

E-GOVERNANCE WITHIN MUNICIPALITIES

SVETISLAV BIOCANIN

NORWEGIAN UNIVERSITY OF LIFE SCIENCES
DEPARTMENT OF INTERNATIONAL ENVIRONMENT AND DEVELOPMENT STUDIES
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sbioca@yahoo.com

Noragric

Department of International Environment and Development Studies

P.O. Box 5003

N-1432 Ås

Norway

Tel.: +47 64 96 52 00

Fax: +47 64 96 52 01

Internet: <http://www.umb.no/noragric>

Declaration

I, Svetislav Biocanin, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

Acknowledgement

I am thankful to everyone who in some way has contributed to the fulfillment of my thesis, especially to my supervisors, Darley Jose Kjosavik and Morten Edvardsen.

Abstract

Information and communication technologies facilitate easier access and information flow using the internet and therefore constitute an enhanced traditional form of communication. Throughout the world governments have adopted the new method of communicating with citizens by internet thus making possible simpler and faster access to information of public significance by introducing e-governance. An increasing number of governments are using e-governance as a new form of information exchange and accessibility with the goal of offering improved electronic services, increased transparency, and cost reduction. The introduction of e-governance implies fundamental changes within the administrative system and on the level of citizen – government relations. Besides, the introduction of a new system of communication between the government and citizens raises political, social and technological issues which greatly impact the quality and speed with which services can be implemented. Developing countries still must face numerous problems when implementing e-governance, although they may be applying principles which had proved successful in developed countries. Serbia also must deal with a variety of problems and challenges when introducing new e-services. This study is an analysis of the current state of affairs with regard to e-governance in two Serbian municipalities. The study is based on the experiences, problems and challenges faced by citizens in the course of using available e-services. The research performed by means of surveys and informal interviews, with citizens of both municipalities, has shown that the level of sophistication of the services is low because local administrations for the most part allow only access to information and downloading of application forms. The availability of these services suggests that communication between citizens and the administration is mainly one-way. The example of these two municipalities has shown that available services are insufficiently interactive, which is one of the preconditions for the transition to full two-way communication. In addition, there is a clear need, supported by citizen sentiment, to develop and implement a more efficient system of two-way communication with local government.

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1. INTRODUCTION

Information and communication technologies worldwide play an increasingly prominent role in everyday life. The advantages offered by information technology¹ through the internet have not just improved the supply side of business, but have also greatly affected human development. Governments throughout the world are investing increasingly in information and services accessibility to citizens over the internet, using electronic governance (e-governance)². Applications available to citizens through e-government/e-governance are there to facilitate and accelerate access to information of public significance, but also to redefine the traditional "citizen-state" relationship.

It is clear today that information access using ICT (information and communication technologies) is a key factor in international socio-economic development. The role of ICT in global development does not depend only on the level of technological development. The availability of greater access to two-way information and communication (government-citizens and vice versa) are also very important factors for the successful implementation of e-governance.

Reform and reorganization of public administration based on a broad ICT concept constitutes a key element of Serbia's transformation into a modern informatics society. ICT offers considerable possibilities with regard to public administration modernization and improvement in the level of public services. That refers to raising the quality and efficiency of services, transparency, and responsibility. The development of e-governance is not an end in itself, but also a stimulus for the development of other economic and political objectives: administrative modernization, economic development, and the involvement of an increasing number of citizens in the democratic process.

Modernization of the government system assumes changes in the traditional patterns of governance. That change means that for the first time the physical presence of citizens is not required or visiting successive government offices in order to gain access to documents or submit a request. Thanks to ICT citizens would be able to satisfy their needs by using their internet portal. In addition, citizens can also gain access at all times to information about the status of their requests. That is a significant adaptation of e-governance to the needs of citizens and of the economy.

¹ Information technology (IT) "can be defined as the use of electronic machines and programs for the processing, storage, transfer and presentation of information" (Björk, 1999, p.4)

² "E-governance is the use of IT by different actors of the society with the aim to improve their access to information and to build their capacities" (UNESCO, 2005)

According to a United Nation publication (2008), “many developed countries worldwide have set up appropriate institutions and formulated well planned national ICT strategies while developing countries are still facing a huge problem”. United Nations see the introduction of e-government / e- governance as ”a very important tool for the improvement of the quality and diversity of information and services which are offered to the population, businesspeople and government and non-government organizations”. The expression electronic-readiness has appeared in the course of that research.

”E-readiness is generally defined as the degree to which a society is prepared to participate in the digital economy (digital society) with the underlying concept that the digital economy can help to built a better society” (Geo Sinc. Int., 2002, p. 5).

As was stated in the UN survey, there is a huge difference between the world’s regions in terms of e-readiness (electronical readiness). The highest level of development is in Europe, followed by the USA and Asia. Oceania is in the penultimate place, while Africa is last. Within Europe, Scandinavian countries are in the lead (Sweden, Denmark and Norway). According to the same survey, Serbia was in the 77th place on the world e-readiness list, while in 2005 it was in the 156th place. Data show that e-governance is being introduced rapidly in governments (state and local), but it is still inadequate for governmental information to be easily accessible to the public.

Serbia’s ranking on the list in the UN survey inspired me to try to find out why the use of information technologies in the e-government/e-governance context is at such a low level. The subject of my research will be the successful performance of e-government which utilizes e-governance on the local level, i.e. a municipality. Using surveys and interviews, I tried to assess some of the challenges and problems which citizens face when they use the local electronic governance service. This research could prove useful in further improving local self-government because it includes the citizens’ perspective on e-governance in terms of understanding and using the service as offered by the local government.

2. DOING BUSINESS ELECTRONICALLY

2.1 Internet and the globalization of business relationships

Internet globalization (or ICT globalization) is a phenomenon that has been studied from the inception of the internet. But to this day, these studies have not resulted in a coherent picture of that phenomenon.

Internet refers to a global information system which:

- Is logically linked through a unified global address system based on the internet protocol (IP), or its subsequent extensions and additions;
- Is capable of supporting a Transmission Control Protocol / Internet protocol (TCP/IP) and its subsequent extensions and additions;
- Enables and offers access to public and private high level services based on communication and accompanying infrastructure described here (Milovanovic, 2003)

In other words, the internet is the "web of webs." From a technical standpoint, the internet is a computer network. It became popular because of the "world wide web" concept which came into being in Bern, Switzerland. A web site is but one of internet services. (Ho, 2002)

The internet is said to have been in existence for the last forty years, and as a concept it appeared for the first time in the eighties of the last century, although its roots go back to the sixties. That was the era when big computer manufacturers (IBM, HONEYWELL, and UNIVAC) were developing their own technologies capable of linking their computers. Each of those companies was creating its own network system and they were mutually incompatible. Linking together heterogeneous equipment was exceptionally expensive and required special hardware and software for that purpose.

The need to define an architecture for linking computers developed by various manufacturers influenced the creation of a unified web, or ARPANET (Advanced Research Project Agency Network). The project was financed by the US Defense Department. The introduction of information packages solved the problem of how to create a computer network resistant to hacking, sabotage, and even an atomic war. (Milovanovic, 2003)

It is clear that the further progress of making is intertwined with the development and application of internet technologies. The internet is a significant means of cohesion which links and brings closer different industries and that is evident if we consider the example of the software, hardware and telecommunications industries.

The point of the global development of information technologies, which is driven by the appearance of the internet, is that it defines and focuses information transfer in terms of the internet. The basic thing to understand is that internet development does not imply, nor does it have as a necessary consequence, the development of computer technologies such as they are today. Today's computers can be replaced by any computers of the future as long as information exchange standards between them remain the same (assuming they use the

TCP/IP protocol³) so that no fundamental changes will occur in the concept of the internet. In other words, it is a description of universality, all-inclusiveness and the importance of the internet for the development of society as a whole.

2.2 Electronic Business

2.2.1 The concept of doing business electronically

Electronic business (e-business) may be defined as the purchase and sale of information, products, and services using the computer for the purpose of information transfer. Electronic business may be viewed as a process during which digital entries are transformed into exits in accordance with a certain procedure. The mass development and application of the internet motivated an increasing number of users to use the benefits of e-business in their search for cheaper and more efficient alternatives. (Feng, 2007)

In fact, e-business constitutes a system for the exchange of standardized electronic messages between physical and legal entities in a negotiating process, purchase, sale, payment, administrative and judicial communication, and any business transactions where the law permits it to be used. It is based on a modern and efficient organization of labor adapted to the application of contemporary ICT, on the utilization of the internet for the completion of most business transactions, the organization and application of the modern information system, the application of the electronic signature and the use of cryptographic protection mechanisms. (Feng, 2007)

2.2.2 E-business models

E-business means doing business using the internet. That does not refer just to buying and selling, but also rendering services to customers and cooperation with business partners. That is different from traditional ways of doing business in that it eliminates the factors of time zone difference and geographical distance as far as ordering and paying is concerned. In this way, the frontiers of our business can expand to include merchandise that before then was unavailable, such as electronic products. Consumers would receive higher quality services adapted to their needs at lower prices and with more attentive service. (Andam, 2003)

³ Transmission Control Protocol/Internet Protocol (TCP/IP protocol) is the basic communication language or protocol of the Internet. (Feng, 2007)

According to Feng (2007) there are various models of contemporary electronic business practice:

- ***Business to Customer (B2C)*** – electronic transactions between companies and consumers. This involves the sale of merchandise and services to final users by using the internet. The basic form of the B2C model are automatized on-line shops. The advantages of this model are: time saving, competitiveness, lower prices, and service.
- ***Customer to Business (C2B)*** –electronic transactions involving customers and companies. In this model the consumer requests an article or a service from the seller by placing a request using the internet and indicating his budget. The seller reviews the request and responds with an offer. The consumer then selects the offer that best suits him.
- ***Business to Business (B2B)*** – inter-company electronic transactions. This refers to the use of the internet and web technologies for the buying and selling and for cheaper, quicker, and more efficient cooperation between business partners.
- ***Customer to Customer (C2C)*** – electronic transactions between consumers. In this model consumers sell to each other by using the internet. Consumers pay a commission to the creator of the internet marketplace.
- ***Business to Administration (B2A)*** – electronic transactions between companies and government institutions. This includes many types of services in the following areas: social protection, employment, registrar, and public notary. Although B2A is still in its inception, there is a growth trend in particular because government organs in the US and EU (European Union) are promoting electronic business in general.
- ***Customer to Administration (C2A)*** – electronic transactions between consumers and government institutions. This model involves areas such as social security (information sharing and payment), health (scheduling medical exams, health information, and payment for health services), education (information sharing and long distance education), and taxes (filing tax returns and payment).
- ***Business to Employee (B2E)*** – electronic transactions between companies and their employees. This model is being increasingly applied. In practice, this model is known as the Intranet, a web site opened to facilitate communication within companies. It relies mainly on an internal network, but it can also use the internet.

For that it is necessary to create a user name and password in order to access certain types of information.

Initially, doing business electronically was viewed with a measure of caution and distrust. For that reason, it must be introduced gradually and subtly. However, although not readily accepted in the beginning, there is no other scientific or technical innovation which has found nearly as broad a range of applications in such a short time.

The application of these scientific and technical achievements does not refer only to doing business, but includes a wide range of activities that members of the information society can engage in. Offering services will play an ever increasing role and its basic aim will be to achieve full service capabilities at all times and everywhere. Contemporary digital technologies make it possible to do business more efficiently, without the use of paper documents and without direct contact between the participants. According to Feng (2007) the most popular channel for doing business electronically certainly is the internet.

3. ELECTRONIC TRANSACTIONS IN PUBLIC ADMINISTRATION – E-GOVERNANCE

The contemporary way of doing business can be defined as the buying and selling of information, products, and services through the use of the internet. This way of doing business is characterized by improved performance in terms of quality (customer satisfaction), efficiency (reduced cost), and quick exchange of business services.

The only area that companies involved in IT have still left relatively untouched, in terms of developing their capabilities and expanding markets, are local and state administration. Up to this point, large companies have mostly turned their production into an automatic process. In Serbia, the only segment still lagging behind is administration, local and state. A reason for that could be the non-existence of common standards in that particular field. (Milovanovic, 2003)

3.1 Background information

The term electronic government, or e-government/e-governance, was introduced in the late nineties and it reflects the “internet boom” in the area of public administration. (Meskell, 2008)

The goal, when e-governance was introduced, was to reduce administrative barriers, to facilitate efficiency, and to enable public services to be more accessible and to raise the quality of government output.

Quality of output refers, first of all, to service automatization for private and legal persons. Human error is supposed to be reduced to a minimum, as well as the level of corruption in the public sector. (World Bank, 2004)

The ideas of e-government/e-governance are relatively new in contemporary society, but over the last few years they have gained in significance and have enjoyed rapid development. With the rise in e-government's popularity, various researchers have offered different definitions and concepts. The definitions differ among themselves mainly with respect to the focus of e-government: whether it is technology, business, citizens, etc. There is no doubt that all these elements are intertwined and only their further linkage and parallel development can lead to the successful implementation and sustainability of electronic government and electronic governance.

There are various definitions of electronic government and electronic governance.

According to the World Bank (2004), e-government "refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government". This method of information exchange between citizens and government used to be found only at public service desks in municipal administration settings. By introducing information technologies, it is possible to post all the required data on the web pages of public institutions, thus making them accessible to citizens regardless of official hours when the respective offices are open to the public.

OECD defines e-governance as a concept that "focuses on the use of new information and communication technologies (ICTs) by governments as applied to the full range of government functions" (OECD, 2001, p.2)

West (2004) defines e-government/e-governance as a simple and useful model for forwarding publicly relevant information and data using the internet. In his article, West stresses that as an asset for the public, because that would make information accessible even government offices are closed.

In the process of defining e-government / e-governance, Grönlund (2005) stresses that government has an obligation to ensure data accessibility to a broad segment of the public. He explains that by saying that in every society there are socio-economic distinctions, so that the data posted on government web pages must be simplified, i.e. written in a popular style. Adding to this, Scott says that it is very important to satisfy public needs and that he recommends that every government be citizen-oriented. (Scott et al., 2005)

The concepts of e-government and e-governance are often interchangeable. They are used as virtual synonyms in various research projects, although there is a slight difference between them.

Saxena (2005) suggested a fundamental difference between e-government and e-governance. He defined government as an institution which proposes, adopts, and implements concepts of governance on state or local community levels. On the other hand, governance need not have the support of government alone because it can also be promoted by non-government organizations, companies, etc. When government and governance are viewed only within the framework of state institutions, it may be concluded that governance refers to the implementation of decisions that have already been made, while government deals with decisions which are implemented through e-governance. The success of implementation characterizes and contributes to the quality of the services which are offered to the public. (Saxena, 2005)

UNESCO (2005) defined e-governance as follows: “Governance refers to the exercise of political, economic and administrative authority in the management of a country’s affairs, including citizens’ articulation of their interests and exercise of their legal rights and obligations. E-governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.”

The development of information and communication technologies has facilitated the establishment of a “new relationship” between state institutions and citizens, through the internet. According to the Council of Europe, the use of information technologies in the public sector (state and local governments) in the main refers to three areas of activity:

- “relations between the public authorities and civil society”
- “functioning of the public authorities at all stages of the democratic process (electronic democracy)”
- “the provision of public services (electronic public services)”

Based on the above definitions, it is clear that E-government and E-governance are two closely related concepts that cannot easily be separated because they are intertwined. The best explanation of that relationship was given by Saxena in the following sentence:

“Governments are specialized institutions that contribute to governance” (Saxena, 2005, p.2)

3.2 Kinds of e-governance

E-governance offers a new level of services by local and state administrations which are also relevant to the needs of citizens. E-governance is a reformed approach which stimulates the use of the internet by government bodies in order to satisfy citizen needs. This creates a new approach to institutions: they are now accessible anywhere to citizens, partners, and government officials.

Public administration is a complex social system which encompasses a variety of activities designed to satisfy a variety of needs. Long waiting for the exchange of information, services, and documents greatly hinders business and social development. That makes the quick development of e-governance a matter of immense significance. (Milovanovic, 2003)

According to Pascual (2003), there are four types of electronic administration:

- **Government to Government (G2G)** refers to the possibility of using internet services at all levels of administration in domestic and international affairs. The main forms of communication at the domestic level are between the central (republic) administration and local self-governing institutions, as well communication between state institutions. At the international level, G2G stands for inter-governmentary exchanges between various states and as such it is a useful international relations tool.
- **Government to Business (G2B)** refers to the exchange of business information, documents, and exercise of rights and privileges on the part of corporate and state entities. Services offered in this category include obtaining application forms, license requests, requests for company registration, tax payment, etc. Communication between government entities and business organizations is potentially one of the most significant contributions to making an economy more efficient.
- **Government to Citizens (G2C)** refers to the cooperation which takes place between government and citizens. The services citizens expect from government are paid for in this case in the form of an administrative tax and payment should be possible using the internet. The services that may be obtained in this category are most frequently the following: drivers' license, excerpts from birth, death, and marriage records, as well as downloading forms and applications in the areas of education, health, and culture.
- **Government to Employees (G2E)** refers to the use of information and communication technology to improve cooperation and coordination of employees in administrative institutions, as well as timely distribution of information, and the general facilitation of the information flow. This type of e-governance encompasses also various forms of employee training. Often when such services are introduced there is resistance on the part of employees

who are accustomed to the traditional way of doing their jobs. Inertia and lack of motivation to try new ways of doing business are always an obstacle. Therefore, modernization is a process which needs to be implemented carefully and wisely making sure that the needs and satisfaction of both the consumers and the participants are taken into account. (Pascual, 2003)

It may be concluded that no significant scientific and technical achievement has managed in such a brief period of time to influence change in the way of thinking, working, and living as internet has done. It is also exercising a transforming influence upon institutions of local government.

Internet influence upon local government has been interdisciplinary, and may be viewed from several angles:

- Economic, in terms of reduced cost of local administration.
- Sociological, by teaching citizens to use new technologies as a way to improve the quality of their lives.
- Psychological, by changing the way the contemporary businessman thinks.
- Cultural, technology becomes increasingly a part of everyday life.
- Technical, by applying contemporary methods of communication in relation to local government and in business relationships.
- Transparency, increases citizen overview and control over governmental bodies.
- Functionality, enhances the effectiveness of local government. (Pascual,2003)

All democratically elected political bodies on the verbal level advocate the creation of conditions that would improve the quality of citizens' lives. The administration and the state must constantly adapt their tasks and responsibilities to economic and social change. The aim of the state administration, based on e-governance principles, should be to help all clients and partners in any public institution to take part in the state administrative process through the internet. Representatives of state institutions, their clients, and partners, are a virtual society which participates in knowledge, responsibility, and shared tasks.

3.3 Citizens Relation Management

The governments of many countries strive to ensure a better life for their citizens. Many of them have concluded that their citizens have high expectations in terms of local services. The goal of every government is to create an effective administration at the least possible cost. The technological development of some of the services that were offered was not sufficient in itself to satisfy citizens' expectations. For that reason, legislative bodies

began to pay more attention to citizen-centric services. Such services were developed and offered based on a "Citizen Relation Management" model.

Citizen Relation Management (CRM) is a complex information system which is used in order to enable the citizen/consumer to communicate with a company, in this case e-governance, in a variety of ways. Communication takes place using various channels such as the internet, telephone, fax, e-mail, and the post. Integration of these activities, which require the telephone line, can be followed through the internet and vice versa, and a basic requirement is that there is a constantly maintained level of quality services. (Saremi, 2009)

E-governance may be viewed in the wider sense as a model of public administration based on intensive use of ICT aiming to offer the best possible services to citizens, companies, and other sectors of public administration, while improving internal processes by constant training and professionalization programs for employees. This definitely reduces administrative costs, but in some segments it may lead to excessive employee involvement because some citizen requests do require feedback. Citizen Relation Management may assist in overcoming these problems by helping employees centralize citizen requests in a unified data base, thus accelerating the resolution process. The CRM model is at the heart of the successfully implemented e-governance project. (Gandhi, 2001)

The concept of Citizen Relation Management began to be introduced in public administration when governments realized the utility of the digital revolution in rendering services to citizens and encouraging them to participate in issues of wide public interest. The model was taken over from the private sector and with some modifications it was adapted to the public sector as a key component of citizen public relations. This type of administration puts the citizen in the center of things, although public employees are also strategically important for the process of improvement of existing services. Employees are the link between citizens, as end users, and policy makers. The types of knowledge gained by public employees and policy makers through the use of the CRM model should enable public employees to respond more easily to citizen requests, to grasp their priorities, and to assess satisfaction criteria. There should be a continuous process of criteria reassessment because those factors can change rapidly. (Gandhi, 2001)

According to Sarema (2009), CRM should have been a "multi channel" which would make it possible for citizens to have a complete overview of e-administration services without any limitations or problems in accessing information. Services which satisfy citizen needs should be presented integrally at a web site, by means of a call center, or a unified desk where citizens can file their requests and also receive responses to them. That would avoid having to

go to different agencies for the response. Such a desk would be necessary only in the case that citizens are unable to find what interests them on the web page. The call center would offer assistance to citizens to find and fill out applications for services that are already offered on the web page. That also promotes cost cutting because fewer administrative employees will be required, while the quality of services would be improved. Through the existing “multi channel”, citizens would have a variety of options in accessing public administration, and that would also enhance the level of self-service. Thus, this model as well is oriented toward citizen needs and not to administrative or bureaucratic processes.

There are specific reasons why the CRM model improves the use of services destined for citizens, but at a lower cost:

- Multi channel enables a greater number of citizens to access information and services at the same time, which results in time saving.
- The web site is organized from the citizen’s perspective, to quickly and efficiently satisfy his needs, and as such it makes it possible for the citizen to send his request from a single location, i. e. the web page. Before, the citizen would have to visit several different offices in order to file their requests and receive a response. Administration is thus transformed from a “desk administration” into a “citizen oriented administration.”
- Multi channel also makes it possible to cut costs because the entire transaction is conducted using the internet and not manually, like before. But at the same time, the quality of service is improved.

The primary motive for introducing CRM is the variety of possibilities which this model offers to public administration. CRM has the potential to improve administration and government, to enhance internal communication, and to increase the number of options available to citizens who use the internet.

3.4 Condition conducive to the introduction of e-governance

The introduction of e-governance is not a simple process because it presumes that the social milieu is ready to accept the new form of governance and information sharing with citizens.

Krull (2002) according to World Bank claims that “To put ICT to effective use, a country must be “e-ready” in terms of infrastructure, the accessibility of ICT to the population at large, and the effect of the legal and regulatory framework on ICT use”. (Krull, 2002, p.10)

The electronic readiness of a country, for the introduction of e-governance, implies a level of social preparedness to accept the use of information and communication technologies to construct a better society. The use of such technologies also enhances interface possibilities with the global economy, something that can benefit every society.

The free and high quality flow of communications and information, as well as data management, are the essential conditions for the development of effective e-governance. It is important to gain the trust of those who use e-governance services that data accessible over the internet are secure and that privacy is adequately protected. That means that illegal hacking and abuse by criminal elements are thwarted. A strong and secure legal environment is vital for the success of a complex information and communication sector which, in turn, is an important precondition for a country’s economic development and stability. (Krull, 2002)

Readiness for the introduction of e-governance is not just in the domain of the government. When all the conditions for the introduction of e-governance are met (vision and infrastructure) it still remains to assess whether the society in question is prepared to accept the introduction of the new model. The readiness assessment refers to the institutional framework (human resources, budget, communication conditions and connections), as well as the readiness of the “ordinary people”- citizens, to accept e-governance. In order to have a satisfactory level of acceptance by citizens it is necessary to constantly point out the advantages and improved services which the new model offers. That comes down to a continuous campaign, in both the media and in direct communication with citizens. The initial resistance is something to be expected because citizens are accustomed to traditional methods of communication and it is natural that novelties will be met with a dose of skepticism.

According to The Working Group on E-government in the Developing World (2002), there are several factors which impact on the introduction of e-governance:

- **Telecommunications infrastructure.** That assumes the availability of telecommunication devices and computers. The quality and quantity of the needed devices depends on the e-government project. With some projects, significant ICT investments may be necessary at the national level to enable the infrastructure to sustain the project.
- **The degree of utilization of ICT infrastructure by the administration.** The level of utilization reflects the degree to which the administration is interested in managing new products which are in the process of implementation. It is important in this regard to consider whether the administration is setting up an infrastructure that is in line with international standards.
- **Human resources available to the administration.** It is vital to ensure experienced and trained ICT personnel in sufficient number. If human resources are at a satisfactory level, there is no need to subcontract part of the task to the private sector. That reduces administration costs.
- **The budget.** In order to properly integrate e-governance projects, adequate resources must be ensured. Of great importance also are independent agencies which would control the flow of funds destined for e-governance development.
- **Favorable e-business climate.** There are many factors which influence the creation of such a climate. Some of them are: current acceptance of e-business by the society at large, the legal framework, and information security. Technical factors are the introduction of electronic signatures and the possibility of electronic interaction.
- **Readiness on the part of government officials to accept e-governance.** Their endorsement is as important as that of citizens. Resistance to new technologies on the part of officials affects considerably the speed with which e-governance can be introduced.

There are three basic functions which administrations and governments must establish:

1. *Administration as a regulator.* Government as the supreme law making body, and therefore also the administration are responsible for formulating a national strategy for the correct use of information technologies. That means that suitable laws must be enacted. It is then necessary to ensure that those legal regulations are duly carried out.

2. *Administration as a helper.* The administration should assist the development and stimulate the use of information technologies. That removes developmental obstacles on both the societal and personal levels.
3. *The administration as a large scale ICT user.* In most countries the administration is the biggest user of ICT and as such it must take advantage of all communication facilities in order to reduce the cost of servicing citizens and enhance efficiency. As a large scale user, the administration can also assist in the development of the local ICT industry. (Krull, 2002)

Finally, in view of the foregoing, the following are the most important factors with regard to meeting the conditions that are necessary for the introduction of e-governance. In the first place is the political will which determines the setting of state priorities, one of which ought to be e-governance. The state administration is usually led by enterprising men, so leadership and strategic thinking should be some of the factors which should be an active part of the e-governance vision. Leadership is of particular importance here when it comes to integrating various aspects when setting up e-governance. In most state institutions, leaders are responsible for ensuring sufficient investments that are required for setting up e-governance and later for making sure that it develops evenly. Resistance may appear among the citizenry, but it is most likely to be in the ranks of officials who see innovations as a threat to their job security. Quick overcoming of resistance leads to a quicker establishment of e-governance. Also important in this regard is the participation of citizens and the economy in the process, as well as distrust of electronic services. Success is therefore predicated on removing these sources of resistance.

4.COMMUNICATION BETWEEN THE ADMINISTRATION AND CITIZENS

Citizens communicate with the administration following the principle of Government to Citizens (G2C). This communication model is also focused on satisfying the needs of citizens. There are three main forms of communication: Intranet, Extranet, and Internet. Which of them is used depends on whether citizens need information only or an official document issued by the e-governance. (Stankovic, 2005)

For the most part, applications offered to the citizens within this system of communication are quite simple. In some applications the system can notify the user that data have already been partially entered, so that the user only needs to fill out the remainder. Of great assistance to citizens are offers with prepared responses which only need to be checked

off. Within the form there is also an integrated instruction manual to assist the user. Citizens can obtain all the necessary information and applications through the web portal. They can fill out all the applications on the web portal, they can receive the necessary integrated assistance there as well, and also feedback about the missing data in order to be able to complete the form properly. The portals are set up and organized in a way that takes account of their function, the community in which they operate, and the services offered to the citizens. A section is set aside on the portal for dialogue between citizens and the administration. In the dialogue window the citizens can leave their suggestions, complaints, questions, and requests.

4.1 A review of citizens –administration communications methods

When introducing further improvements in e-governance, the image projected by the collaboration of the administration with citizens should be noted. That implies that services to citizens shall be rendered in a timely fashion and that their quality will be on an acceptable level regardless of the channel of communication which happens to be used. Internet is just one of those possibilities because there are also the telephone, fax, email, and personal services.

In order to gain citizen trust, the accessibility and security of the technologies used must be at a very high technical level.

According to Andrejic (2005), communication methods between the citizens and the administration may include intranet, extranet, mobile telephone internet (GPRS – General Packet Radio Service), and call centers.

- Intranet is the common internal administration network containing a unified data base for citizens and institutions on the administered territory. It makes possible enormous budgetary savings and it eliminates reliance on paper while making it possible for citizens to conduct their business at a single administrative counter.
- Extranet enables citizens to file requests and receive information by using the internet or certain designated offices (banks, post offices, stores, etc.). Extranet reduces counter congestion resulting in savings in the course of conducting business.
- The internet facilitates access by administration personnel to a vast store of knowledge and it also makes it possible for them to portray themselves and their work to citizens, enabling the latter to comment. That increases the scope of services and information available to citizens. The administration finds the internet useful in several respects:

the personnel are better informed and more efficient and the budget is burdened to a lesser extent. Citizens can follow the activities of the administration and because of the transparency feature they can post their comments.

- The telephone, mobile phone (GPRS), and fax. GPRS technology enables citizens to communicate with the e-governance by using mobile phones. This type of communication is called m-governance and it is still not widely used in most countries. The increasing use of mobile phones in everyday life indicates that this model will soon begin to spread. The use of GPRS technology has advantages similar to the use of the internet: less data processing time, 24 hour access to services, less paperwork, and greater efficiency. However, from the citizens' standpoint this model does have some defects, such as a greater likelihood of abuse, the entire country may not be covered by the mobile telephone signal, and the risk of system breakdown.
- Call centers came into being with the development of technology and integration of the internet as a system for servicing citizens' needs. The development of call centers is a response to market requirements because it is the users that decide what services the call centers will offer. This is, in effect, a modern contact center which citizens use to satisfy their needs with respect to public utilities issues and issues involving the administration of their communities. The citizen forwards his request using the phone, although the internet option is also available. The subject matter is mainly complaints, requests, suggestions, information, and notices of citizens directed to administrators at some level. The point of the call center is that the entire record and the communication are located at a single place – the call center.

5. A REVIEW OF THE APPLICATION OF DOING BUSINESS ELECTRONICALLY IN PUBLIC ADMINISTRATION IN SERBIA

5.1. Internet use in Serbia and future trends

Frequent references are made to internet's enormous influence on everyday life, work, and entertainment. Even though that is obviously true, there are few studies that deal with its influence on society and human development in Serbia. The study completed by the Boston Consulting Group (2009) was comprehensive and it focused on the use of the internet regardless of the form of access (mobile, fixed, wireless, etc.).

According to this study, the model that was used was particularly applicable to households and business users. In this study, internet cost referred mainly to the expense associated with hooking up, subscribing, and servicing. Research has shown that about 31% of Serbian households use the internet. Of interest also are facts relative to the rate of growth of internet usage in households, which increased by 34% between 2006 and 2008. In Serbia the internet is experiencing quick growth because it is estimated that the density of internet use will reach 42 users per 100 inhabitants by the year 2020. Such increased internet density could set the stage for better economic development. Research data suggest that even this growth rate might increase gross national product by 5,2%. The greater part of this increase was made possible because of the increased productivity of internet users in the service sector and in industry. Serbia is advancing at a similar pace with other countries in the region such as Bulgaria, Bosnia, and Romania, but it is behind the leading countries such as Slovenia, Macedonia, and Croatia. The level of increase in internet use in the leading countries of the region is 49%, which is also below the European average.

Boston Consulting Group (2009) research shows that by the year 2020, Serbia should have about 3 million subscribers, which suggests a serious growth rate. As far as households are concerned, by 2020 about 81% of households should be connected to the internet. The level of internet use in the business setting is somewhat higher and reaches 95%. The geographic location of the household (whether it is urban or rural) is shown to have an influence on growth in the number of subscribers. As may be expected, in rural households the rate of growth will be lower because of slower infrastructure development and the fact that rural dwellers demonstrate less interest in new technologies. Statistics show that internet use in Belgrade households is the highest, at 37%, while in Vojvodina it is 23%, and in Central Serbia it is at its lowest level at 16%.

The social benefit of the internet is equally essential as is its influence on economic growth. The areas which can benefit the most are education, health, and rural communities. All those areas can be placed under the common “roof” of local administration. The administration can serve as the center from which influence is exerted on defined areas within the larger social community. As education is a priority area for every government, the internet can enhance access to educational opportunities in many ways and raise their quality. The internet can also play a useful role in health by making health solutions more easily accessible to citizens. The internet can also play a significant role in the development of rural

communities which in Serbia are unfairly neglected by making local administration services more readily available to rural dweller.

5.2. The current state of e-governance in Serbia

5.2.1 Statistical data on the state of e-governance

The current condition of electronic governance in Serbia is not at an enviable level if we consider data offered by the Republic Statistical Bureau (2009). Their research shows that only 12,9% of the population which uses the internet also takes advantage of e-governance electronic services. Of the total number of respondents, 51,1% are interested in using such services, while 36% are not interested in using them. The number of e-services users has increased by 25,000 in relation to 2008.

With regard to businesses, the situation is somewhat better as 69% of companies use e-governance services. That is a significant 20% improvement compared to 2006. There is a logical explanation for that increase. The economy and business are increasingly dependent on information technologies because ICT offers time savings, less paperwork, and decreased overhead expenses. Companies use e-governance most frequently for information gathering purposes (95% of the respondent businesses) while 86% of the companies use e-administration to obtain the required forms. Companies use e-governance services the least often for filing forms. Their responses show that they trust the process the most if they return filled out forms personally to a counter employee. In all, only 47% of the companies do their filing electronically.

5.2.2 A review of the current state of e-governance in Serbia based on the quality of services

Service quality is assessed based on regulations and methodology applied in the European Union (EU). The methodology adopted by EU is applicable to member countries, plus Norway, Switzerland, Island, and Turkey. Parameters used to measure the quality of e-governance are set from the perspective of citizens, companies, and the administration. The European Commission views the matter from the standpoint of service sophistication, on-line accessibility, user friendliness, and the quality of the portal used by the administration. According to Markovic et al. (2008) these are the criteria used:

- Service sophistication refers to the level of quality accessible to citizens and companies. Sophistication is measured on a scale of 1 to 5, where 1 is the lowest and 5 is the highest level. Level 1 gives the user the possibility to obtain information only; at level 2 the user can obtain forms, but cannot file them electronically and must switch to personal contact in what may be considered one-way communication; at the 3rd level there is two-way communication and the possibility of electronic filing; at the fourth level the entire process is accessible electronically, from the filing of the request to obtaining the final decision, all electronically. The highest level of sophistication is the fifth, or “personalization.” This is the level of active communication between the citizen and the administration, accompanied by very good interaction.
- Full on-line accessibility is defined as the ability to access all information and e-governance services electronically. Personal and written communications are excluded. If the level of sophistication exceeds 3, it is assumed that full on-line accessibility is available.
- User orientation is assessed with respect to several elements: privacy must be protected, a multiplicity of users should be able to have simultaneous access, and there should be no privileged treatment for service beneficiaries.
- A national portal is defined as an integrated system which handles all services offered to the users in electronic format. The portal must satisfy the criteria of data security and it must be user friendly. It is important that the portal should support interactive communication of users and the administration, as well as contain a dynamic content. (Markovic et al., 2008)

The above criteria are the model which the Republic Statistical Bureau used in conducting its study of the level e-governance service sophistication.

According to Republic Statistical Bureau data (2009), it is clear that the level of sophistication has increased by comparison to 2008. In 2009, that level was 51% while in 2008 it was 47%. The improvement was due to an increase in the level of sophistication of individual services such as: electronic real estate register, company income registration, unemployment assistance, and public libraries. In Serbia, the most sophisticated services (fourth level) are employment bureaus, public libraries, customs declarations, and the corporate register.

When the sophistication level is viewed from the standpoint of local administration, the best results are seen with respect to birth certificates. That service is at level 3 (34%). For the moment that is highest level attained by local self government bodies when it is taken into consideration that level 4 requires the use of electronic signatures, which the majority of local e-governance are unable to support at the moment.

If sophistication levels for corporate entities (58%) and individual citizens (44%) are viewed separately, it is clear that the level is higher for the former. That is not the case just in Serbia, but also in other countries where similar surveys have been conducted. The surveys also show that Serbia is considerably behind EU countries where the average level of sophistication was 83% in 2009, while in Serbia it was only 46%. Serbia is in that respect also behind some relatively developed countries in the region, such as Croatia with an average level of 55%. (Republic Statistical Bureau, 2009)

5.2.3. The best ICT practice in Serbia

The Government of Serbia is working to improve the quality of e-governance through its ministries, of which the Ministry of Communication is playing the principal role in this effort. In 2006 the ministry adopted a Development strategy for the information society where one of the priorities is the efficient and effective development of e-governance. Based on that strategy, the Faculty of Electronics in Nish conducted a study of the best e-governance in Serbia.

In developed countries a broad spectrum of methods is used to assess the performance of e-governance. Most often, the methods used rely on the number of services that are offered electronically, user satisfaction, rate of customer increase, degree of cost relief, etc. Since the level of development of e-governance in Serbia is under the European average, the survey conducted by the Faculty of Electronics used a reduced number of criteria. The basic criterion used was the quality of services offered to citizens and corporate entities and the effectiveness of internal communication within the administering body. (Stoimenov et al., 2009)

5.2.3.1 Example of a good e-governance for citizens

The City of Krusevac is a good example of a web portal organized to serve citizens. Citizens have quick and efficient electronic access to information and forms. All citizens have access, with some limitations based on the kind of information or data sought. (Stoimenov et al., 2009) Limitations have to do with security checks that need to be performed depending on

the kind of data that is requested. The city administration offers e-services in the areas of urban affairs, voting issues, and birth records. The reason why the e-government project was introduced in Krusevac was that citizen applications were taking too long to resolve and in order to obtain a needed document citizens had to visit many different offices, resulting in great dissatisfaction. Some branches of the city administration were already using e-government systems, but only internally. Now this is available to all citizens and the project has taken on a life of its own.

System users are local government employees and citizens. The number of citizens using the system is satisfactory, on the average about 20 per month. The security check requirement for some services is satisfied by using a personal ID number. (Stoimenov et al., 2009)

The advantage of this form of communication lies in reduced cost for all sides, as well as efficiency and transparency. Citizen satisfaction has increased, thus achieving the project's ultimate goal. It is expected that the number of citizens who will be coming to the municipal building to obtain information and documents will be steadily declining.



Figure No 1: Krusevac Municipality Portal (Krusevac Municipality web page, 2010)

5.2.3.2 Example of a good e-governance for corporate entities

The biggest problem facing Indjija Municipality was the non-existence of records for land parcels and infrastructure in electronic form. Documents of this type existed only in paper form and were accessible only to officials. In order to facilitate access to corporate entities and make the job of municipal employees easier, a new system was introduced: Geographic Information System (GIS). The need for a GIS system became apparent when a large number of investors expressed a desire to invest their resources in the municipality of Indjija. The system enables citizens to have insight into building regulations and the records that are associated with it. (Stoimenov et al., 2009)

Both, citizens and corporate entities, benefitted from this system. Big investors now easily obtain the information and documents they need, and so do citizens who desire to invest in housing. The beneficiaries may be divided into internal and external users. The former are employees of government agencies, while the latter are companies and citizens. The system unfortunately does not keep track of the number of users. The degree of cost cutting the system has made possible is also at present not precisely known. (Stoimenov et al., 2009)

5.2.3.3 Example of a good e-governance system in the internal services category

The best example in this category is Vranje Municipality which has managed by using the Virtual Private Network (VPN) to link disparate administrative services in a unified information system. The basic idea was to unify service providers located in different parts of town.

The problem in Vranje arose due to the slow response of government bureaus which were widely dispersed to citizen requests and applications. Since the administration receives about 30,000 requests of different kinds, citizens were obliged to file them first at the central municipal counter. If the office that was designated to respond was located in another part of town, several days were lost while the paperwork was making its way to the proper employee who would be able to attend to it. Sometimes citizens had to wait several weeks for the simplest matter to be resolved. Inter-office communication was poor due to geographic factors. The introduction of VPN solved these problems and it proved to be a very useful

model of internal communication which was also applicable to other local government bodies in Serbia. (Stoimenov et al., 2009)

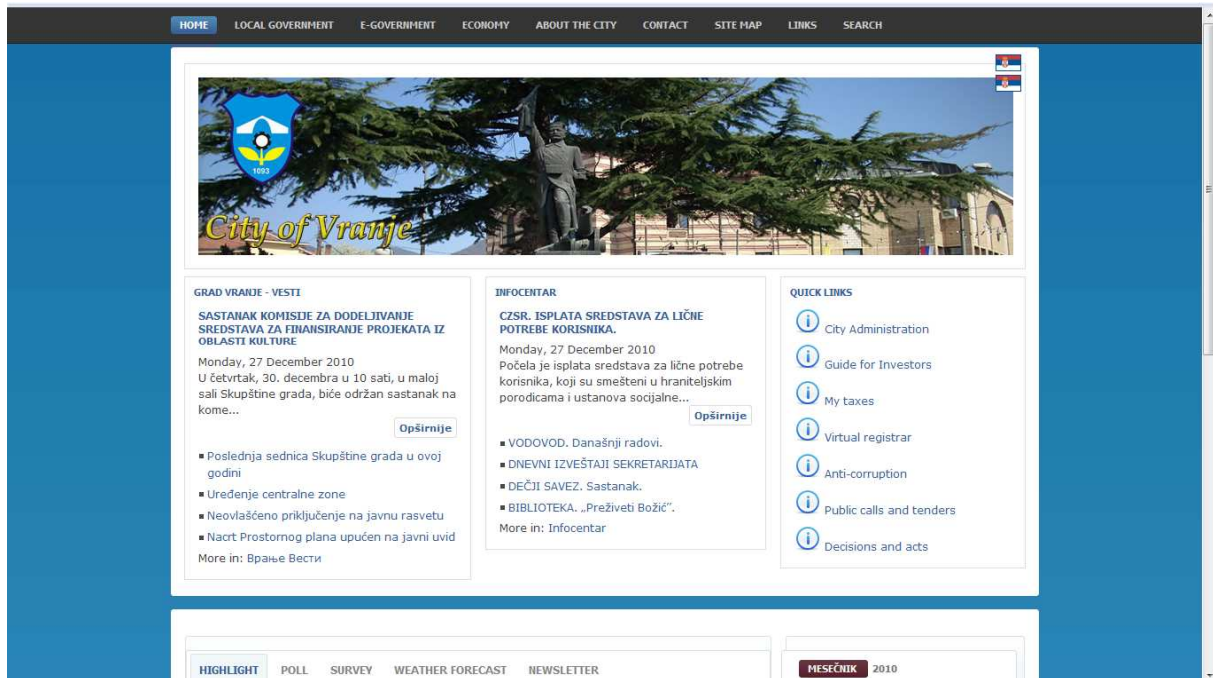


Figure No 2: Vranje Municipality Portal (Vranje Municipality web page, 2010)

6. METHODOLOGY

A research project must operate with a clearly defined methodology which is used in the collection and processing of data. The approach depends on the subject matter. But regardless of the methodology selected, it is necessary to answer two questions. How were the data collected? How were they organized? The answers to these questions constitute the research approach, also known as research strategy or method.

6.1 Research propose

There are several classifications of research purpose, but the simplest is the one that was offered by Aaker et al. (1998). According to him, there are three basic categories: exploratory, descriptive, and causal. Yin (1994) pointed out the necessity of such a classification depending on the purpose for which the research results will be used, the

phenomena we intend to study, the hypotheses used, and the way the resulting data are processed or organized.

Exploratory research is used when the issue or phenomenon is viewed from a general perspective and when it is not necessary to go too deep into the essence of the matter. Such a method is very flexible and based mainly on the use of qualitative methods. The use of this approach enables us to obtain as much data as possible regardless of the fact that the issue is viewed rather “superficially” and mainly using interviews as the basic tool. This approach lacks a clearly defined structure so that the implementation of new ideas is made easier and it is possible to arrive at some conclusions which may not have been predicted easily at the beginning of the research. (Aaker et al., 1998)

The descriptive method is used when we are studying interpersonal relations or events or phenomena which occur against that background. This approach is used when the phenomenon under study is evident and it is not necessary to investigate its causes. Here, we draw conclusions of a general nature based on empirical experience. (Aaker et al., 1998)

The causal method is a way to investigate a phenomenon’s or event’s causes. Account is taken of the reasons for their interrelatedness. Data obtained by this method are very useful in complementing empirical experience and conclusions arrived at by the use of the descriptive method. (Aaker et al., 1998)

In my research I used the exploratory methodology because it was the most appropriate in relation to the theoretical aspect of my work and the structure of the questions in the questionnaire.

There are also some disadvantages when using the case study method. According to Yin (1994), the most common are the following limitations:

- 1) Researchers’ negligence causing lack a precise and accurate presentation of the research results. It is possible that research results are ambiguous and researchers influence direct research process. This causes a very subjective analysis of the results.

- 2) Another problem occurs when it comes to generalization of certain phenomenon. Relatively small number of samples makes this generalization imprecise. There is always doubt how the small sample can be recognized as a part of a larger pattern.

- 3) Case study generally requires extensive data in a long period of time and this can lead to problems in the organization of the documentation collected. As a result of a bad organization of collected data, the conclusion can be imprecise and unreliable. (Yin, 1994)

6.2 Research approach

This approach encompasses a choice of research questions, a conceptual framework within which the investigation is being conducted, and a choice of research methods. The choice of method to be used depends on the phenomenon or issue under consideration and on the goals that the researcher has decided to achieve. Therefore, the research approach can be articulated through two methods: quantitative and qualitative. Both methods have advantages and disadvantages, as well as differences in their respective approaches. (Yin, 1994)

The quantitative method is based on the numerical elaboration of data obtained from observation of the research subject. In the social sciences, this method can be represented as the numerical relationship of one thing (or variable) which is independent and another variable which is dependent upon the first in a given social context. At the end of the investigation the results are most often depicted in the form of graphs and tables. The quantitative method may be descriptive or experimental. When applying the descriptive method the variable is measured only once, while when the experimental method is practiced the variable is measured before and after performing an experiment. The experimental method may give rise to cause and effect relationships between variables, while the descriptive approach requires only the relationship between the variables to be measured. In most cases, the results obtained from the use of the quantitative method can be generalized and applied to other phenomena and issues. This research method is very useful when it is necessary to take into account a multiplicity of factors which exert an influence over a phenomenon or a problem. (Yin, 1994)

According to Leedy and Ormrod (2005) the qualitative method is used mostly when it is necessary to study the complexity of some phenomenon and to answer questions from the standpoint of the participant. The resulting picture is “tainted” by the subjectivity of the researcher, his feelings, and impressions. The qualitative method may also be affected by the socio-economic condition, social norms, gender, religion, and ethnic affiliation, although these influences may not be particularly apparent. In the process of data collection, the researcher should endeavour to have a close relationship with the respondents in order to extract as much information as possible from the target group. For information gathering purposes, interview and participant observation are the most frequent approaches in the case study context.

This project is based on a review of literature and background information which assist in interpreting and analyzing data obtained in the course of the research. The research strategy is to use the qualitative method, applied to a case study.

According to Yin (1994), case study is a good approach when researching certain phenomena and when we wish to obtain answers to questions “how” and “why”. He adds that the case study approach is also suitable in situations where there is a lack of statistical data and theory about a particular topic. On the other hand, case study facilitates a multi-dimensional picture of a given issue, by means of surveying populations of various social profiles. (Yin, 1994)

The advantage of case study is that it can be selectively choose certain area within a wider context, or we can opt for a particular target group within the overall population that certain actors appear. It is important to us, our choice is an appropriate subject and thereby contribute to the ease of understanding the problems of research. In the case study analysis is possible to process only a single and unique case or it is possible to use multiple case study. One case study is recommended when one wants to enter the deep core of the problem and a detailed analysis of certain phenomena. This approach at first glance seems simple but cannot obtain sufficient relevant data. Most investigations on case study approach are based on observation and analysis of two or more case studies and their cross-case comparison can get more relevant results of the survey. (Yin, 1994)

Case study approach certainly gives an answer to the question "how" and "why" and the results present the advantages and disadvantages of certain phenomena. The results obtained appear in real life context, and this is an empirical study of clear boundaries between phenomena and real-life context are not obvious.

Research strategy here will be based on multiple case study. According to Yin (1994), that could be a somewhat risky choice because of the possibility that one case study might be subjected to much closer analysis than the other, and vice versa. A better familiarity with a certain phenomenon can also affect the quality of analysis and explication of that case study in relation to the other one. However, overall multiple case study is a better approach because it confers greater value on the results because they were obtained through a comparison of two similar or diametrically contrasting cases.

6.3 Sample selection

Sample selection represents a choice of a small number of samples from the whole population that is being researched. On the basis of these chosen samples researchers make their conclusions about a certain phenomenon. Since the research is almost not possible on a big number of samples, sample selection is a good method for simpler research. By examining

only a certain group of a population, time needed for research can be shortened and costs can be reduced. (Yin, 1994)

Sample selection is done by using research questions and objectives. The basic criterion for selection is to obtain as detailed answers as possible. Since samples cannot be the ideal representatives of a whole population, results cannot be generalized with a complete certainty. (Yin, 1994)

In my research, sample selection method was applied on a population in two municipalities- Cacak and Indjija. The leadership of both municipalities has been trying to advance existing e-services and also to introduce some new e-services. There are many challenges faced by both, the citizens of municipalities and the clerks working in public services, who are also responsible for coordination between the citizens and the leadership. The main goal of this research is to present the level of satisfaction of the citizens with the existing services and to introduce possible suggestions for their advancement.

The number of samples has been determined with precision. I tried to focus on respondents who are young or middle aged because they are the most likely to know something about information technologies, and they tend to be more interested in e-services and innovations in general. The total number of respondents was 30 from each of the municipalities, all of them willing to contribute to the survey.

Results obtained by means of informal interviews and questionnaires have been classified so it was easier to analyze them. Finally, the results are subjected to analysis and conclusions are drawn.

6.4 Data Collection

The choice of data collection methodology is an essential factor during the research process. As Yin (1994) points out, it is precisely the case study approach that leaves us the possibility to use various sources while collecting data. It should be stressed that here there are not some sources that are significantly better than others. Various sources complement each other and thus enhance the validity of the results. These are the three of the most important data sources: documents, interview/questionnaires, and direct observation of phenomena and participants. In this research are used documents, informal interviews and questionnaires. The characteristics of some methods of data collection will be briefly discussed.

Since I applied the qualitative method, Leedy and Ormrod (2005) define its main characteristics. It is used for the most part when it is necessary to research a phenomenon's complexity, the focus being on the participant's point of view (observations, impressions, criticisms, and attitude). This is usually a flexible method because the relationship between the researcher and the participant is not strictly formal. Open-ended questions also enhance flexibility because they enable the participant to give more complex answers, and not just "yes" and "no". There are also some close-ended questions included to simplify data analysis.

Open-ended questions make it possible for respondents to reply without any limits to the questions put to them and they thus offer wide freedom in formulating answers. Such questions are very useful in wide spectrum responses so that some phenomena can be explained better. One of the advantages of open-ended questions is also the fact that the subjectivity and interference on the part of the surveyor are reduced to a minimum. The drawback of such questions is that the responses must encompass all possibilities although they need not be wordy. A long list can confuse the respondent. (Leedy and Ormrod, 2005)

Research into citizen attitudes about the successful performance of local e-governance is conducted using questionnaires and informal open-ended semi-structured interviews with citizens. I opted for informal semi-structured interviews because of that form's flexibility and the opportunity it offers for obtaining detailed responses, while the questionnaire is a reliable tool for canvassing a large number of responders. (Yin, 1994) Informal interviews were a secondary method because they were performed incidentally with citizens which just happened to be on the municipal premises but who were not necessarily using administration services. Yin (1994) pointed out that interviews have the drawback that questions may be badly formulated or may be what is known as leading questions. I took great care to avoid these pitfalls. All informal interviews and questionnaires were conducted with citizens within both municipalities.

6.5 Data analysis

Prior to any data analysis, it is necessary that questions about specific characteristic of local e-governance and in regard to the research topic be fully understood. Moreover, it is important that theoretical framework be carefully examined so that an adequate analysis could be carried out properly later on.

When it comes to qualitative data analysis, an inductive method is highly useful as this is a good way to connect observation with theory. According to Bryman (2004), for an

analysis of qualitative data a good tool may be a grounded theory as more information can be obtained and be on disposal for carrying back and forth prior to the final stage of the analysis.

Aaker et al. (1998) described the above approach in its several phases:

- organizing a data base (most typically)
- reading and analysis of entered data in order to identify the common thread
- categorization in terms of subgroups in which data are distributed
- linking data and making it understandable to the reader, who may not be deeply versed in the research topic (data are simplified to accommodate the average reader). In this phase, linkages are made between different categories and data are represented by means of diagrams, graphs, tables, etc.

In the data organization phase a data reduction process takes place and only those data are aside to be used which are considered to be valid and capable of leading to a clear conclusion. That implies data paraphrasing and summarization. In my case, it implies that questionnaires are made as clear as possible so that the reader would understand unambiguously what they are referring to.

The final phase is the drawing of conclusions. Assuming the preceding phases were performed correctly, at this stage the researcher explains what meaning is to be attached to certain things and compares the data that were obtained to the theoretical aspect. The conclusion should be simple and clear. (Yin, 1994)

In any quality research, the subjective perceptions of the researcher inevitably play a role. (Aaker et al.,1998) I therefore strive to put aside my position and expectations as much as possible as I offer a final data analysis and I tried to convey the results as accurately as possible.

7. EMPIRICAL DATA

Empirical data is the portion where data for both municipalities that were the subjects of this research will be presented relating to citizen experiences with the two respective e-governance.

7.1 Description of study area - Cacak and Indjija Municipality

The first study area is Cacak Municipality, located in western Serbia. It is one of the economically most developed municipalities in that part of the country. The fact that the municipality is fairly advanced economically, but that e-governance is lagging behind is what stimulated me to select this as the topic of my research. (Stoimenov et al., 2009)

The municipality's area is 636 square kilometers, and according to the 2002 census its population was 117,072. Cacak is considered the regional economic hub with a considerable number of small and medium sized enterprises which are doing well in spite of the economic crisis. Nevertheless, the municipality's relatively good level of economic development and sound business environment have not encouraged the introduction of more e-services on the municipal web page. Services and information of significance to the public which have already been posted relate mainly to private individuals. At present the following data are accessible: birth, marriage and death certificates, and citizenship certificate, which may be obtained by filling out on line electronic forms. Access to voters' lists is also available.

The second study focus is Indjija Municipality in the north of Serbia. It belongs to the Autonomous Province of Vojvodina. According to the 2002 census, the municipality comprises 384 square kilometers and has a population of 49,609 inhabitants. Indjija is a very developed municipality in Vojvodina and has been since the last century because of the geographic location along the road that links Novi Sad to Belgrade on one side, and Belgrade to Zagreb on the other. Today these are important regional and international roads. Unemployment in the municipality is 11%, which is below the nation-wide average of 15,6% in 2009. The ability of the municipal leadership to attract foreign investors has made Indjija one of the most developed communities in Serbia. Good marketing strategies have made it a popular and recognizable venue. From the standpoint of e-services, Indjija is a leader in the introduction of new technologies as shown by surveys of the most advanced ICT practices in Serbia.

Since Serbia did sign the Aarhus convention on 31 July, 2009 (UNECE, 2010), there are no impediments to information of public significance being made available to citizens. The Aarhus convention defines a direct relationship between government and citizens in relation to government "accountability, transparency and responsiveness".

Based on the foregoing (satisfactory level of economic development in the municipalities, Serbia is a signatory of the Aarhus convention...) it was useful to find out why e-governance in Cacak and Indjija are on the certain level of sophistication.



Figure No 3: Serbia- map (World Sites Atlas, 2011)

7.2 Cacak Municipality Portal

The Cacak municipality portal offers a variety of services the majority of which are online information only. In addition to information, some documents and forms are also accessible and can easily be downloaded. Some of the forms (birth, death, and marriage certificate transcripts) can be filled in online and forwarded to the appropriate office. There seven main categories on the portal: Get to know Cacak, City council, Administration, E-Governance, Economy, Nature protection and Contacts. There is a user-friendly submenu in

each category. In the E-Governance category there are some scant offerings, including forms, transcripts of birth, death, and marriage certificates, citizenship certificate, and site map. The municipal portal is clear and serves its purpose. It offers the option of clicking on to external links of related organizations and companies. There is also a clearly visible banner for filing complaints about municipal services. Complaints are filed following the principle of online applications; links and forms are easy to notice and fill in and, in general, the presentation is user-friendly.

According to the degree of sophistication, the e-governance is at the third level, i.e. of two-way communication. The first level of communication is the possibility of accessing certain data bases and obtaining information about the city government. The second level of sophistication means that the Cacak municipality portal allows for the downloading of certain documents, filling them out, and filing them personally, which is called “one-way communication.” At this level there is no electronic feedback. These criteria which refer to the levels of sophistication reflect European Commission standards. (Stoimenov et al., 2009)

There is also in this municipality a program for developing a human resources management system based on the EU model for improved local government. A systemic approach to human resource management is a basic challenge in the efficient functioning of local self-government. The municipality seems to be very keen to improve services that are offered to citizens but much more investment is required to make the services interactive.



Figure No 4: Cacak Municipality Portal (Cacak Municipality web page, 2010)

7.3 Indjija Municipality Portal

At first glance, the Indjija municipality portal appears very dynamic and offers plentiful information. In the main menu there are links for a welcome message, citizens, local self-government, the economy, public utilities, gallery, and e-governance. On the home page (welcome) there is information of general interest about the city and its administration such as: facts about Indjija, current events, service information, documents, presentations, development plan to 2015, and current municipal plans and projects. A portion of the menu is dedicated to specific needs such as health, education, transcripts of various certificates, etc.

There are two new projects here which have begun to function nowhere else but in Indjija: mobile-governance (m-governance)⁴ and “system 48”. Following the definition of Kerala government, m-governance is: “The strategy and implementation involving the utilization of all kinds of wireless and mobile technology services, applications and devices for improving benefits for citizens, business and all Government units” (Achuthanandan, 2010, p.1). In Indjija m-governance is conceived so that all participants who own mobile phones are enabled to use them to order the desired documents from the municipal administration. All payments, administrative taxes, and service charges are paid using the mobile phone. This service is in a developing phase so that currently only the birth certificate can be obtained.

“System 48” is unique in Europe and it enables citizens to solve certain problems within 48 hours. It makes the municipal government more efficient and offers better supervision of public utilities. Citizen problems which have to do with public utilities are resolved efficiently. The problem is communicated by calling a single call-center, by a personal visit to the city administration, or by filling in an online application available on the municipal portal. If citizens choose to visit the administration personally, Citizens Assistance Service will help them to complete the procedure. Citizens who are using the municipal web portal select the method by which they wish to receive the response: mobile phone message, telephone call, or email. The service is available to citizens 24 hours, 365 days out of the year. Its implementation puts Indjija in the ranks of the most developed municipalities and it has brought a saving of about 10 % to the municipal budget.

By using e-governance, it is possible on the municipal portal to obtain all the standard certificate transcripts, to check the status of various files, financial card information in public

⁴ M-governance makes electronic services within municipalities available via mobile technologies using, for example, mobile phone. (Achuthanandan, 2010)

utilities, and to download document forms. Indjija is the first municipality to introduce the GIS system which was very useful in attracting investments to the region. For that reason, Indjija is considered a very advanced municipality with regard to its e-government for corporate entities.

There are banners on the municipal portal which put citizens in touch with important services and companies. There is a banner for communicating with the president of the municipality and directors of public utilities entitled “ask the president”. The public has reacted very favorably to that transparent approach by the local government which is trying to be in step with technology. Citizens are usually consulted on the portal about issues of wide interest. The current question is: What should be the municipality’s investment priorities? By responding, citizens have an input in the decision making process and community participation is enhanced.

Service sophisticated places Indjija at level three, which means that requests can be made and responses received electronically. That is an example of two-way communication.

Indjija’s internet presentation is esthetically well organized and it features all the necessary data about the municipality. Interactive options are obvious as soon as the site appears on the screen. The facility of communication has the effect of increasing citizen satisfaction and thus making the work of e-governance more efficient.



Figure No 5: Indjija Municipality Portal (Indjija Municipality web page, 2010)

7.4 Survey results

It is difficult to appreciate fully a community's needs and problems unless the researcher is also a part of that community. Since I lived in Serbia until three years ago and I was actively involved in social affairs and know through personal experience how the system works, that may make the results of my research a bit more valid. I point that out because the focus is on the qualitative method and numbers do not play the key role in that. In my case, being able to explain a phenomenon using the qualitative method is an advantage because I am familiar with the way the system in Serbia functions as well as with the characteristics and psychology of the people from that region. On the other hand, in this case there is always the possibility that the interpretation of the results would be subjective. I have made a deliberate effort to be as professional and objective as possible.

My research encompassed 30 respondents from each of the municipalities. The gender, age, and educational structures varied, as well as ICT literacy. The research in Indjija Municipality has been done 1 November 2010 and 2 November 2010, while the research in Cacak Municipality has been done 14 June 2010 and 15 June 2010. The respondents interviewed consisted of the inhabitants visiting the municipal buildings. That was an ideal opportunity and environment to find out about the citizens awareness and satisfaction with the existing e-services. Everyone interested in the research received a simple questionnaire. Additionally, I carried out informal oral interviews with the same respondents. The informal interviews were very helpful in cases where the answers in the questionnaires were not completely clear. They provided me with more precise information. When summarizing the results of questionnaires and informal interviews, I noticed that the responses were very different as well as the citizens' improvement recommendations. I will present the results based on objectives which in the questionnaire are divided into several parts. Each part defining relevant questions and relates to a relevant issue:

- Access issue covers the questions relating to Internet usage. Since the use of e-governance presupposes access to the Internet, it is important to find out how often citizens use the Internet.
- Level of awareness. (The level of awareness of existing services offered by the local government through its official internet site)
- Level of trust in the services offered through the official municipal website.
- Citizen satisfaction with existing e-services.

- Problems encountered by citizens as they use existing e-services.
- Recommendations for enhancing e-governance on the local level.

Of the total number of questionnaires, all could be used since all respondents were willing to participate in the survey. They believed that somehow the results would be communicated to the municipal leadership and thus help to improve government to citizen communication. The results will first be presented using numerical values because I want to point out the respondents' age and educational structure.

In the Cacak municipality male respondents were in the majority (17)⁵ while females were somewhat less represented (13). In Indjija the situation was similar, but there were a bit fewer males (16) and more females (14).

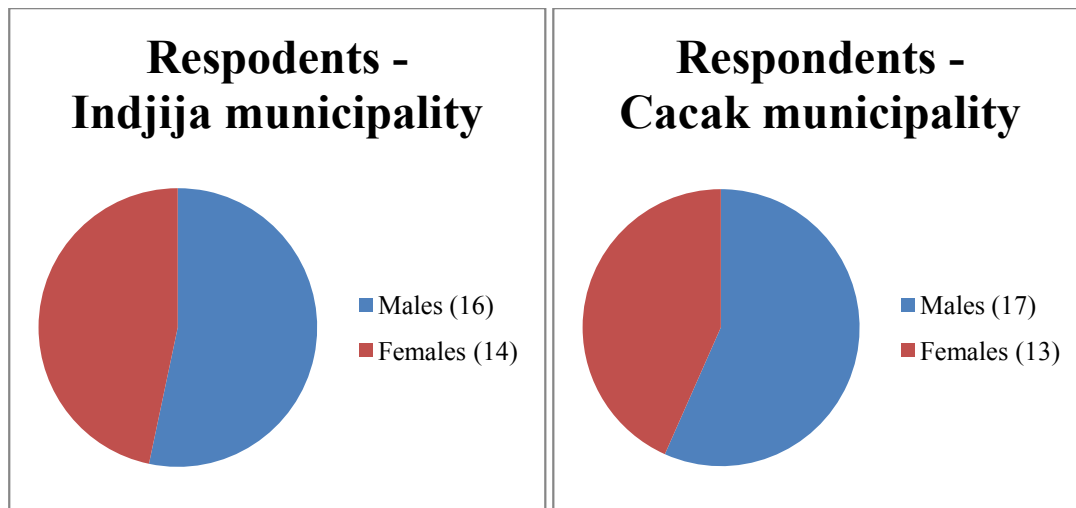


Figure No 6: Survey response by gender

When I analyzed the age of the respondents, I came to the following data. In Cacak municipality, the fewest respondents were in the over 50 group (1), while there were more young ones between 15 – 20 (4). Results for middle aged citizens were distributed as follows: a similar number of citizens (8) were age 31 – 40 and 26 – 30. The number in the 41 – 50 age category was not great (5). Similar was the number in the 21 – 25 category (4). Results for Indjija show that among the respondents there were none who were over 50, while somewhat more than in Cacak were in the middle age category: age 26 – 30 (9) and 31 – 40 (11). The youngest of the lot were not very numerous: the 15 – 20 age group (1) and 21 – 25 (2). The 41 – 50 age group was represented by 7 respondents.

⁵ The number of interviewed individuals is in the brackets.

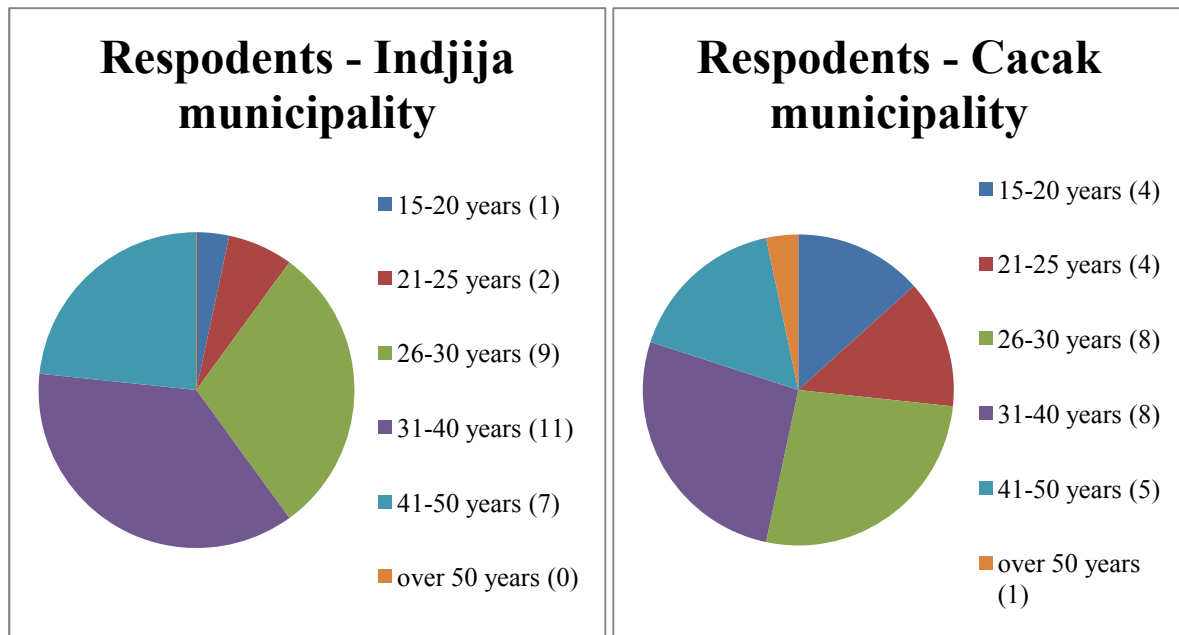


Figure No 7: Survey response by age of respondents

When looking at the educational level of the population, I drew the following results. In Cacak the majority of the correspondents had intermediate professional training (17), while those with a university diploma were the fewest (3). Participants included citizens with a grade school education (4) and with a professional school diploma (6). In Indjija, the educational structure was as follows: there were the fewest number of respondents who had only elementary school (1), and the most with middle school education (15). Citizens with professional school and university education were equally represented with 7 in each group.

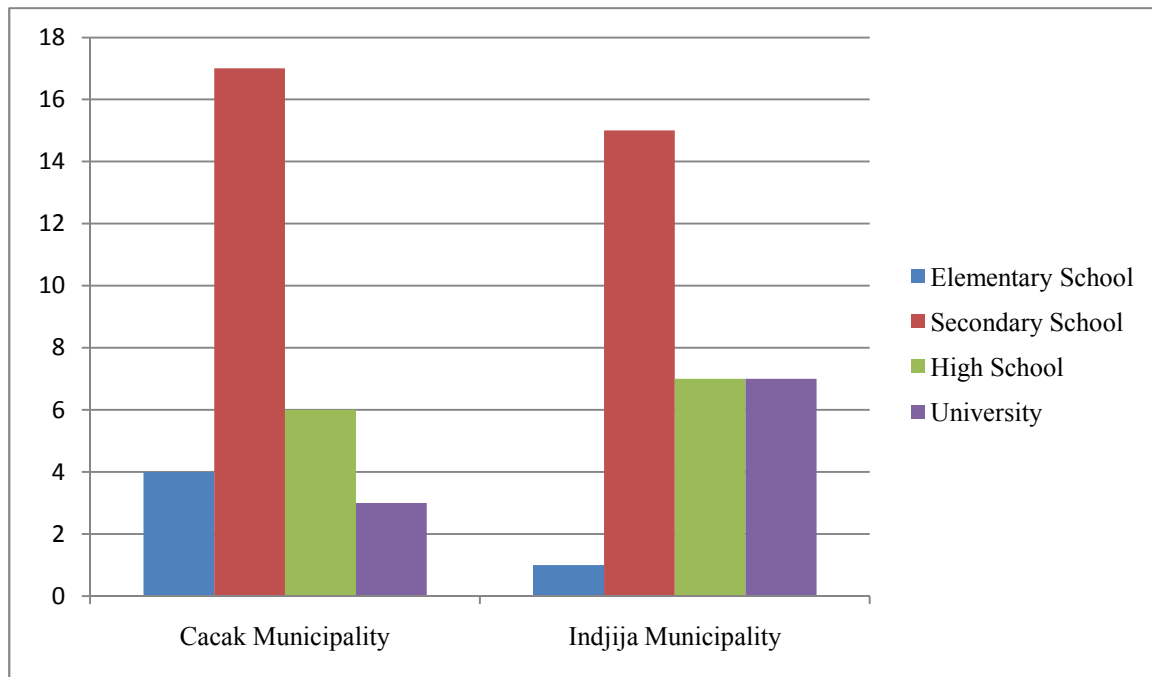


Figure No 8: Survey response by educational level of respondents

In regard to internet use, in Cacak I found out that many citizens use it (25), and very few of them (2) use it on less than a daily basis. Internet is used mainly for entertainment purposes, reading news, and keeping in touch with friends. In Indjija a somewhat greater number use the internet (28) and all citizens use the internet at least once a day for various purposes, mostly for entertainment and information. Cacak citizens seem not to be aware of services that are available over the internet. An inconsiderable number of respondents (12) knew that some e-services were available on the city portal. Information on these subjects was obtained mostly through friends, colleagues, and acquaintances. Informed respondents used the city portal for information gathering and acquisition of documents. In Indjija more citizens know about the available services (24) and they found out about it through the media (local TV and newspapers) and to a lesser extent from friends or colleagues.

Out of the total number of respondents in Cacak who were aware of the existence of the e-service, all knew that it was possible to order their birth certificates through the city portal, while only one respondent was aware of additional services that were available. On the other hand, Indjija citizens showed a keen awareness with e-services that were being offered through their portal and the majorities were able to name most of the available services. It was somewhat surprising that Cacak citizens were not at all informed of the existence of GIS on the city portal, while the overwhelming majority of Indjija citizens were aware of it.

With regard to the scope of services on the city portal, citizens who were using e-services were very dissatisfied by the range of services that were being offered electronically. That dissatisfaction was somewhat higher in Cacak because the majority of the citizens who were aware of the service (11) thought that they were not so adapted to the needs of average citizens that a person would opt for electronic as opposed to personal communication. Citizen satisfaction in Indjija was greater (23) and they expressed the hope that current services would be expanded and new ones introduced.

In response to the question whether municipal employees had taken any steps to spread awareness of services on the portal, Cacak respondents said that they practically never got information from officials. Only one citizen said that he had received this kind of assistance. The situation in Indjija is much better and it is clear that officials in that city pay far more attention to citizens and do try to inform them of the existence of services on the portal. All Indjija respondents who were aware of the existence of e-services had received useful information from an official or through the city call center on at least one occasion.

When assessing citizen trust in the information received through the internet, trust levels were high in both municipalities but citizens preferred to visit administrative offices personally. Citizens in Cacak have not acquired the habit of checking what is available on the portal before they go to the municipal office to request a document; only 2 citizens do that regularly. In Indjija, all citizens who are familiar with the existence of e-services first check the municipal portal or contact the call center and they make a personal visit only if that is unavoidable.

In Cacak, citizens are unhappy with the existing services offered by the city government on the portal. Majority of the interviewed individuals have a negative opinion about the quality and quantity of the available information. In Indjija, the level of dissatisfaction is lower. In the course of this survey, it was explained to citizens who had never visited the portal how many and what kinds of services were available so that they were included in the process of acquiring results.

According to survey results, respondents in Cacak are not convinced that they can have a significant impact on the creation and development of e-services because there is no way to make suggestions and share their ideas. Suggestions and ideas are shared mainly in verbal form during interaction with officials while citizens are filing their requests. None of my respondents ever send a suggestion electronically using the portal. In Indjija citizens do participate in some form in the creation and development of their e-services and almost all respondents who had used the city portal had used it at least once to file a request or forward a

suggestion electronically. Citizens who so far have not used those services think that it is a good way to notify the municipal authorities of problems, but only on condition that there is someone to read those messages and to take some action subsequently. In general, respondents are willing to influence the development of e-services by forwarding their suggestions.

With respect to privacy protection, respondents were not skeptical and thought that data currently available on the portal could not threaten their privacy. Citizens in both municipalities trust their local governments and believe that the accessible data are sufficiently protected.

One of the more interesting aspects of the results of this survey are the barriers encountered by citizens when they try to use these services. In Cacak, citizens are dissatisfied mainly with the quantity of accessible e-services and they complain about the lack of information about it from the municipal leadership and the media. Not only are e-services offered to them few, but for a response they must pay a visit to the municipal office in person. This barrier is in many cases a deterrent to seeking documents electronically knowing that they must go to the office personally anyway. Few citizens mentioned the problem of not having internet or its cost because the majority had online access at home or at work. IT literacy was not cited as an issue by those surveyed, nor was a lack of computers. A few of those surveyed (those not using the internet) did cite the high cost of connecting to it as well as high monthly charges for using it. There were also complaints about the lack of a call center which could assist them in the event they encountered difficulties while trying to use e-services. There seems to be a consensus that counter officials do not have the time to help with problems when using e-services. The simplicity and user friendliness of the portal and available documents were satisfactory so that there were no improvement suggestions in that regard. Improvement suggestions had to do with health services (making doctor appointments) and education (filling for admission and information about what various schools and pre-school institutions offer to potential students). Citizens were interested in being given the opportunity to convey their e-service improvement suggestions using the portal (until now that was not possible). Their suggestions have to do with increasing the number and quality of services. Opening a unified counter to give filing assistance would greatly help to eliminate remaining reluctance to use e-services and it would make it possible for citizens to obtain everything they need at a single location.

The shortcoming most often noted by Indjija citizens is the small number of accessible services and they would appreciate it if the number was increased, but they give the portal's

user friendliness a high mark. Portal visitors agreed that its interactive qualities are high and that options for contacting the mayor and public utilities were very conspicuous. User demands had to do with increasing the number of accessible services as well as the number of citizen surveys because they feel that these surveys are a very good way for the local government to receive citizen feedback. Additional services suggested had to do with health, education, and culture. The creation of a cultural calendar was suggested so that all cultural activities in the city would be displayed at a single location. Citizens were very happy with “System 48” and the way it works, but they think that the call center is too busy and that waiting time before an operator is therefore a minimum of 20 minutes. Although the conversation is charged as a local call, the prolonged waiting period is unpleasant and undermines the image of professionalism that the municipality has been trying to cultivate over the last decade. Many respondents suggested hiring more operators in order to reduce waiting. In contrast to Cacak respondents, those in Indjija did not make an issue of internet access or the cost of internet services, or of using the GIS system (although they do not use it very often). The majority agreed that data, information, and documents presented on the portal are user friendly.

	Cacak Municipality	Indjija Municipality
<i>Access issue</i>	- respondents use Internet (25) - respondents use Internet every day (23)	- respondents use Internet (28) - respondents use Internet every day (28)
<i>Level of awareness</i>	- respondents are aware of e-services on city portal (12)	- respondents are aware of e-services on city portal (24)
<i>Level of trust in services offered through the official municipal website</i>	- high level of trust - respondents prefer to visit the municipality personally	- high level of trust - respondents prefer to visit the municipality personally
<i>Citizen satisfaction with existing e-services</i>	- lower level of satisfaction if compare with Indjija citizens - practically never got information of existing e-services from officials - respondents are not convinced that they can have significant impact on creation of e-services - unsatisfied with quantity of assessable e-services	- high level of satisfaction - all of respondents somehow receive information from officials (either personally or by call-center) - respondents do participate in development and creation of e-services
<i>Problems encountered by citizens as they use existing e-services</i>	- lack of information regarding e-services - for response they must visit municipal office in person	- small number of accessible e-services

	- lack of call-center	
<i>Recommendations for enhancing e-governance on the local level</i>	<ul style="list-style-type: none"> - respondents are willing to influence the development of e-services by forwarding their suggestion - respondents need more help from officials - improvement within health services and education - establishing call centre for the citizens 	<ul style="list-style-type: none"> - increasing number of e-services - increasing number of surveys on city portal - improvement of services within health, education and culture - improvement of call center

Table No 1: Survey summary

7.5 Data Analysis

One of the preconditions for good communication between citizens and their government is a well established ICT structure. The World Bank maintains that ICT can contribute greatly to the transformation of that relationship. Bearing in mind that the Boston Consulting Group Survey (2009) shows that 31% of Serbian households have internet the results obtained about internet use are not surprising. Compared to average internet use in Serbia as a whole, citizens in the two surveyed municipalities use it more frequently. The above average internet use is due to the fact that these are urban settings with a relatively higher level of development. In Cacak, internet use is somewhat less frequent than in Indjija, but that can be attributed to the latter's relatively higher development. Perhaps the educational structure of respondents is also relevant here because in Indjija it is a few notches higher on average than in Cacak.

In both municipalities awareness of the availability of e-services is relatively high, but in Cacak most respondents were able to name only one of the services available on the portal. The explanation for this lies in the fact that Indjija local government has invested a great deal more in public information, whereby they were included in government activities in a transparent fashion. As a result e-governance is accessible and meaningful to a broad range of citizenry, which is precisely an idea promoted by Grönlund (2005). Since according to the data of the Republic Statistical Bureau (2009), birth certificate transcripts had the highest level of sophistication, it should have been expected that citizens in both municipalities would be reasonably familiar with that particular service. Surveys of best ICT systems in Serbia

(Stoimenov et al., 2009) have shown that Indjija was the first municipality to introduce the use of that system, so that is reflected in greater frequency of use in that municipality.

Dissatisfaction in Cacak due to the narrow scope of e-services is considerable. Since, as Scott et al. (2005) have pointed out, each administration must satisfy public needs and be citizen oriented, this type of dissatisfaction may be interpreted as a criticism of the municipal administration. That in Cacak it is not sufficiently citizen oriented is shown by the fact that citizens were never informed of the existence of e-services. The positive aspect of citizen – authorities relationship is the fact that in both municipalities citizens have a high level of trust in local government and are not concerned that accessibility of information electronically will imperil their privacy. That is a fundamental precondition for the quick development of e-governance. Cacak citizens do not believe that they can have much impact on the creation and modeling of new e-services, so in that sense communication with government is perceived as low level. Clearly, poor interaction is unlikely to lead to service improvements. That hampers the implementation of the notion advocated by the Council of Europe (2010) that e-governance contributes to the creation of a new type of relationship between citizens and their government. One of the ways to achieve that is the survey question placed on the portal. Cacak citizens proposed the introduction of some sort of communication with the government structures in the form of a survey that would permanently be on the portal. That is a very positive initiative and it speaks perhaps of the inertia of city authorities and their lack of interest in following the progress being made in other communities.

In both communities citizens are satisfied with the user friendly features which allow easy access to information and documents on the respective portals, which means that further development should build on that. Although Indjija citizens have identified some drawbacks, mainly in terms of an inadequate range of services, “System 48” seems to compensate for that. In that way, Indjija has met one more condition for a citizen oriented administration. According to Sarema (2009), Indjija has thereby made possible a multi-channel approach to administration resources, thus confirming level I development. Cacak citizens suggested the implementation of a call center and they believe that such a service would indeed improve the quality and efficiency of the administration.

Clearly, in both communities citizens are open to the acceptance of new technologies which can influence human development. Citizen readiness is a basic precondition for the introduction of ICT in local self-government bodies, but according to Krull (2002), a country must also be “e-ready”. Based on survey results, the development of e-governance on the

local level is approximately the same, as well as e-governance on the state level and that is confirmed by the level of sophistication of the services.

8. CONCLUSION

Electronic governance is widespread throughout the world and its development depends primarily upon factors such as education, a country's socio-economic development, level of trust and citizen awareness of the advantages of its introduction. We have shown how citizens in the two surveyed Serbian municipalities assess e-governance from their point of view. Citizens were selected using the sample method, as a result of which various age and educational level groups were represented.

It was shown that there is a high level of citizen trust in local administration organs and the way they disseminate information of public significance through municipal portals. Citizens are generally satisfied with existing e-services, but they also want current services to be enhanced and new ones to be introduced. The available services are less than ideal in terms of document retrieval because they are only partially accessible. That means that when citizens try to use them, they still must appear personally in municipal offices in order to complete the document retrieval process. On the other hand, citizens can access the internet quite easily in both municipalities, which should act as a good precondition for the acceptance and widespread use of the new services. However, notwithstanding simplicity of access the difference in the level of citizen awareness of the existence of e-services varies considerably between these two municipalities. Indjija citizens are more aware of the e-services available on their municipality's portal, which is a tribute to the administration's efforts to popularize and simplify this procedure. Both municipalities e-services are on approximately the same level of sophistication, but clearly Indjija officials when introducing new services such as "system 48" and m-services are keen to become leaders in the development of e-services in Serbia. On the other hand, the Cacak administration is insufficiently interactive, but it meets high criteria of internal communication, as shown by the investigation of the best ICT practices in Serbia.

The research presented here shows that citizens of both municipalities are prepared to accept new e-services, but also that they find it difficult to abandon the traditional method of communication with government bodies. From the standpoint of Cacak citizens, it may be concluded that their municipal portal is insufficiently interactive and that that makes it

difficult to identify the inadequacies of the existing services and to suggest new ones. Citizens in both municipalities see enhanced interactivity as a matter of mutual advantage for the municipality and its citizens. There is an expectation that as citizens learn of the simplicity of using e-services that are offered to them on municipal portals there will be a further development of these services. The more citizens use existing services, the greater the possibility that their comments will influence useful improvements in the system.

It is obvious that local administrations are investing efforts in the improvement of e-services for their citizens, but it must be noted that much remains to be done so that the quality level of services and portal interactivity could be enhanced. Only the accelerated development of e-services and their accessibility can satisfy citizens' high expectations when it comes to e-governance. Unfortunately, the desire to improve existing e-services and introduce new ones is limited by financial and technological considerations. On the other hand, municipalities must bear in mind that more interactive portals are indispensable so that they can constantly receive citizen feedback. The example of Indjija has shown that even with limited financial resources it is still possible to ensure a certain level of interactivity of currently accessible e-service portals. That shows that determination and enthusiasm of municipal leaders are the moving force of further development of interactive portals and the direction in which Indjija is going is a good example of citizen relation management.

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Appendix

Questionnaire

How often do you use the Internet?

- Daily
- Weekly
- Monthly
- Yearly

Do you use Internet for checking available services from the local government?

- Yes
- No
- Sometimes

Are you aware that some of the services and information offered by the local government can be obtained through the official municipal website?

- Yes
- No

Which services are available? _____

How extensive is the service information available to citizens through the official municipal website?

- Very extensive
- Partly extensive
- Not extensive at all

When inquiring at the municipal office, were you informed that certain categories of services can be obtained through the internet?

- Yes, very often
- Sometimes
- Never

Do you believe that internet based information is trustworthy?

- Yes
- No
- Partly, because I cannot communicate to the officers “face to face”

How much more reliable is it to personally visit municipal offices, compared to seeking information over the internet?

- It is the same for me – check on the Internet or come personally to municipal officers
- I prefer to come personally
- I always check first on Internet and then come personally

Are you satisfied with the existing services?

- Yes
- No

Do you have any input in the development of e-services on the municipal website?

- Yes, with given comments to the officers
- Yes, by sending e-mail to the web page administrator
- No

Do you need additional encouragement to make greater use of internet services?

- Yes - Please, mention ideas _____
- No

Do you think that information that can easily be found on the Internet is a threat to your privacy?

- Yes, I do not like that
- Sometimes, if information are not protected
- No

Are there any barriers in using existing e-services?

- Yes
- No

If YES on question above, please mention those reasons:

- The problem is technological by nature
 - lack of a computer
 - internet inaccessible
 - too expensive to have Internet
 - no computer skills
 - other _____

Are form and information on the web page sufficiently clear and user friendly?

- Yes
- No – Please, mention disadvantages _____

To what extent can municipal employees be counted on to instruct citizens about how to make better use of services?

- The officers could help us very much
- The officers do not have time to help us
- It is necessary to open extra help-desk

Recommendations for enhancing e-governance on the local level

What additional services should the local government introduce?

How could exist services be made more accessible and how can information access on the municipal web page be simplified?

Please, provide your details:

- Age:
- Gender:
- Education: a) primary school
b) secondary school
c) High school
d) University

Thank you very much for your participation!

Svetislav Biocanin

