

## E-Inclusion as the Part of E-Government Development in Lithuania

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*The paper is based on a research dealing with the e-inclusion policy in Lithuania. Authors describe and analyse public and private initiatives, designed to avoid electronic disjuncture, as these initiatives can be realized through innovative projects. E-inclusion is an activity, an instrument of creation of information society for everyone. e-inclusion helps to decrease the risk of digital disjuncture, to secure that disabled persons, elder persons and socially sensitive sets be involved in development of e-government and avoid new forms of disjuncture caused by information illiteracy and poverty of access to internet. Mykolas Romeris University participated as a national correspondent for Lithuania in eInclusion@EU project, which was launched under the European Union's Information Society Technology program in 2004. The paper is grounded on the material of this project.*

**Raktažodžiai:** *e.įtrauktis, informacinės technologijos, e.paslaugos, neįgalieji*

**Keywords:** *e-inclusion, information technology, e-services, disabled people*

### Introduction

Information and Communication Technology (ICT) has great potential to enhance social inclusion and cohesion by empowering all Europeans to fully participate in and contribute to the economy and society. E-inclusion means both inclusive ICT and the use of ICT to achieve wider inclusion objectives. In other words, e-inclusion refers to the extent to which information and communication technologies help to equalise and promote participation in society at all levels by enhancing social relationships, facilitating economic opportunities for work and entrepreneurship, developing cultural aspects of society, encouraging civic participation [20].

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The e-inclusion problem is therefore both the lack of inclusive ICT, i.e. an information society that has barriers due to the technology itself, as well as the lack of contributing with ICT to advancing economic and social inclusion in general.

All citizens should have equal opportunities to use information technologies for social demands. Public services of information character should be presented with orientation to customers. E-inclusion is about using ICT to remove obstacles which limit or prevent people from participation in the economy and wider society. It also seeks to overcome barriers to ICT products and services that exclude people and create a new form of exclusion, i.e. digital exclusion. E-inclusion also seeks to find new digital opportunities for traditionally excluded social groups to become equal participants of the modern information society. E-inclusion is an important aspect in building an inclusive Europe with greater social cohesion and mobility, highly participative democracies, better quality of life, and enhanced opportunities for employment and education [4].

In addition, everyone benefits from e-inclusion initiatives, which influence the whole society by creating more opportunities, access and equality. Such initiatives play a significant role in our daily lives with products and services designed to meet our changing needs. However, in

particular they benefit those at risk of exclusion. In other words, e-inclusion helps people overcome barriers so they can participate more fully in society, regardless of disabilities, age, gender, ethnicity, and educational achievements, financial and technological resources.

E-inclusion is an important issue for the European Union. *i2010 – A European Information Society for growth and employment* [1] – decided to support policies to address e-inclusion and quality of life. The 2006 Riga Ministerial Conference on Information and Communication Technology for an Inclusive Society provides strategic guidance and is a major step towards this initiative. Future work in e-inclusion shall build on national, regional and local initiatives, and link into European policies already in place [3].

Lithuanian e-inclusion policy and other public and private initiatives are aimed at strengthening information society and fighting digital divide, which most of all affects socially disadvantaged people, such as disabled, elderly, minorities, etc.

This article aims to analyse Lithuanian e-inclusion policy and describe the public and private initiatives aimed at fighting digital divide that are examples of good practice and innovative projects. In the first part of the article, authors describe overall e-inclusion issues and main aspects of e-Inclusion related policy. The second part focuses on the Lithuanian e-inclusion issues. The authors analyze e-inclusion policy in Lithuania and the main related conceptual and legal documents; in addition, they discuss the adaptation of Lithuanian state websites for disabled persons and present good practice and innovative e-inclusion projects examples. The authors conclude that, despite the existing efforts to correspond to the needs of those who are affected by the digital divide, it is essentially important to work with the attitude and priorities of responsible institutions, i.e. organizations of disabled persons, since e-Inclusion-related issues usually are not their highest priorities.

### **ICT and inclusion processes**

E-inclusion refers to the interactions between ICT and social inclusion processes [5]. These interactions may have several different forms and outcomes:

- Replication and/or reinforcement of existing disadvantage. If traditionally disadvantaged groups are also disadvantaged in relation to their access to ICT and in relation to

the opportunities/benefits that such access can offer for their social, economic and other spheres of life, an even wider gap between them and the rest of society is created;

- Emergence of new forms of exclusion for other groups. If lack of access to ICT and their benefits affects opportunities and outcomes in social, economic and other spheres of life, for example, for older or disabled people, the outcome is a new form of exclusion, i.e. digital divide;
- Positive opportunities for reducing exclusion for at-risk groups. If access to and utilization of ICT is facilitated and promoted in ways that can result in positive outcomes/benefits, i.e. better access to services, increased employment opportunities, or increased engagement of communities of interest, such situation enables ICT to fight the existing social exclusion.

Digital inclusion is a crosscutting issue, involving a number of interrelated social inclusion agenda, as well as the ever-developing ICT. Digital inclusion is, therefore, social inclusion with an ICT stream.

Individuals and communities can use ICT to enhance their quality of life, overcome difficulties and fulfil their potential. ICT is an important route to the equality of access to information – the essential aspect of creating social equality. Moreover, ICT social and communication applications have been shown to promote social cohesion and identity. Therefore, people need information and support to optimize their use of ICT including communal access and structures to facilitate home use, appropriate technology, adapting ICT and accessing special equipment, ICT skills development in line with technological developments, relevant content and user-friendly web searching tools, participation as a citizen and creating content.

ICT can be used as a tool to promote social inclusion, i.e. projects for single parents could focus on work at home support using ICT or projects for homeless people might include publishing creative writing on the web. Another project might tackle crime, isolation and community cohesion through wiring up a housing estate. If ICT is introduced to a community from the perspective of addressing a community need it is more likely to inspire individual interest and to reach sustainability. Initiatives that attempt to provide ICT for its own sake are less likely to succeed.

## Overall policy approaches addressing e-inclusion in Lithuania

E-Inclusion@EU Project [21] ended in the beginning of 2007. It was set up to support Information Society policy-making in the European Union by initiating a Europe-wide dialogue among those working for an accessible and inclusive Information Society; establishing a knowledge base that will provide a resource on key e-inclusion and e-accessibility policies and practice.

Mykolas Romeris University participated as a national correspondent for Lithuania in e-Inclusion@EU project [6], which was launched under the European Union's Information Society Technology program in 2004. Under this project, three information gathering tools were designed; they were to be used by the national correspondents for the data and information gathering processes in their own countries. National correspondents had to address: 1) the issues of e-inclusion and e-accessibility; 2) ICT and their contribution to active ageing and equal opportunities in work and employment; 3) selected aspects of the national situation in relation to research and policy activities in the field of e-Inclusion; and 4) the activities directed towards monitoring and benchmarking e-inclusion. All project work and analysis were carried in the three waves of information gathering in 2004-2006. The results of the analysis that was carried under the e-Inclusion@EU project can be the background for deriving main aspects of e-inclusion policy in Lithuania [6].

### *Main aspects of e-inclusion related policy*

E-inclusion related policy and research activities can take many different forms: from full-fledged policy programs or policy statements to grassroots initiatives, from basic research projects and technology development to market implementation studies. They are likely to be found in many different areas of the wider field of e-Inclusion. Several types of e-inclusion-related public policy activities can be distinguished: inclusive online services, independent living, and e-services for social inclusion [7].

***Inclusive online services.*** The spread of ICT into all spheres of everyday life results in an increasing pervasiveness of online services: e-government, e-health, e-learning, e-commerce, etc. The emergence of these services lends a new urgency to the question of access and the digital divide as described above. When such vital services are increasingly provided by means of online me-

dia, it is essential to ensure that inequitable access and/or utilization of online media does not result in a medical, educational or any other structural divide counteracting the goal of a cohesive society. Ways must be found, both through research and through political activities, to ensure that this threat is avoided and that online services are accessible by all people, particularly as regards the services that are of public interest such as e-government, e-health and educational online services.

***Independent living.*** The concept of independent living seems, at first glance, to be rather self-explanatory. In general terms it describes all measures, technologies or activities helping older people and people with disabilities to live as self-determined or independent as possible [8]. From a technology point of view, this encompasses four key application domains: assistive technology (i.e. devices compensating in some way for motor, sensory or cognitive difficulties, screen-readers for a computer, text-to-speech relay services for telephone), smart homes (i.e. networked dwellings responding to specific needs threatening the independence of older people, providing facilities ranging from simply detection and action - turning lights off or on, locking doors and providing alarms - up to fully automated electrical systems and networking components within the home environment), remote social and medical care (i.e. solutions that allow some medical services to be provided to the home, communication with a care centre via voice, transmission of biomedical data or, linked to smart home technology, dwelling based monitoring) and so called ambient intelligence solutions (i.e. the creation of a living environment where humans interact in a natural and non-invasive manner with computational services that help them in their everyday tasks, a concept similar to that of 'ubiquitous computing') [9].

***E-services for social inclusion.*** The understanding nowadays is that the information society is not all risks, but rather something that offers a number of opportunities or even clear-cut benefits for societal at-risk groups. This means that ICT in general and also its more specific applications and services can help those people to increasingly participate in societal life. The focus for this sub-issue is on e-services facilitating the inclusion of disadvantaged people. The concrete type of such a service depends largely on its target group or groups that can range from older and disabled people to the illiterate, immigrants and people with a low level of educational attainment. The examples

are online learning platforms for illiterate people that lower the barriers to participate by means of their anonymity or online services offered to low-income households via alternative platforms like digital television.

### ***E-inclusion policy in Lithuania***

There is a certain interest from the government bodies to promote e-inclusion in Lithuania. The specific body of the Government of the Republic of Lithuania – Information Society Development Committee – is engaged in this sphere. This Committee continues the work of the earlier Ministry of Telecommunications and Informatics. The main function of this Committee is regulation of information technologies and telecommunication and coordination of development of information society. In the Seimas of the Republic of Lithuania (the Parliament) a special committee on development of information society exists. In 2001 the Seimas passed a resolution on priority work on knowledge society and knowledge economy in Lithuania [10]. This resolution was a complex of suggestions for the Government to develop knowledge and information society. It covers education (computer literacy requirements in schools, the increased number of students in the field of informational technologies), e-government, e-business, and knowledge economy fields. In order to improve the functioning of e-government, it is important to coherently develop electronic context, to stimulate service offering by electronic ways, to ensure for citizens and business subjects the opportunity to use such services. Moreover, it is important to ensure the acceptance of modern technologies by all willing persons.

Information Society Development Committee takes part in formation process of comprehensive state policy on information technologies and telecommunication. In 2001 Government of the Republic of Lithuania has passed resolution on *National concept of development of information society* and in 2005 *Strategy on the Development of Information Society in Lithuania* [11]. It is acknowledged in *National concept of development of information society* that many people in Lithuania do not know how to use and cannot use information technologies, especially in rural localities (in 2001 only 8 percent of population used internet, in rural areas – only 1 percent). However the situation as regards internet and computer usage is rapidly improving in Lithuania: in 2004 29 percent of all population used internet and in 2006 – 42 percent of population did the same. The *Strategy on the*

*Development of Information Society in Lithuania* is focused not only on improving computer literacy and internet penetration but is also oriented towards development of public infrastructure of electronic services. It is projected to achieve that by 2010 40 percent of inhabitants will be using public electronic services and 70 percent of public services will be provided according to ‘one window’ principle.

With reference to the main documents on information society mentioned above, the following policy areas can be distinguished: people, public administration, e-business, the Lithuanian language and culture. E-inclusion covers the programs related to training and education. The main goal is to ensure that people can use information technologies and telecommunication, be more flexible, and adjust to changing circumstances. The programs of training include computerization of schools and libraries, creation of public internet access spots, digital community projects, raising the qualification of information technologies educators, use of open code, promotion of remote studies, and development of qualification of the unemployed people through the use of ICT. The Ministry of Education and Science, the Ministry of Culture, the Ministry of Social Security and Labor, the Ministry of the Interior, the Ministry of Agriculture and the Information Society Development Committee takes part in e-inclusion programs related to people. Public administration area [12] also includes several e-inclusion oriented programs: development of computer literacy of civil servants, integration of disabled persons in information society. The main target of the latter program is fulfillment of Web Accessibility Initiative. Almost all web pages of government institutions are ready for the use of disabled persons ([www.lrv.lt](http://www.lrv.lt), [www.smm.lt](http://www.smm.lt), [www.ivpk.lt](http://www.ivpk.lt)).

There are several practical Governmental initiatives to stimulate e-inclusion in Lithuania. For example, in 2002 Government of the Republic of Lithuania passed the concept of e-government [13] and introduced program ‘Vartai’. It aims to develop e-government, e-education, and e-business and enable people to get all public information and actively participate in state’s life. This program encourages wide internet usage in schools and libraries, creates public internet spots for free use.

In February 2004 the Ministry of Social Security and Labor signed a Cooperation Treaty with the telecommunication enterprise ‘Lietuvos telekomas’ (currently ‘TEO LT’). An additional proto-

col of the project *Voice and Internet Services for Disabled Persons* and organizations of disabled persons was also signed. This treaty and the project provide cheaper internet and telephone services for disabled persons. The aim of such project is to create an opportunity for disabled persons and organizations of disabled persons to use contemporary communication, help them to integrate into society, and promote their employment. In July 2004 the Ministry of Social Security and Labor with the telecommunication enterprise 'Lietuvos telekomas' started a project called *A Wider way to the World*. The main purpose of this project was to integrate disabled persons into society. 46 computers were donated to 25 day centers for disabled persons during this project [14].

In 2000 the Ministry of Education and Science passed *Strategy on Information and Communication Technologies in Education*. In 2001 the program *Education for Information Society* was prepared. This program includes web page [www.emokykla.lt](http://www.emokykla.lt), computer net in comprehensive schools, public internet spots in schools, promotion of computer literacy in schools. The main aims of the computer net are the following: 1) to use information technologies for improvement of education process, 2) to encourage wide usage of information technologies in after class activities, 3) to modernize management of schools, and 4) to improve functioning of schools' libraries.

E-inclusion and e-accessibility is also very important when ensuring equal opportunities for all people to employment and general social integration. In the Republic of Lithuania the European directive 2000/78/EC of 27 November 2000 is implemented with reference to the appendix of the *Law on Equal Opportunities* [15]. This Law determines implementation of European Directive 2000/78/EC and of European Directive 2000/43/EC of June 29 2000 that aim at implementing the principle of equal treatment between persons irrespective of racial and ethnic origin.

*The National Program for Social Integration of Disabled Persons for the years 2003 – 2012* [16] includes a provision related to e-accessibility. Clause 10.2 deals with accessibility of information by disabled persons. This clause determines the necessity to adapt public information to the needs of disabled persons. The National Program refers to the Concept of Adaptation of Information Environment to the Needs of Disabled Persons. This Concept has been created in order to fulfill the aim of adaptation of public information to the needs of

disabled persons and creation of special supporting equipment for disabled persons.

The Association of Environment Adaptation for Disabled of Lithuania was recently established under the support of Open Society Fund-Lithuania (OSFL - one of the network of foundations established since 1985 in Central and Eastern Europe, Asia, Africa and Haiti). The main objectives of the organization are following:

- To monitor projections and the building of new buildings processes;
- To participate in the expert groups accepting the exploitation of newly built or renovated buildings with the evaluation of their correspondence to the needs of the disabled;
- To initiate and implement different programs on adaptation of city environment, public institutions (schools, universities etc.) and nongovernmental organizations to the needs of disabled people;
- To provide an assistant on adaptation of the accommodation owned by a disabled person to his needs;
- To provide training and information regarding the needs of disabled people and friendly environment in general for public officials.

Although the objectives of the Association cover wide range of issues, the activities are limited by the financial possibilities and are mainly based on the monitoring the fulfilment of the requirements for public buildings and areas and not to the adaptation issues of private accommodations owned by the disabled. Innovative initiatives like 'smart house' are not affordable yet.

### **Main public policy documents related to e-inclusion issues**

Positive development in state policy is reflected in *Conceptual framework for adapting the information environment to the needs of people with disabilities* (hereinafter 'Conceptual framework'), which was adopted by the decision No T-5 of Director of Information Society Development Committee under the Government of the Republic of Lithuania in January 21, 2005. This document needs special attention as it is the main conceptual document in the sphere of e-Inclusion issues in Lithuania. 'Conceptual framework for adapting the information environment to the needs of people with disabilities' is a part of 'National program for disabled people social integration for 2003-2012'.

This conceptual framework set a list of requirements for the creators of information environment (content creators, designers, programmers), which have to be fulfilled in order to adapt information environment to the needs of disabled people. Common requirements embrace provisions that all content must be accessible to people with vision and hearing disabilities, all functions must be accessible with keyboard (without mouse), etc. However conceptual framework is rather consultative and provides creators of digital content with methodical guidelines how to make content more accessible for visually impaired.

There are several other legal acts which are important legal documents regulating technical aids for disabled people that are guaranteed or supported by the state. It is worth to mention *Catalogue of means of technical aids for disabled people* [17] (hereinafter ‘Catalogue’) and *Description of supply with means of technical aids for disabled people and the order of compensation of their purchase expenses* (hereinafter ‘Description’). As it is stated, technical aids for disabled people enhance human activity; provide opportunity to move freely and independently.

The Catalogue contains a list of means set by the International Standard LST EN ISO 9999:2001 *Technical Aids for Disabled People: The Classification*. The Description specifies the order of supply and compensation of purchase expenses of technical aids.

The state position towards the disadvantaged groups of the population specified in its legal acts is very important in the field of e-Inclusion. Sometimes it might be one of the main driving forces for innovation, an adviser for nongovernmental or-

ganizations or an efficient listener to the needs of disabled or elderly people.

The main instruments presently offered or available for the above mentioned target groups might be called a very basic ones in order to improve quality of life in general and lowering their dependence on other people in particular, i.e. an improvement of medical, social and professional rehabilitation of disabled people by means of provision with technical aids, such as wheelchairs, walkers, crutches, anti-bedsore mattresses, sticks, etc. New possibilities opened by a very fast developments of ICT and other technologies (i.e. smart house solutions) are not into consideration yet.

Researches of sponsorship of projects of information environment accessibility was accomplished with purpose to establish why information environment of Lithuania not enough suitable for disabled persons. These researches showed that although sponsorship of such projects increased during 2003-2006 years, but its part of all programmes of social integration of disabled persons decreased from 6,5 percent (2003) till 5,6 percent (2006).

As it is indicated in the Figure 1 only a small amount of all financial means allocated for the implementation of the *National program for disabled people social integration for 2003-2012* are devoted for the e-accessibility projects. Such projects aim at enhancing possibilities of disabled persons to get equal access to information and other benefits of information society. This situation shows that e-inclusion issues are not among the priorities of the *National program for disabled people social integration for 2003-2012* and reveals weakness of e-inclusion public policy implementation.

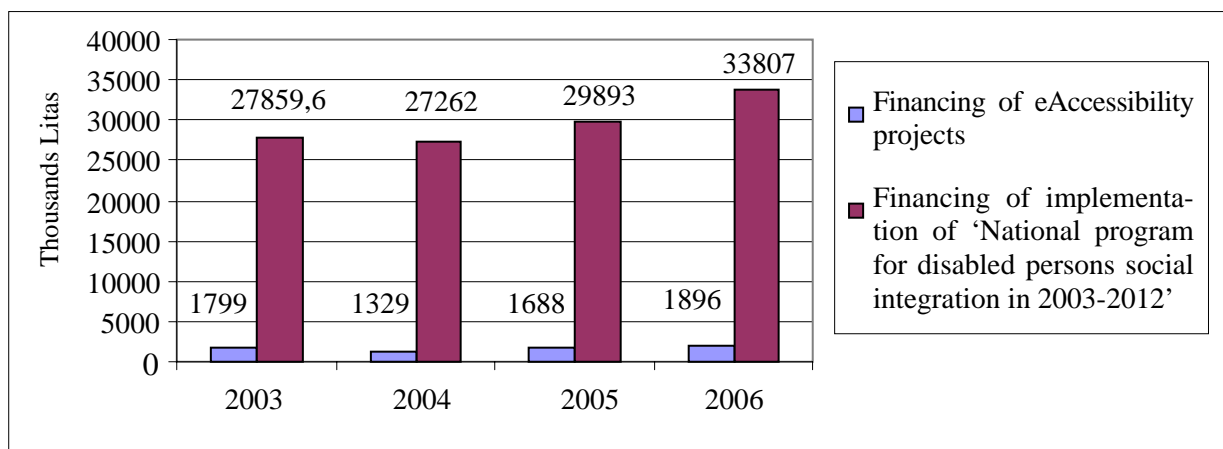


Figure 1: Sponsorship of projects of access of information environment of disabled

Source: Report on Creation of Universal System of Integration of Disabled Persons. Vilnius: VITI, 2006.

## Lithuanian state websites adaptation for the disabled persons

Another aspect of e-inclusion public policy is the adaptation of state institutions' websites for the disabled persons. This aspect clearly shows how the declarative statements of conceptual and programming documents related to e-inclusion issues are implemented.

Decision No 480 by the Lithuanian Government on *Common requirements for internet pages of government institutions* [18] set several principles for the governmental internet pages, which have to be implemented in order to create more opportunities for all citizens to use services of information society. According to this Decision all governmental internet pages have to be adapted to the needs of disabled persons [19]. This Decision is implemented in practice, and now almost all internet pages of government institutions are adapted to visually impaired people, for example, [www.ivpk.lt](http://www.ivpk.lt), [www.lrv.lt](http://www.lrv.lt).

During the research websites of main Lithuanian state institutions' were analyzed:

- Seimas (Parliament of the Republic of Lithuania) and its administration;
- President of the Republic of Lithuania and his administration;
- Government of the Republic of Lithuania;
- Ministries and other state institutions.

Links to these institutions are presented on Government's website in point 'Links'. Purpose of this analysis was to establish how these websites are adapted for disabled persons. Authors didn't analyze particular technical solutions used on certain websites. If website is adapted for disabled persons it was decided by particular link. During the research 120 objects were analysed.

The analysis revealed that only one website of the three main state websites has a link 'adapted for disabled', i.e. the Government's website ([www.lrv.lt](http://www.lrv.lt)). The Parliament's website has the link 'text version' only.

Only nine websites of ministries' websites have such a link; it makes up only 69.2 percent of all state institutions' websites. If we analyze both the websites of ministries and its institutions, the amount markedly increases. 11 of 13 groups (85 percent) of either a ministry's website or its institution's website are adapted for disabled persons (but of all 74 websites only 21 are adapted, i.e. 29 percent). Only three websites (13.6 percent) of 22 Parliament institutions are adapted for the disabled:

the Office of Parliament Controller, the Investigation Centre of Genocide and Resistance, and the Lithuanian national radio and TV. 33 websites (28 percent) of all 120 analyzed institutions are adapted for disabled persons

It is interesting to analyze what particular websites have such links. The sites of the Environment Ministry ([www.am.lt](http://www.am.lt)) – the websites of the Ministry, the Agency of Environment Protection, Environment Protection Inspections – and the Ministry of Finance ([www.finmin.lt](http://www.finmin.lt)) – the website of Taxes Inspection – are adapted. However, The Ministry of Social Security and Labor website ([www.socmin.lt](http://www.socmin.lt)) is not adapted for disabled persons, but the sites of The Labor Market Education Service and The Disabled People's Affairs Service are adapted. The site of the Social Insurance Fund is also not adapted. On the contrary, the sites of Roads Direction and the State Transport Inspection of Ministry Transport and Communication ([www.transp.lt](http://www.transp.lt)) and the site of State Patient Till under the Ministry of Health Protection ([www.sam.lt](http://www.sam.lt)) are adapted. Furthermore, the websites of the Ministry of Education and Science ([www.smm.lt](http://www.smm.lt)), the Ministry of Economy ([www.ukmin.lt](http://www.ukmin.lt)), the Ministry of Foreign Affairs ([www.urm.lt](http://www.urm.lt)), the Ministry of Justice ([www.tm.lt](http://www.tm.lt)) are adapted for disabled persons. But the portal of Legal Information Centre ([www.infolex.lt](http://www.infolex.lt)) is not adapted to disabled persons.

The websites of environment protection, cultural and education institutions are best adapted for disabled persons in the best way. Websites of such important institutions as State Tax Inspectorate, State Patient Fund, and Department of Statistics are also adapted for disabled person. However, some very important institutions such as Social Protection and Labour Ministry, Social Insurance Fond, Labour Market do not have adapted versions of their websites for the disabled persons. And portal 'Government Electronic Gates' hasn't link 'adapted for disabled persons'. Internet site of Lithuanian Republic Prosecute Office ([www.lrgp.lt](http://www.lrgp.lt)) is adapted for disabled persons.

The analysis of state institutions' websites shows that there is no systematic and crosscutting policy of adaptation of such websites for the needs of disabled persons. Moreover, among three main political institutions (Parliament, Government and President) only Government has a version of its website for the disabled. Thus there could be observed a wide gap between declarative statements in political documents and practical intentions to fight digital divide problems can be clearly observed.



## Examples of good practice and innovative projects

There could be observed private initiatives aimed at enhancing positive outcomes of interaction between ICT and social inclusion processes in Lithuania. Such examples of good practice usually fight accessibility and computer literacy problems. Several good practice examples are described below. Success of such projects lies in public-private partnership, bottom-up initiative and down to earth solutions of e-Inclusion problems.

**Window to the Future.** In 2003 the alliance *Window to the Future*, formed by leading mobile and fixed telecommunication and IT companies, largest commercial banks and Vilnius City Municipality, implemented a project 'IT Training for Society'. The aim of this project was to provide 20000 Lithuanian residents with an opportunity to participate in basic internet usage courses for free. The project intended to emphasize positive features of internet usage, encourage people to use computers and e-services at home, and invite them to adapt the knowledge obtained during the courses in internet centers. The courses began in spring 2003. In December 2003 there were 20000 Lithuanian residents who have taken part in these courses. 60 percent of participants were people aged 35-60, 35.37 percent of the participants were people aged 18-35, the rest of the participants were more than 60

years old. The average age of the participants was 40 years. 80 percent of the participants were women. The smallest group of participants was retired persons (2.45 percent). The results of the courses are positively evaluated. 89.84 percent of participants declared that these courses had encouraged them to further improve their computer literacy. 65.2 percent of participants evaluated courses as very good, 17.95 percent as good.

Another *Window to the Future* project is focused on the establishment of public internet access points. *Window to the Future* together with the Ministry of the Interior established around 200 public internet access points in Lithuania during 2002. The Ministry of the Interior and *Window to the Future* cooperate in 1) developing a unified strategy for the establishment of public internet access points and 2) coordinating activities of such points. This initiative was followed by the project *The Establishment of Public Internet Access Points in Rural Areas* implemented by the Ministry of the Interior and sponsored by the Phare social-economical cohesion programme supported by the EU. 300 more public internet access points were established during this project. Currently *Window to the Future* together with its partners implement a project financed by the EU Structural Funds during which 400 more public internet access points are going to be established in Lithuania. Figure 2 shows how already running public internet access points are spread across Lithuania.

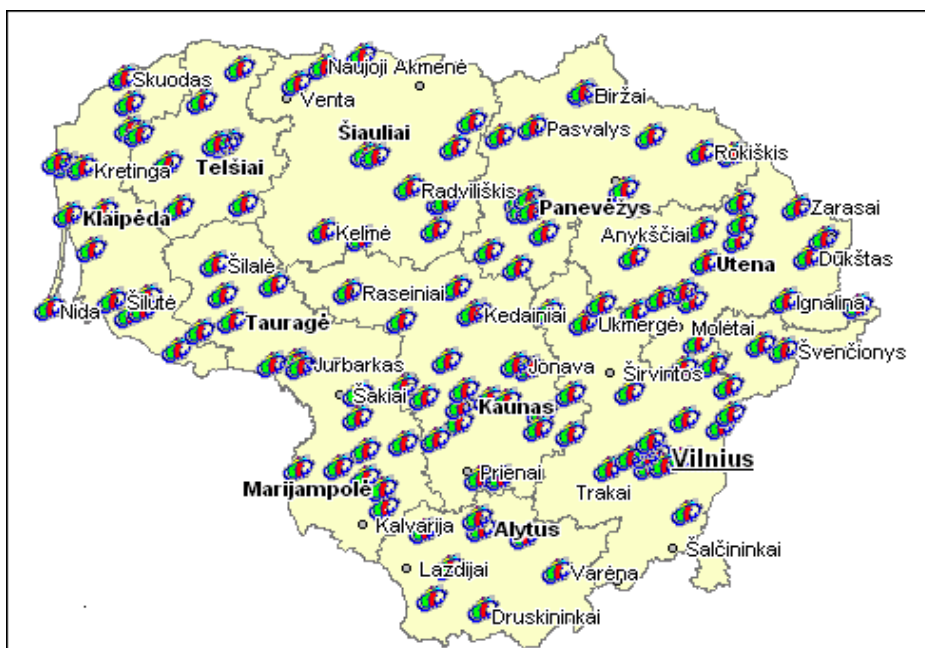


Figure 2: Public internet access points in Lithuania.

Source: Alliance 'Window to the Future' [22].



**RAIN.** The Project *Rural Area Information Technology Broadband Network RAIN* aims to provide a broadband access for all rural public sector administration institutions, hospitals, laboratories, schools, museums, libraries, public internet access points and also rural residents and business companies. This project is supported by the EU Structural Funds and implemented by the Institute of Informatics and Mathematics together with the Ministry of Transport and Communications and the Ministry of Education and Science. The project started in 2005 and it aims at providing a broadband access to 80 percent of all rural education institutions, 75 percent of all rural public sector administration institutions, 75 percent of all rural health institutions, and 75 percent of all rural public internet access points. Currently the project managers announce that they are already in a half-way of building a broadband infrastructure. A feasibility study for the second stage of this project – *RAIN II* – has been already approved by the supervisory committee of the project implementation. In the second stage it is planned to create infrastructure which enables already existing and newly established communication operators to provide broadband internet services in not less than 98 percent of the territory of Lithuania.

**WWW-GOLDEN-AGE (SOCRATES/GRUNDT VIG 2 project)** [24]. The aim of this project is to introduce IT to older people, educate them to work with internet, check and improve teaching methods, create a network of organizations engaged in older people education, create a positive image of older people in communities, help to solve social problems, encourage the cooperation of older people from different countries. The organizers are going to hold seminars for older people. IT courses shall 1) provide older people with opportunities to earn for a living, 2) integrate them into society, and 3) cooperate with other people from the EU countries. The project started in July 2004 and is going to proceed for 3 years.

**Screen phones.** TEO LT (formerly known as Lithuanian Telecom) company has recently introduced a new product of telephonic devices a so called 'screen phone'. Among the other advantages of the product, the company has emphasized the most important of it – a possibility to see a person you are talking with at a real time. As one of the beneficiary groups or a group for which the new product could open a completely new communication possibilities, were the people with hearing disabilities named by the company as well. The possibility to see a person you are talking with and the

technical abilities of free hands' equipment of the product would open new possibilities to communicate in gestural language between the members of the target group as well as with public institutions intended or mostly used by the people with hearing disability. Despite the potential benefits for specific disadvantaged groups, no projects are initiated yet. However, on the request of the State Board of the Deaf Association and with a special offer of the company, four pairs of the telephone devices were recently (May 2006) installed in the premises of nongovernmental organizations of deaf people (at the National Rehabilitation Centre of Deaf People, Vilnius Rehabilitation Centre of Deaf People, Lithuanian Federation of Sport of Deaf People and at the Kaunas Rehabilitation Centre of Deaf People).

## Conclusions

Information and Communication Technologies can reinforce social inclusion and offer new opportunities for a lot of people currently excluded from today's society. The situation regarding internet and computer usage is rapidly improving in Lithuania: in 2004 29 percent of all population used internet and in 2006 42 percent of population did it. People at risk of social, economic or digital exclusion may benefit from purposefully created digital services and equipment. ICT can improve the quality, efficiency and effectiveness of the public services offered by national, regional and local administrations by meeting the needs of all citizens and businesses. However, there are some differences in possibilities to use ICT among various social groups and these differences form a new form of social exclusion – digital divide. The traditionally excluded social groups, such as disabled persons, people with low income and lack of education, and elderly people are especially disadvantaged.

The process of information society development in Lithuania is directly connected to the state institutions' activities. These institutions tend to use different ICT applications for modernizing public administration. All kinds of institutions and enterprises increase the proportion of their activities and information relations in the electronic communication space.

In order to provide equal rights and opportunities for disadvantaged social groups and to make them socially and economically integrated into society, it is important to reduce the digital divide they are confronted with. E-Inclusion programs are very important tools for combining? ICT and social integration processes and seeking

positive outcomes for disadvantaged people. Reduction of digital divide may take different forms and require different means. For example, one of the most important conditions for reduction of digital divide for disabled persons is adaptability of internet information environment for their special needs. Information networks and e-mail can become one of the most important means of education, communication, social integration for disabled persons. Another very important issue is to provide disabled and other disadvantaged people with specially adapted electronic equipment which could help them to become equal participants in information society.

There are several practical Governmental initiatives to stimulate e-inclusion in Lithuania. Currently e-inclusion issues are getting more and more attention in Lithuania both from state institutions and private sector. The success of some e-inclusion projects that can be used as good practice examples from Lithuania usually lies in public-private partnership, bottom-up initiative and down to earth solutions of e-inclusion problems. *The National Program for Social Integration of Disabled Persons for the year 2003 – 2012* has a provision related to e-accessibility. The National Program refers to the Concept of Adaptation of Information Environment to the Needs of Disabled Persons. This Concept is created to fulfill the aim of adaptation of public information to the needs of disabled persons and creation of special supporting equipment for disabled persons. However, governmental initiatives exist more in the form of conceptual and declarative documents rather than real actions. The analysis of state institutions' websites adaptability to the needs of disabled persons clearly illustrates the fact. Finally, only a small amount of state financial sponsorship is allocated for the implementation of e-inclusion projects.

Not only shortage of financial sources influences the hard access of information environment for disabled persons. Average 25-30 millions litas are distinguished for implementation of programs of disabled persons' organizations. But such organizations often choose others priorities of projects because shortage of knowledge, specialists and competence. Projects which aim to increase access of information environment compose only the small part of supporting measures of governmental program of social integration of disabled. Although the sponsorship of social integration projects for disabled persons from 2003 till 2006 remotely increased, financing of e-inclusion projects decreased from 6,5 percent in 2003 till 5,6 percent in 2006.

## References

1. i2010 – A European Information Society for growth and employment. Communication from the Commission to the Council, the European Parliament, the European Economic and Social committee and the Committee of the Regions. COM(2005)229 final, [http://europa.eu.int/eurlex/lex/LexUriServ/site/en/com/2005/com2005\\_0229en01.pdf](http://europa.eu.int/eurlex/lex/LexUriServ/site/en/com/2005/com2005_0229en01.pdf) [2007-08-30].
2. Ministerial Declaration Approved Unanimously on 11 June 2006, Riga, Latvia. [http://ec.europa.eu/information\\_society/events/ict\\_riga\\_2006/index\\_en.htm](http://ec.europa.eu/information_society/events/ict_riga_2006/index_en.htm) [2007-08-30].
3. Common Actions for Growth and Employment: The Community Lisbon Programme. Communication from the Commission to the Council and the European Parliament. COM(2005)330 final, [http://ec.europa.eu/growthandjobs/pdf/COM2005\\_330\\_en.pdf](http://ec.europa.eu/growthandjobs/pdf/COM2005_330_en.pdf) [2007-08-30].
4. eEurope 2005: An information society for all. COM(2002)263 final, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2002:0263:FIN:EN:PDF> [2007-08-30].
5. eAccessibility of public sector services in the European Union. Executive briefing. <http://www.cabinetoffice.gov.uk/e-government/resources/eaccessibility> [2007-08-10].
6. eInclusion@EU National Information Gathering Template: Wave III on Selected aspects of the national situation in relation to research and policy activities in the field of eInclusion and activities directed towards monitoring and benchmarking eInclusion in Lithuania.
7. eInclusion revisited: The Local Dimension of the Information Society. Commission of the European Communities. Staff working document. SEC(2005)206, [http://ec.europa.eu/employment\\_social/news/2005/feb/einlocal\\_annex\\_en.pdf](http://ec.europa.eu/employment_social/news/2005/feb/einlocal_annex_en.pdf) [2007-08-30].
8. Lietuvos Respublikos neįgaliųjų socialinės integracijos įstatymas. *Valstybės žinios*, 2004, Nr. 83-2983, *Valstybės žinios* 2005, Nr. 71-2554, Nr. 127-4534.
9. Influence of modern technologies on quality of life of disabled persons. Report of European Council Committee of Rehabilitation and Integration of Disabled Persons (CD-P-PER). <http://cm.coe.int/Ap/rehab/ntn/rd/2001/p-SG.35.6e> [2007-08-30].
10. Lietuvos Respublikos vyriausybės 2001 m. kovo 7 d. nutarimas Nr. 20-625 *Dėl Lietuvos nacionalinės informacinės visuomenės plėtros koncepcijos patvirtinimo*. *Valstybės žinios*, 2001, Nr.20-652.
11. Lietuvos Respublikos Vyriausybės 2005 m. birželio 8 d. nutarimas Nr. 625 *Dėl Lietuvos informacinės visuomenės plėtros strategijos patvirtinimo*. *Valstybės žinios*, 2005, Nr.73-2649.
12. Lietuvos Respublikos Vyriausybės 2004 m. balandžio 28 d. nutarimas Nr. 488 *Dėl viešojo administravimo plėtros iki 2010 metų strategijos patvirtinimo*. *Valstybės žinios*, 2004, Nr. 69-2399.
13. Lietuvos Respublikos Vyriausybės 2002 m. gruodžio 31 d. nutarimas Nr. 2115 *Dėl elektroninės valdžios koncepcijos patvirtinimo*. *Valstybės žinios*, 2003, Nr.2-54.

14. Neįgaliųjų socialinė integracija 2005 m. [http://www.ndt.lt/files/File/statistika/statistika\\_2005.doc](http://www.ndt.lt/files/File/statistika/statistika_2005.doc) [2007-08-30].
15. Lietuvos Respublikos Lygių galimybių įstatymas. *Valstybės žinios*, 2003, Nr.114-5115.
16. Lietuvos Respublikos Vyriausybės 2002 m. birželio 7 d. nutarimas Nr. 850 *Dėl nacionalinės žmonių su negalia socialinės integracijos 2003–2012 metų programos patvirtinimo*. *Valstybės žinios*, 2002, Nr. 57-2335.
17. Web Content Accessibility Guidelines 1.0. W3C Recommendation 5-May-1999. <http://www.w3.org/TR/WAI-WEBCONTENT> [2007-08-30].
18. Lietuvos Respublikos Vyriausybės 2003 m. balandžio 18 nutarimas Nr. 480 *Dėl bendrųjų reikalavimų valstybės ir savivaldybių institucijų ir įstaigų interneto svetainėms aprašo patvirtinimo*. *Valstybės žinios*, 2003, Nr. 38-1739, 2003, Nr. 6-159, *Valstybės žinios*, 2007, Nr. 49-1889.
19. Informacinės visuomenės plėtros komiteto prie Lietuvos Respublikos Vyriausybės direktorius 2004 m. įsakymas. Nr. T-40 *Dėl neįgaliesiems pritaikytų interneto tinklalapių kūrimo, testavimo ir įvertinimo metodinių rekomendacijų patvirtinimo*.
20. European i2010 initiative on e-Inclusion “To be part of the information society”. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. COM(2007) 694 final, [http://ec.europa.eu/information\\_society/activities/einclusion/policy/i2010\\_initiative/index\\_en.htm](http://ec.europa.eu/information_society/activities/einclusion/policy/i2010_initiative/index_en.htm) [2007-08-30].
21. eInclusion@EU. <http://www.einclusion-eu.org> [2007-08-30].
22. Langas į ateitį. [www.langasiateiti.lt](http://www.langasiateiti.lt) [2007-08-30].
23. RAIN. Kaimiškųjų vietovių informacinių technologijų plėtojimo tinklas. <http://www.rain.lt> [2007-08-30].
24. WWW-GOLDEN-AGE (SOCRATES/GRUND TVIG 2 project. <http://www.pmvc.ktu.lt> [2007-08-30].

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### **E. įtrauktis kaip e. valdžios vystymosi Lietuvoje dalis**

#### Santrauka

Straipsnyje analizuojama Lietuvos e.įtraukties politika ir aprašomos viešosios ir privačios iniciatyvos, skirtos panaikinti elektroninei atskirčiai, kurios realizuojamos per inovacinius projektus. E.įtrauktis – tai veikla, kurią vykdant siekiama sukurti informacinę visuomenę visiems. E.įtrauktimi siekiama mažinti skaitmeninės atskirties riziką, užtikrinti, kad neįgalieji, senyvo amžiaus žmonės ir socialiai jautrūs sluoksniai neliktų nuošalyje nuo e. valdžios plėtros ir išvengtų naujų atskirties formų dėl informacinio neraštingumo ar interneto prieigos neturėjimo. Mykolo Romerio universitetas kaip nacionalinis korespondentas (atstovas) dalyvauja eįtraukties@EU projekte, kuris 2004 metais pradėtas Europos Sąjungos Informacinės visuomenės technologijų programos ribose. Pagal šį projektą buvo sukurti trys informacijos rinkimo įrankiai, kuriuos turi naudoti nacionaliniai atstovai duomenų ir informacijos rinkimo procesams savo šalyse. Straipsnio autoriai remiasi projekto vykdymo metu atliktais tyrimais.