COMPUTER APPLICATIONS USED IN ELECTRONIC GOVERNANCE

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Abstract:

The main objective of computer applications used by public administrations is represented by the need to rapidly meet citizens' needs while achieving governmental functions. This fact, combined with increased familiarize of citizens with new information and communication technologies has led naturally, we may say, to a transition from the classic, traditional model of governance to electronic governance. In this context, this study shows the applications used in electronic governance that comes to support a modern public administration.

Key words: computer applications, public administration unit, electronic governance, ICT

JEL classification: H11, M15

Introduction

The success of using information and communication technology (ICT) in private companies has highlighted its potential, which led to special attention from the government to address the new challenges imposed by the information society. The task of coming up with new initiatives that will lead to the development of ICT returns now, collectively, to both private sector and international organizations on the one hand, and to governments and civil society on the other hand. One can say that this joint participation in developing and implementing new information and communication technologies provides an adequate frame regardless this process' participants' socio-economic development level. 2005 UN Summit highlighted the role of ICT as catalyst in achieving the Millennium Development Goals (MDG) of ICT, which is recognized as *"key element to increase the socio-economic opportunities for all citizens, both in developed countries and in developing countries "*(2005 UN Summit).

Making the state's activities more profitable and efficient by using ICT at all levels can contribute significantly to the transformation and development of a society. Computerization of state's activities increases the speed and efficiency of operations by streamlining processes, reducing costs, improving service delivery and research, documentation and data storing capabilities. Utilization of ICT in modernizing the state's activities makes these technologies strong mechanisms to generate economic growth, to stimulate job creation and to raise the employment chances of specialized personnel.

Although the benefic results of ICT use are obvious, the benefits of computerization activities of state does not consist in introducing and using technology as such, but rather in its application to organizational and not least institutional transformation processes. The realities of political, economic and cultural live requires changing the governing model taking into account the potential impact of ICT in public administration. In theory, ICT favors decision-making process at all levels, rather decentralized one may say, in a transparent manner, while the decision maker has more information. Economic development and investments in communication provides the

society with strong communication networks which overcome the organizational, spatial and jurisdictional and sector wise (public vs. private) barriers.

e-Governance applications for citizens, business environment and employees

Technology was influencing the way people think while Internet was growing, matured and gaining in popularity. The People are part of today's political and decision-making layers can say that they grew under the changes that have taken place in ICT. Today, the phenomenon of electronic government (e-Government) is substantially shaped by those accomplishments achieved in ICT that have made it possible for millions of people to access communication networks.

E-Government is defined as the employment of electronic applications to ensure interaction between government and citizens on one hand and government and private business environment on the other, and also the employment of these applications to ensure the government's internal operations in order to simplify and improve the act of government, to make it more transparent and democratic [3]. When using the e-governance system to process data, we must choose what data is useful and what kind of information can be obtained from the processing of collected data. Stevenson defines the ICT in its 1997 report for the UK government and later used in UK National Curriculum documents in 2000 as: *"The study for employment of technology in order to control information and encourage communication"* [8].

Taking e-business development model of private companies to operate more time online and its implementation at government level, allows the use of the word **e-government** to recognize that there is a continuous process of transformation in public administration, as well as in its internal relations and external relations by using new information and communication technologies.

The online presence of public administration, as in the case of private firms, implies a remodeling both of the organizational structure and processes that govern the daily activities in line with the needs of citizens and business environment. Thus, a special attention is given to ICT applications that improve internal management of government institutions in order to provide quality and more flexible services to population, while improving public participation in the decision making and hence the democracy [1, 5, 6, 9].

According to France Belanger and Hiller (2006), in the e-Government concept there are three main target groups that can be distinguished, namely government, business and the private citizen. Acronyms like B2B (Business to Business) and B2C (Business to Citizen) are commonly used in e-commerce concept. Capturing the ideas of representation and analysis of the interactions that occur between the main target groups within e-commerce concept (business and citizens), we can say that the interactions that are formed within e-government are G2C (Government to Citizen), G2B (Government to Business), G2G (Government to Government), schematically represented in Figure 1.

Figure 1 G2C, G2B, G2G interactions
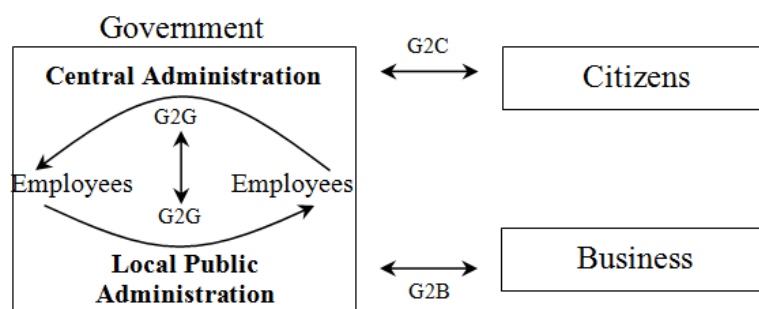
We believe that the most important target groups of e-governance are both business and citizens, because they are ultimately the biggest and the final part of the whole concept of e-government.

A first development direction of employment e-government in public administration is geared towards creating an interface between citizens and government and between government and business. This step of application development is a realistic initiative which may facilitate the interaction between citizens and government. Government, as a public organization is responsible for meeting the needs of citizens and firms, G2C software applications being able to provide transactions specific to the 12 services offered by government to its citizens or transactions specific to the 8 services provided by public administration to companies. These services are presented in Table 1.

Table 1 - List of basic public services

Public Services	
Public Services for citizens	Public Services for businesses
Income tax: declaration, notification	Health insurance contributions for employees
Services to find a job (through employment offices)	Company Tax: declaration, notification
Services of social protection (at least three of four): - Benefits related to unemployment; - allowances for children; - Medical costs; - Scholarships.	VAT: declaration, notification
Personal documents (passport, identity card, driving license)	Registering a new company
Vehicle registration	Providing data to statistical offices
Request authorization for construction	Customs declarations
Statements to the police	Environmental Permits
Public Libraries (online catalogs, search tools)	Public Procurement
Certificates (birth certificates, marriage certificates): submission and release	
Registration in other advanced forms of education	
Announcing authorities at changing the home address	
Health Services	

Source: Capegemi, 2006

One can say that the development of e-government specific software follows two main directions. The applications designed to provide services that seek to increase citizens' access to public information, by using specific tools to disseminate information such as web sites or info-kiosks. These applications are primarily aimed at informing citizens or business without having to physically go to the government offices. In other words, these applications come to diminish the importance of geographic location of public servants, it can be said that one of the main objectives of the implementation of G2C and G2B interactions is to create "one-stop-shopping site", that unique place where citizens or companies can perform a variety of actions, even if these involve contact with several government agencies.

These applications such as Web services are first adopted in implementing e-government concepts since they are less complex and thus less expensive to achieve. Web services applications are considered the starting point in achieving a common infrastructure that can ensure an integration of various systems from different government agencies.

The second direction of development e-government software focuses on using ICT tools and applications by using computer networks to perform transactional tasks (such as online payment of taxes), in processing information and distribute knowledge both within and outside their organizations. Basically, this type of interaction between government and business (G2B) or between citizens and government (G2C) integrate counter applications (front-end application) such as online catalogs and transactional interfaces present within the government portal. In terms of transactional activities related to online payment services, government portals are supported by back-end activities (query, modify or add information to a database or data warehouse). The implementation of such applications is a solid foundation for achieving a single government portal that can support both interactions between government and citizens (G2C) and between government and business (G2B).

A potential result of this interaction between government and citizens, judged by e-governance, it is that it enhances the relationship between citizens (C2C) and increase their participation in the act of governance by creating opportunities through a better awareness of citizens and demolishing geographical barriers.

Another pressure factor influencing the implementation of electronic government applications in providing an interface between citizens and government is the time spent by citizens to carry out any transaction. To eliminate this pressure, the government must find ways to reduce the time lost by the citizens in the state administrative departments by providing businesses and citizens with better alternatives for performing transactional activities.

A particular direction in the design and implementation of specific e-government software is represented by the interaction established between government employees (whether they are part of either central or local administration). These applications must meet special features such as automatic continuous and real time communication between different components of applications. From a government and employees G2E interaction perspective, these applications encourage employees to interact more effectively with other departments or other state agencies.

The integration of heterogeneous IT applications and components across the entire state apparatus is time and especially money consuming due to the diversity of public sector organizational environment. Equally, government agencies or public administrations inherited outdated systems and applications. New requirements for the concept e-government systems and applications require that these to be updated and accessible through web sites to expand its functionality beyond the organizational boundaries of an agency.

Traditionally, government departments and public administrations have separate databases, to undertake specific activities. This creates barriers between systems in terms of organizational communication and data transmission and ultimately hinders the implementation of applications for governance in a single portal.

Conclusions

Migration of the services offered by the public administration to the web environment can increase the quality and effectiveness of government institutions, leading them to achieve a high level of maturity.

We believe that the greatest value brought to the computerization of state institutions is created when a successful integration of all state institutions it is achieved.

This integration can be accomplished regardless of the size of the state apparatus by using IT technology that supports a service-oriented architecture, such as those offered by the Web services.

Web services represent that technology that can be used in order to improve public sector activity, with the hope of obtaining the same results as in the private sector. Promoting widely public administration services via Web allows private companies to work easier and conveniently with government agencies.

REFERENCES

1. A. Ancarani, " Toward quality e-services in the public sector: the evolution of web sites in the local public service sector, " *Managing Service Quality,* 2005, 15(1), pp 6-23.
2. Belanger France and Hiller S. J. (2006), "A framework for EGovernment: privacy implications", Business process management journal, Vol. 12 No. 1, pp.48-60.
3. Backus Michel (2003); E-Governance and developing countries; Introductions and examples. Research Report, No.3. April, www.ftpiicd/org/research/reports/pdf.
4. Capgemini (2006), Online Avalability of Public Services: How is Europe Progressing? Diegern, Belgium: European Commission.
5. Maniam. K., Halimah A., and Hazman, S.A., "Citizens Expectations for Electronic Government Services: Malaysian Perspectives,". *The egov Asia Conference in Bangkok, Thailand*, 2006.
6. Seifert J.W. & Relyea. H.C.," Considering e-government from U.S. federal perspective: A evolving concept, a developing practice," *Journal of e-government,* 2004, 1(1), pp 7-16.
7. Stevenson, 1997, in Computing Dictionary, http://www.hyperdictionary.com/
8. West. D.M (2004, September). Global e-government, 2004. Brown University. Available: http://www.insidepolitics.org/egov04.
9. *** www.un.org/millenniumgoals/reports.shtml