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E-CITIZEN'S CONCEPT AND INITIATIVES IN KAUNAS REGION

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Abstract

This paper aims to answer the question "What does a concept of the e-Citizen consists of in Kaunas region and why?" Generally the concept of the e-Citizen is directly related to the vision of eEurope, i.e. with all to the development of eEurope directed actions, which are highly attended of European Union in recent years. Analyzing the e-Citizen's subject, it is essential to examine the issue of e-service, because the e-Citizen's vision is shaped by using e-service concept, which aims to involve every citizen, family, school, enterprise and administration in the digital era. The research problem includes e-Citizen's concept and the initiatives in Kaunas region, thus highlighting the interaction between dimensions of e-Services and e-Citizen, also both why those initiatives are required and what is an outlook in this range for Kaunas region.

The main task is to answer the question concerning e-Citizen's concept by analyzing the e-Initiatives in Lithuania and Kaunas region. These e-Initiatives are underlying goals of eEurope and i2010. The aim of the research is to module the picture of Kaunas e-Citizen and show a value of mentioned initiatives for the inhabitants of Kaunas region by analyzing the implemented and continuing e-Region's projects.

Keywords:

e-Citizen; Kaunas e-Region; the Strategy plan of e-Kaunas; e-Europe; i2010; e-service; e-Government; e-learning; e-health; e-security; e-culture.

Introduction

Today nobody has a doubt about wide spread of IT to all areas of social life, influencing the interactions between citizens and government, legal and political processes between them (O. Barčkutė, A. Mikalauskienė, R. Skyrius, 1999). Today's government is oriented to the society that successfully applies available resources of information and knowledge. The development of electronic services (hereinafter – *e-Services*) is one of the aspects revealing such a situation. The topic of *e-Services* is analysed by both, Lithuanian and foreign authors, widely. R. Gudauskas (2000), T. Talandis (2004), J. Aleknavičius (2001; 2003), K. Andrijauskas (2007), D. Dzemydienė, R. Naujikienė, (2007) wrote about *e-Services*. In his research M. Asgarkhani (2005) emphasizes the worth and efficiency of the public *e-Services*, inducting social, cultural and ethical impact on the citizens. A. Ancarani (2005) widely studied the quality of *e-Services* paying attention to the increasing of transparency, productivity and efficiency of *e-Services* in the public sector mostly. While A. Sahai, J. Ouyang, V. Machiraju, K. Wurster (2000) examined the creation of *e-Services'* system for meeting demand of business sector. S. Croom, R. Johnston (2003) analysed the issue of *e-Business* development. R. T. Rust and P. K. Kannan (2003) analysed *e-Services* as the development of business opportunities. G. Piccinelli, C. Preist, C. Partolini (2001) highlighted "business-to-business" (B2B) interactions, where *e-Services* were analysed as the decision of implementation of the new services of business. Whereas L. Aversano and G. Canfora (2002) designed models for the introduction of *e-Services* to the business processes, i.e. models the processes, services and composition of processes, and on the basis of IT generates models of labor flow and interaction with available services. R. T. Rust, K. N. Lemon (2001) analyzed the critical aspects of *e-Services* for the efficient interaction with the consumers. J. M. Field, G. R. Heim, K. K. Sinha (2004) oriented to the development of the model of quality assessment and management of *e-Services.* D. Gefen, D. W. Straub (2003) highlighted the most important differences between B2C *e-Services* and traditional services provided to the customers online. Moreover,

consumer confidence in *e-Services* was investigated. An assumption can be made that analyzed topic is multidisciplinary, because it is an object of interest of the researchers of social and technical sciences. Rapid globalization processes and the creation of information society have a new weight on information and innovations (especially technical). Technology progress is one of the most significant factors on the economical growth at the moment. Scientific problem: what are the most important initiatives creating the *e-Citizen concept* in Kaunas region*? What perspectives could be supposed?* Novelty of the problem is revealed through the development of *e-Services* initiatives, which determine structural changes, competitive advantage and economic growth in Kaunas region.

Research **aim** – to highlight *e-Citizen's* concept and initiatives in the Kaunas region, in purpose evaluating the perspectives.

Research **tasks:**

1. To define the term of *e-Services*;
2. To give *eEurope* vision;
3. To evaluate the situation of *e-Services* in Lithuania and Kaunas region;
4. To characterize the impact of *e-Citizen's* initiatives and perspectives in the Kaunas region.

Research **object:** *e-Citizen's* concept and initiatives.

Research **methods:** analysis of the EU legal acts and specific literature, and contemplation of the perspectives of initiatives of the Kaunas region.

The term of electronic services

T. Talandis (2004) notices wide spectrum of *e-Services* and proceedings, including new business models, public administration methods, new media types and new economical and political relationships. According to the legal website EUROPA (2002), *E-Service* is a service or resources online, improving communication among citizens, business and European institutions. J. Aleknavičius (2001) notices that *e-Service* is a service which fulfils targets, deals with the problems or transfers data and is provided on the web. Citizens, businesses and other *e*-Services can use *e-Services.* They can be provided through various devices of information. (J. Aleknavičius, 2001).

Public service includes communication of citizen or business unit with public institution. (e.g., inquiry and answer to the question, filling of various documents, submission, accounts...) (J. Aleknavičius, 2003). Public *e-Service* gives an opportunity to perform various needed operations and get information digitally to a person in the place of his occurrence and trough the public networks of computers. Provision of public *e-Services* is evaluated on the basis of maturity models (K. Andrijauskas, 2007). Services of the first phase – mean a provision of information (D. Dzemydienė, R. Naujikienė, 2007). Second phase includes original information and explanations, and the help on any public *e-Service* online. In virtual setting document forms, which could be printed and filled, are accessible. When transferring public *e-Services* to the third and fourth maturity phase, the problems of natural and legal persons' identification in the government's information systems should be solved and the connection of the public administration redesigned. Such a strategy is scheduled of the development of the public administration till the year of 2010 (D. Dzemydienė, R. Naujikienė, 2007).

Picture1. *E-Services* classification and users (formed by L. Valalytė, 2008)

Vision of electronic Europe

Recently, the EU institutions pay attention to the development questions of information considerably. In March in the year of 2000 European Council confirmed the initiative "Electronic Europe – information society for everyone (e-Europe)" (eEurope 2005 Action Plan, 2005). The aforementioned eEurope initiative is designed on the basis of nowadays policy. The initiative purpose is to reduce the differences of access to the internet and its usage of the member sates, and to find common decisions of problems as well. The main aim of *e-Europe* is to involve every citizen, family, school, enterprise and administration institution to the digital era; to create computer sophisticated Europe that is sponsored by cultured, ready to fund and develop ideas business; to ensure that process will be socially attractive, encourage consumer confidence and strengthen social cohesion. In order to eliminate or reduce the barriers, the directive INSPIRE (2007/2/EC), which aim is to develop essential spatial data, was initiated; to harmonize data according to the common standards; to create metadata and administration; to exchange national spatial data between governmental institutions in the territory of Europe (Commission Communicate…, 2008). The aforementioned directive is valuable, because allows reaching information for the society and other stakeholders; equalizes formats

of spatial information and it's presenting; establishes periodicity of updating of spatial information; implements the means of spatial information analysis and it's presentation in various layers; due to the occurrence of the coordination of common actions (K. Andrijauskas, 2007). According to the USA experience, new technologies can accelerate growth and create new job places, because of the fact that in the companies providing internet services work about 2.3 million direct employees, apart the impact to the non-direct employment that is 1.6 million (eEurope, 2005).

The main parts of *E-Europe* that form the picture–vision of *eEurope* are the following:

	*E-Learning* is a mean for organization of internal and external trainings for the workers, providers, business partners, pupils or students. The following method extends the organization opportunities of trainings, saves working hours and reduces the training, administration and communication costs.
	*E-Business* – is a purchase and sale online. *E-Business* could be divided into two parts – a purchase and a sale. B2C is sales, while B2B includes electronic transfer of data (purchase and sales). Systems of B2E exist as well. Many companies are looking for the decisions for all three types of transactions.
	*E-Health* includes means with main purpose to facilitate communication between patients and doctors; to improve the level of health services in the member states. The bigger part of electronic means is initialized in order to tackle with the existing problems (e.g. long queues near reception desk, lack of information on some illness) (A. Rapolevičiūtė, 2007).
	*E-Government* can be understood as the government that is available in the electronic space, and its government function is implemented trough IT. *E-Government* is one of the means used to improve the quality of society and government communication; to modernize a governance; to implement the reform of state while adapting to the requirements of knowledge society successfully (M. Kiškis, A. Kraujelytė, 2006).

When creating *E-Europe*, a few problems were found: expensive, insecure, slow connection of the internet and *E-Commerce*; citizens' lack of information for the usage of ICT; lack of the dynamic business and services provided; unsatisfactory active governmental sector that could give new opportunities for the development of the new programs and services. In June of the year 2002 European Commission formulated the action plan "E-Europe 2005: information society for everyone", according which an access to the infrastructure of broadband network and development guidelines of provided E-Services is given for everyone (*e-business, e-learning; e-inclusion; e-health*) (eEurope 2005 Action Plan, 2005).

In June of the year of 2005 the i2010 umbrella EU strategy of ICT development, which extended the initiatives of *E-Europe,* was confirmed. *i2010* is concentrated to the convergence of the industry of telecommunications, providers of the internet services and content industry, e.g.: media's depolarize (Commission Communicate ...., 2005). The most significant EU documents related with *E-Europe* are showed in the 2nd figure.

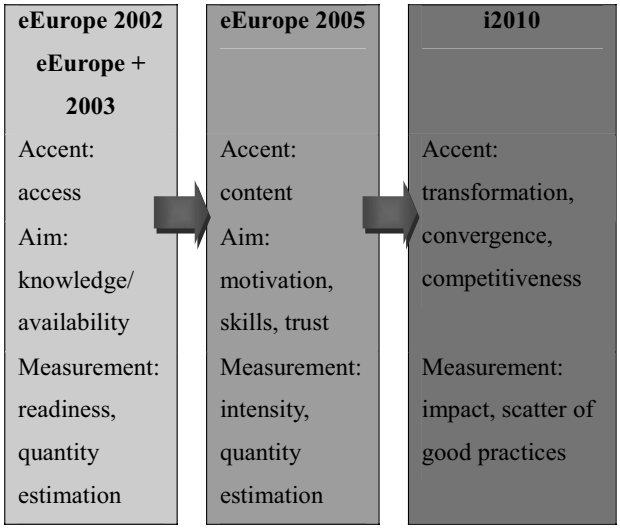

Figure 2. EU policy when developing information society (Strategy on the creation of information society, 2005)

Situation of *e-Services* in Lithuania and Kaunas region

LR Home Office research (2008) indicated that maturity index of public E-Services for citizens – 51 %. Only 5 of 26 services are provided maximally: tax return and consultation on incomes and property; search of free work places, etc. The Committee of

information society to the LR Government (2007) presents data revealing that 66 services are transferred to the electronic space in Kaunas region, i.e. 45 % of all services. LR Home Office research (2008) indicated that the common maturity index of the public services to business is 62 % and exceeds the common maturity index of public services to citizen, which is 51 %. Only 6 of 16 public services are provided to business maximally (taxes declaration; pay back and pay customs, etc.). It is obvious that most of public services are not provided in an ultimate level and only a few of them meet the requirements of the fifth level. When comparing the transfer of the public services for business, European tendencies predominate in Lithuania – the public services for the business are transferred much faster than for citizens. Only 5 of 20 public services for business and citizens scheduled on the EU directives are transferred to the electronic space. Today, in Lithuania about 70 % of public sector services are transferred to the E-Government, average of EU – 75 %, Estonia – 90 %. It is scheduled that till the year of 2010 all the member states provide 12 e-Government services for citizens and 8 e-Government services for business.

Electronic declaration system (lt. - EDS) – the project of the State Tax Inspectorate was awarded with the "Good practice" label of the year of 2007 (the ePractice.eu Good Practice label is only given to 10% of the cases published on the web portal). Lithuanian Labor Exchange website was awarded in the year of 2007 in the category of e-Government as "The best e-content project" in Vilnius (IVPK, 2007).

Good conditions and necessity to implement *e-City* project are in Kaunas region. In the Kaunas strategic plan (2004) the main accent is given to the intensive education of information society and development of the knowledge based economy, ensuring the competitiveness of Kaunas region. All the aforementioned actions will make public life of city much more effective and convenient. All the conditions for e-City development are in Kaunas region – citizens' abilities to use IT; strong intellectual potential of IT and telecommunications, mechanics, electrotechnics and pharmacy in the universities, structures of business; compact city; developed infrastructures of IT and telecommunications. The most significant factor stopping e-City development is the absence of e-Content (e-Content consist of e-*Banking, e-Business*, *e-Communication*, *e-Government*; *e-Information*, *e-Health* and *e-Transport* sectors).

In Kaunas city, like in all the country, *e-Banking* services expand widely and the number of the users of these services grows as well. *E-Business* segment developed services for the citizens incompletely but between enterprises *e-Business* is used on a mass scale. *E-Communication* is one of the reasons for the usage of the internet. In Kaunas city, like in other Lithuania's municipalities, e-Government sector has made a significant progress during the last several years. *E-Information* is rapidly spreading part of the e-Content. It can be simply uploaded to the internet and is frequently searched of citizens. Kaunas has perfect conditions to be the e-Health leader, because medical services for the citizens of all the country are provided in Kaunas, moreover, it has a strong potential of medicine and pharmacy. *E-Transport* sector has done a progress – an *e-Ticket*, which is the firs step to the presentation of the city's *e-Citizen* card, ensuring the efficiency and practical services of the public transport for citizens, was presented. Due to the universality of the city's *e*-Card, private sector's integration to the development of the *e-City* can be reached and education of information society, and attractiveness of the city ensured.

Since the year of 2003 under the triangular agreement among Kaunas municipality, Kaunas city and Tampere city (Finland) the project "Kaunas e-Region" has been started to be implemented by the municipalities. R. Gatautis and V. Pukas (2007) notice that this program was developed due to the support of Phare 2001. The results of the aforementioned support were the research of the viability of e-*Kaunas* region; current situation analysis and planning of the most significant future goals in six areas (see Figure3). Tampere model was used as the guidelines of developing program of Kaunas *e-Region*.

Picture 3. The complex of projects that were implemented in Kaunas region (Partnership Program of Information Society, 2004)

The general objectives of the project are to enhance the process of Lithuania's integration to the EU (eEurope dimension); to create a partnership between Kaunas and Tampere regions for the strategic development of Information Society (eTampere); to contribute to the sustainability of the development of Information Society in the whole Baltic region (eNorth dimension). The main results of the projects are the following: Feasibility Study of Kaunas eRegion; Partnership Program of Information Society of the Kaunas region; Subroutines of implementation model of the Kaunas eRegion (see Table 1).

A. Andrėnas (2003) notices that Kaunas municipality has started the first transaction of electronic self-government implementation in autumn of the year of 2001 (Pilot project "Interactive map of Kaunas investment" (http://www.kaunas.lt/kim); "Model of spatial consulting-room"; *e-self-Government* conception; analysis of public services provided by Kaunas municipality). A. Lukoševičius (2004) notices that Kaunas using available potential and experience of international partners has a chance to be the leader of *e-Health* (*e*-cluster of *e-Health* is noticeable). Kaunas territory map of business is made and supervised by the park of high-technologies of information of Kaunas and funded by the Kaunas municipality as well. The aforementioned website is an interactive online system of the search and analysis of the geographic and objective information, including whole the areas of the performance of enterprises and whole enterprises of the Kaunas region (LR Ministry of Economy, 2007).

Table 1. Objects of the initiatives of Kaunas *eRegion* (L. Valalytė, 2008)

E-Democracy	E-Business	e-Infra
To strengthen the processes of democracy by providing information of the decision making processes via the Internet to the public and increase interactivity between decision makers and citizens.	To improve business skills of the information society, especially between SME-companies, and create the ecosystem for the support of innovations.	To create the infrastructure that supports the development of the information society. It must be reliable, easily accessed, speedy and low cost.
E-Health	**E-Municipality**	**E-Abilities**
To improve health care and make it more cost/effective by utilizing ICT in all the levels of healthcare system.	Public services should be provided electronically and together with the private sector. The aim is the quality and cost effective service production.	To make sure that all the citizens have skills, access and motivation in order utilize the services of Information society fully. Schools should utilize eLearning possibilities whenever it is appropriate for the learning and instruction.

According to the *e-Kaunas* strategic plan for the period of 2006 – 2015 (2006), *e-Kaunas* is defined as the competitive European and global world city, where IT usage is associated with daily actions, giving much bigger benefit to the society and business. In the end of the year of 2007 the idea of introduction of e-Citizen card in Kaunas was pronounced. This card is one part of e-Kaunas project. The aim of the aforementioned initiative is to facilitate settlements that are less than 200-300 Lt. A. Bačiliūnas (2007) notices that Kaunas inhabitants have had an *e-Ticket* for the settlements of public transport (initiative was completed) in the first phase. In the second phase much wider packet of services is introduced i.e. more settlement functions are incorporated into the card. The authors of the project work with the Kaunas website as well, i.e. the internet portal about the events of Kaunas region, provided various services, business institutions and private sector, science institutions, etc. The project *e-Kaunas* includes municipality and the transfer of the municipality companies to the e-Space. This *eKaunas* project would get near 300 mln. Lt hopefully. *EKaunas* (ID, *e-Signature*; *e-Commerce*, *e-Tickets* in transport, theater, *e-Public utilities* (data of accounts, settlements), *e-Studies book*, driving license, *e-Social insurance*. The competence centre of the *e-Services* project of Kaunas public company "Technopolis" that main aim is to create the public infrastructure enabling the development of *e-Services* for the small and medium enterprises and public sector is between 15 best implemented projects of the EU.

Today, projects related with the *e-Citizens* concept are implemented in Kaunas region. The creation of the system of electronic ticket for the public transport and passengers' information. One of the project partners is Kaunas municipality (19 494 850.80 Lt). Vytautas Magnus University is implementing the project "Mean of information translation online" (5 585 600.00 Lt). The aim of the project is the creation of means for online machine translation from English into Lithuanian and the exploration of the service of free machine translation in the websites by invoking available specialists of the Lithuanian language, cumulating Lithuanian resources and "know-how" from the international hegemonic, and IT companies in range of machine translation. The project "The system of patient registration in advance" (7 350 378.00 Lt), despite the fact that this project is implemented by the public company Santari kės clinic of the Hospital of Vilnius University, the main partners of the project are from the Kaunas region (6 partners). The main purpose of this project is to create the system of patient registration in advance, which integrates the separate registration system of the medical institution. The project "Broadband network of information technology of rural area RAIN" (73 676 946.15 Lt) is implemented in all the territory of Lithuania. The

main object is to provide the broadband access for all the rural public administration institutions, hospitals, laboratories, schools, museums, libraries, public internet access points and also for the rural residents and business companies. The project "E-Health services" (19 077 834.00 Lt) is implemented as well, despite the fact that this project is implemented by the LR Ministry of Health, one of the most important partners is Kaunas Clinic of Medical University in this initiative.

Table 2. Number and support sum of the projects in Kaunas region (LR Finance Ministry, 2008)

Funding projects	**269**
Implementing at the moment:	184
Finished:	85
BPD support	**233 962 978.18 Lt**

Kaunas University of Technology is the most active institution in creation of *e-Citizen* concept and initiatives in Kaunas region. This university implements the project such as "The creation of academic e-publishing system of Lithuania" (3 367 000.00 Lt) that aim is the creation of e-publishing system of science and studies, including e-documents' arrangement, storage, search and presentation to the users invariant manners. The aim of the next project "Remote learning network grounded by the ICT development in Lithuania" (3 508 529.00 Lt) is to create the infrastructure of distance studies and create suitable conditions for the Lithuanian science institutions to provide high quality distance studies in all Lithuanian regions by creating the dynamic knowledge society, reducing rural areas and urban exclusion. The main aim of the project "The creation of science, information system of studies and experimental implementation in Lithuania" (2 855 600.00 Lt) is to create LieMSIS academic infrastructure, which would increase the availability of LieMSIS services and ensure effective usage of the resources of science institutions. Due to the project "Integral education activity of the system of distance learning in Lithuania" (4 129 986.00 Lt), institutions of Lithuanian science and studies can provide distance learning in Lithuania's regions. Due to the project "The creation of Lithuania's virtual library and full text database" (3 655 900.00 Lt), the process of life long learning is complemented by innovative learning manner, Lithuania's virtual library and VDDB is created too. The project "Lithuania's e-documents accumulation of science and studies and presentment to the readers" (3 267 486.00 Lt) empowers organization, keeping and presentation of e-documents of science and studies to the academics, students and to the society later. "LĮA" implements the project "The elements of the computer license for the Lithuania's e-Citizen" (8 538 588.00 Lt) that allows getting skills and abilities of the computer license and increase the level of computer skills. The aforementioned skills empower an employee to be competitive in the labor market and improve the access to the work information. This project is implemented in all the territory of Lithuania. The Association of the Lithuanian Chambers of Commerce, Industry and Crafts implements the project "The development of basic education and career education systems, and creation of suitable conditions for the life long learning in the e-education field" (2 878 658.00 Lt) aiming to train shape abilities of all the schoolmasters to use the ICT means in the education process. One of the successful projects is Kaunas municipality project "Education of computer literacy for the economically active citizens in Kaunas region" (525 730.00 Lt). The aim of this project is to fasten the processes of information society and to create the knowledge based economy in Kaunas region, to strengthen human resources and their integration to the labor market, and reduce the exclusion in Kaunas region. This project is the continuing of the financed project of PHARE 2001 "Kaunas e-Region: IV partnership program"/ subprogram e-Skills/ www.kaunaseregion.lt (European agency of social fund, 2008).

Summarizing all implemented initiatives that form and influence *e-Citizen* concept in Kaunas region, the conclusion can be made that many initiatives are designed for the development of infrastructure, technical preparation, development of IT skills and for the instrument (e-library …) creation. Those indicators allow upstarting the new initiatives. The *e-Kaunas* vision is being implemented in reality.

Effect and perspectives of the *e-Citizen's* initiatives in Kaunas region

The Kaunas region *E- Region* projects are the way for the implementation of e-Kaunas vision. Citizens get significant benefit – comfort, time saving, easy access, reduced corruption, development of skills. Kaunas experience could be a good example of practice for other regions.

Technical setting. E-Citizen's concept implemented in the Kaunas region improved public access to the internet and paid much attention to the computer literacy. In order to make significant influence, the aforementioned moments should be presented as substantial for the initiatives, but the created infrastructure isn't the ultimate result. This infrastructure could be non-functional without

e-Content (e-Skills, e-Services), therefore, the necessity is to improve and develop e-Infrastructure.

Economic setting. E-Citizen's initiatives influence competitiveness and investments of Kaunas region directly. The projects noted in this article were initiated by the science institutions and city municipality. Such a situation shows that business initiatives are limited but the perspective of science and business collaboration could be the solution. Growing science and technology park "Technopolis" is one of the perspectives for the implementation of this solution. The mission of "Technopolis" is to encourage collaboration among the higher education, research institutions and innovative enterprises of the state. This action should encourage wider business involvement to the creation process of e-Citizen concept in Kaunas region. The creation of e-Citizen card promotes business integration into the development of e-City as well. In the e-Transport sector the need for noticing the development of infrastructure of the transport information is. At the moment, the modern integrated system of traffic control is being prepared to introduce. All aforementioned and forthcoming initiatives would allow citizens of Kaunas region to get public and business services, exchange information and communicate rapidly and handily; business would have possibility to optimize business processes and increase the productivity and competitiveness; state institutions would have possibility to provide services coming up the expectations of citizens.

Table 3. Perspectives of the e-Citizen's concept

Side effect:	***Expected effect:***
• *Growing info exclusion;* • *Health problems;* • *Psychological problems;* • *Data security problems.*	• *E-Citizen's concept set;* • *Openness;* • *Competitiveness;* • *Investment.*
e-Business | ***e-Learning*** | ***e-Health*** | ***e-Government***	
Creative initiatives	
Skills, abilities/ Empowerment	
Infrastructure	

Social setting. Every new initiative influences many running processes in the society. E-Citizen initiative could influence social setting as well. The basic problem is the increasing rates of info exclusion or digital exclusion; psychology, heath (related with the usage of IT devices) and data protection problems.

In conclusion, impact of the *e-Services* can be not only positive. One negative impact is discomfort due to the lack of skills or technical problems, which are highlighted, when the vision is going to be implemented into reality. But good practices develop positive solutions to the e-Citizen's vision.

Conclusions

- E-Service – all services, which ease ir communication among three institutions (government, citizens and business) and are required through ICT.
- *eEurope* vision creation with the help of three documents. In the latest strategy the convergence and content is accented.
- Implementation of the public *e-Services* in Lithuania and Kaunas region gets behind the EU average; however, it made a big progress comparing with previous year. KTU implements the biggest part of the projects related with *e-Citizen's* concept. All the initiatives could be included to the phase of infrastructure preparation in the Kaunas region. The aforementioned initiatives are the basis for further initiatives.
- E-Citizen initiatives perspectives: increase of science, business and public collaboration of the state with the e-Citizens initiatives; further development of existing infrastructure.

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