

# INCREASING EFFICIENCY OF ELECTRONIC PUBLIC SERVICES TO CITIZENS AND BUSINESSES IN CONNECTION WITH THE IMPLEMENTATION OF INTEGRATED ELECTRONIC SOLUTIONS

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*European Union enlargement, the existence of new needs and demands, requires the development of innovation and quality of public administration, which means improving public services in the global economy as a requirement of competitiveness.*

*The European Union hopes to achieve the major objectives in what concerns the electronic government by 2010; actions necessary to achieve them are adopting solutions based on information and communication technologies in the Romanian public administration, aimed at developing modern public services. This paper presents some best experiences of e-governance in Romania and the results of e-governance in Gorj County, and the degree of implementation and use by citizens.*

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## **1. Development of e-Government services in the current European context**

The existence of efficient and innovating public administrations is essential in a global and competitive Europe. Government is the key element for the management and putting the potential of the public sector to good use.

The electronic governance is the acceptance of general Government use of IT applications and other information technologies based on the Internet, combined with processes that implement these technologies to improve access and delivery of government information and services to the public, or to other agencies and government entities. This brings improvements in the workings of government that result in increased effectiveness, efficiency and service quality.

In general, the administrations of most developed cities make use of initiatives and programs at national and international level in order to achieve and develop an environment for e-government services in the city. Their policy is focused on developing several types of services and the establishment of a wide range of services (for citizens and businesses).

Strategy shift to e-government transformation and modernization of government is imposed by information technology and communications. Digital Governance refers to the web infrastructure to provide online services. According to an analysis of websites of major cities, which took into account five variables (security and confidentiality, can / utilization, content, type of online services offered,

answer citizens and ensuring their participation through websites ), increase participation is a key to the e-government strategies<sup>545</sup>.

Providing information and knowledge needed in the sector was a priority for governments from the beginning. They must be integrated through interactive tools that allow, for example, involving people in defining and evaluating public policies. The most important electronic governance models focus on user involvement and citizens on the one hand, and the services provided to users in urban areas, on the other.

E-Government services involve the public sector to the challenges and requirements of the new economy. Therefore, accelerating the implementation of electronic government is important in order to innovate and modernize public services<sup>546</sup>.

Throughout the world, governments are showing interest in new technologies and electronic services of the future, allowing the implementation of electronic government, but must not forget that this involves major changes in public institutions and facilities.

Internet is easy to use and involves low cost of use, this making it a digital instrument that anyone can use. This is why the Internet is now an opportunity for the Board to serve citizen information technology intensively. Internet access isn't the only element that influences the level of development of applications for electronic government. The use of this application depends also on *education* and on *the change of mentality*, and the success of implementing these applications determines the acceptance and the impact they have in modern society. Not so long ago, citizens perceived public service negatively, being most often displeased of their quality. The level of satisfaction of the citizens is tied to their expectations regarding public service.

The European Union has identified five priorities or **major objectives regarding e-government for 2010**, which are<sup>547</sup>:

- ***Efficiency and efficacy***, which implies an important contribution of e-government services to the increase of satisfaction, transparency and responsibility, to the reduction of bureaucracy and to the increase of efficiency by the year 2010.

- ***Implementing key services, with major impact on the citizens and on the business environment***, so, by the year 2010, public acquisitions will be 100% available online. The achievement of this objective also involves the future cooperation for the development of online services that have strong impact on the citizens.

- ***Offering services for all citizens***, which means stimulating the inclusion through e-government, so all citizens will benefit from secure, innovative and easy to use services by 2010.

- ***The introduction of identification keys, which allow authenticated access to public services, based on laws concerning the protection of data***. This allows citizens and the business environment to benefit of authenticated convenient access by 2010, secure and interoperable to public services from Europe (for example, eIDM, and the management of electronic identification for interoperable access to public services).

- ***Strengthening the participation of citizens to the process of government and the democratic adoption of decisions***, by promoting public debate and the participation to the process of making decisions in a democratic way.

The i2010 plan for e-government – „Accelerating e-government in Europe for everyone's benefit”<sup>548</sup> has as main goals accelerating the process of obtaining attainable advantages for all citizens and for the

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<sup>545</sup> M. Păceșilă, *E-government services at European Level – Features and Trends, Theoretical and Empirical Researches in Urban Management*, Year 2, Number 5, 2007

<sup>546</sup> Source: “i2010 eGovernment Action Plan: Accelerating eGovernment in Europe for the Benefit of All”, Communication From the Commission to the Council, the European Parliament, Brussels, 2006, page 3.

<sup>547</sup> Patrick Wauters, Graham Colclough, „Online Availability of Public Services: How Is Europe Progressing? Web Based Survey on Electronic Public Services, Report of the 6th Measurement”, June 2006, Capgemini, [www.capgemini.com/public](http://www.capgemini.com/public), page 15.

business environment; the assurance that national e-government does not lead to new barriers on the unique market because of fragmentation and lack of interoperability; expanding the advantages for the European Union through large scale economies that can be obtained in member states and cooperation in order to find solutions to common problems that appear in Europe; ensuring the cooperation of all European Union stakeholders in planning and providing e-government services. For the development of electronic government services concentrated actions are necessary, like:

- establishing a common guide, approved by member countries that will align the development of electronic government with the accessibility of electronic communication;
- advancing specifications for strategies of providing services that will allow access to e-government services through varied channels like digital television, fixed and mobile telephony and other interactive environments;
- establishing a common measurement of the impact of e-government services;
- exploiting the mechanism that ensures long term financial and operational durability for infrastructure and electronic services;
- accelerating the establishment of common specifications for public acquisitions in the European Union and launching pilot programs in this area;
- testing instruments based on information technology and communications that facilitates the transparency and involvement of the public in adopting decisions and also backing exchange of experience;
- establishing an advanced form of electronic democracy, etc.

The actions presented above and announced through i2010 were introduced in the period 2006 – 2010 and will need the cooperation of all stakeholders in order to develop electronic government in the European Union.

## **2. Integrated development and implementation of online public services in the Gorj County Council**

Objective of the project concept development and implementation of electronic administration in the Gorj County Council, focuses on quality growth and development of electronic public services for the benefit of citizens, providing online public services to citizens / public administration at a level of sophistication environment and efficient activities of the County Council, using specific information technology by implementing new work flows, related to e-administration services.

The project will have the main results and increase satisfaction in Gorj County citizens through: transparency in providing information and electronic public services, equal access for all citizens, and better information and service them through public service available "on line" simplify, accelerate and strategic management of economic processes to be conducted on the basis of solutions, ensuring the security of transactions in a centralized, 24 hour availability of services 24, 7 days a week, in a solution integrated, consistent, easily integrated with other systems and easy to manage. Also, another significant result pursued by the project is the efficient activities of the Gorj County Council, using specific means of ICT, by: improving the quality of the administrative act and change deep relationship between public administration and citizen, increase efficiency of public administration, elimination bureaucracy and increase the quality of public services, creating a centralized system for routing administrative documents (administrative forms), ensuring the security of transactions in a centralized, retraining public servants, raise their professional standard.

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<sup>548</sup> Source: "i2010 eGovernment Action Plan: Accelerating eGovernment in Europe for the Benefit of All", Communication From the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, Brussels, 25.04.2006, COM(2006) 173 final, pages 3-4.

### 3. The overall system architecture

In defining the architecture that will support the Information System Development and increased efficiency of electronic public services to citizens and businesses in Gorj country, were taken of the following general features of the system:

- Availability: Availability of IT& C depends largely on the care with which it was designed, the discipline with which it is operated, the rigor with which it was tested and optimization to over exploitation. Key availability is found in insulation capacity of that "single point of failure" existing in the individual components of the system (equipment and / or applications), thereby maximizing its uptime. Techniques and technologies to increase the availability of time are: to ensure redundancy (multiple-way communication between server and client) in the communications, and using technologies like clustering to services.

- Data security: risk management by ensuring adequate protection of networks and systems should ensure confidentiality and integrity of information circulating through the system, is an important goal in designing any system IT & C The only solution for doing so in a consistent manner is strict observance of a policy in the organization, named "defense-in-depth".

- Defense-in-depth multi-level security defines bidirectional, organized in areas of security, which ensures the compartmentalization system so that if one part of it is compromised by a potential attack, it can not compromise the other compartments.

- Scalability: scalability is the ability of a system to cope with an ascending continuous charging, without decreasing performance. In general, the major components of a system architecture that is subject to scalability are: topologies and network systems, application servers, infrastructure services, infrastructure management components and subsystems responsible for storing data.

- Safety in operation: is based on the repetitiveness with which architecture has been implemented successfully as standard system architecture. Reliability of operation may directly affect the system availability at the macro level and indirectly, the degree of success that can be achieved in areas such as security, scalability, and performance management capacity. Safety in operation is addressed to several levels (layers) and is especially critical for solution scalability and performance of individual applications.

- Standardization: implementation of infrastructure components, standardized by well-known architectural elements, creates predictable and reliable systems to exploit. Standardization creates a solid foundation for growth management system, ensuring integration of processes / applications and technologies within the organization.

The system should not allow the loss of data, in this sense is necessary to restore capabilities in case of accidents and ways to prevent them. Also, system architecture will be a component of security infrastructure that does not allow unauthorized access to data. The information and communication system will be arranged on two levels:

- Level of infrastructure: including all subsystems necessary for the functioning and security specific applications. This level contains the following subsystems:

- Subsystem Hardware.
- Communications Subsystem.
- Subsystem Software Basic.
- Security Subsystem.

- The level of specific applications: includes all the subsystems that support the activities of carrying on specific activities management. This level contains the following subsystems operating on different applications within each organization in part:

- Economic Management Subsystem.
- Subsystem HR and payroll.
- Subsystem local taxes.
- Subsystem "Marital status".

- Subsystem “Agricultural Register”.
- Subsystems necessary to complete the electronic services delivery system:
  - Subsystem Design and simulation work processes.
- Subsystem document management and workflow (including electronic registry).
- Project Management Subsystem.
- Subsystem external portal (the management of electronic identity for citizens enrolled in the system and operators).
- Public area of the portal institution with the functions of advertising and promotion of information of general interest.
- Component type discussion forum - which will be held on various issues - instead of being extracted information on the areas of interest to citizens for the development of new services coming to meet local community needs.
- Component type probe public opinion on the subject of attention of public opinion about various aspects of community life to find solutions closest to the characteristics of the local community.
- Subsystem management relationship with citizens and businesses.
- Implementation of computer application project specific indicators.
- Business Intelligence Subsystem.
- Subsystem Management Application.

Principle of the computer system architecture and communications for “Integrated development of online public services in Gorj” can be represented as follows:

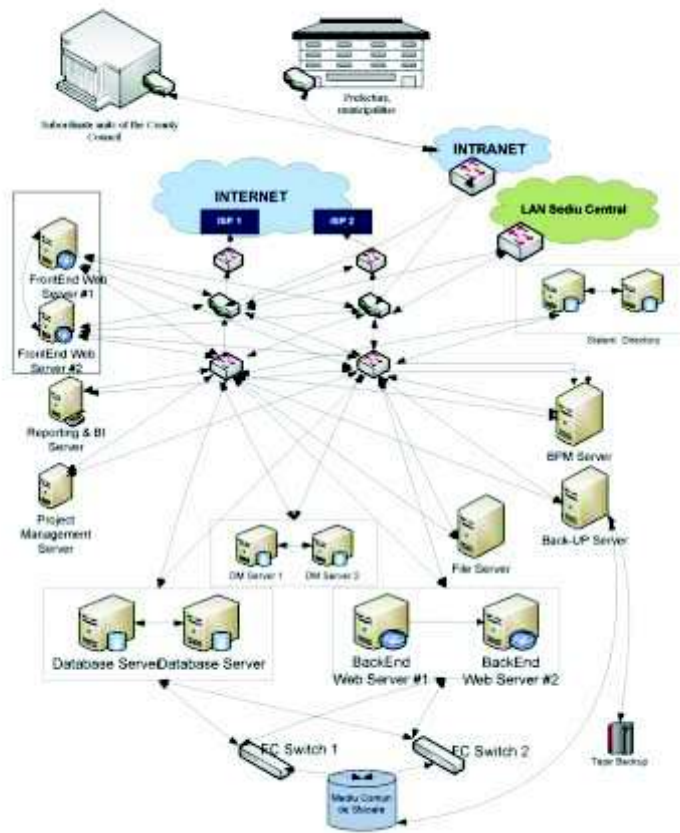


Fig. 1 County computer system architecture: Online public services

To achieve system and the Communications Council, have been taken into account these technical possibilities of designing the architecture: a centralized system, this calls for a single Data-Center, centrally, and connecting all secondary locations via VPN network , the centralized database management requires a single point, making data transfer is vertical; due to the necessity of obtaining and processing data in real time, seen fit to implement a system to connect all users to a central system. Of course, such architecture requires a communication system adequate to ensure access any information from the system operator, with reasonable response times.

#### 4. Conclusions

In the macroeconomic context of Romania in the last few years, the IT&C sector has grown in importance, becoming a valuable instrument and important element of success, capable of generating economic growth, promoting education and, last but not least, offering real support to democracy. In this context, the initiatives of e-government of creating an electronic infrastructure that will bond educational institutions, governmental agencies, and public sectors to private sectors have formed the premise for the development of the IT&C sector.

New information technologies and communication has favored gathering, analyzing and access to information, leading to more efficient activities, a better act of decision and more transparent public and local institutions in their relationship with the citizen, who has a right for free access to information.

*The Romanian strategy for e-Government* is tied to the growth of the entire sector of information technology and communications and it concentrates on the government's effort to implement those electronic services that have high economic and social potential. Only through actions of developing modern electronic services can e-Government ensures transparency and institutional credibility and reduce costs necessary for managerial process in public services. In this context, the main objectives for e-Government are the use IT instruments in the sector of public administration in order to make day to day activities more efficient, the presence of public administrations on the Internet, providing more accessible information to citizens and companies, the growth of utility and usage of interactive services for citizens and companies and last but not least changing the experience of e-Government nationwide.

The achievement of these goals is not possible if a strong partnership between all sides involved (public authority, public administration and civil society), that leads to creating intelligent public services based on new information technology and communications, does not exist.

*The development of public services bring benefit* both in the public and private sectors, translated into economic growth, a favorable environment for investments and better use of public resource, including Structural and Cohesion Funds.

#### References:

1. Baltac, V., *Introducere în e-Government*, SoftNet Grup, 2004;
2. Darrell M. Urban W., *E-Government*, Center for Public Policy, Brown University, 2004;
3. Păceșilă M., *E-government services at European Level – Features and Trends*, Theoretical and Empirical Researches in Urban Management, Year 2, Number 5, 2007
4. Țarcă, N., *Bazele utilizării calculatoarelor*, Ed. Universitatii din Oradea, 2008
5. Vatuiu T., *Informatics systems used to increase the efficiency of the activity within public administration*, Ed. Inforec, București, 2008
6. Vatuiu T., *Baze de date - creare și gestionare cu Access 2007*, Ed. Renaissance, 2009

Internet Resources:

7. [www.e-guvernare.ro](http://www.e-guvernare.ro);
8. <http://www.administratie.ro/articol.php?id=28399>;
9. [http://www.euractiv.ro/uniunea-europeana/articles%7CdisplayArticle/articleID\\_17843/7-solutii-pentru-eficientizarea-relatiei-dintre-administratia-publica-si-contribuabili.html](http://www.euractiv.ro/uniunea-europeana/articles%7CdisplayArticle/articleID_17843/7-solutii-pentru-eficientizarea-relatiei-dintre-administratia-publica-si-contribuabili.html).