private sector and enhance the effectiveness of government work internally, in addition to broadening the participation of citizens in decision-making process. However, many studies indicate that a large proportion of initiatives to implement E-government around the world did not succeed in achieving these promised goals. There are, in fact, a global consensus on the existence of the need for deeper studies to understand the real reasons behind this failure, but in spite of higher percentage E-government projects that failed to achieve its goals globally, the world is witnessing a comprehensive consensus recognizes that there is still the possibility of E-government initiatives to fulfill their all promises , but the underlying potential of these initiatives will only be achieved through access to a better understanding of the obstacles they faced and therefore to work out ways to overcome these obstacles. The most challenges that are expected to be faced during the implementation of an E-government program have been summarized from the E-government handbook of developing countries (Center of Democracy and Technology, 2002), presented in table 1. A set of recommendations has been provided to assist in overcoming the challenges and obstacles in the road for developing a successful E-government.

Table1: Challenges to be faced during the implementation of an E-government and Recommendations to overcome these challenges

Challenges	Recommendations
<p>1. Infrastructure Development All countries implementing E- government have struggled to develop a basic infrastructure to take advantage of new technologies and communications tools. Many developing countries, even if possessing the will, do not have the infrastructure necessary to immediately deploy E-government services throughout their territory</p>	<ul style="list-style-type: none"> • Develop projects that are compatible with the nation’s telecom infrastructure. • Use public access kiosks and mobile centers if telecommunication density is low. • Introduce telecom competition and lift regulations on wireless and other digital technologies to accelerate their deployment. • Build on the microenterprise model to bring connectivity to underserved areas and ensure sustainability. • Consider the government’s current use of technology and learn from past successes and failures. • Establish an action framework at the beginning of the process to allow for a rational and coordinated investment effort down the road.
<p>2. Law and Public Policy The application of Information Technology and Communication (ICT) to government may encounter legal or policy barriers. Legislatures must ensure that laws are updated to recognize electronic documents and transactions. Policymakers implementing E-government must consider the impact of law and public policy.</p>	<ul style="list-style-type: none"> • Consult with stakeholders to assess how existing laws may impede the desired results. • Give legal status to online publication of government information. • Clarify laws and regulations to allow electronic filings with government agencies. • Reform processes by simplifying regulations and procedures.
<p>3. Digital Divide The digital divide is the gap between people who have access to the Internet and those who do not. Those without access cannot learn essential computer skills, cannot access information that can provide economic opportunities, and cannot share in the benefits of E-government.</p>	<ul style="list-style-type: none"> • Provide communal access through village computer centers or kiosks. • Combine access with training. • Provide incentives to the private sector to donate equipment and training. • Emphasize local language and content tailored to different communities. • Use for-profit entrepreneurs to build and sustain access points in small communities.
<p>4. E-Literacy E-Literacy refers to marginalized groups who are unable to make use of information and communication technologies because they are not computer literate. With the digital revolution there is a very real danger that the world will be divided into the “information rich” and the “information poor.” E-government has the potential of either equalizing access to government and its services or increasing the barriers to participation.</p>	<ul style="list-style-type: none"> • Ensure that content is in local languages and that interfaces are easy to use. • Develop applications that use speech or pictures in addition to, or instead of, written text. • Include an educational component in E-government projects. • Provide aides at access points who can train citizens in basic computer skills. • Create programs that include traditional media, like radio programs or newspaper columns, where citizens can learn about E-government. • Special attention should be given to groups difficult to integrate (women, elderly, immigrants).
<p>5. Accessibility Governments must serve all members of society irrespective of their physical capabilities (disabled people: those who are blind, deaf or otherwise handicapped). Online services will have to be designed with appropriate interfaces.</p>	<ul style="list-style-type: none"> • From the outset, design applications that accommodate the disabled, such as an audio option for the blind. • Establish as a legal requirement that the government must adopt technology to assist the disabled. • Set performance criteria and measure progress
<p>6. Trust To be successful, E-government projects must build trust within agencies, between agencies, across governments, and with businesses, NGOs and citizens</p>	<ul style="list-style-type: none"> • Map key internal and external partners and build a strategy to keep open lines of communications. • Start with short-term projects that yield early results. This helps build trust and could help point to areas for larger scale ventures. • Strong leadership can help build confidence in programs.
<p>7. Privacy Governments must be responsible custodians of the enormous amounts of personal information they hold. Governments collect vast quantities of data on their citizens through everyday transactions. Protecting the privacy of citizens’ personal information stored on these databases while making effective use of the information contained in them is a vitally important issue.</p>	<ul style="list-style-type: none"> • Educate and train government officials on the importance of privacy. • Design applications that integrate privacy protections. • Follow “fair information practices.” Minimize the collection and retention of personal information. • Limit access to personally identifiable information- do not automatically allow employees to tap into databases of personally identifiable information.
<p>8. Security Security is costly, but must be addressed in the</p>	<ul style="list-style-type: none"> • Designate a senior official responsible for computer security.

<p>design phase, as security breaches can shatter public trust in E-government. Trust is a vitally important component of E-government projects. Without trust, citizens who may already be leery of using technology may avoid and even shun the use of online services that ask for detailed personal information.</p>	<ul style="list-style-type: none"> • Continually assess systems to make sure that security precautions are being implemented. • Backup information regularly and store backups in a separate location. • When it comes to personal information, keep information collection to a minimum and do not disclose personal information without express prior consent. • Provide ongoing training to employees on computer security. • Evaluate performance of system managers in adhering to sound security practices.
<p>9. Transparency</p> <p>Citizens too rarely understand how government decisions are made. This lack of transparency prevents the public from actively participating in government and from raising questions or protesting unfair or ill-advised decisions. A lack of transparency can conceal official graft or favoritism.</p>	<ul style="list-style-type: none"> • Post online rules, regulations and requirements for government services (such as requirements for obtaining a license) to minimize subjective actions by officials. • Highly-placed public officials can expedite transparency and accountability efforts by making their offices positive examples of openness. • When putting services online, give citizens the ability to track the status of their applications. • Train civil servants and provide incentives to reform. • Integrate transparency and process reform to simplify regulations and procedures.
<p>10. Interoperability</p> <p>Putting incompatible record formats online neither simplifies nor reduces the workload imposed on people and government officials. Reliable E-government requires a comprehensive overhaul of legacy systems.</p>	<ul style="list-style-type: none"> • Map and assess existing record systems. • Identify and reform regulatory schemes that make interaction with the government onerous. • Use common standards throughout the government to shorten development time and ensure compatibility. • Adopt a common IT infrastructure for the government.
<p>11. Records Management</p> <p>Better information management can help officials identify barriers to more efficient government. An information management framework is necessary to make sense of available data. Without this framework, policy makers could not derive useful analysis quickly enough to react to social and economic developments.</p>	<ul style="list-style-type: none"> • Encourage data sharing and cooperation between government departments. • Streamline offline record keeping processes to make the transformation to online publication easier. • Creation and standardization of meta-data is critical for conducting successful data searches across institutions and networks.
<p>12. Permanent availability and preservation</p> <p>Historical documentation is of special importance for governments. ICT not only allows for quick and cheap dissemination of data, but also for its compact and convenient storage.</p>	<ul style="list-style-type: none"> • Design applications according to need. • Consider relevance, usability, language compatibility and affordability. • Encourage cooperation between departments and with the private sector in collecting, storing and utilizing data, but proceed continuously with personally identifiable information.
<p>13. Education and Marketing</p> <p>E-government services are only useful if people know about them. Education and outreach programs will be needed.</p>	<ul style="list-style-type: none"> • Develop publicity and training campaigns that will engage the public about E-government initiatives. • Conduct research to ensure that online services respond to actual needs and that the implementation suits the target audience.
<p>14. Public/Private competition/collaboration</p> <p>Answering the question of where government controls end and the private sector takes over in E-government efforts.</p>	<ul style="list-style-type: none"> • Forge multi-sector partnerships. • Review and reassess laws and policies that impede public/private cooperation. • Ensure that agreements with contractors and partners are equitable and can be reviewed and revised over time. • Seek assistance and involvement from organizations that already have experience in providing services and information using the same or similar technologies
<p>15. Workforce issues</p> <p>Human resources must be structured and managed with E-government goals in mind. A well-trained and motivated workforce is critical to E-government success.</p>	<ul style="list-style-type: none"> • Articulate a timeline for implementation in a step by-step manner so the reforms will not seem overwhelming to the bureaucracy. • Hold regular meetings between E-government policy leaders and the affected workforce so employees are active participants in the process. • Create incentives by rewarding individuals and agencies that apply the reforms rapidly.
<p>16. Cost structures</p> <p>While planning and budgeting in a changing climate is difficult, governments should seek to invest in sustainable programs that can produce savings.</p>	<ul style="list-style-type: none"> • Avoid advertising-based or fee-based services. They have generally not been sustainable. • Articulate functionalities clearly and try not to add details that will push budgets into deficit. • Develop projects that are achievable with resources available. • Consider the government's current use of technology and study past successes and failures. • Designate an officer or organizing body that will oversee cost.
<p>17. Benchmarking</p>	<ul style="list-style-type: none"> • Create measurable goals during early planning stages.

<p>Governments must regularly evaluate the progress and effectiveness of their E-government investments to determine whether stated goals and objectives are being met on schedule</p>	<ul style="list-style-type: none"> • Designate an office to oversee E-government implementation. • Make sure the office is sufficiently funded and is recognized by all relevant agencies and departments. • Conduct regular audits to ensure progress is being made to achieve stated goals. • Review benchmarks regularly to ensure that accurate measures are appropriate for rapidly changing technology. • Create a data collection system to support program operations and “before and after” surveys of knowledge, skills, and applications among participating organizations to assess program impact. • A common IT infrastructure and architecture standard is key to ensuring that ongoing development takes place in a coherent and integrated way. • Advanced planning of common IT infrastructure standards result in shortened development time and system compatibility. • Quantitative measures can be as beneficial as qualitative ones.
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2.4. Factors Affecting the Success of E-Government

For successful E-government endeavor, two critical requirements are needed: availability and accessibility. E-government transactions have to be available 24/7. This provides citizens, partners, and employees with the flexibility to process transactions outside standard government office hours. With the inclusion of websites for E-governments, an E-government website needs to satisfy this “high availability” requirement (The Office of Government Commerce, 2004). Also, the E-government endeavor is critically dependent on the accessibility of its integral websites. If the website is not accessible to the intended target users it will not be successful (Abanumy, 2005). The factors affecting success or failure have been widely discussed by several researches, below is a review of the most important reaches and its findings:

Danish Dada, "The Failure of E-government in Developing Countries" (Dada, 2006). The research was a revision of published literature related to reasons of failure in E-government projects, and then the researcher discussed that the models presented by these literature (e.g. Cecchini and Raina (2004), and Heeks (2002)) to explain reasons of failure in E-government model can be directly applied to the situation of E-government projects in the developing countries where he stated that “The problem that often arises with developing countries is that there is frequently a mismatch between the current and future systems, due to the large gap in the physical, cultural, economic, and various other contexts between the software designers and the place it is being implemented”. The researcher never provided any evidence to prove his claim.

This study perfectly summarized the causes of failure of the E-government program in developing countries, as identified by other authors, those causes are:

- Lack of training schemes and qualified staff, which makes it hard to go with such a new trend like E-government.
- Lack of change management efforts.
- Lack of educating citizens about the value and benefits of E-government, that the government itself should play the main role in this issue.
- High turnover rates of government IT staff because of uncompetitive payment and employment conditions as compared to private sector.
- lack of public sector skills, and as a result E-government projects are often outsourced to the private sector
- Large design-reality gaps as a result of using an off-the-shelf solution from an industrialized country for a developing country.
- The need of appropriate infrastructure that means that weak infrastructure (such as technology being used, skilled people and communication systems), will be the first obstacle in employing the E-government program.
- The large gap between the skilled leaders who can afford technology, and the unskillful poor who can't afford the same.

Marc Holzer, Seang-Tae Kim, "Digital Governance in Municipalities Worldwide" (Holzer, 2008). The two researchers presented a matchless model to assess E-government services. They used a survey to examine the quality of 100 local E-governments services based on a model presented by Moon (2002) developed a framework for categorizing E-government models based on 92 different components perceived as critical measures of E-movement success in achieving its goals from the public point of view.

The study came out with a result that there is a gap between developed and under-developed countries, and the researchers recommended finding a comprehensive policy for overcoming that gap. That comprehensive policy should include capacity building for municipalities, including information infrastructure, content, and applications and access for individuals.

The most important part was the categorization of study variables to be measured as indicators of E-government success which were:

- Information Dissemination, means and methods.
- Two-way communication, the nature of the relationship.
- Services that will be available to the citizen or any stakeholder.
- Integration.
- Political participation. To what extent the citizens will be involved in the political matters, and how it would affect it.
- Security, how secure transactions will be.
- Usability, how usable (easy to use) will the transactions will be, and if they are user-friendly or not.

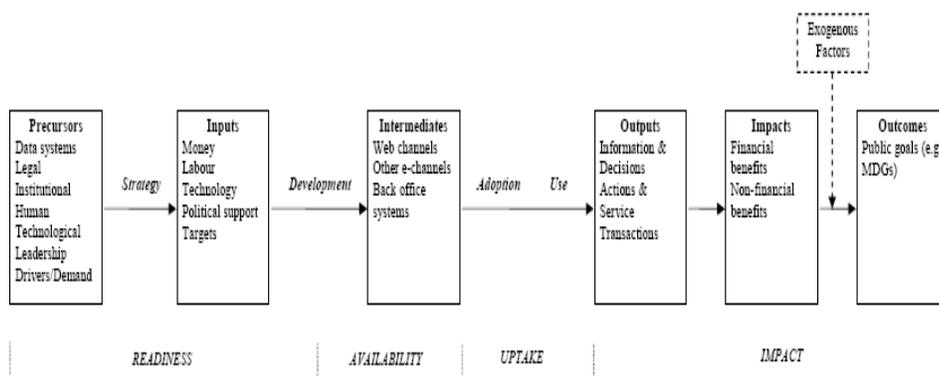
Richard Heeks, "Benchmarking E-government: Improving the National and International Measurement, Evaluation and Comparison of E-government" (Heeks, 2006). His definition for benchmark in E-governments is: "E-government benchmarking means undertaking a review of comparative performance of E-government between nations or agencies". The researcher in his research relied on good practice or innovative practice to provide a comprehensive framework for benchmarking E-government, backed up by statistical findings and other conceptual frameworks.

The researcher was not similar to the other researchers, who concentrated on citizens as receivers of E-government services (G2C) in their benchmarking model for E-government efficiency measurements, he also focused on:

- (G2B) Government to Business.
- (G2G) Government to Government – the interrelationship between different governmental departments.

The researcher introduced a modified representation of E-government value chain-a summary shows the way that inputs turns into outputs in the E-government- as follows:

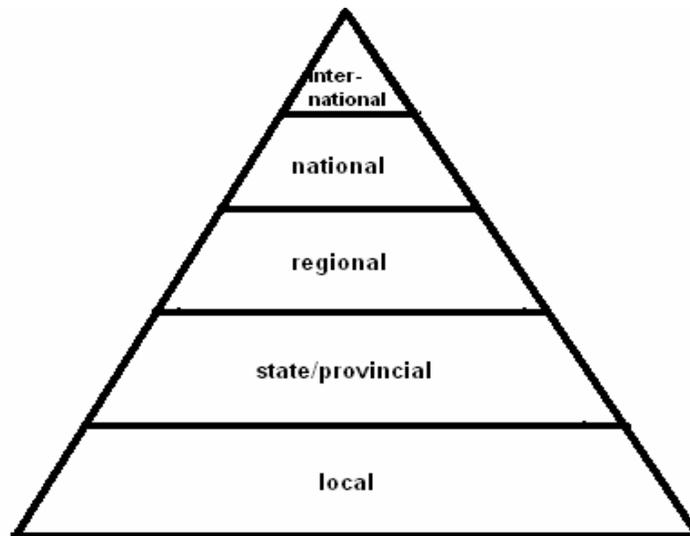
Figure 2: E-government Value Chain



This suggested value-chain could also summarize the inputs and outputs of the E-government program , as inputs will be all the skilled people , up to date technology and communication means, plus the governmental support financially or providing all the requirements as well as the strong leadership. And as a result the wanted outputs will be achieved including all the e-services and information needed, as well as making all the transactions faster and immediate.

The researcher also gave levels of possible E-government, and he included them in his model of benchmarking E-government, he was unlike the others of researchers who focused only on the national E-government. It is illustrated as follows:

Figure 3: E-government levels



The above mentioned figures highlighted some important points that can be of a great importance when taken into consideration when applying any E-government project, where each stage represent a step to be implemented before moving to the next step in order to insure the success of an E-government project. The researcher utilized some of the mentioned above points to build the research questioner as a benchmarks of the E-government project's success in Jordan. Even though, the researcher's point of view is that those different levels (steps) will not be recommended in Jordan, as it is a small country, and the population could hardly reach 6 million. And as a result, local and national levels will be ideal, inter-national level might be implemented, but it will take a long time.

3. Why is E-Government?

E-government will make the government more transparent, efficient, and enable government information and services to be delivered to citizens much faster and easier. One does not need to go to different government offices when a mouse click at his/her home or other locations will do the same work in minutes(Xiong, 2006) .One of the benefits of E-government in developed countries is cost reduction in the transfer of information and online transactions(Dada, 2006). E-government has many advantages serve as criteria for measuring the efficiency of administrative work and general quality. The essential task of government is governance which means the job of regulating society and not just working with marketing and sales. E-governance is defined as the transformation of governance processes resulting from the continual and exponential introduction into society of more advanced digital technologies (Layne and Lee, 2001).

The most common E-government services are listed below:

- A. Direct services to the public such as the receipt of applications for licenses and certificates, payment of taxes and real estate registration, payment of traffic fines, fines, and postal and electricity bills.
- B. Facilitate the payment and implementation of public sector procurement.
- C. The provision of electronic forms of public opinion on automatically information job vacancies.
- D. Provide statistical data.
- E. Technical support information and communication of volunteering and security centers and the courts.
- F. Creating an open government that is better, such as the publication of laws and regulations on the Internet.

Developing a successful E-government provides the following benefits (Encyclopedia, 2006):

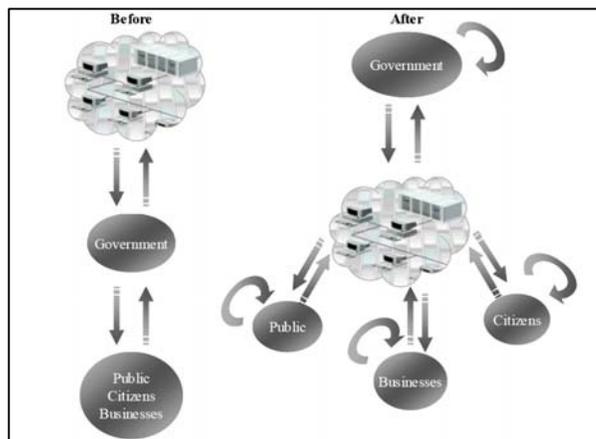
- Improving efficiency of administrative processes, as it will be more accurate, reliable, no data loss, and especially faster.
- Increasing transparency, as all the information about the government and its agencies will be available, nothing ambiguous. And it will be accessed easily and from anywhere.
- Improving services, which could be by making all the services available online, with no hassle of queuing or waiting, or choosing the wrong department. So citizens will feel that they are satisfied with such a new way of serving.
- Decreasing corruption, every citizen will be dealt with as the other, no recommendation to citizens upon others. And the system will do exactly the rules.
- Contributing to revenue growth, and/or cost reductions, citizens will feel comfortable with the E-services online, as it is fast and clear, so it would be an advantage to encourage them to do their payments on time, which could contribute in the revenue growth.
- achieving specific policy outcomes, and contributing to economic policy objectives,
- Helping trust building between governments and citizens. This will help the E-government to achieve the main idea from its existence.

4. How is E-Government Work?

Getting the idea of E-government acceptable to the many officials and interested in the developed and developing countries, comes as a result of such conviction that technology and communications can transform government services received by citizens across in a queue waiting inline to services that are regularly available throughout the day and can be obtained directly through the lines of communication electronic online. It could be argued that the electronic government is a revolutionary electronic display material and political risks and if it does not absorb enough may be E-government initiative is a waste of resources and fail to provide useful services, so it must be from the beginning to determine needs and potential obstacles such as poor infrastructure and humility of the educational system and the lack of means to communicate with technical or limited resources, expertise and information.

The old fashioned model of ICT in government has been changed to new model is one of ICT supporting and transforming the external working of governance by processing and communicating information and data, as shown in figure 4. Network communication technology has revolutionized how agents in the economy interact, transact, and share information with each other – namely government, businesses, and citizens. The new technology provides for multi-channel access, communication and interaction, including, among others, the usage of Wide Area Networks (WANs), the Internet, and mobile computing networks.

Figure 4: E-government “Go on-line instead of in-line”



The experiences of countries in this regard have reached advanced stages in time, which was launched three Arab countries: UAE, Jordan and Egypt. E-government construction projects come from recognizing the importance of the communications revolution, which must be exploited fruit of civilization and the exploitation of cultural cognitive in the convoy of civilization without hesitation or equivocation.

The Working Group on E-government in the Developing World (Roadmap for E-government in the Developing World, 2002) introduced “10 Questions E-government Leaders Should Ask Themselves” which are summarized in table 2. They provide clear path show the issues and public affairs for the E-government and you must know how to deal with it, planning strategies to solve, 10 questions you need to answer is helpful to the planning, management and evaluation of E-government project.

Table 2: 10 questions E-government leaders should ask themselves

Question	Description
1 Why are we pursuing E-government?	First we have to aware that the electronic government is a process of transformation and the technology is its tool to help citizens and institutions and are part of the general reform program as to what is common in the administrative and economic world. It means reshaping the work of government, information management and serves the public, but it is not an easy process and not a low-cost. Before the allocation of the resources and the time to achieve E-government must have the desire by owners of top management in the country, as it requires changing the mindset of administrators and staff and how they share information G2G between different departments and institutions, non-governmental trade G2B, as well as individual citizens G2C, therefore require re-engineering method of governmental action, both within a single institution or among multiple government institutions.
2 Do we have a clear vision and priorities for E-government?	Because of E-government may also refer to many different things, the plans of E-government also come in different shapes and sizes, so you must posse a clear vision of E-government, and can build a common vision through the goals or the common interests of society, such as: <ul style="list-style-type: none"> • improve services provided to citizens • improving the productivity and efficiency of government institutions • strengthening the judicial system • support the priorities of economic sectors • strengthening the administrative system and broaden the base of popular participation It can show many different goals in each of the five objectives listed above, in the sense that the public perception of E-government keeps track of the major concerns of the community and target domains. For example the community may focus the ambition on the development of itself to be the center of business in their respective geographical areas on earth and thus the vision of E-government in this case will focus on trade facilitation and electronic services across on-line, which may need to improve the system of investment or the tax system and that will form the priority sectors in this case.
3 What kind of E-government are we ready for?	Due to the different needs of the communities, as well as priorities, there is no unified model for E-government, and government's willingness for E-government based on the quality of targets and the sectors that selected as priorities, as well as the resources available, which based on financial budgets and human capacity and the infrastructure of communications and the legal framework.

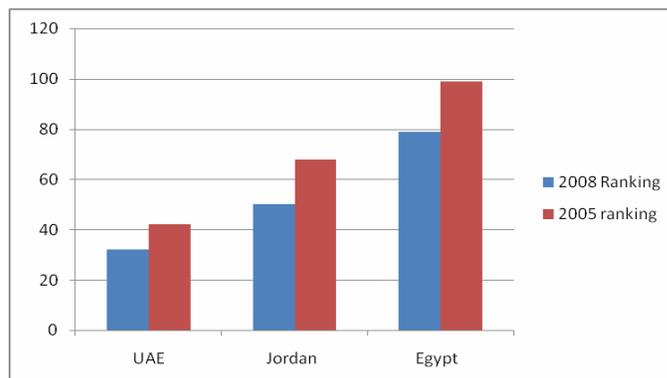
4	Is there enough political will to lead the e-government effort?	As with any reform efforts of the traditional government, the desire of political leaders is one of the most important requirements for the implementation of electronic government project because without the continuation of this political support can not guarantee continued availability of financial resources and cooperation between institutions and policy change and human efforts, highlighting the need for this support as well as when the opponent of the project appear or hindered.
5	Are we selecting E-government projects in the best way?	The selection of E-government projects is very important, particularly the initial projects, because the initial success project can be radiation point for the future attempts and be a driving force forward to other projects, it is also important to highlight the successes you-go rather than spend a long time in the development of visions and strategies of action plans, It must identify important issues and deal with them in the form of quick E-government (within a year or less) highlighting the internal management processes and operations dealing with the public.
6	How should we plan and manage E-government projects?	Efficient management is essential to the success of E-government as is the case for all governmental operations and business, a lot of businesses rely on the orderly management and capable such as the completion of the project within time, and the specific budget, and distinguished dealing between different governmental institutions, so it's before you start E-government project must develop management mechanisms to all levels of the project.
7	How will we overcome resistance from within the government?	Citizens may be opposed for E-government projects and may have refuse to adapt to the new procedures, so it is worth understanding the causes of this opposition and overcome them through awareness and training programs in the technical field.
8	How will we measure and communicate progress? How will we know if we are failing?	E-government projects require considerable funds and human resources devoted to dealing with information, so they are sensitive responsibility and test of success based on the achievement of project objectives such as quality of services provided and the ease of access to government information, and these goals are measured using criteria such as size of transactions executed electronically, speed of response to queries, the number of services provided and reduce the proportion of the cost to the citizen and the government.
9	What should our relationship be with the private sector?	Public sector cannot implement the E-government projects alone, and other sectors in the country to contribute to different roles in the project development phase starting from initial vision and planning until implementation and evaluation, so it is necessary to search for companies and institutions with expertise in technical applications, management of information and communication projects, so can complete E-government project at less time of the lowest possible cost.
10	How can E-government improve citizen participation in public affairs?	The participation of individuals and non-governmental organizations and private and civil sector, an important element in all phases of E-government, where this participation can be in a number of ways such as: <ul style="list-style-type: none"> • Submission of proposals on E-government plans. • Getting information from government sites. • Participate in free and open dialogues with the government and citizens. In the end, E-government is intended to serve the citizens who are experts.

A study conducted by UN (UN E-government Survey, 2008) in the year of 2008 presents a comparative assessment of the 192 United Nations Member States'. The Survey evaluates the application of information and communication technologies by governments. This evaluation of E-government readiness places citizens at the forefront, by focusing on the governmental services and products that primarily affect them. A snapshot for this survey for some Arab countries is shown in table 3.

According to the report, the provision of services has seen by government agencies significant development more than just being a traditional model of the government that provide services to citizens in traditional ways to focus heavily on E-government services to become one of the intrinsic components that increase the value of services to citizens and then many countries in different regions of the world is reviewing strategies of developing public sector to ensure increased value of the services provided to the public through the electronic network and develop. The report showed readiness for e-government that there is considerable variation between the five continents of the question of readiness for E-government For example, we find that Europe got 0.6490 points, the Americas got 0.4936 points, Asia 0.4470 points, Oceania by 0.4338 points, and Africa is estimated at 0.2739 points.

It should also be noted that Arab countries improved significantly since the 2005 survey, where Jordan moving up 18 positions as shown in figure 5. The reasons of this improvement understand the society for the importance of E-government, websites and services.

Figure 5: E-government Readiness (2005 and 2008 Rankings)



It should be noted that the overall level of readiness for E-government in Asia and Oceania were slightly below the world average of 0.4514 points, and that Africa was a low level. The readiness for E-government is not restricted only to the governmental body, though. It is also important to assess society, government institutional frameworks, human resources, existing budgetary resources, interdepartmental relationship, national infrastructure, economic health, education, information policies, private sector development and other issues when making strategy for implementation of E-government (Al-Omari, 2006), and this what has been taken into account in the UN report where largely consists index of E-government readiness of the three key indicators, the first and second indexes are network and infrastructure while the third index is human resources.

The Telecommunication Infrastructure Index 2008 is a composite weighted average of five primary indicators. These are: PCs/100 persons; Internet users/100 persons; Telephone lines/100 persons; Mobile phones/100 persons; and broadband/100.

Infrastructure Index = 1/5 (PC index) + 1/5 (Internet user index) + 1/5 (Telephone line index) + 1/5 (Mobile user index) + 1/5 (Broadband Index)

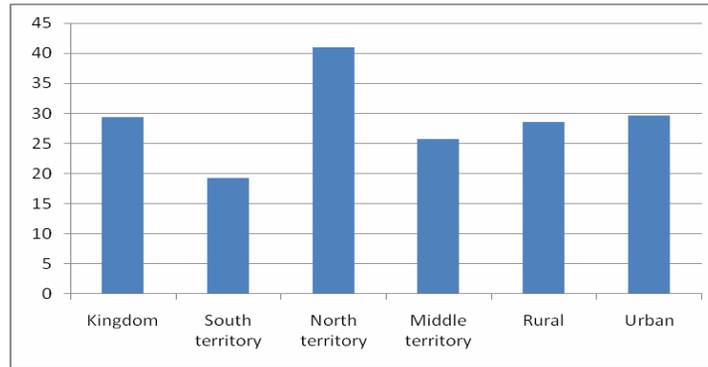
Table 3: Infrastructure Index 2008

Country	Internet Index	PC Index	CellularIndex	Main TelephoneLines Index	BroadbandIndex	InfrastructureIndex
UAE	0.413	0.258	0.781	0.292	0.163	0.3813
Jordan	0.154	0.069	0.489	0.109	0.026	0.1693
Egypt	0.089	0.042	0.155	0.148	0.009	0.0886

The maturity of citizens and their knowledge of information and ICT is important point in implementing E-government program. As Jordan, Department of Statistics carried out a survey the use of information technology in the home in 2008 (Jordanian Department of Statistics, 2008) to observe the awareness of the citizens. The survey covered 3340 families distributed to all governorates of the kingdom, was the proportion of response in the survey about 94% or 3145 families. Most Internet users are individuals in the age group 14 - 15 years, students, and those with bachelor degree or higher.

The data indicate that the extent of Knowledge of individuals 15 years of age to get more information provided, including special E-government services was 29% (29.6% in urban areas accounted for 28.5% in rural areas) and the highest percentage in the north territory as shown in figure 6. However, it is still necessary more awareness and education in this and highlight the benefits and privileges of use of these services to the members of a community.

Figure 6: Percentage of persons aged 15 years and above and have information on E-government services by place of residence, region



Talal Abu- Ghazaleh organizations introduced in their workshop (Talal Abu-Ghazaleh, 2006) some E-government implemented applications which summarized in the following table for the previous Arab countries:

Table 4: some E-government implemented applications

Country	Applications
UAE	Human Resources Management Systems Financial Management Information System E-stamps E-Tender
Jordan	Financial, purchasing and inventory systems in different governmental agencies. E-payments in telecommunications sector E-Tendering Wideband network in 18 ministries (will be the infrastructure of the E-government services)
Egypt	ERP in 6 ministries Archiving Systems in 6 ministries Work flow in more than 28 governmental agencies

The world average of the global E-government index continues to increase as more countries invest resources in developing websites that are informative. Most countries have E-information on policies, laws and an archive on their portals/websites (UN E-government Survey, 2008).

5. Conclusion

This paper viewed many previous studies and researches about the E-government program, take all the aspects and all the sides of the E-government program by discussing definitions of the E-government, maturity, critical success factors, risks and obstacles, how to achieve a reliable and Successful E-government. Each country should take in consideration all of these aspects, and work on improving it in such a way, that will lead to a comprehensive successful electronic government. however, apparently there is a need for better planning and monitoring mechanisms for the project to meet a the predefined goals within a carefully designed timetable, otherwise the project will be lagging behind a moving target, taking into consideration the accelerating developments in the field of ICT.

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