

E-Government in a Bosnia and Herzegovina Municipality

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Abstract

For the last ten years, e-life has grown up rapidly contingent upon the development of high speed technology and turbulent world economy. One of e-life applications is e-government that revolutionary changed the way things were done and procedures were conducted. In this study, the notion of e-government is examined and some concepts about contents, purposes, functions and definitions of e-government are given. The evolution of the idea is studied in light of its practical repercussions.

In this paper, E-Government implementation through one of Bosnia and Herzegovina municipalities will be researched. A survey-based study is applied to empirically test the E-Government implementation in Bosnia and Herzegovina administration.

The survey was evaluated descriptively. The conclusion and the discussion respectively provide the results of the survey and address the future research areas with all its limitations.

Keywords: E-Government, survey, descriptive analysis

1.INTRODUCTION

For the last decades, technology has substantially improved and expanded. Technological applications and widespread use of technological tools, have affected human being life and structure of organizations.

The functions of cities and their share in human being life started to change with technological improvements by the Industrial Revolution started in 1870s. Information and communication technologies which have improved fast for the last 50 years have changed all aspects of the life (commerce, production, work, education, home life, law, management styles, etc.). This change triggered innovation and change in the public management styles like in governments and municipalities (Coruh, 2008).

Today, one of the most common technological applications is the World Wide Web (WWW) and computers. The usage of the World Wide Web (WWW) and computers provide the

organizations to introduce themselves, to give information about the structure of the organization, to make announcements, to do operations through net, etc. These activities can be performed in a shorter period of time, with less staff, and can reach more people.

Especially smaller, intelligent and flexible organizations based on productive economies instead of scale economies have appeared with Information Technologies. Therefore, to control the autonomous and local management style organizations, based on Information, was chosen instead of hierarchical and bureaucratic management systems. Expansion of Internet and computer networks has removed the coordination and control problems of these autonomous units (Marin, 2004).

Coordination and collaboration are very important for the organizations to be successful. These are actually, the reasons of the existence of the organization. The organizations should use the improvements to achieve these goals. The expectations of the society force the organizations for the improvements. The adaptation of the public for the development in a short period of time and increased expectation for digital service, from the government, has increased the speed of transition to internet phase.

According to Steidel (2003), the effect of “Digital Revolution” has increased growingly in American's daily lives. The citizens now can reach a lot of services which could only be dreamed before a few years ago. The expectations of the citizens, using electronic services in their daily lives, have been changed. The governmental offices have realized this situation to use the chance which has been created by the change in transaction methods among the citizens (Steidel, 2003).

Creating a service environment by using electronic network systems by government has developed the definition of e-government.

2. What is E-Government?

There is no common definition of e-government (electronic government, also known as e-gov, digital government, online government or in a certain context: transformational government). Briefly, e-government has been referred to as the application of Internet-based technologies to the commercial and non-commercial activities of the government (OECD, 1998). Broadly, e-government is defined as the different ways in which governments and public managers contact and interact with their citizens through their Web sites, but also other Internet uses (e-mail or IRC), and different tools, like video conferencing, touch-tone data entry, CD-ROM, private intranets, or satellites and antennas (Criado et al., 2002). It can also be defined as:

. . . the use of information technologies (such as Wide Area Networks, the Internet, and mobile computing) by government agencies that have the ability to establish the relations with citizens, businesses, and the other arms of government. These technologies can serve a variety of different users, better delivery of government services to citizens, improved

interactions with business and industry, citizen empowerment through access to information, or more efficient management of the government. The final benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions (World Bank Group, 2003).

E-Government is the presentation of the services given by the government in an electronic environment. By this way, governmental services can be delivered to the citizens very easily, effectively without interrupted and in a qualified, fast, and safe way. The understanding of e-government has taken the place of bureaucratic and classic government notions. And it aims every organization and individual to reach the government by using systems of information technologies (<http://edevlet.turksat.com.tr>).

E-Government as understood from the name is electronic government. By this project, some services and applications of the government can be completed over the internet. By this means, besides providing an improved and fast service to the citizens, organizations and corporations, it is also a time and money saving system (<http://edevlet.turksat.com.tr>).

The citizens have also responsibilities to the government. Therefore, e-Government is performing mutually all the duties and responsibilities between the government and citizens on digital environment in a reliable and continuous way (<http://www.digitaldevlet.org>).

Ever since the Clinton's presidential administration began to popularize the idea of reinventing government in the United States, citizens had increased expectations for how information technology (IT) could help to make government more efficient and to improve services. In 1993, Vice President Gore gave an effort to explore how the internet could be employed in the services of the government to revolutionize and reengineer historically bureaucratic processes, and his report, "Reengineering through Information Technology", reflects the key role of business process reengineering (BPR) on these early efforts (US Government, 1993). As he stated:

. . . the idea of reengineering by using the technology is critical. We didn't want to automate the old and worn processes of government. Information technology (IT) was before and is now the great enabler for reinvention. It allows us to rethink, in fundamental ways, how people work and how we serve customers (Gore, 1997).

2.1.What is the scope of e-government services?

E-Government projects aim to form a better expansive understanding of a government structure. E-Government is focused on the works of government except "e". Basic fundamental components of the notion are e-company, e-corporation, and e-citizen. Each of them tries to improve the e-notion inside and they will be affected from each other and therefore will be more powerful. As a result, e-government can be constructed (<http://www.digitaldevlet.org>).

2.2. Why is e-Government?

There is a need to question the objectives, applications, and benefits and worse outcomes of the applications. Therefore, the objectives of e-government may be: (1) Transparency of the government; (2) To provide a fast, effective, and efficient mechanism for the government; (3) To incorporate all the citizens at every level of the management; (4) To provide the share of the knowledge; (5) To provide easy life to the citizens; (6) To establish a better environment for the Decision Makers to make fast and right decisions, etc.

After the implementation, then the expected benefits may be: (1) Time consumption can be decreased; (2) The costs will be decreased and the efficiency will be increased; (3) The satisfaction will be improved; (4) Economic improvement will be supported; (5) Life standards will be higher; (6) Individuals' share will be better; (7) Dependence on paper and its use can be lesser; (8) The public information that the citizens want to achieve, can be reached from anywhere and in a faster way. Therefore the people's failures can be decreased; (9) Decisions for both the public and the citizens can be faster and easier; (10) The citizens' requests can be considered easily; (11) The relations between the government and the citizens can be improved. And a reliable environment can be created; (12) When the citizens reach right information in a short period of time, the trust for the government can be higher (The Premiership of Turkey (Başbakanlık), 2002).

The ICTs impact on public administration is accepted as one of the emergent issues among the public management styles. In spite of few academic researches on e-government, in one of his seminal articles Hood (1995) suggested that the term informatization may not be elegant, but it fulfills a need. The term is used to denote the diffusion of computers connected through telecommunication networks as a part of newest fundamental technology of public administration.

The past research indicates that various e-government initiatives have been undertaken, and have had varied success degrees to achieve the desired outcomes and benefits (Bellamy, 1999). It has also found that there are significant differences between public and private organizations. Therefore, some necessary steps should be taken to reinvent government and achieve e-government success (Gulledge and Sommer, 2002).

E-government provides various opportunities for city, county and state governmental units to facilitate their operational efficiency and improve their influences to satisfy the needs of citizens. E-government forces organizations to think about specific constituencies, their problems and their life events to improve solutions through organizational boundaries to address specific needs of their customers (Fagan, 2006). Studies describing e-government initiatives that serve a range of constituencies include the applications of: government-to-citizen (G2C), government-to-business (G2B), government-to-employee (G2E), and government-to-government (G2G) (Fagan, 2006; Erdal, 2004).

Government to citizen (G2C): The applications such as death and birth information, the procedures related to marriage, transactions of registration for land, finding jobs, searching

easily all the services which the government provides (much of the citizens are not aware of these services), health services, (e.g., arranging an appointment with the doctor or to see the blood analysis online), requesting to governmental offices and searching for requests results, and so on.

Government to Business (G2B): Following the operations of import and export, taxation services, auctions announcements, making announcements to encourage the companies in a short period of time, customs related transactions, bill payments, are some of G2B applications.

Government and employee relations (G2E): The communication of the government with its employees through electronic systems is used to regulate the work hours, to give the information about salary and insurance, to announce staff seminars, and other announcements (job, death, marriage, etc.)

Relations among the units of the Government (G2G): Government should use internet as a fast communication tool to provide a continuous relation not only with the environment but also with its units. In case of an interruption on a service, the other municipality offices can be aware of this event.

E-government concept has been improved much in many parts of the world. The Government's response to the Australian public's growing reliance on online government information services, such as australia.gov.au, as the preferred medium for interacting with government is one of the successful e-government applications (Nairn, 2007).

Almost all local government institutions, besides internet based applications, have constructed their web-sites (for commercial use, touristic and local information and services, discussion boards and action groups) as well as by establishing videotext systems, electronic kiosks, and intelligent-card systems, they have provided an information environment for public systems. And they have targeted to increase their service quality and to provide integration among them. They have opened the local communities for public use by establishing connections among society centers, public libraries, and schools through internet (Velibeyoğlu, 2004).

Although, e-government concept has improved much, there are some problems on both the government side and the stakeholders' side. In most parts of the world, for many reasons the concept of e-government hasn't succeeded yet, even, in England. A research study finds out that there are a large number of English adults who are ready, willing and able to use e-channels, potential early adopters of e-government. On the other hand take-up is low, because e-channels' awareness is low. One solution to increase the take-up process is to run purposeful marketing communication campaigns. The gross potential for take-up market is about 17.5 million above the age of 15 in England (Mellor, 2006).

There are significant differences among stakeholder groups based on their types of organizational membership. Stakeholders of local governments are quite less optimistic to

achieve their goals, and worried more about a variety of organizational, technological, and financial barriers (Zhang, Dawes and Sarkis, 2005).

Local administrations are citing both what they have done so far and technical problems which they have met. They are:

- development (roads, hospital, school, mosque, etc)
- municipal police (fines, public health, clean-up, etc)
- fire brigade (forest fires, etc)
- infrastructure (water, waste-water, solid waste)
- environment (open-space area, parks, forestation)
- Disaster management (earthquake, flood, soil erosion etc.)
- local taxes (information on rates and application)
- health services
- public education (http://www.yerelnet.org.tr/yyaem/about_us.php)

While converting the old system into an e-Government system, the primary steps to be taken can be ordered as:

Legal background: The related legal regulations should be done.

Technological background: The infrastructure of technological background should be created and the applications should be started rapidly.

Financing e-Government: To finance the government in preparing classical budgeting methods should be left and the new models should be developed.

Human: Adapting and training the society to the planned and considered systems, and the Change Management should be run.

Service Background Development: The efficient and effective technologies which the users can benefit should be determined and the needed structure should be constructed.

Forming The Service Mechanism: An active information share system among all e-government units should be formed and the content should be constituted.

Confidence and Security: e-Government services should store the information of the users in a safe environment, and the users should be made sure that the security principles are regularly performed.

Construction of a Coordination Center: This is one of the most important priorities. All the public units should be managed from a single Coordination Center and a Government Portal should be constructed (The Premiership (Başbakanlık), 2002).

3. Research Methodology

A survey study was performed on one of the fastest growing BiH municipalities. The target population in the municipality was determined by the responsible person in the municipality.

Therefore the study was restricted to the number of 35 respondents. The respondents are all selected from the top level positions within the municipality. Ten of the respondents were men.

According to the survey results, it is obvious that there is an expectation of the citizens from the municipality to use E-Government applications. On the other hand, the support of the federal and local administrations seems weak. The respondents in the municipality believe that the municipality can afford E-Government activities with an additional budget and the municipality has an available technologic infrastructure to run E-Government applications. However, they slightly agree that the municipality needs help of a consulting company to execute an E-Government project (Table 1).

Table 1 E-Government Enablers and Barriers

E-Government Enablers and Barriers	N	Mean	Std. Deviation
The expectations of the society force the municipalities for E-Government applications.	35	5.51	1.579
Federal laws support all my E-Government activities	35	3.94	2.127
Local laws support all my E-Government activities	35	4	2.21
My municipality can afford an E-Government project implementation with an additional budget.	35	5.66	1.608
There are numbers of consulting companies in BiH to consult my municipality on E-Government development and implementation.	35	4.6	1.752
My municipality has available installed technology infrastructure in premises with network connection capabilities.	35	6.26	1.291
Valid N (listwise)	35		

The staff in the municipality accepts the need for an E-Government application and they agree that it was a helpful tool to support the work. Furthermore, they believe that the municipality wants to implement E-Government projects (Table 2).

Table 2 Executive Support

Executive Support	N	Mean	Std. Deviation
Managers consider E-Government as a helpful means to support the work.	35	5.46	1.804
Managers believe that my municipality needs to implement an E-Government project.	35	5.49	1.837
My municipality is willing to implement E-Government strategies	35	5.09	1.616
Valid N (listwise)	35		

The staff has almost strong belief that E-Government projects can save the money and time, shorten work in progress time and supplement, facilitate learning, knowledge sharing, empowering and common vision of the municipality, help the municipality on its announcements (Table 3).

Table 3 Productivity of E-Government Projects

E-Government Enablers and Barriers	N	Mean	Std. Deviation
Money and time will be saved	35	6.14	1.498
Work in progress time and supplement will be shortened	35	6.14	1.264
Learning, empowering, and common vision will be facilitated	35	6.2	1.53
Announcements are easily made	35	6.17	1.599
The work is completed with less staff	35	5.94	1.371
The share of the knowledge is provided	35	5.71	1.526
Valid N (listwise)	35		

It has been strongly shown in the study that E-Government projects are believed to be helpful on managerial issues such as the integration of the departments, the quality of integrated information, effective and efficient decision making capabilities, the synchronization between the units, the control of processes, keeping the data secure, transparency of the works, incorporating the citizens in every level of the management, etc. (Table 4).

Table 4 Influences of E-Government Activities on Management

Influences of E-Government Activities on Management	N	Mean	Std. Deviation
The integration among the departments will be provided	35	6.4	1.035
The quality of integrated information will be achieved	35	6.2	1.079
Effective and efficient decision making capabilities will be improved	35	6.11	1.255
The synchronization between the units will be satisfied	35	6.14	1.24
The control of business processes that cross functional boundaries will be permitted	35	6.14	1.115
Real time data will be chronically available to management for precise decisions making.	35	6	1.372
The risk of loss of sensitive data by consolidating multiple permissions and security models into a single structure will be reduced.	35	5.8	1.106
Transparency is increased	35	6.37	1.215
Incorporating all the citizens at every level of the management is provided	35	5.23	1.816
More efficient government management	35	6.03	1.445
Valid N (listwise)	35		

E-Government projects can also be helpful on improving the transactions of municipality and citizen, government, business and municipality staff (Table 5).

Table 5 E-Government Projects and Governmental Transactions

E-Government Projects and Governmental Transactions	N	Mean	Std. Deviation
Government to Citizen, G2C	35	5.2	1.549
Government to Government, G2G	35	5.23	1.477
Government to Business, G2B	35	5.49	1.38
Government to Employee, G2E	35	5.37	1.437
Valid N (listwise)	35		

The respondents strongly agree that there are some difficulties which the municipality might have during E-Government projects such as legal, technological, financial, training of both staff and citizens, developing an active information share system among the units, information security, building a single coordination center, e-channel awareness of the citizens, etc. (Table 6).

Table 6 Difficulties in E-Government Implementations

Difficulties in E-Government Implementations	N	Mean	Std. Deviation
Legal background	35	6.34	1.056
Technological background	35	5.77	1.629
Financing e-Government	35	5.43	2.104
The necessary training for the staff	35	6.63	0.69
The necessary training for the citizens	35	6.89	0.404
An active information share system among all the units of e-government should be formed	35	6.66	0.591
E-Government services should store the information of the users in a secure environment	35	6.49	1.011
All the public units should be managed from a single Coordination Center.	35	6.37	1.14
Awareness of e-channels is low among the citizens	35	6.74	0.701
Valid N (listwise)	35		

4. Discussion

While it was believed that the e-government will be suitable only for wealthy nations and that the progress to reach developing world will last for a very long time the internet revolution has proven otherwise. The use of electronic solution has troubled every nation from Vanuatu to Mali, from Switzerland to Bosnia to Swaziland. They all aspire to improve their services by using electronic means because, for many, their survival depends on those services.

The worst opponents at the outset of the internet emergence have become the advocates of the electronic services and electronic solutions generally simply because they realized that this approach and technology is not only unavoidable but also it is a key to success despite all

the weaknesses. Hence, those who embraced it and effected the change survived all others simply perished.

Big nations and their central governments take this issue very seriously and aspire to improve their e-governance in all affairs and in all levels. The developing ones also aspire to implement and make use of new technologies in their administrations. However, this is rather a process in the making and its end results are neither visible nor finite. Thus, if tackled properly e-governance can make a real difference and may secure survival to some governments but it can also elevate one nation over the other or others as in the case of Singapore or some Scandinavian countries.

5. CONCLUSION AND IMPLICATIONS

This paper best illustrate that e-government is equally important in the USA, Turkey, Bosnia and Herzegovina or any other country. Despite the political, economic, social, technological, legal and human issues and problems, e-governance enhances the operations of the administration and brings its services closer to the end-users rather conveniently.

The literature review not only brings the definition and shows the importance of the Electronic government but it also proves that the e-government greatly improves various relationships such as: G2C, G2B, G2E, G2G... It also provides an insight that great many leaders stress the importance of the electronic governance and administration as in the case of Clinton and Gore per se.

The research findings show that albeit the difficulties in getting appropriate support from higher authorities, this local Bosnian government shows high respect for new technologies and new processes in their environment although it may trigger unpleasant change to some of them.

Unfortunately, although all the heads of the departments and their assistants filed the questionnaire the number of respondents amounted only to 35. Further research should be undertaken to examine the wider scope of the stakeholders in order to see the response of the users and the higher levels of the administration of Bosnia and Herzegovina.

The authors agree that the e-government is a great opportunity for small and developing nations such as Bosnia and Herzegovina with its complex and multi level governments where in practice some parts of the government simply look detached from the other. Being a small country in terms of geography and its population it makes it easier to implement the e-government provided that there is a will from the government's head. In the case of this very municipality this will is rather obvious.

REFERENCES

- Bellamy, C. (1999). Joining-up government in the UK: towards public services for an information age. *Australian Journal of Public Administration*, Vol. 58 No. 3, pp. 89-103
- Coruh (2008). *Bilişim Teknolojisi, Ekonomisi ve Toplumu. Evde, Okulda, İşyerinde ve Kentte Yaşantımız Nasıl Değişiyor?*, Ankara.
- Criado, J.I., Hughes, O.E. and Teicher, J. (2002). E-government and managerialism: a second revolution on public management. VI International Symposium on Public Management, Edinburgh University, Edinburgh, 8-10 April.
- Erdal, M. (2004). *Elektronik Devlet*, www.turkiyegov.tr
- Fagan, M. H. (2006). Exploring city, county and state e-government initiatives: an East Texas perspective. College of Business and Technology, University of Texas, Tyler, Texas, USA
- Gore, A. (1997). "Introduction", The Report of the National Performance Review. Government Information Technology Services Board, Access America, available at: <http://govinfo.library.unt.edu/accessamerica/docs/intro.html>.
- Gulledge, T.R. and Sommer, R.A. (2002). Business process management: public sector implications. *Business Process Management Journal*, Vol. 8 No. 4, pp. 364-76
- Hood, C., 1995, "Emerging issues in public administration", *Public Administration*, Vol. 73 No. 2, pp. 165-83.
- <http://edevlet.turksat.com.tr>
- <http://www.digitaldevlet.org>
- http://www.yerelnet.org.tr/yyaem/about_us.php
- Marin, (2004). *Elektronik Küresel Mekânlar, Tele-Koloniler Ve Türkiye'deki Kentler*. <http://www.bilgiyonetimi.org/>
- Mellor, N. (2006). E-citizen: Developing research-based marketing communications to increase awareness and take-up of local authority e-channels. *Aslib Proceedings*
- Nairn, G. (2007). *Driving innovation into e-government. Information Age (Australia)*
- OECD, (1998). *Information technology as an instrument of public management reform*. www.oecd.org/puma
- Steidel, (2003). EYALET VE YEREL YÖNETİM, Değişikliğe Uyum Sağlamak, A.B.D. DIŞİŞLERİ BAKANLIĞI ELEKTRONİK DERGİSİ, Demokrasi Konuları, EKİM 2003 CİLT 8 SAYI 2
- The Premiership of Turkey (Başbakanlık). (2002). *Bilgi Toplumuna Doğru: Türkiye Bilişim Şurası Taslak Raporu*. Türkiye Bilişim Şurası, Ankara,s.212

3rd International Symposium on Sustainable Development, May 31 - June 01 2012, Sarajevo

US Government. (1993). Reengineering through information technology”, Accompanying Report of the National Performance Review, Office of the Vice President, September, available at: <http://govinfo.library.unt.edu/npr/library/reports/it.html>.

Velibeyoğlu, K. (2004). Bilgi Teknolojileri destekli kentsel gelişme stratejileri. Yapi ve Kente Bilisim, Ankara

World Bank Group. (2003). A definition of e-government. www1.worldbank.org/publicsector/egov/definition.htm.

Zhang, J., Dawes, S., and Sarkis, J. (2005). Exploring stakeholders' expectations of the benefits and barriers of e-government knowledge sharing. Journal of Enterprise Information Management