E-Government Projects for the Acceleration of the Transition Towards the Information Society - Romanian Case

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Abstract

Transition to Information Society is one of the strategic goals of the Romanian Government for the entire period from 2001 to 2004, aiming at the improvement of the quality of public services offered to citizens and an increased competitiveness of the Romanian economy. Nevertheless, Romania is involved in the global European effort for the development of the Information Society, the national priorities in this field complying with the strategic goals defined in the frame of the "eEurope+" initiative and with the recommendations of the Warsaw Ministerial Conference of May 2000.

Romania's priorities for the transition to Information Society are: the modernisation of the public administration and of the public services, improvement of life standard by using information technology in fields like health, protection of environment and transports, development of the information technology sector, better work force for the Information Society, adaptation of the educational system and creation of digital content. For the accomplishment of these objectives, a series of projects with regard to facilitating the wide access to the Internet, education and continuous formation, to stimulating e-commerce, to allowing a faster access of citizens and companies to the public administration services and to speeding up transition to e-government are being carried out during 2001-2004, under Governmental coordination.

The e-administration or the administration on-line becomes a reality in the developed countries nowadays, but also developing countries and countries in the transition period to the market economy begin to implement this concept.On another level, the new approach of the public administration, the informatisation of the public administration, correlated with the development of the e-government, permits to increase the citizen's degree of access to public information or his degree of satisfaction as regarding the quality of services offered by the public institutions.

E-government represents the government of the future in the "new economy", to which we are heading, the use of the Information Technology (IT) in public administration in the highest degree, for citizen's benefit. As a consequence of e-government, public administration becomes more efficient, closer to the citizen, and the bureaucracy and corruption are decreasing.

The Group for Promoting Information Technology (ICT Task-Force) set up in March 2001 as a task force led by the Prime Minister and having as members another seven Ministers ensures a coherent and coordinated approach for the implementation of the Information Society in Romania. The main tasks of the ICT Task-Force are the elaboration of the strategy and the approval of all major projects in the field of information technology and communications initiated by public institutions, initiated by or benefiting to national companies or companies where the state is a majority shareholder.

In the context of Romania's accession process towards the European Union, MCIT (Ministry of Communications and Information Technology) has actively participated to the drawing up of the action plan eEurope+ and took on the responsibility of coordinating its implementation in Romania. The eEurope+ plan is dedicated to the accession countries and is similar to the eEurope plan, meant for the Member States of the Union.

Launched on June 15 2001, the eEurope+ action plan sets out the following **objectives** regarding**:**

1. **Faster internet access**

   1.1.Cheaper, safer and faster Internet access
Measures taken by Romania:
   o Since September 18, 2001 – Dial-up Internet access costs 0.7 cents, representing 25% of the normal local tariff (working days, between 7.00 a.m. and 10 p.m.)
   o The draft **Law on the electronic commerce** labels as criminal offences certain acts committed in relation to the issuance and use of the electronic payment instruments.
   o Romania will implement the new acquis for electronic communications, including the **Universal Service Directive.**
   o The RoNIX network was created in 2001. RoNIX is the National Network for the interconnection of Romanian Internet Service Providers.

o Creation of a single point of access to applications and websites of the public institutions for monitoring access and ensuring the security mechanisms in an unitary fashion for all public institutions

1.2. Faster Internet for researchers and students.

Measures taken by Romania:

o **RoEduNet (www.roedu.net)** is an organization and at the same time a data communication system which connects a number of Local Area Networks through their Central Access Nodes to a national WAN data communication infrastructure, operated by NSP (Network Service Provider) nodes in Bucharest, Iasi, Tirgu Mures, Cluj, Timisoara and Craiova. The aim of this technical complex is to offer the participants – universities, cultural and scientific non-profit institutions – the means to communicate with each other as well as to have access to Internet.

o **RNC (www.rnc.ro)-** RNC is a national project co-ordinated and established by the National Agency for Science, Technology and Innovation targeted at the following main objectives:

- Setting up technical and organizational infrastructure meant to provide national and international services for the Romanian scientific research community;
- Providing a rapid and competitive tool for the exchange of information in the framework of research and development community;
- Using the scientific and technical databases available in the country and offered by the national networks from other countries through international networks;
- Providing a support for information, documentation and scientific and technical cooperation considering research teams and topics and research and development programs.
- 94 institutions connected through leased lines;
- Over 250 research institutions connected by "dial-up";
- About 8000-10000 users;
- Total international traffic: 300 Gbytes/month;
- Total international and national traffic: 500 Gbytes/month;

RNC is a member of the following European organizations: TERENA (Trans European Research and Education Networking Association),CEENet (Central and Eastern European Networking Association). RNC has a connection to LORAL ORION - USA (2M / 512k) and its main nodes are: one international node located at ICI (Research Institute for Informatics, the national operator for RNC), national backbone nodes located in 7 cities and 7 backbone nodes in Bucharest.

1.3. Secure networks and the use of smart-cards

Measures taken by Romania:

o Elaboration of an action plan for promoting safer use of the Internet by combating illegal and harmful content in the global networks;

o Building the Public Key Infrastructure;

o MCIT launched in 2001 a pilot project regarding the identification of civil servants through smart-cards. This project will be the basis for the introduction of smart-cards in other fields in the next future;

o The **Law no. 455/2001 on the electronic signature** was adopted in July 2001, and the subsequent secondary legislation was also adopted in November 2001.

The General Inspectorate for Communications and Information Technology will become provider of accredited certification services for the electronic signature. Any organization interested in becoming accredited electronic signature provider must obtain the accreditation from the Ministry of Communications and Information Technology, on the base of the fulfillment of all preliminary conditions for the issuance of qualified certificates (see Law 455/2001 on Electronic Signature).

o The draft **Law on the electronic commerce** labels as criminal offences certain acts committed in relation to the issuance and use of the electronic payment instruments.

2. Investing in human resources and developing the necessary skills for working in the Information Society

2.1. European youth in the digital age

Measures taken by Romania:

o The Romanian Government approved in 2001 and launched a project to introduce, in two years, 500,000 computers with education software and Internet access in all Romanian schools and high-schools. This project will cost about 260 millions USD. In 2001, 2573 schools were equipped with at least a computer connected to Internet and 120 computer networks connected to Internet were supplied to high schools throughout Romania. Also, a more active involvement of the private sector is encouraged and lobbied for (donations for schools).

o **ADLIC** – This system is the first Romanian system used to centralize the capacity exam's results and to assign candidates to high schools according to their results and their preferences. The assignment of the high schools candidates was made according to the specifications of the Ministry of Education and Research.

The objectives of the ADLIC project, initiated by the Ministry of Education and Research, were:

\- Modernization of the high schools and technical schools candidates distribution process from the technological point of view

\- Applying the new IT technologies in the educational fields

\- Promotion of the new technologies to all organizational levels of the ministry (local units, district, etc.)

o BrainBench (classification): Romania is the first European country in the classification of Brain Bench technical evaluation system.

o Ensuring the availability of the support services and of the Internet educational resources (ICI's pilot project "virtual library")

2.2. Working in the knowledge-based economy

Measures taken by Romania:

o The MCIT (www.mcti.ro) launched in 2001 a pilot project for job search and employees recruitment. The pilot project E-job can be accessed at: http://e-job.mcti.ro/ejob/;

o The Ministry of Labor (www.mmss.ro) implemented an electronic system to match the demands for jobs and job offers.

c) **Participation for all in the knowledge-based economy**

Measures taken by Romania:

o The MCIT (www.mcti.ro) launched in 2001 an info-kiosk pilot project, which is already used by local authorities to implement individual projects addressing the needs of specific communities.

o The MCIT (www.mcti.ro) launched in 2001 a project to implement multimedia centres for citizens. The project can be accessed at: http://cmc.mcti.ro/

o The MCIT (www.mcti.ro) launched in 2001 a project to implement an "e-referendum" system. The project can be accessed at: http://cmc.mcti.ro/

o The Romanian Government approved the **Ordinance no. 24/2002 on electronic cashing in of local taxes and duties (O.J. no. 81 from February 1, 2002)** for the introduction of the "e-tax" systems in all the local public administrations. In a first phase, until February 1, 2003, the system will become operational in all the municipal towns, and it will be extended for all the cities until November 2003.

3. Stimulating the use of the Internet

3.1. The speeding up of introducing the electronic commerce

Measures taken by Romania:

o Measures for strengthening the consumers' trust in the use of electronic means, by organising media campaigns, creation of antifraud departments in the public administration.

o Among the pilot projects launched in 2001 by MCIT, a major role in the development of e-commerce is played by the "e-procurement" and "e-market" projects. The extension at a national level of the "e-procurement" project started with the launching on March 4, 2002 of the Electronic system for public acquisitions. The system will contribute to reducing bureaucracy and eradicating corruption by ensuring the transparency of Governmental acquisitions, and also to cutting the public expenditure. The system will be extended gradually. In the first phase, the **Government Decision no. 175/2002** imposes to around 400 public institutions to use the system and establishes 10 categories of products (a total of 3,000 different products) that will be procured by these institutions only through this system. The system may be accessed at www.e-licitatie.ro. Until April 10, 2002, 5355 users (519 contracting authorities and 4836 suppliers), 157 bids closed and 396 bids opened were registered in the system. The use of the system provided reductions of up to 37% of the acquisition costs, compared to the same transactions done in 2001 and in the first months of 2002. The "e-procurement" project is

considered essential for developing the institutional capabilities in Romania and for improving the relation Government – citizens.

 o Corporate income declaration: Starting with March 14, 2002, the first 50 large enterprises can submit electronically their income statement declaration to the Ministry of Public Finance.

 o Beginning with January 2002, the MCIT and all the institutions in its coordination are recruiting staff using the" e-Job" system developed last year.

 o Creation of the necessary legislative framework:

 - The Romanian Government approved on January 30, 2002, the **Ordinance no. 20/2002 concerning public acquisitions by means of electronic bids (O.J. no. 86 of February 1, 2002).** The "e-procurement" system will be implemented gradually, starting from several categories of goods and a number of public institutions.

 - The **Law no. 455/2001 on the electronic signature (O.J. no. 429 of July 31, 2002)** implementing Directive 99/93/EC defines the legal framework for the use of the electronic signatures. The technical and methodological norms for the application of the Law were approved by the **Government Decision no. 1259/2001 (O.J. no. 847 of December 28, 2001)**.

 - The draft **Law on the electronic commerce** implementing Directive 2000/31/CE was approved by both Chambers of the Romanian Parliament. Its entry into force is expected in the second quarter of 2002.

3.2. Government online: electronic access to the public services

Measures taken by Romania:

 o The site of Romanian Government (www.gov.ro) functions as a portal for Governmental information.

 o Promotion of pilot projects: MCIT (www.mcti.ro) launched in 2001 about 20 pilot projects on e-Government components, some of them being already in process of extension at a national level. These projects aim at providing on-line public data, including information concerning legislation, administration, culture, environment and traffic related information ("Info-Kiosk" pilot project and "Expansion of the IT System for Monitoring the Balance Sheet and the Fiscal Duties of the Economic Organisations with Web Declaration Capabilities" project, both launched by the MCIT); simplified administrative procedures for the incorporation of a new company (pilot project, part of the "Romania Gateway" project); the promotion of the use of open solutions in the public sector and the establishment of the best practices in the field of e-Government (participation of Romania to the IST and IDA programmes – Brussels, September 5th – September 6th 2001); the promotion of the use of electronic signatures in the public sector (all the projects approved by the ICT Task-force and launched by the MCIT impose the use of electronic signatures or of smart-cards)

 o The Ministry of Public Administration launched in September 2001 the strategy for "e-Administration" (http://www.gov.ro/obiective/map/e-Administration.pdf).

 o Participation of Romania to the „Interchange of Data between Administrations (IDA)" programme

 o Implementation of security mechanisms for interchange of data between administrations of different states

3.3. Health online

Measures taken by Romania:

The main institutions in this field are already presenting on-line information to citizens and are even providing on-line services:

 o www.cnas.ro- National House of Health Insurance

 o www.medicina.ro

 o www.farmaline.ro

3.4. Digital content for global networks

Measures taken by Romania:

 o   Starting with 2002, Romania will participate to the "e-CONTENT" programme

 o   Launching the INFOSOC programme, which consists of projects aiming at the creation of digital content

 o   Continuing the "Romania Gateway" project, whose objective is to present information concerning the development of various sectors in Romania

3.5. Intelligent transport systems

Measures taken by Romania:

Main transport companies have their web sites, providing information to citizens:
- o www.ratb.ro
- o www.cfr.ro
- o www.metrorex.ro
- o www.tarom.ro

The pilot projects launched in the year 2001 by MCIT classify themselves in the list of basic public services proposed by the European Community as being absolutely necessary for the implementation of the "e-Government" concept. These pilot projects constitute the starting point for the roll-out at a national level: for each of the pilot projects launched and completed until the end of the year 2001, the ICT Task-force will define and approve an extension strategy at regional and national level for each of the projects, on the basis of the proven results and benefits.

"e-Government" will contribute to the modernisation of the public administration, both local and central. For the modernisation of the local public administration, the Romanian Government approved in September 2001 the strategy for "e-Administration", which is a component of the chapter G2C of the strategy for "e-Government".

"e-Government" requires the use of a standard for the exchange of information through which the users could create and share documents running on any local or extended network, helping the Governmental institutions to integrate applications characterised by a great technological diversity. For the successful implementation of "e-Government" it is necessary to coherently define the architecture of the applications and to pre-define a set of general services and tools for the development, implementation and subsequent administration of the applications. This architecture needs to be updated to ensure correspondence with the user's requirements and with the new emerging technologies.

With regard to the "e-Government" component of the "eEurope+" plan, the European Community monitors the achievements registered by each country on basis of a series of indicators, grouped in two main categories:
1.	The percentage of the basic public services provided by electronic means.
2.	The use by the public of the public services provided by electronic means for the purpose of information or forms filling in.

In February 2001, the European Community proposed a list of 20 basic public services to be included in the list of the public services provided by the electronic government. Providing these services by electronic means may be realised on various levels of complexity:

Level 1	Information: providing information about the public services
Level 2	One-way interaction: downloading forms from the Internet
Level 3	Two-way interaction: forms processing, including authentication
Level 4	Fully automated transactions: transmission of information, making
decisions and delivery (including payments by electronic means).

The two tables below present the list of the public services proposed by the Commission and the stage of achievement of corresponding national measures.

4.Romanian Projects regarding E-Government applications

4.1. Electronic System for Public Acquisitions e-Procurement
www.e-licitatie.ro

The extension of the e-Procurement system to national level became a key component in the process of modernization of Government in Romania. By procuring electronically, the Romanian Government can lower the cost of inputs, also encouraging the private sector to move to B2B and it also creates the premises for lowering corruption, reducing bureaucracy and ensuring transparency, in the effort of building efficient and accountable public sector institutions, capable of sustaining long term development.

e-Procurement (Electronic System for Public Acquisitions) is more a "program" than a "project", taking into consideration that involves a long-term, fundamental process of changing governance, the human resources, the institutions and the technology. The role of Government is to guide the implementation of this new strategy of gradual change in the process for public procurement, to administrate this new system and to "re-engineer" the procurement processes.

The system of e-public acquisitions has three essential advantages: consolidating a more efficient and transparent process of public acquisitions, simplifying the participation in the processes of assigning the contracts of public acquisitions; providing information about the way in which the public acquisitions are made. Moreover, it stimulates the development of e-commerce in Romania, the use of Internet, of new technologies in general, and especially in the business environment, and it generates changes in mentality and culture in the public institutions, but also at the level of the entire

society. The integration of Romania in the information society will suppose the creation and consolidation of a culture of technology for all the citizens that wish to benefit from the advantages offered by this society.

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In the Government session on January 24, 2002, was approved the Ordinance for e-procurement. This Ordinance defines the legal framework for assigning the contracts of public acquisition on-line. The Electronic System for Public Acquisitions observes all the principles, on which the contracts of public acquisitions are based, namely the free competition between the potential contracting parties, the efficient use of the public funds, the transparency, the equal treatment, as well as the confidentiality concerning the commercial secret. Also, the concentration of the information regarding the public acquisitions of the public institutions and their dissemination by the public on Internet creates a transparent mechanism that can be easily evaluated by everybody. This means that any citizen could find out more details about how the public funds are spent, about the applied procedures, the participants and the winners of the contracts of the public acquisitions. Therefore the system for e-public acquisitions not only solves the problem of the competing contracts, but also responds to other major objectives of the Government.The system's operator is the General Inspectorate of the Communications and IT. A Government Decision settles the contracting authorities that shall apply the on-line procedure of assigning, mentioning for which procedure or phase of each procedure it is mandatory to use the procedure on-line.

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The official launch of the system took place on March 4th, 2002. The first stage is based on a reduced number of contracting units and products: 400 institutions and 17 categories of products so as to give the opportunity to everybody to get used to this system, as well as to evaluate the subsequent introduction of new products and institutions. For this phase the pilot system developed last year by the Ministry of Communications and Information Technology is used, but the tender for the further development of the system is already ongoing and the system will become functional in the second half of this year.

The informational flow on the basis of which this application functions is as follows: the system of public acquisitions presents itself under the form of a site on the Internet where the contracting authorities and the bidders meet each other. The contracting authority subscribes in the system, after which it has the right to make public the announcements and the documents on the basis of which the acquisition is made. A bidder that is not registered in the system and even the large public has the right and possibility to see or look for the announcements. After the bidder' s registration it is possible to download the documents for more complex auctions, as well as to transmit the offers as reply to demands of the contracting authorities. In this stage the auctions will be made by standard products, for which there is a clear description and what will matter in the first place is the price (for the first stage in the development of the system; the section of the evaluators and commission for opening the offers will be functional in the second stage, when complex products and services will be introduced). The system is connected to the Internet, there is a server of e-mail and a database on which all the data for the products within the system will be administrated and there is the server that actually makes the connection. All the necessary measures to ensure the security of this system were taken, there is safe connection, there are lists of control of the access, and attempts of access to unauthorised functions can be easily detected, the authentication of the users is made by digital certificates of those who participate and work in the system and there have been settled policies of access and of audit.

The results achieved so far on the acquisitions launched and closed on www.e-licitatie.ro (average economies of 26% of the acquisition costs) confirm the viability of the system and the premises that we had in view at its initiation. Moreover, each citizen who wants to know how the public money are spent has now the possibility to access the data about the finalised auctions, as well as those in progress, on the site www.e-licitatie.ro. Each company willing to sell something to

the State may subscribe in the system of e-procurement. All what one needs is a computer connected to the Internet so as to take advantage of this opportunity that the Romanian Government makes available for all its citizens.

4.2. "e-Job" - Information System for Job Search and Recruiting

This project is part of the "e-Government" implementation process, which was initiated by the Romanian Ministry of Communication and Information Technology.

The basic objectives of the system are:

- To achieve a virtual job fair through the Employers and Job Seekers meet their expectations regarding to job seekers' profiles and desired workplace, respectively.
- To prove the need, benefits and efficiency of using Information Technology in the Human Resources area.
- To give anyone the opportunity to emphasize personal skills and expertise in various areas of high-tech.

Solution Overview

EJob performs the following basic functions:

- Fill in the Job Seeker's profile in electronic format: identification data, education, capabilities and professional history
- Emphasize to Job Seekers the Employers' profiles and available positions
- Detail available positions offered by the Employer in the suitable way to attract all people who meet the job requirements
- Enable the Job Seeker to view all offers which are released by the Employers and to apply for the desired job
- Enable the Employers to view, study and analyse Job Seekers' resumes
- Enable the Employers to contact suitable Job Seekers via email in order to follow up the next stages for selection for the job

System Performance
UserAccess

User access is very easy within any Internet browser currently used on the market. The interface and user browsing are friendly. The speed for information retrieving is very high.

Data Accuracy

Only accurate and complete data are stored in the system. This issue is mainly done by the registration mechanism (most of data to be filled in are required, automatic password generation and sending them to Job Seekers emails to select only running Job Seekers' accounts), by the management mechanism (both the Job Seekers and Employers are accepted as site's users only after their info preview by the Application Admin) and by the mechanism to apply for job (only Job Seekers with complete resume and match for minimal requirements can apply for jobs).

Data Security and Confidentiality

The access in the system is enabled by an authentication mechanism like username/password. These allow to unique identify any user in the system. Data protection is assured both by Internet security mechanism (proxy server) and core Oracle RDBMS mechanism.

Any user-related data in the system are maintained as confidential and only the Employers, which was previously registered and enabled on the site, can read it.

Environment

This assures the basics for the system's performance within availability, fault-tolerance and speed. The application's architecture is a three-tier one (user level, business logic level and data persistence level). This is de-facto standard currently used in terms of performance. The used database is Oracle 9i and the business logic level is made using an Apache Web Server on Linux. All of them run on an IBM server. For any Internet user, the browser could be any of those currently used on the market.

Benefits

The system brings up the following benefits:

- Flexibility and quickness for the HR recruiting process; otherwise, this kind of process could be an expensive and time-hungry one for the organization;
- The system contributes to enforce the Information Technology as an alternative to the common HR recruiting procedures; the system allows to create, publicize and emphasize available jobs using the internet;
- To prove the need and opportunity of countrywide deployment of such a system and to identify any potential trouble in the implementation phase;
- To obtain information about the users feedback about changing the HR recruiting culture against the classical HR recruiting process which means multiple interactions between people.
- To increase the efficiency and transparency of the HR recruiting process in the government environment;
- To enable Employers to know more about the their future employees before meeting them.
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4.3. Multimedia Centers for Citizens

The first stage requires building an initial multimedia information center for the general public, located within the MCTI headquarters. This initial center will focus mainly on information and activities that are typical to the MCTI. The main objective of this first stage is both the social and technological confirmation of the information center concept for the local administration.

In order to accomplish this, the first stage will ensure, from an informational and a technological point of view, the following services:

-The opportunity to review main regulations (laws, government ordinances, MCTI regulations, national and international standards that apply in Romania) regarding telecommunications and information technology
· Information regarding actions and procedures required for private persons in carrying out duties and attributions regarding activities in the area of telecommunications and information technology; ensuring necessary logistics for completing and (if required) printing of document related to these procedures
· Information regarding public activity of the MCTI
· Searching different kinds of information featured by the multimedia center by key word search
· Assisted updating of information featured by the multimedia center
· Initiation of inquiries and public opinion polls on different issues of interest for the MCTI
· Legal assistance on topics of interest in the areas of telecommunication and information technology
· Information regarding the status of projects financed or coordinated by the MCTI
· Information regarding licenses awarded by the MCTI as well as specific data concerning the owners of these licenses; secure access and communication through Internet connection will be ensured for the later
· Linking to other central administrations information systems
· Information regarding nongovernmental organizations active in Romania, on foreign institutions with an active role in regulating telecommunications and information technology, on public institutions abroad with which the MCTI collaborates
· Exploring publications in the area of telecommunications and information technology printed or otherwise available in Romania; availability of books in electronic format by connecting to the appropriate servers
· Monitoring of information activity provided by the multimedia center and issuing of relevant statistics regarding this activity

Functionality

The solution consists in designing an integrated information system structured as a web portal, featuring the following modules:

· LEX - module for researching laws and regulations that apply in Romania, regarding telecommunications and information technology
· LocalAdmin - the module will feature information to ease interaction between the local administration and the general public
· Info MCTI - features information regarding public activity of the MCTI
· Search - global search module allowing the rapid retrieval of information published on the CMC site
· Opinions - module for inquiries and public opinion polls on different issues of interest for the MCTI
· Link Portal - will allow the integration of different data featured in various MCTI information sources
· Other organizations - information regarding nongovernmental organizations active in Romania, on foreign institutions with an active role in regulating telecommunications and information technology, on public institutions abroad with which the

MCTI collaborates

· Byblos - features publications in the area of telecommunications and information technology printed or otherwise available in Romania; availability of books in electronic format by connecting to the appropriate servers

· Suggestions and complaints - CMC users will be able to send their suggestions and complaints to the multimedia center administrator or to various departments within the MCTI

· The use of the above mentioned modules will be monitored though the Usage Monitoring module

· The Usage Statistics module features statistics regarding the level of use of different information on the CMC site

· The CMC Management module - Information Management System for administering and updating the content of the multimedia center

Key Points:

· Increases the interaction speed between local and central public administration and the general public

· Fast and easy retrieval of information

· Friendly and intuitive interface

· The system runs on standard PCs, including those with touch screens

· The multimedia center provides both online and offline services, featuring advanced email and fax capabilities

· The system has a scalable architecture allowing for new modules to be added during future development

Benefits:

This information system will contribute to the development of a multimedia center model, which will be implemented during the next stages of the project

· The system ensures citizens' rapid and intuitive access to information in various areas of interest

· Having a web interface, the modules can also be accessed via Internet

· The systems can be scaled to "info-kiosks" in public areas, thus ensuring citizens a wider access to information and a relevant basis for inquires and polls

· The Multimedia Center Information System:

-Helps citizens get more familiar with the new means of information

-Facilitates citizens in getting accustomed to the use of home PC

-Assists in changing citizens' mentality toward the opportunities provided by the use of PC's

-Contributes to the development of the electronic information market, thus to that of the IT industry

-Reduces the gap between the level of IT culture of rural and urban area citizens

-Facilitates management of public information provided by local and central administration in order for it to be easily accessed through the system

· The system allows simple and effective administration, thus ensuring easy information updating and access management.

4.4. **Extending the information system for monitoring balance sheets and fiscal obligations of those companies with declaration capabilities on the Web**
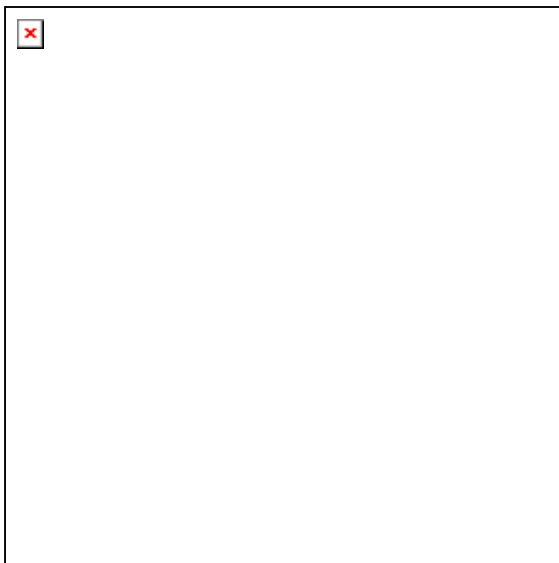
4.5. **Public servants identification.**

Identifying public clerks through smart cards

- The digital signatures and digital certificates will be used to identify the employees from Ministry of Communications and Information Technology.
- This application will supervise and manage the access rights to different applications or data
- Authentication in communication systems
- The communication will be encrypted, authentication is needed to access the e-mail accounts
The following **technical elements** can be distinguished:
1. certSafe server - Certification Authority, its main purpose is to issue, validate and verify the digital certificates of the eployes from Ministry of Communications and Information Technology.
2. LDAP server - it stores the information about the users (valid digital certificates, canceled digital certificates, e-mail addresses, etc)
3. MCTI e-mail server - the server where the e-mails of the Ministry of Communication and information Technology eployes are stored, they can read the e-mail both from Ministry's LAN or from internet.
4. Work stations and smart card readers - all workstations from Ministry of Communications and Information Technology will have smart card readers, the eployes from Ministry of Communications and Information Technology can use the computers after logging on using their smart cards.

Functional description
The solution developed by UTI offers:
· Identification of the employes
Smart cards will be used to identify the eployes. They offer a very good support to store a digital certificate and they can be used by the owner to sign the documents or to encrypt/decrypt the data. In this way they assure the authenticity, integrity and privacy of the data.
· The possibility to supervise and manage the access rights to data and applications The users won't have to use anymore the "username/password" system to log on a computer or an application, they will use only smart cards to access those resources. A smart card will be issued for each user of the computer, the access rights are stored on it and the access is granted only if the right smart card and its associated PIN are used.

Operating model
The main characteristics of the application are:
· certSafe server, this is the Certification Authority and the server that authenticates the eployes when they want to read their e-mail.
· clickSign application, this application is used to encrypt and sign Microsoft Office Documents.

CertSafe server
The user will log on Ministry of Communications and Information Technology server and he will be diverted to the private web page where certSafe server is.
When the user is authenticated, certSafe server will use a secured connection to communicate with the e-mail server from Ministry of Communications and Information Technology and it will download the new e-mails.
The e-mails list appears in a friendly user interface with all the functionalities of an e-mail client program; the user can read or send e-mails and he can save or send attachments. These functionalities can achived using the e-mail server of Ministry of Communications and Information Technology even when the user is not in his office. This solution offers a lot of mobility for the user and he doesn't have to create new e-mail accounts on public servers when he travels.
The communication between the certSafe server and the workstations from Ministry of Communication and Information Technology network is secured; in this way there is no chance to occur internal attacks or sniffing actions.

ClickSign application
clickSign is an application developed by UTI. This application can be integrated with Microsoft Office and it offers the possibility to sign and encrypt documents generated with MS Office applications without leaving that environment. The documents can be used only by the authorized users, who have the proper private key. The digital signature is used to identify the author of the document and it offers a good data protection.
Because it uses digital certificates stored on smart cards the clickSign application offers supplementary security, the user have the advantages of the hardware device and of the PIN code necessary to activate the smart card.
The clickSign application allows the user to send the data by e-mail when the encryption is completed, to optimize the transmission parameters clickSign can compress the data using a very powerful compression algorithm.

4.6. Cashflow management

The system designed for Cash Flow Management is included among the main targets of the informatisation program for the Ministry of Communications and Information Technology, having the purpose to develop an application for a wide use inside the organization, improving the usage of the specific services and structure.

The provided solution is a financial analysis tool which allows the presentation, in a clear and suggestive way, of the report for financial available funds of the organization and the evolution of these for a certain time according with the level of the cashings and payments.

The system presents in an organized and where it is necessary - hierarchical way, information regarding cash flow, requested by the management levels. The main target followed-up in the system design and development phase was the set up of an financial analysis tool which allows:

· Cash flow analysis supported by cash in and out;

· Emphasize cash flow tendencies - differentiate between negative, positive and zero cash flows.

· Aggregation / desegregation for different time periods, cumulating, filtration, establishment of excepting situations, top/bottom analysis;

· Follow-up of the values for interest indicators all time, with the possibility of "what if ?" analysis and prognosis for the evolution of the analyzed indicators for time periods established by the user and which take into account historical data existing in the system;

· Knowledge about financial relations with business partners;

· Secure and safe access to the key data of the organization;

· Possibility to define at any time, the specific scenarios which reflect analyzed indicators
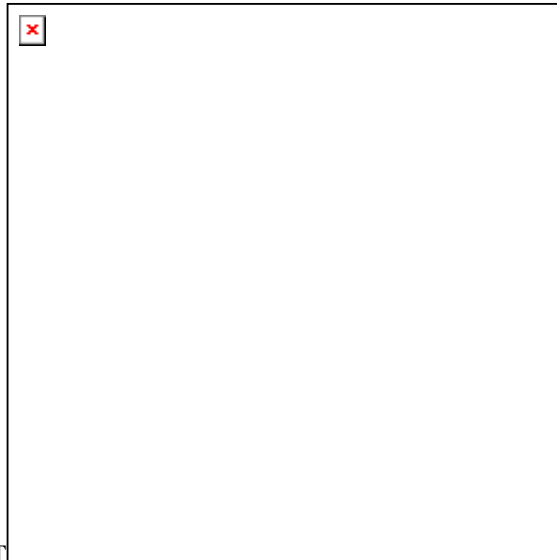
4.7. Document management in MCIT

4.8. Tax payment by electronic means (e-Tax-payment)
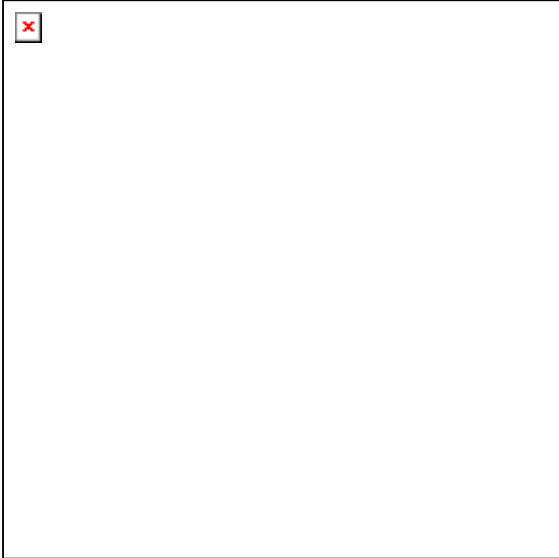
According to the Law 291/2002, regarding the electronic payment of local taxes, public administration authorities have to deploy electronic local tax collection systems in every city and municipality. Due deployment date is 1st of February 2003 for municipalities and 1st of November 2003 for all the other cities.

4.9. Computerized system for the auditing of system security and communication networks

4.10. Electronic Information Services for citizens (Info-Kiosks)

Info Kiosk - represents a portal, an automated information system, easy to use by the citizens.
The reason of the Ministry of Communications and Information Technology to offer better services for companies and people through modernizing, increasing transparency and access to operations from public administration, represents the main target of this project together with:
· Making and offering an integrated information system in social, cultural and economical fields;
· Creating well-acquainted people in electronic information and creating the concept that informatics is a personal utility element for everyone;
· Getting close and involving the people in government action though easy electronic access to information using this Info-Kiosk system.
Validation of the Info-Kiosk concept from the social and technological point of view justifies the choosing of the implemented applications for:
· Informing the people about the norms and rules in force, specific for fiscal administration activity;
· Informing the people about local taxes which they debt. This information is personal and can be accessed only with an electronic certificate.

4.11. WEB based system for loading supplier's bills

4.12. Electronic Referendum (e - Referendum)

e-Referendum project refers to public opinion tests inside of a referendum made at national or local level. In the same time it represents an excellent frame for a large scale using of Internet and electronics means, especially when their volume is very large.
The system will offer to the citizens a friendly and economic alternative to express their option referring to a national interest subject.
The reasons of Ministry of Communications and Information Technology, project supporter, were conceptual and also practical. The aims for this project are:
· Achievement of a pilot project for an application which will allow the citizens to express their option for a certain national interest subject, inside of a Referendum, using Internet based technology;

· Demonstration of the necessity, benefits and efficiency of modern technology using in a referendum doing process.

4.13. Virtual market (e-market)

The main objectives of the electronic commerce project eMarket are:
· To demonstrate the necessity, the benefits and the efficiency of the modern technologies utilization in the Romanian economic environment.
· To develop a virtual market for products and services that allows the buyers and the sellers to meet, negotiate and perform commercial transactions, all supported by Web technologies.
· To provide equal chances and a transparent information for all the players from the economic environment.
· Acquisition Price Optimization by matching the demand and the offer.
· Marketing and distribution Cost Reduction.
· Continuous Accessibility to a virtual business frame.
· High Speed for information access.

The eMarket site is provided with a double functionality, for regular users and for administrators. The access to all the website's pages is secured, being no danger for an unauthorized data usage.

4.14. Informatic system for address change notification

The accelerated use of information and communication technologies and the advent of the Internet have put very powerful tools within the reach of citizens, governments as well as large and small businesses everywhere. This is resulting in profound changes in the internal organisations of governments and business as well as in the relationships amongst businesses, trading partners, citizens and governments. We now know that these technologies are considered to have a considerable impact on the whole of the economy and that policy which governs their use and implementation are decisive in the modernisation of these economies.

The Government and the related institutions have an important role in conducting and controlling the development process in Informatics Society. This role consists in concrete programs, projects and specific regulations.

The aim of this project is to build the platform and a tool which will provide citizens quality services.

The solution is an Internet Application with the main functionality which will allow citizens to change their address online. In that way will be eliminated the necessity to go to the evidence people offices for couple of times, in order to obtain information, blanks and needed data. These services are a new step forward to change the relation between citizen and state. Another objective is to create a new tool, helpful and easy to manage among public institutions, with minimal human and material resources.

4.15. Integrated informatic system regarding national communications Infocom

As a consequence of the heterogeneous telecommunications services market, monitoring its structural evolution becomes an important issue for the following years. The integrated informational system for national communications creates a base for the decision process, offering a real image of the distribution of the services in the communication market.

The purpose of this project is the developing systems for monitoring and evaluation communication networks across Romania and for achieving this purpose, the following objectives were set:
- realizing a strong informatics system for centralizing the dates from communication companies
- a high security level for the system
- the possibility of distributing users by groups, with custom profiles
- rapid and facile administration of the system
- the possibility of adding new data formats using the administration module
- reports and statistics
- the possibility of extending the system by adding new modules and functionalities

4.16. Informatic system regarding the implementation phase of eEurope+ and development of IT

4.17. Financial Integrated System

The Integrated Financial System as a management tool for Ministry of Communications and Information Technology creates the conditions for organization efficiency, through the possibility of follow-up at any time and at any level, of the Ministry current activities. The system assures the obtaining of fully and complex reports, regarding financial-

accounting information, in a short time and with a frame easy to be analyzed.

The solution is designated for accounting evidence management and achieving of a fast financial administration, with the respect of the Romanian law in force, a special achievement solution, attractive for the user, easy to learn and to assimilate and simple in exploitation.

Once information became more and more a production mean it, is also more and more important the way how it is stored, found and especially used. The offered tool allows data storage and optimally management, being an instrument close to the manager, helping him in the decisions process.

The main targets project followed-up by the Ministry of Communications and Information Technology are also the attributes of the applications:

· Modular construction which allows a simple data retrieving and just a single input of the information in the system;

· Confidentiality assurance, necessary for the used data, security, backup and recovery mechanism for all incidental situations;

· Possibility to reflect economical activity in different currencies: LEI (basic), EURO, USD, DEM related with the transactions that have been carried out;

· Analytical accounts definition and chronological registration of the primary documents, which establish movements inside the institution;

· Analytical accounts calculation after periods of time established by the user or returning to the previous configurations of the accounts for finishing operations done at the end of the year;

· Long term diary of all accounting operations and re-establishment of account situations, for incident situations or for a user special request;

· Defining budgets structures over activities, projects and organization structure, achievement of all budgets flow;

· Administration of the assets for all using time period;

· Human resources administration, planing and following -up of the evolution of working personal and also personal salaries;

· Defining and following-up the contracts;

· Administrations of inventory and procurement;

· Economical analysis of performance indicators specific for the organization.

4.18. Portal for administrative forms on-line

4.19. Portal for eHealth information

5. Romanian legislation in force regarding E-Government applications:

1. Emergency Ordinance no. 79/2002, on on the General Regulatory Framework for Communications, published in OJ no. 457 of June 27, 2002
2. Ordinance No. 34 of January 30, 2002, on the Access to the Electronic Communications Networks and to the Associated Infrastructure, as well as their Interconnection
3. Ordinance No. 31 of January 30, 2002, on Postal Services
4. Ordinance No. 24 of January 30, 2002 on Electronic Cashing in of Local Taxes and Duties
5. Ordinance no. 20 of January 24, 2002, concerning public acquisitions by means of electronic bids
6. Ordinance No. 18 of January 24, 2002 on the Functioning of the Single National System for Emergency Calls
7. Law No. 676 of November 21st, 2001, on the Processing of Personal Data and the Protection of Privacy in the Telecommunications Sector
8. LAW no. 455 of July 18th, 2001 on Electronic Signature

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