

## **E-GOVERNMENT: SOME FACTORS FOR SUCCESSFUL IMPLEMENTATION**

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### **ABSTRACT**

There are many different benefits that a government can get from developing an e-government. Some state, national, and local governments around the world have long played active roles in the use of information technologies (IT) to stimulate economic development. Electronic government utilizes information technology to provide all the access to a wide range of public services. Today governments at all levels respond to millions of citizen demands electronically. Many public organizations are implementing Electronic Government (e-government) projects. There is a need to put forward a conceptual model focusing on steps towards implementing more successful e-government projects. The paper argues that several key success factors are appropriate for e-government implementation. About one hundred e-government Web sites were examined upon those key success factors. This paper puts forward a conceptual model for a better implementation of electronic government.

**Keywords:** E-government, Information Technology (IT), Government to Business (G2B), Government to Citizens (G2C), Government to Government (G2G).

### **INTRODUCTION**

#### **Background**

In recent years nearly all countries have integrated information technology (IT) into their national economic development strategies. Governments see IT as a way to improve the quality of life of their citizens. The scale of activity on the part of public sectors in leveraging IT has increased in volume (Smith, 2008). E-government is enabling government companies to provide better services to their customers. The ability to improve citizens' access to services online has made e-government a desirable application for government organizations (Gorla, 2008; Donna, Yen, 2006). Governments around the world are implementing e-government. In every part of the world - from industrialized countries to developing ones, governments are putting information online to provide better services for citizens (The Working Group, 2002; Chircu, Lee, 2005; Palmer, 2006). Transactions such as renewing driver's licenses, applying for jobs and filing tax forms can now be conducted online, quickly and efficiently (West,2008-2). To be able do these services, e-government uses information technology (IT). Developing countries are behind in this race to provide e-government services to their citizens. This can be due to many reasons such as

lack of a good communication infrastructure, low computer literacy, and limited access to the Internet and so on (Akther, M.S., Onishi, T. and Kidokoro, T, 2007). These issues have to be addressed before developing e-government applications. Officials should be aware of the obstacles before starting an e-government project because; they are long and costly project [The working group, 2002].

The United Nations E-Government Survey 2012 (UN, 2012) finds that many countries have put in place e-government applications for the people to further enhance public sector efficiencies and streamline governance systems to support sustainable development. In the present recessionary time some countries have been better able to continue to invest in IT infrastructure and service improvement for their citizens. Following table shows the world e-government ranking.

Table 1: World e-government development leaders (source: UN, 2012)

<b>1-</b> Republic of Korea	<b>2-</b> Netherlands	<b>3-</b> United Kingdom	<b>4-</b> Denmark
<b>5-</b> United States	<b>6-</b> France	<b>7-</b> Sweden	<b>8-</b> Norway
<b>9-</b> Finland	<b>10-</b> Singapore	<b>11-</b> Canada	<b>12-</b> Australia
<b>13-</b> New Zealand	<b>14-</b> Liechtenstein	<b>15-</b> Switzerland	<b>16-</b> Israel
<b>17-</b> Germany	<b>18-</b> Japan	<b>19-</b> Luxembourg	<b>20-</b> Estonia

In the following sections of this paper, the author makes an effort to disclose the concept of e-government in a way that leads to more successful e-government project development.

### **Organization of the paper**

Next section describes the research method of this study. Section after attempts to clarify some of the concepts related to the e-government. Following section puts forward a conceptual model of e-government and possible conclusion. The last section presents the list of references. Appendix “A” follows the list of references.

### **Research method, questions, process and limitation**

This study attempts to explain the concept of e-government by defining various vital perceptions and their relationships involved in embracing e-government. The research introduced here draws upon social system theory in the functionalist sociology defined by Burrell and Morgan (1979). The focus of social system theory is on the “holistic view”, i.e., all parts of a system are related to each other. This paper approaches its subject matter from an objectivist perspective. Objectivist is one of several doctrines holding that all reality is objective and external to the mind and that knowledge is reliably based on observed objects and events. Put differently, objectivism holds that reality exists independent of consciousness; that individual persons are in contact with this reality through sensory insight; that human beings can gain objective knowledge from perception through the process of concept creation and deductive and inductive logic The

conceptual model presented here is based on the “holistic view” school (Social System Theory). The methodology is based on a literature review and personal experiences as an IT consultant in numerous organizations. This study attempts to answer the following main research problem:

- What concepts are involved in implementing e-government?
- What are the steps towards implementing e-government?

Many public organizations are implementing Electronic Government (e-government) projects. So there is a need to put forward a conceptual model focusing on steps towards successful planning e-government projects. From the author’s point of view, good research requires a sequence of well defined steps planned in advance. The steps in this study include:

- Generate research idea
- Review literature
- Develop concepts
- Collect data via literature studies
- Develop conceptual model
- Publish result

Most of the research on e-government has utilized the internet to examine government web sites. The use of the internet has been suggested by e-government scholars as a method to assess e-government development (Mofleh & Wanous, 2009). As with any research, this study has limitations. The data were presented in various tables extracted from the literature review and about 100 Web sites (appendix “A”) were examined (see Table-2). So, one limitation would be the number of the articles and Web sites that were reviewed in this study. Furthermore, the questions in this study are based upon the author’s understanding of the literature review.

## **CONCEPTS DEVELOPMENT**

### **E-government**

One frequently asked question regarding electronic government (e-government) is “What is e-government?” E-Government is more than just providing some public information and specific citizen services available to people via a Web site (Lee, Wu, Lin, & Wang, 2008; Curtin et al., 2003 ). E-government serves as a portal focused mainly on access to the public sector; these portals are aimed at citizens (G2C), businesses (G2B), other governments (G2G) and anyone else who are interested in the government and its services. Over 160 countries worldwide have already begun some kind of e-government project, creating a major market for IT vendors and service providers that are competent of helping public agencies in their technology initiatives (Greiner, 2005). E-government is an emerging concept and recent researches focus on applying the new concept of e-commerce and management in e-government such as knowledge management enterprise resource planning (Raymond & Bergeron, 2006). E-government is being considered as one of the tools that can be used to meet the many challenges faced by governments (Jupp, 2003). Governments are facing increased service expectations by their citizens. Some of the services that can be offered by e-governments are as follows (Evolution of e-government, 2002):

*Government to Citizens (G2C)*

1. Income taxes: notification of assessment
2. Job search services by labor offices
3. Social security contributions
4. Personal documents (passport and driver's license)
5. Car registration (new, used and imported cars)
6. Application for building permission
7. Declaration to the police
8. Public libraries (availability of catalogues, search tools)
9. Certificates (birth, marriage): request and delivery
10. Enrollment in higher education / university
11. Announcement of moving (change of address)
12. Health related services (e.g., interactive advice on the availability of services in different hospitals; appointments for hospitals)

*Government to Business (G2B)*

1. Social contribution for employees
2. Corporation tax: declaration, notification
3. Value Added Tax (VAT): declaration, notification
4. Registration of a new company
5. Submission of data to statistical offices
6. Customs declarations

According to a study made by (Cap Gemini, Ernst & Young, 2001) shows that in Europe the most used services are the job search, income taxes, VAT and corporate tax services; the least used are the health related services, building and environment-related permits. Further, the study emphasizes that in Europe the biggest customer of e-government services is business (G2B, 53%) whereas services for citizen (G2C, 40%) scores significantly lower. Though US companies lead the e-commerce initiatives among businesses, e-government portal efforts in the US are not ahead of the world. FirstGov or USA.gov (see appendix A for URL) is the US federal government's portal, providing access to both state and federal government agency Web sites. US portal now offers Americans a complete source of information, and the options to apply for student loans and even Social Security benefits online. FirstGov has about 186 million pages across 22 different sites and receive 6 million visitors per month (Greiner, 2005). The US e-government initiative is divided in three main groups as follows (Murra, 2003):

*Government to Citizens (G2C):*

1. Free online tax filing;
2. Job search;
3. Social security;
4. Personal documents (birth and marriage certificates, passport applications, driver license);
5. Immigration services;
6. Health and related services;
7. Government benefits;
8. Student loans;
9. Disaster help;
10. Other useful information (for sales, weather forecast, recreation).

*Government to Business (G2B):*

1. Comment on federal regulation;
2. Corporation tax;
3. Business opportunities;
4. Registration of a new company;
5. Business laws and regulations;
6. Central contractor registration;
7. Government auctions and sales;
8. Employer ID number;
9. Wage reporting;
10. Subcontracting opportunities;
11. Patents and trademarks filing;
12. Export portal.

*Government to Government G2G:*

1. 2003 Federal Pay Tables;
2. Grants;
3. Background Investigation Application;
4. E-Training Initiative for Federal Workers;
5. For Sale to Government Buyers;
6. FirstGov Search for Federal Agencies;
7. Per Diem Rates;
8. Employee Directory;
9. Federal Personnel-Payroll Changes.

Table 2: Compare various e-government Web sites based upon some key concepts

<b>Country</b>	<b>Continent</b>	<b>G2C</b>	<b>G2B</b>	<b>G2G</b>	<b>Visi- on</b>	<b>Publicat- ion</b>	<b>Interac- tion</b>	<b>Transpar- ency</b>	<b>Accessibil- ity</b>	<b>Transact- ion</b>
Albania	Europe	A	A	NA	A	A	A	A	NA	A
Algeria	Africa	A	A	NA	A	A	A	A	NA	NA
Andorra	Europe	A	NA	NA	A	A	A	A	NA	A
Angola	Africa	A	A	NA	A	A	A	A	NA	A
Argentina	South America	A	A	A	A	A	A	A	A	NA
Australia	Australia	A	A	NA	A	A	A	A	A	A
Austria	Europe	A	A	A	A	A	A	A	A	NA
Bahamas	Noth America	A	A	NA	A	A	A	A	A	A
Barbados	North America	A	NA	NA	A	A	A	A	NA	A
Belarus	Europe	A	A	NA	A	A	A	A	A	A
Belgium	Europe	A	NA	NA	A	A	A	A	NA	NA
Canada	North America	A	A	NA	A	A	A	A	A	A
China	Asia	A	NA	NA	A	A	A	A	NA	NA
Columbia	South	A	NA	NA	A	A	A	A	NA	NA

	America									
Congo	Africa	A	NA	NA	A	A	A	A	NA	NA
Cuba	Noth America	A	NA	NA	NA	NA	A	NA	NA	NA
Czech Republic	Europe	A	NA	NA	NA	A	A	A	NA	NA
Denmark	Europe	A	A	NA	A	A	A	A	NA	NA
Dominican Republic	North America	A	NA	NA	A	A	A	NA	NA	NA
Egypt	Africa	A	A	NA	A	A	A	A	A	A
El Salvador	South America	A	NA	NA	A	A	A	NA	NA	NA
Estonia	Europe	A	NA	NA	A	A	A	A	A	A
Fiji	Australia	A	A	NA	A	A	A	A	A	A
Finland	Europe	A	NA	NA	A	A	A	NA	NA	NA
Gambia	Africa	A	A	NA	A	A	A	A	NA	A
Georgia	Europe	A	A	NA	A	A	A	A	A	A
Germany	Europe	A	A	NA	A	A	A	A	NA	NA
Greece	Europe	A	A	NA	A	A	A	A	A	A
Guatemala	South America	A	A	NA	A	A	A	A	NA	NA
Guinea	Africa	A	NA	NA	NA	A	A	A	NA	NA
Haiti	North America	A	A	NA	A	A	A	A	A	A
Honduras	North America	NA	A	NA	A	A	A	A	NA	A
Hungary	Europe	A	A	NA	A	A	A	A	A	A
Iceland	Europe	A	A	NA	A	A	A	A	A	A
India	Asia	A	A	NA	A	A	A	A	A	NA

Indonesia	Asia	A	A	A	A	A	A	A	A	A
Ireland	Europe	A	A	NA	A	A	A	A	A	A
Israel	Asia	A	A	NA	A	A	A	A	NA	A
Italy	Europe	A	A	A	A	A	A	A	A	A
Jamaica	North America	A	NA	NA	A	A	A	A	A	NA
Jordan	Asia	A	A	NA	A	A	A	A	NA	NA
Kazakhstan	Asia	A	A	NA	A	A	A	A	A	A
Kenya	Africa	A	A	NA	A	A	A	A	A	NA
Kuwait	Asia	A	A	NA	A	A	A	A	A	A
Latvia	Europe	A	A	NA	A	A	A	A	NA	NA
Lebanon	Asia	A	A	NA	A	A	A	A	A	A
Liberia	Africa	A	A	NA	A	A	A	A	A	A
Lithuania	Europe	A	A	NA	A	A	A	A	A	A
Luxembourg	Europe	A	A	NA	A	A	A	A	NA	A
Madagascar	Africa	A	A	NA	NA	A	A	A	A	NA
Malawi	Africa	A	NA	A	A	A	A	A	A	A
Mali	Africa	A	A	NA	A	A	A	A	NA	NA
Marshall Islands	Australia	A	NA	NA	A	A	NA	A	NA	A
Mauritania	Africa	A	A	NA	NA	A	A	A	NA	A
Mauritius	Africa	A	A	A	NA	A	A	A	A	A
Mexico	N.America	A	A	NA	NA	A	A	A	A	A
Micronesia	Australia	A	A	A	A	A	NA	A	A	NA
Nepal	Asia	A	NA	A	A	A	A	A	NA	NA
New Zealand	Australia	A	A	A	NA	A	A	A	A	A
Nicaragua	N.America	A	A	A	A	A	A	A	A	NA



<b>Niger</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Norway</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Oman</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Pakistan</b>	<b>Asia</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>
<b>Palau</b>	<b>Australia</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Panama</b>	<b>N.America</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>
<b>Poland</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>
<b>Qatar</b>	<b>Asia</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Republic of Korea</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>
<b>Republic of Moldova</b>	<b>Europe</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>
<b>Romania</b>	<b>Europe</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>
<b>Russian Federation</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Rwanda</b>	<b>Africa</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Samoa</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Saudi Arabia</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Senegal</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Serbia</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Singapore</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Slovakia</b>	<b>Europe</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Slovenia</b>	<b>Europe</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b><u>Somalia</u></b>	<b>Africa</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>South Africa</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Spain</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Sudan</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Swaziland</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>

<b>Sweden</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Switzerland</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Tong</b>	<b>Asia</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>NA</b>
<b>Togo</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Trinidad and Tobago</b>	<b>South America</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Tunisia</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Turkmenistan</b>	<b>Europe</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Uganda</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Ukraine</b>	<b>Europe</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>United Republic of Tanzania</b>	<b>Africa</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Uzbekistan</b>	<b>Europe</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>
<b>Zambia</b>	<b>Africa</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>NA</b>
<b>Zimbabwe</b>	<b>Africa</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>	<b>NA</b>	<b>A</b>	<b>A</b>

A = Available  
NA = Not available

The US e-government strategy is to improve the quality of the services to the citizens and businesses. According to one study by (West, 2008-1), 11% of the web sites examined have no services, 12% provide one service, 10% have two services, and 67% have three or more services. Obviously, both federal and state governments are making important strides in providing services online. The United States has fallen behind many countries in Internet access and broadband usage. America delays Sweden, Denmark, Switzerland, Australia, Germany and the Netherlands in Internet subscribers per 100 inhabitants. Whereas 36 percent of Swiss residents have access to Internet subscription services, 31 percent of Americans have access to the Internet (West, 2008-1).

In this complex world in which we live, everyone must learn more about e-government. Even our politicians may not fully understand the concept and application of e-government. Surveys carried out by the United Nations Conference for Trade and Development (UNCTAD, 2002, UN, 2012) on the development of e-commerce in various parts of the world identifying the need in developing countries for transparency within government operations (Mitra, 2005). Electronic commerce (EC) has revolutionized the way the business and individuals interact. In the United

States and Europe, the use of the Internet in the public sector has initiated a discussion about new forms of democracy. The e-government will change the course of democracy by providing all citizens access to government operations.

### **Vision, Principles and Priorities**

A fully implemented e-government can break down bureaucratic barriers and move to a better service level, connection and protection that a government may want and need in every aspect of government's activity. This provides an opportunity not merely to manage business but also to get wide access to what government is doing or intending to do, and how, and why. This will allow citizens more than ever before to take part in government decisions and become more knowledgeable of the performance of their elected representatives. Citizens will have the chance to become stable players in the process of determining and making government task (McGinnis, 2003). A broad vision of e-government should be shared by all citizens, i.e., encouraging stakeholders (citizens, officials, businesses, civil society groups and others) to participate in determining the vision. A shared vision can lead to a more successful implementation of e-government, i.e., supporting e-government project from beginning to end (please see Table 2). Broad categories of goals that are commonly shared by citizens are as follows (The working group, 2002):

- Improving the productivity of government
- Improving services to citizens
- Improving the quality of life for disadvantaged communities and
- Improving the legal system and law enforcement.

Putting it differently, e-government would make government become closer to this vision: an institution of the citizens, run by citizens, owned by citizens and for the citizens. Fighting corruption should be included in the vision. This may be announced to the public as "anti-corruption" goal of e-government. More, a challenge for public sectors is to recognize today's trends and apply effective tools for creating and implementing policies that optimize the role of IT in their societies. These strategies are often novel, a result of the spread of relatively new technologies, such as the Internet, mobile devices, opens sources (e.g., Linux, games, information) viewing movies via Internet, and e-mailing. This means that government agencies will need to choose wisely the most appropriate strategies. Naturally, each government's vision should also be accompanied by a short list of priority areas for the e-government project.

Improvements in the following areas are recommended:

- Employee productivity
- Service delivery
- Information security
- IT infrastructure
- Data management
- IT management
- Human resource management
- Disaster recovery/management and
- Others.

Up to 2007, research not only confirms the historic role governments played in affecting the employment of IT, but more significantly that IT is considered to be a main component of a national economic development policy. Today, no advanced nation can ignore the role of IT strategies in its economy (Ghapanchi, Albadvi & Zarei, 2008; Haigh & Griffiths, 2008; Cortada, Gupta & Le Noir, 2007).

One strategy is the effective use of IT by government agencies themselves to improve their internal productivity and increase their ability to serve citizens (as in providing 24 x 7 services). By providing citizens convenient access to information around the clock over the Internet, a government encourages citizens to access public services, data, and application forms using PCs and the Internet. This action encourages citizens to utilize that technology in other ways in their private and professional lives. Another popular tactic is requiring suppliers to provide do their services using online procurement systems. In addition to helping lower the costs of acquiring these by a government, it makes suppliers start using the Internet and related technologies in an “e-business” environment (Abramson & Harris, 2003). In recent years connectivity has been all about making it possible for individuals, firms, and other institutions to access mobile (wireless) networks and the Internet. Wireless Internet service should be available all over cities in any country. This should be one of the main strategies for any government. Costs of these services to individuals and organizations should be affordable for all citizens. The expansion of the Internet plays a vital role in the economic development activities of the public sector. This is a development that is attracting renewed attention to the topic of IT by economists and public policy experts (Breznitz, 2007, Baumol, Litan & Schramm, 2007). This reality is made more passionate by the fact that more people and firms dependent on IT to go about their job and private lives has enlarged over the past quarter century.

## **Publications**

The ability to search for a specific Web site is a basic tool needed by citizens. In this regard, one significant new development has been the formation of online service portals. This service is an important advantage for ordinary citizens because it reduces the need to log on to various Web sites to order services or find information (please see Table 2). Citizens can connect in "one-stop" shopping, and locate what they require through a single site that integrates a range of government Web sites. One of the main dissatisfaction for citizens is going through enormous amounts of information to locate useful material (Haigh and Griffiths, 2008). Admission to updated publications, contact information and databases are vital to citizen access to information and improve democratic responsibility. Another way that e-government Web sites can provide the available information to citizens is by personalizing the Web site or letting citizens register to receive update publications. This is known as “push technology” (Murru, 2003). All these services utilize IT to expand access to government information, so that citizens do not need to go to the government offices in person and wait in long lines. This is the leading frame of e-government. Naturally, knowledge is required on how to manage publications, how to present information clearly online and how users likely to use the information.

## **Interaction, transparency and accessibility**

A state should aim to have broadband connections for all public administrations. Broadband

services can be offered on various technological platforms. Public Internet Access Points (PIAP), preferably with broadband connections, should be provided for all citizens in their communities. Internet is a perfect tool for obtaining public access to government information. Accessible and clear information can improve citizens' understanding and knowledge and may lead them to take part in the decision-making process, developing democracy. With the increase of the Internet, the value of well designed e-government Web site will become even more obvious (please see Table 2). Making it easier for citizens to access public information will improve participation and democracy. Knowledge is required on how citizens or government officials look for information and like to receive it.

Fig.3: Percentage of state and federal sites meeting W3C disability accessibility

	2003	2004	2005	2006	2007	2008
Federal	47%	42%	44%	54%	54%	25%
State	33	37	40	43	46	19

Source: West 2008-2, P.5.

E-government sites should also consider disability access. World Wide Web Consortium (W3C) has introduced some standards regarding disability access. There has been some progress in this area on US government Web sites (see Fig.3). Further, e-government sites should provide foreign language accessibility as well. Public outreach is one of the most important characteristics of any e-government. Put another way, one of the most promising benefits of e-government is its ability to draw citizens closer to their governments. In my examination of US Citizenship and Immigration (USCIS) Web sites, a visitor to the USCIS Web site cannot email or phone a person in any particular department.

## Transaction

The goal of transaction is to provide government services online (please see Table 2). Government agencies can computerize particular processes and procedures, such as fine collection, tax collection and credit card purchases. By providing these services online, government can attempt to restrict corruption and improve citizens' trust in government. Further, this can lead to increased productivity in both private and public sectors. Knowledge of efficiency and security is required for designing such a computerized system. In the study by West (2005-1), it is mentioned that there are several novel services available on US state portals, such as live online help desk and state tourism sites featuring online planning for travelers. At the same time, the study mentioned some aspects of e-government privacy and security issues (see Table-3).

Table 3: Assessment of e-government privacy and security statements

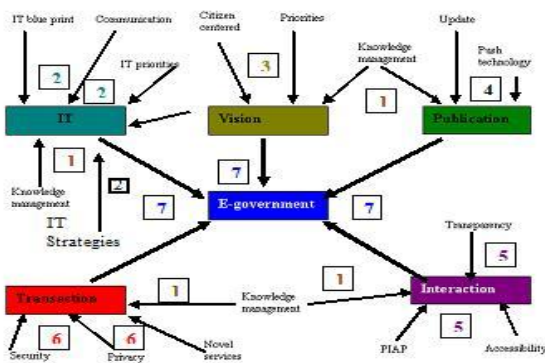
	2001	2002	2003	2004	2005	2006	2007	2008
Prohibit Commercial Marketing	12%	39%	32%	40%	64%	58%	64%	53%
Prohibit Cookies	10	6	10	16	21	16	32	40
Prohibit Sharing Personal Information	13	36	31	36	65	54	37	51
Share Information with Law Enforcement	--	35	35	39	62	49	50	49
Use Computer Software to Monitor Traffic	8	37	24	28	46	60	65	57

Source: West, 2008-2, p.4.

## CONCEPTUAL MODEL

Designing an efficient and successful e-government is very challenging and demanding process (Sagheb-Tehrani M, 2007). Theory is important for researchers. Researchers who proceed without theory rarely conduct top-quality research. Concepts are the main building blocks of theory. A concept can be an idea expressed as a symbol or in words (Neuman, 2003). Thus the conceptual model presented here may contribute to the theory of correlated fields. Figure-4 shows an e-government conceptual model with its relationships.

Fig.4: E-government conceptual model



The conceptual model may suggest a number of propositions regarding the impacts of some concepts related to e-government. In this section seven particular research proposals are stated in general terms. The aim is to suggest important issues that need to be investigated further. Deeper discussion of the research propositions may also reveal that potential efforts are often complex with both positive and negative connotations.

**Proposition 1:** Knowledge management is required to shape the concepts of IT, vision, publication, interaction and transaction.

**Proposition 2:** The concept of IT is based upon other concepts such as: IT blue print, communication, IT priorities and IT strategies.

**Proposition 3:** The concept of vision is derived by concepts of citizen centered and vision priorities.

**Proposition 4:** The concept of publication is formed by the concepts of update, personalizing and push technology.

**Proposition 5:** The concept of interaction is created by the concepts of PIAP, transparency and accessibility.

**Proposition 6:** The concept of transaction is based upon the concepts of security, privacy and novel services.

**Proposition 7:** The concept of e-government is generated by the concepts of IT, vision, publication, interaction and transaction.

## CONCLUSIONS

All government or business operations require an effective management, as it is for e-government. One may say that there is no “one size fits all” IT strategy that works for all societies. To be able to deliver a project within a budget and on time and to coordinate effectively between all partners requires skillful management [The working group, 2002]. Governments at all levels need to move past this stage and use social media as a way to interact with the community. One way to start is by posting a question to residents and employees on your Facebook page asking what type of information would they like to see provided there (Stern, 2011, Magro, 2012). This study has introduced a conceptual model of e-government. The paper has argued that several key success factors are appropriate for e-government implementation. About twelve e-government Web sites were examined upon those key success factors (please see Table 2). The conceptual model allows one to comprehend very broadly the concept of e-government. This helps to design more successful e-government projects. Further, this work may supply a basis for future research in the associated disciplines. One direction would be to use the conceptual model presented here in a case study. Moreover, the propositions launched here are meant to provide a starting point for supplementary research on this subject. Research in this theme should make a contribution to the knowledge of e-government development so that these projects can be implemented more effectively.

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#### **Appendix A:**

List of some related links to electronic governments

**<http://www.keshilliministrave.al/?fq=brenda&r=&kid=43>**

**<http://www.cg.gov.dz/index.php>**

**<http://www.govern.ad/>**

**<http://www.angola.org/>**

**<http://www.argentina.gob.ar/>**

**<http://www.australia.gov.au>**

**<http://www.austria.gv.at>**

**<http://www.bahamas.gov.bs>**

**<http://www.gov.bb/>**

**<http://www.belarus.by/en/>**

**<http://www.belgium.be/en/>**

**<http://www.canada.gc.ca>**

**<http://english.gov.cn/>**

<http://wsp.presidencia.gov.co/En/Paginas/Presidency.aspx>  
<http://www.congo-site.com/>  
<http://www.cubagob.cu/>  
<http://www.vlada.cz/en/default.htm>  
<http://www.denmark.dk/en>  
<http://dominicanrepublic.com>  
<http://www.egypt.gov.eg/english/>  
<http://www.presidencia.gob.sv/>  
<http://valitsus.ee/en/government>  
<http://www.fiji.gov.fj/>  
<http://government.fi/etusivu/en.jsp>  
<http://www.un.int/wcm/content/site/gambia/>  
[http://embassy.mfa.gov.ge/index.php?lang\\_id=GEO&sec\\_id=5&lang\\_id=EN](http://embassy.mfa.gov.ge/index.php?lang_id=GEO&sec_id=5&lang_id=EN)  
<http://www.new-york-un.diplo.de/Vertretung/newyorkvn/en/Startseite.html>  
<http://www.greeceun.org/greeceun/content/Folder.aspx?d=3&rd=12106234&f=1272&rf=629020616&m=-1&rm=0&l=1>  
<http://www.guatemalaun.org/index.cfm>  
[http://www.un.int/guinea/Guinea\\_pgs/mst\\_fm6.htm](http://www.un.int/guinea/Guinea_pgs/mst_fm6.htm)  
<http://www.un.int/wcm/content/site/haiti/>  
<http://www.un.int/wcm/content/site/haiti/>  
[http://www.mfa.gov.hu/kulkepvisolet/New\\_York\\_ENSZ/en/](http://www.mfa.gov.hu/kulkepvisolet/New_York_ENSZ/en/)  
<http://www.iceland.is/iceland-abroad/un/nyc/>  
<http://www.un.int/india/>  
<http://www.indonesiamission-ny.org/index.html>  
<http://www.irelandunnewyork.org/home/index.aspx?id=81115>  
<http://israel-un.mfa.gov.il/media-center>  
[http://www.italyun.esteri.it/Rappresentanza\\_ONU/](http://www.italyun.esteri.it/Rappresentanza_ONU/)  
<http://www.un.int/jamaica/>

<http://www.un.int/wcm/content/site/jordan>

<http://www.kazakhstanun.org/>

<http://kenyaun.org/index.html>

<http://www.kuwaitmission.com/>

<http://www.un.int/wcm/content/site/latvia>

<http://unifil.unmissions.org/Default.aspx?tabid=1499>

<http://www.liberia-un.org/index.html>

<http://mission-un-ny.mfa.lt/>

<http://newyork-un.mae.lu/en>

<http://www.nationsonline.org/oneworld/madagascar.htm#News>

<http://www.malawi.gov.mw/>

<http://www.maliembassy.us>