E-Governance in Republic of Srpska - Challenges and Prospects

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Abstract: In order to ensure quality of life of its citizens, the European Union member states are in the process of modernisation of their public services through utilization of information and communication technologies (ICT). In this process, each state is selecting own way to meet citizens' demands for provision of more quality, efficient and flexible public services. One of the main interests of actual Government in the Republic of Srpska (RS) is to protect economic interests of its citizens, as well as to transform its services and functions in order to improve overall quality of life in RS. The implementation of e-Government and e-Governance is one of the main strategic commitments. In order to meet these EU trends, the Government of the Republic of Srpska made first steps in introducing new public services to facilitate communication with its citizens. The Government of the Republic of Srpska recognized benefits of these trends and their impacts on the overall development of society and economy improvement of quality of life of its citizens. With the introduction of these modern services, the citizens in RS should skip lines and shorten the waiting time for response from Governmental bodies related to their requests that will give them more time for other activities.

This paper gives brief analysis of challenges and prospects for implementation of e-Government and e-Governance initiatives, as one of the pillars for successful development of the Republic of Srpska as knowledge based economy and information society with benefits that improve citizens' life. The paper also gives brief review of main strategic document, which gives governmental vision for implementation, as well as introduction of eSrpska- public administration portal.

Key words: EUROPE2020, Digital Agenda, e-Government, e-Governance, knowledge-based economy, interoperability, public services, information society, eSrpska

Introduction

European Union member states are in the process of modernisation of their public services through utilization of information and communication technologies (ICT). In this process, each state is selecting its way to meet citizens' demands for provision of more efficient and flexible public services. New knowledge based economy and information societies are some of the most important pillars of EUROPE2020 strategy. One of the main flagship initiatives of this strategy is Digital Agenda for Europe. This initiative provides strategic actions fostering ICT sector in Europe. Digital Agenda's pillar "*ICT for Social Challenges*" gives main actions that European Commission and member states should implement in order to use ICTs capability for reduced energy consumption, support ageing citizens' lives, revolutionises health services and deliver better public services. In Digital Agenda for Europe Communication, paragraph 2.7.4 stresses the importance of e-Government services: "*eGovernment services offer a cost-effective route to better service for every citizen and business and participatory open and transparent government. eGovernment services can reduce costs and save time for public administrations, citizens and businesses. They can also help mitigate the risks of climate change, natural and manmade hazards by including the sharing of environmental data and environment related information. Today, despite a high level of availability of eGovernment services in Europe, differences still exist amongst Member States and the take-up of eGovernment services by citizens is low. In 2009, only 38% of EU citizens used the internet for accessing eGovernment services, compared to*

72% of businesses. General internet take up will be lifted if the usage and quality and accessibility of public online services rises." (Digital Agenda for Europe – COM, 2010).

This action clearly states the most important directions for development of public services in EU. For any other country willing to become a member state, implementation of Digital Agenda should be a part of country's strategic documents. Republic of Srpska, as an entity within Bosnia and Herzegovina, is having intention one day to become a member state. The Constitution of Bosnia and Herzegovina gives authorities to entities in order to create all supporting legislation related to e-Government and e-Governance.

One of the main interests of actual Government in Republic of Srpska is to protect economic interests of its citizens, as well as to transform its services and functions in this direction. The Government should listen to "*vox populi*" and to promote citizens' economic and social interests. As the creator of policy and decision making, the Government of the Republic of Srpska is aware of actual strategies in EU, including EUROPE 2020 and Digital Agenda, and invests efforts to follow up. Having in mind the economic situation in the country, these efforts have limited domain. However, implementation of e-Government and e-Governance is one of the main strategic commitments. In order to meet these EU trends, the Government of the Republic of Srpska made first steps in introducing new public services to its citizens. The Government of the Republic of Srpska recognized benefits of these trends and their impacts on the overall development of society and economy.

In order to start activities on implementation of reform of governance and streaming towards knowledge based economy and information society, the Government of the Republic of Srpska established the Agency for Information Society of the Republic of Srpska in 2007. The Agency has very important role for further development of information society in Republic of Srpska. The Agency is authorized and responsible to perform the following tasks (www.aidrs.org):

- Introduction of new electronic services for citizens and companies,
- Planning, organization, implementation and coordination of IT projects in public administration bodies,
- Measuring of IT influence on society development,
- To have a role of national certification body for Public Key Infrastructure (PKI), etc.

Therefore, the Agency presents the most important public body that has influence in promotion and encouraging implementation of e-Governance and respective e-services for citizens and industry.

The e-Governance challenges and possibilities in Republic of Srpska

There are num erous of challenges and possibilities for deployment of e-Governance in Republic of Srpska. In order to implement e-Governance and public services, the Government of the Republic of Srpska needs to overcome number of problems.

Lack of adequate and relevant legislation

The number of legislative documents that are regulating this field is growing daily. At present, Republic of Srpska is faced with weak institutional, legal and technological infrastructure, lack of financial and human resources and many other factors that are stopping or slowing-down the process of public

administration reform towards e-Governance. The legal framework is necessary for introduction and use of public services for citizens and especially for protection of citizens' rights and freedoms. Republic of Srpska needs to implement a serial of systematic measures, legislative acts and incentives for development of ICT sector, in order to create basis for introduction of e-Governance. Special attention should be devoted to introduction of relevant legislation that is harmonised with the European one. Naturally, the introduction of legislation requires an adequate financial support. Although the Government made some initial steps towards this important reform, there are still many things left to be done. Until today, the Agency initiated and the Government and National Assembly of the Republic of Srpska approved following legislative acts (Drljača, 2011):

- Law on electronic document,
- Law on electronic commerce,
- Law on electronic signature,
- Regulation on authority for electronic certification of republic administration bodies,
- Rulebook on registration of certification bodies,
- Rulebook on measures for protection of electronic signature and qualified electronic signature, lowest obligatory insurance amount and implementation of organizational and technical measures for protection of electronic certificates,
- Law on IT security, etc.

There is more approved supporting legislation, but the most important laws must be passed as soon as possible, such as:

- Law on protection of personal data,
- Law on eID,
- Law on prevention of cyber criminal,
- Law on e-Content, etc.

Lack of financial support for comprehensive reform of public administration

Reform of public administration to work in "electronic" environment requires significant financial funding. The financial funding must be ensured through various sources, such as credits, loans, public or private investments, etc. The funds should be provided to ensure procurement of hardware and software solutions and platforms to support development and deployment of public e-Services, or e-Governance.

Lack of adequate ICT infrastructure

Major problem in implementing e-Governance is to deploy adequate ICT infrastructure. This infrastructure refers to broadband access to Internet, if possible through Next Generation Networks, but also through mobile network for m-Services, such as 3G or GSM. Beside this, hardware and software platforms for proper functioning of these services are also important. Namely, according to some estimation, Republic of Srpska has 1.5 million inhabitants presently. Having in mind their need for public services, such as car registration, issuing of personal identification documents, birth and other certificates, etc, the relevant

hardware and software platforms that should run these services must be carefully selected. In further provision of G2B (Government – to – Business) services, such as e-Procurement, e-Tender, etc. it is necessary to provide high-level VPN (Virtual Private Network) mediums for secured transactions.

Low level of digital literacy among civil servant and citizens in general

In 2010, Agency for Information Society of the Republic of Srpska made survey on IT literacy, which showed low level of digital literacy among citizens. The study covered respondents of all age groups, but the most responsive (30, 14%) was the group aged 19-35, while the lowest was the age group 15-18 (10, 14%). Most of households have a computer (over 63%) and are using it daily (49, 51%). The problem can be that almost 51% of questioned do not have Internet access at home. The computers are usually used for surfing the Web (42, 5%), e-mail correspondence (40%), but for modern e-Services this percentage is quite low – e-Banking 1, 56% only. (Presentation, 2010)

These figures from 2010 (today maybe a little bit more favourable) are showing that, in order to have e-Services implemented and used by citizens or business, the Government must challenge global education and training of citizens in use of modern ITs. This challenge is trying to be resolved with an intensive training in all stages of education, from primary to higher education.

Resistance to changes and complexity of implementation reform

The willingness of public institutions to actively participate in various types of e-Services is an important factor which determines the success of investments. High level of bureaucracy and tendency to keep "status quo" are the basic characteristics of public administration institutions. Governments are traditionally more closed and conservative towards any changes of regular daily activities. They are also slower in implementation of even minor changes and also in adopting innovative applications and services.

Previously mentioned low level of digital literacy is another reason for resistance to reform processes. Civil servants that are missing essential ICT skills are afraid to lose their jobs and positions and therefore resist to changes. From the other hand, low digital literacy among citizens, especially seniors, jeopardises utilization of e-Services already developed. However, the challenge is to motivate and attract even that critical group of citizens in order to use e-Services. They need support and additional assistance, and provision of these will significantly reduce resistance of these two groups. This education and assistance can be arranged in various manners, such as specialised lifelong ICT courses for senior citizens, interactive help-desks for use of e-Services, telephone help-desks, etc.

Lack of infrastructure and networking between public institutions that need to share data

One of the basic infrastructural elements for e-Governance is secured computer network between public administration bodies and institutions at local level (in municipalities). At the moment, this kind

of network does not exist. One of the possible solutions is that the Government of the Republic of Srpska invests in realization of VPN, as private Internet network. This would require certain public funding and will require high level of security in realization. From the other hand, the process of issuing of electronic (digital) certificates is very slow, which is an important precondition in order to create safe environment for e-Governance in G2G model (Government – to – Government). The safe environment requires significant investments in infrastructure – networking (communication), hardware (computers) and software (interoperable software).

Not all public administration institutions have broadband Internet access and this creates significant communication problem. However, the situation is changing relating to Web presentations of municipalities. Out of 63 municipalities in Republic of Srpska, in 2007, only 44 municipalities had Web presentation, while today, 56 of them have it (www.aidrs.org). This shows positive trend in informatization of municipalities and willingness of municipalities to change something in their work. Some municipalities are introducing information systems in their organization. However, these systems are not interconnected and change of information cannot be done. Lack of joint databases that can be used by various public administration institutions also presents a problem. This would eliminate data redundancy and increase efficiency in work and data processing.

This and some other prerequisites are needed in order to enable cooperation between municipalities and public administration institutions in both directions – horizontally (between municipalities) and vertically (between municipalities and central government or public administration units).

Governmental vision of e-Governance in Republic of Srpska

The main strategic document dealing and directing development of e-Government initiative in Republic of Srpska is "Strategy of e-Government in Republic of Srpska 2009-2012" (Strategija razvoja elektronske vlade, 2012). This document gives main strategic commitments in development of e-Government in the Republic of Srpska. The document was produced by Agency for Information Society of the Republic of Srpska in 2008.

Strategic approach to e-Government initiative is based on a few basic guidelines:
- construction of a national, secure, fast and available network infrastructure both for all citizens and businesses, and through additional services for use in the network of public administration, the government and its organs,
- construction of quality e-Governance by implementation of technology, services and processes enabling easier and better quality of life for citizens, and through the same and similar services enabling better functioning to business subjects,
- building of e-Government projects whose realization will establish the preconditions for economic growth and government as whole, which in turn provides increased employment and better life for all citizens.

The Strategy foresees several basic principles for creation of e-Government services. These principles are following:
- Availability – the services in e-Government should be daily available to citizens,

- Simplicity - simple use of services without need for physical visit to public administration institutions,
- Transparency – of all processes as a basis for fruitful and successful cooperation and involvement of public and private sector in establishment of e-Government and related services.
- Data protection (security) – in order to attract citizens to use developed services and to assure functioning, e-Government services must be as safe as possible,
- Cooperation –all level of governance must be involved in the process and able to share common data,
- Sustainability – should be achieved with modular development of e-Government and its services,
- Interoperability – in line with Digital Agenda's requirements, interoperability will ensure cross-border use of eServices, and
- Neutrality – no technology can be preferred and e-Government system must be open and follow up development of modern technologies.
- In order to implement e-Governance, Strategy foresees an operative approach consisting of:
- Adopting of new and changing of existing legislative framework,
- Improved human resource management, including upgrade of professional knowledge and skill,
- Implementation and improvement of national broadband and PKI infrastructure,
- Implementation of general safety and identity management policy,
- Introduction of data and meta-data management policy,
- Introduction of e-Government policy on projects.

As one of the conclusions of this Strategy stands the main commitment of the Government of Republic of Srpska:

"Through modernization, the Government of the Republic of Srpska seeks and supports the traditional methods of public services and the creation of new delivery channels, which provide users with choices and avoid the existence of restrictions in terms of availability of these services. All delivery channels - call centres and telephone systems, Web portals, one-stop shops, mobile devices and digital television - will be fully integrated, each supported by the same Web-based technologies." (Strategija razvoja elektronske vlade, 2012)

The Strategy is very demanding and consists of numerous actions that should be realized in relatively short timeframe. In order to achieve short- and long-term plans projected with this Strategy, the Government assigned implementation of the Strategy to the Agency for Information Society of the Republic of Srpska. The Agency now is faced with a very complex task that is very challenging for even more advanced societies with more productive economy.

e-Srpska portal

In order to provide services to citizens (G2C) and business (G2B), the Government of the Republic of Srpska, through the Agency for Information Society of the Republic of Srpska, implemented several projects important to initial steps in establishment of electronic government services. These first steps, though

shy, announce the intention of the authorities (both republic and municipal) to put more of their services in online mode and thus facilitate the daily operations on both sides.

Portal of public administration of the Republic of Srpska - eSrpska - represents the first serious step towards providing electronic services for citizens and businesses. Portal eSrpska is a long term project of the Government of the RS and the Agency for Information Society of the RS and as such is conceived as a place where customers of public administration will be able to find accurate and reliable information using the Internet as means of communication. The aim is that the portal, its functionality and content is measured by the user and their needs. To achieve this it is necessary to connect all the functions of public administration so as to simplify and expedite transactions with public administration. According to United Nations Public Administration Network (UNPAN) Web Measure Assessment Model, eSrpska portal can be considered as being in "*emerging presence*". This can be concluded based on basic review of services offered at the portal. eSrpska portal offers simple and basic information on services provided by public administration. The portal offers numerous of links and useful texts with simple site search, with applet for browse of register of institutions and links to important public administration bodies and other e-Services that are deployed on separated Web locations. Developed forms or other interactive tools for two-way communication with public administration are not available.
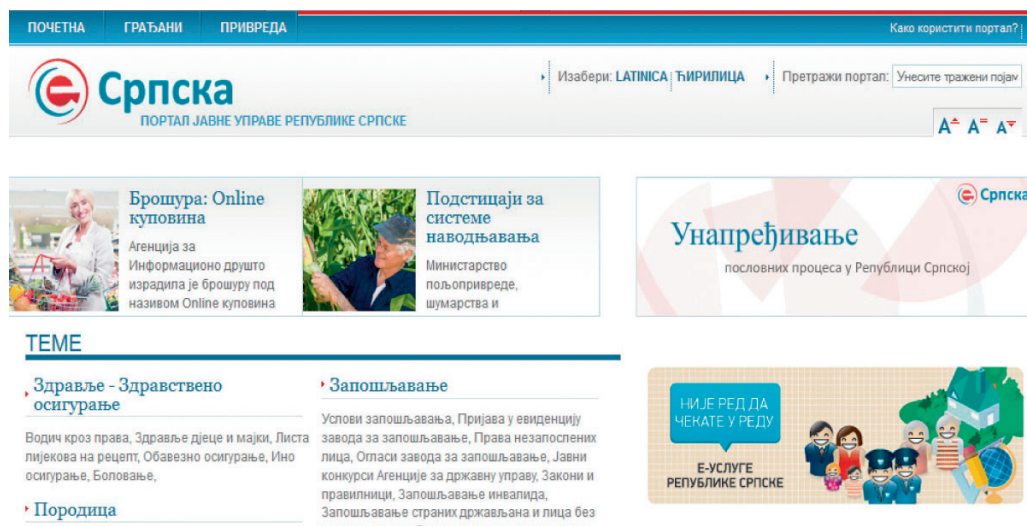

Figure 1. Public administration portal – eSrpska (www.esrpska.org)

The portal is divided into two sections – "Citizens" and "Business", offering G2C (Government – to – Citizens) and B2C services respectively.

In the section "Citizens", organized information intended for the citizens in general is demonstrated. The information that can be found in this section covers all areas of life and work in Republic of Srpska - from family, sports, culture, war veterans and victims to information about health care and employment. Each thematic area covers an overview of basic and detailed information such as, for example, realization of health care.

At the portal, Section "Business" is a specialized section providing information to business subjects. This section of the portal is divided into nine thematic areas such as Business, Finance, Tourism, Agriculture, Import-Export, Incentives, e-Business, etc. Each thematic area provides basic information and links to important documents and institutions responsible for the subject area.

The portal eSrpska offers also links to other projects of the Government of the Republic of Srpska in order to strengthen the information society, such as:

- Database of emergency services by municipalities,
- Register of the Republic of Srpska's institutions,
- Register of the Republic of Srpska's municipalities,
- Register of authorized notary in the Republic of Srpska,
- The project "Electronic land registration of the Republic of Srpska",
- The project "Electronic maps of the Republic of Srpska",
- Portal "eEducation" and
- Portal "eCulture".

Conclusion

The general opinion among citizens in almost each country is that the public administration is expensive, inefficient, with insufficient expertise and with a low technological level, bureaucratic, unnecessarily complicated, and too focused on itself and usually acting from a position of the ruling majority. As such, public administration is focused more on the process than on the results of work. In order to improve work of such public administration, countries are trying to modernise public administration. (Latinović, 2007) The very important initiative in this direction is implementation of e-Government and e-Governance initiatives. Today, almost every country in the World is in one of the four stages of public administration reform (according to UNPAN's Web Measure Assessment Model). Each country also has different strategic approach to this and is choosing its way to meet citizens' demands for provision of more efficient and flexible public services. EU member states have agreed on numerous of initiatives and strategic documents for implementation of borderless or cross-border governmental services in order to serve its citizens and business.

The Government of the Republic of Srpska is also trying to find its path to implement these trends in reform of public administration and its services to citizens. The initial steps in this direction have been made. The Government established Agency for Information Society of the Republic of Srpska, which main task is to manage overall development of information society in Republic of Srpska on behalf of the Government. The Agency has already proposed a set of legislative acts that have been accepted by relevant authorities. This set of acts and laws gives initial framework for development of information society and e-Government as one of the most important pillars for development of economy based society. The Government and the Agency have started a number of projects that should increase the level of use of ICTs in everyday life of citizens and authorities.

Implementation of these projects has as the aim overall improvement and increase of quality of life of all citizens in the RS. The citizens should be aware of positive impacts of such projects first with automatization of some governmental activities, such as those in taxation offices by accepting electronically the tax applications and similar. In order to get these documents or to make the application of some forms via electronic services, the citizens will skip standing in long queues in front of taxation offices and will decrease time needed to submit the papers. From the other hand, civil servants should be less in contact with citizens that sometimes have "short nerves" due to long and exhausting waiting.

This paper has provided an analysis of possible challenges and prospects seen from the authors' point of view. The increase of IT literacy among civil servants, but also among citizens in order to be ca-

pable to use e-Services of e-Government and e-Governance will be the most important challenge, besides financial one. Horizontal and vertical coherence and linkage in G2G model should provide consistent provision of public services. In order to achieve this, all stakeholders must invest funds and efforts to establish secured broadband network communication channel and achieve interoperability of data flow and processing, as well as to create joint databases that will be used by various stakeholders and public institutions.

The paper has also briefly presented the main commitments of the Government of the Republic of Srpska stated in the "Strategy for electronic government (2009-2012)". This very demanding and prospective strategy gives main strategic and some operative directions in order to implement e-Government and e-Governance in Republic of Srpska. Lastly, the portal of public administration eSrpska was briefly introduced.

One can conclude that, although struggling with different social and economic barriers, the Government of the Republic of Srpska started seriously working on implementation of these important initiatives. The fact is that some initial steps have been done, but there are many more challenging steps to be completed. The most important are: improvement of networking infrastructure, reorganization of public administration and improvement of IT knowledge and skill both for civil servants and citizens, in order to successfully implement and use e-Services.

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