The Five Models for E-Government

Abdulmula AL Bashir. Lusta\textsuperscript{1}, Yasar Aktas \textsuperscript{2}
\textsuperscript{1}Abdulmula AL Bashir. Lusta, Social sciences institute, department of business administration, Kastamonu University, Turkey.
\textsuperscript{2}Yasar Aktas, Prof of Economics and Business Administrative Faculty / Kastamonu University

Abstract: Most governments in the modern era aim for development of information and communication technology. In order to promote its activities through the creation of construction and development programs, working through the e-government, so as to save time, effort and cost to the beneficiaries (citizens, government and private organizations) to get the required services. The role and the successful implementation of the e-government need to study the specific steps. This paper focused efforts to find out about five models on e-government between different governments around the world. The identification of these models that will help in the successful implementation of e-government programs. This paper seeks to consider the same of the models on e-government, and by which we can support the makers and decision-makers and officials in the implementation of e-government programs. This study found that there are similarities between some of the models in terms of naming some stages with different step in the sequence of their execution, also there is a difference between the numbers of steps of these models. It is also possible to implement these models, for ease of understanding and clarify the functions of each step, nevertheless, these models do not specify a specific time for the implementation of e-government programs. In addition to the roads ways of success can vary the e-government program, it can also be found challenges to the implementation of various e-government program of the environment into other work environment.

Keywords: E-Government, Government, Models, Stages, Information

1- INTRODUCTION

Electronic government occurs one to government’s use of technology, specifically, web-based internet applications to improve the access to and delivery of government information and service to citizens, business partners, staffs, and government entities [1]. E-HR, using the internet is caused by human is to director of management operations or activities [2].

The most of all government in the world an aimed of e-government application towards: the achievement of clear government vision; citizens, work with the state to handle faster; the provision of public services to be more efficient units; ensuring the integrity of information between government agencies [3]. The electronic government is a general concept that refers to the use of an effective government for information technology and modern communications, through the various information services [4]. An e-government portal's maturity model is a set of stages (from basic to advanced ones) that determines the maturity of the e-government to e-portal. The main benefit of those maturity models is to offer a way to rank e-government portals [5].

This paper discusses the show range of models on e-government and by showing the experience of some governments, by the application of e-government programs, from which we are trying to define and identify the steps and stages of these models. The Importance of research, the term e-government of the modern terminology, which emerged as a result of the tremendous revolution in information and communications network, which caused a shift "important" in a productive enterprise performance by improving the speed and performance and the quality of its services. On the subject of e-government a keen interest in contemporary societies in general and in every institution of the state especially, it has addressed a lot of the literature and studies and researchers on the subject of e-government and publicize it and the extent of its application in the enterprise. The significance of this paper is to help makers and decision-makers so as to get to know some of the models of electronic government. The aim of the research, the research aims to identify some of the models in various e-government as well as possible and to identify the steps implementation of models of e-government faced by these models for electronic government.

The Research Methodology, researcher adopted the "inductive approach" for the purpose of determining the e-government models and to identify the phases of steps Implementation of e-government programs in some countries, which seek to implement their programs through electronic government. The Tools to collect information: Were collected the search all the
information adopted by the sources, books and scientific fields and electronic research tools on the global information network.

2- E-GOVERNMENT MODELS:
the e-government is frequently prescribed for just beyond the introduction of electronic government services, and a set of parallel information networks compatible with each other and are capable of processing interactive government services on these networks[6]. To ensure the successful implementation of e-government program, it requires a design model can be guided by the steps of determining and analyzing each step, in order to ensure the achievement of the objectives of the e-government program. Some writers have conducted a synthesis based on existing maturity models and then supply their own maturity model [5]. There are several models about e-government. Through this paper you can to review some models the following Figure (1) shows that five models for both by Baum and Di Maio (2000), UN's (2001), Hiller and Bélanger (2001), Layne and Lee (2001) and Wescott (2001) widely of the steps displayed in each model are similar in nature and results [7]. The five models show steps that the predict for the expansion or progression of e-government [8].

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2-1 Model of Layne and Lee

Electronic government development had evolved by Layne & Lee by moving the first two phases, the technological challenges had faced the government organizations and the government are contains both off stage three and four instead of automation, and they made a concept for their citizens through creating an integrated information based by transfer their services and integrate processes and functions through different levels of the government and they call it ‘one stop shopping’ [9]. A Four stages of maturity model had been developed by Layne and Lee for the electronic government; these models have evolved to monitoring of electronic government initiatives in the United State [1].

In the model e-government Layne and Lee, developed a four stages maturity in the following: [5, 10].

1- The “Catalogue” is the first stage and at this stage, the web is presented the public authority. The only one-way communication between the government and the governed is possible in this stage. This phase focused on indexing government information and displayed on the information network, which is about indexes pages are the electronic documents can be arranged so that the citizen to search and find government
information desired and bring in the required forms. In other words, this stage is working to increase the convenience of citizens and reduce the effort of staff corresponding to the public, in fact, that at this stage the citizens continue to use the existing services, such as: contact by telephone and the personal presence of the offices of the service, but less frequently, at this stage: offering citizens services such as online query for the phone bills or auto irregularities.

2- The “Transaction” is the second stage where at this stage the public can make cooperation with the government. This phase enhances citizens interact with government electronically, and this is what provides many hours were consumed in the paperwork, and travel to government offices and the waiting time in boring queues. At this stage the government advancing another step taken, where services and interactive dealings between the government institution and the user form a bilateral contact. It is allowing the user to enter specific data, and then the public institution run electronically this data so that gives the user a new result, government offers at this stage, online services such as license renewal services, and obtain official certificates, the degree of difficulty at this stage to identify the user and confirm his character and the fight against fraud and information security process.

3- The “Vertical integration” is the third stage, which involves integration with higher level systems within similar functionalities or jurisdictions. All eyes at this stage about the shift in government services, rather than computing the existing procedures, after the spread of transaction services and attainable degree full growth, increasing ambitions and desires of the citizens, for example, the regulations are available in the health sector may be associated with the directorates systems in higher levels in the province (Health Bureau) if a citizen held in the treatment of the Civil Service Bureau of the transaction information will be sent to the corresponding authorities, And is linked to these systems from multiple levels communicate with each other, the goal of vertical integration is the integration of local regulations with the public order of the State, in order to facilitate the process of making sure certain information or Find know what, and will have a clear impact in linking the districts or regions with each other, for instance, building a national database for the registration of motor vehicles and driving licenses and registration of traffic accidents This is what we call data linking bodies and government departments base.

4- The “Horizontal integration” is the fourth stage, the systems at this stage are combining across various government jurisdictions, and the electronic portals are real one-stop shops for public. As the citizens are asking facilities, and assistance from the government in more than one service, Those who need housing they also need to facilitate access to educational services and health care and to the Supply and thus, Horizontal integration works at this stage to link different databases in a variety of functional areas and allows it to participate in the information, and therefore the information stored in the body that will be broadcast to all government departments as a result of this integration can be played here governmental institutions to communicate with citizens via the means of communication that suits them. And without waiting for them to take the initiative to contact them, whereupon the, for example, sends a message to the citizens via cell phone to remind them of appointment to renew a driver's license or pay the phone bill and others. At this stage of e-government are linked to the same citizens in the electronic system and a single, integrated, so that the fading role of staff favoritism completely, and digital performance becomes a hundred percent. As well in this stage it has been sheltered horizontal and vertical combine within government, a specific use of front end systems for customer services, and adoption and use of the internal network within government [11].

2-2 Model of Baum and Di Maio (2000)
Baum and Di Maio had predicted that electronic government will moving from the Web presence in which governments supply a basic information to the next stage that produces interactivity or the public the ability to contact with the governmental organizations and officials online. The transactional stage has followed this where the
public will be able to conduct business online with the governments. The transformation is the final stage in this model [8, 12]. In this model, there are four stages which are [12, 13].

1- The first stage "The Web presence" in this stage, it has been posted basic information on the Web by the agencies to public; (the action start of the creation of a virtual environment on the internet in the Presence stage, in the case to provide the public with access to information).

2- The second stage" Interaction": in this stage, the users have the ability to contact agencies through the web sites (for example, using email) or they can make a self-service (for example download document); (supply the public with access to various forms and sites, and to supply the website with search ability).

3- The third stage "Transaction": in this stage, customers and businesses users can complete a total transactions online (for example license application and procurement); (the public services involvement in the online execution such as the payment of accounts balances and receiving licenses).

4- The fourth stage "Transformation": in this stage, consisting of integration among internal and external applications, in order to provide full communication between the governmental offices and non-governmental organizations where the governments transform the current operational processes to provide more efficient, integrated, unified, and personalized service.

2-3 Model of UN's (2001)
UN's (United Nations and American Society for Public Administration) had suggested an electronic government model which consists of five stages (efficient public service on the web-based): [14] [15].

1- The first stage “Emerging presence”: a single or a few autonomous government web sites provide formal, but limited and static information.

2- The second stage “Enhanced presence”: government web sites supply specialized, dynamic, and regularly updated information.

3- The third stage “Interactive presence”: government web sites act as a gate to connect users and service providers, and the interaction takes place at a more advanced level.

4- The fourth stage “Transactional presence”: users have the ability to conduct complete and secure transactions, such as renewing visas, obtaining passports, and updating birth and death records through a single government web.

5- The fifth stage “Seamless or fully integrated presence”: governments used a single and universal web site to supply a one stop portal in which users can instantly and comfortable access all kinds of available services.

2-4 Model of Hiller and Bélanger (2001)
There are five stages in this Model which are: [16].

1- The first stage is “Information”, information dissemination consider as the most basic form of electronic government, where the government just simply posts the information on websites for constituents. There are a lot of such sites exist.

2- The second stage is “Two-way Communication”. Where in this stage, the government sites allow to constituents to communicate with the government and make simple requests and changes, and there is a lot of this type also agencies allowing online requests supply sites where peoples can fill in information requests.

3- The third stage is “Transaction”. Aat this stage, the government has sites available for actual transactions with constituents. Peoples can react with the government and conduct transactions completely online, with web-based self-services replacing public servants in these cases. Actual online transacting considers as the most developed level of electronic government currently widely available.

4- The fourth stage is “Integration”. In this stage all services are connected, a single e-portal can be used to access all electronic government services (all government
services are integrated). This can be achieved by a single portal that constituents can use to access the services that they need no matter which agencies or departments offer them; the lack of integration of all online and back-office systems are one of the biggest obstacles to more online transactions between the government and its constituents [5].

5- The fifth stage is “Participation”. These are government sites that provide voting, registration or posting comments online. As well as this could be seen as a subset of the two-way communication stage, we see this as so significant as to warrant a separate category, especially when we viewing the impact of privacy concerns on the provision of electronic government, it is helpful to view this function as distinct because of providing this unique and sensitivity of online feature. There are a few government sites that supply for this level of electronic sophistication [16].

2-5 The model of Wescott (2001)
There are six stages in this model of electronic government [17].

1- The first stage is “Establish an internal e-mail system and the network”. Most governments begin by setting up systems, focusing mainly on internal processes. The basic administrative functions such as payroll and accounts are usually supported by the first networked application in many agencies. Significant benefits can be delivered or also significant risks can be carried by adopting such systems. On the benefit side, information and communications technology can allow a significant decrease of information handling costs, and commitment costs, another kind of stage-one system is e-mail, even though email can reach outside of organizations by using the internet, most government organizations in the region that adopt email use it mostly for internal messages. Email has many specifications over other systems, some of it is that its informality, it can lead to an increase in lateral, and bottom-up and communication and emails can be sent directly to the person concerned, this can improve information sharing, coordination, and feedback.

2- The second stage is “Enabling inter-organizational and public access to information”. The first step was to involve developing systems for an organization that helps to manage workflow; the next stage is to enable better inter-organizational and public access to information. Workflow is a generic term that applied to the ability to move images, files, documents, etc., from a workstation to another, by using specific business rules for review, authorization, data editing, data entry, and task assignment. Business procedures can now be managed electronically from the very beginning to final disposition when they were accomplished by moving paper before. The delays normally can be minimized with workflow systems when they used to associate with hard-copy documents and manual processing. Workflow systems in public sector that promising information and communications technology applications include, among others; such as, claims processing and management; bid and proposal routing and tracking; handling of customer service and complaints; grant and scholarship award, approval, and processing; and human resource recruitment and hiring.

3- The third stage is “Allowing two ways of communication”. The next stage allows two ways of communication between the government and the public by using information and communications technology. In the beginning of the stage was and to encourage the public to send messages and to post one or more telephone or fax numbers or email addresses on the website, there are many other possibilities, for instance, government’s website allows visitors to select from categories such as government services, laws and regulations, a news center, links to other government departments, and an email section, the latter asks citizens to “make suggestions about the capital’s development, or criticize work you’re dissatisfied with”; clicking on a link that generates an email addressed to gets the user started on an email to the appropriate office, instead of users can join an electronic forum to get answers to questions such as how to move one's official residence to other city in order to work there. The response on the website listed specific regulations and procedures.

4- The fourth stage is “Allowing the exchange of value”. This stage such as tax assessments and license renewals conceded as features applications, where the public can make secure payments on the website [5]. The development of more flexible is supported by the communications technology and information, available ways for the public to conduct business with the government, such as the Singapore Government has evolved online, round the clock facilities for transacting business such as tax assessment, welfare claims, license renewals and visa applications. Also there are a lot of examples of business transactions of government that take place on such systems, such as the customs bureau
has evolved systems for releasing of shipments from customs control, processing of clearance documents and customs payments. The new online system has led to secure and fast transition of payment details.

5- The fifth stage is “Promoting digital democracy”. Information and communications technology applications had at least two important sets that can probably support democratic and participatory processes, applications that authorize civil society organizations and those that allow citizens express opinions and to vote over the Internet, the communications and information technology can also back self-organizing networks, which are in the governing industrial democracies had said to be increasingly important, from this belief, in a policy network, the government is the only one of many interdependent actors and greater attention to network process can restore confidence and trust in policymaking. Participatory networks, open and bottom-up have shown their strength in the private sector in many cases of computer software evolution (Linux, Apache server, Oxford English Dictionary, Perl, etc.) and application (Gnutella and Napster distributed file sharing systems), these were built on concepts of swarm intelligence, where a set of (mobile) agents can directly or indirectly communicate with each other by acting on their local milieu and jointly carry out distributed problem-solving.

6- The sixth stage is “Allowing joined up government”. In the last stage of electronic government, there is the integration of service delivery, both vertical and horizontal. A smart card or web portal is integrates services and information from various government agencies to help public and other stakeholders get seamless service without having to know about the responsible government agency, thus users can gain services across different geographic levels of government within the across different functions and same functional area. As for an example of the latter, the public could submit a change of address on her driving license and this change would be automatically registered with the elections, health and tax departments, thus averting the need for multiple filings. The public could also use these gates to make payments and other transactions, gain a checklist of things to bring when applying for services in person, find answers to frequently asked questions and engage the services of relevant mercantile enter prices [18].

3- CONCLUSION AND DISCUSSION

This paper review the models in the electronic government of literature such as Hiller and Bélanger (2001), UN’s (2001), Baum and Di Maio (2000), Layne and Lee (2001) and Wescott (2001). These models have predicted a gradual and linear, and the gradual development of e-government, mainly to show the stages of e-government with a website such transactions, interaction, integration, then access to the ecstasy of e-government, delivery of government information continuously and services, e-democracy, participation electronic, and government transformation, or some combination of the above. Through to refer to Figure 1, which shows there is a similarity in some of the labels of some stages with a different place phase of the model to another. This result shows us the challenges facing the Implementation of e-government program with a difference between / in one State to another, it can also be not by some of the models that some models were based on four steps and others on the five-step and the other on the six steps to benefit the e-government program. This difference may be due to the vision and goals set by the government or the challenges it faces in front of the e-government program. Through this result possible to reach that there is a difference in the functions of the e-government program, this may be due to the different possibilities and the structure of greeting and human development towards the implementation of e-government programs. It is also notable that it can be applied to these models for electronic government in our country, most of the world. However, some governments are still in the early stages of the adoption of information and communication technology to improve the financial information management and reporting, and simplify the delivery of government services, and enhance communication with citizens and serve as a catalyst to enable citizens to interact with government. However, these models did not specify how this gradual evolution is and how much time it will take to fully implement. It may can be difficult for some public and private institutions, particularly in developing countries. These models may face some challenges such as: (legal, financial and technological, organizational, political, and others) as well as how to integrate the information with government services.[8]. Nevertheless, these models tell us that more and more e-government intervention (interactive, transactions, and integrated) is one of the best and should be used by governments in the provision of transaction, interaction and integration. E-government must produce electronic or e-participation democracy and fundamental shift in the relationship between governments and the public. When the e-government becomes more prevalent in the world, it can be expected through the development stages, when you reach all the governments and agencies to all stages, there will be a lot of diversity of the Government with
different agencies at different stages. Eventually it must be pointed out that to get the most out of e-government interest requires a full understanding of the full and engineering of the processes whereby the production of public services, and the preparation and the establishment and use of electronic systems.

4. RECOMMENDATIONS
We recommend to this a paper of the literature of electronic government, in particular: the models, electronic government, which were listed in this paper. These models we see the possible presence of some challenges to applying e-Government can differ from environment to another business environment. Therefore, we hope this an paper contributes to open a new area of study for researchers, those interested in the study of those challenges that stand up to the application of forms of electronic government with business environmental differences.

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