

[eInclusion in]

Romania

România



ICT & Ageing

Geographic Digital Divide

eAccessibility

eInclusion

Cultural Diversity

Inclusive eGovernment

Digital Literacy & Competences

Country Profile

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Disclaimer:

This document is not intended to be exhaustive. Its purpose is to give an overview of the general eInclusion status in Romania. Even though every care has been taken to ensure accuracy, the information herein should be treated as indicative and no responsibility for errors can be assumed. Neither the European Commission, nor any person acting on its behalf can be held responsible for the use that could be made of the information provided.

Country Profile

Basic data and indicators

Basic Data

Population (1 000): 21 462.1 inhabitants (2010)

GDP at market prices: 115 869.2 million Euros (2009)

GDP per inhabitant in PPS (Purchasing Power Standards, EU-27 = 100): 45.0 (2009)

GDP growth rate: -7.1 % (2009)

Inflation rate: 5.6 % (2009)

Unemployment rate: 6.9 % (2009)

Government debt/GDP: 23.9 % (2009)

Public balance (government deficit or surplus/GDP): -8.6 % (2009)

Source: Eurostat

Area: 237 500 km²

Capital city: Bucharest

Official EU language: Romanian

Currency: Romanian leu

Source: Europa website

Information Society Indicators

Percentage of households with Internet access: 42 % (2010)

Percentage of households with broadband connection: 23 % (2010)

Percentage of individuals regularly using the Internet: 34 % (2010)

Percentage of individuals using the Internet for uploading self-created content:* 14 % (2009)

Percentage of individuals using the Internet for reading online newspapers/magazines: 22 % (2010)

Percentage of Individuals using the Internet for finding information about goods and services: 26 % (2010)

Percentage of Individuals using the Internet for seeking health-related information: 19 % (2010)

Percentage of individuals using the Internet for looking for a job or sending a job application: 7 % (2010)

Percentage of individuals using the Internet for doing an online course: 4 % (2010)

Percentage of individuals using the Internet for seeking information with the purpose of learning: 17 % (2010)

Percentage of individuals using the Internet for interaction with public authorities: obtaining information 6.3 %, downloading forms 4.5 %, returning filled forms 3.7 % (2010)

Source*: *Digital competitiveness report*

Source: *Eurostat*

Editorial notice: Statistical indicators referenced in this section reflect those of Eurostat at the time the Edition is being prepared.

eInclusion History

Main developments and key milestones (in reverse chronological order)

For the latest developments, see: [ePractice news for eInclusion](#)

Recent News

October 2010

The [EU-IMMINENT website](#), an interactive business start-up guide for immigrant entrepreneurs, [was launched](#) at a conference in Bucharest, Romania, on 14 September 2010.

The website is a comprehensive online training resource for potential entrepreneurs living outside their country of origin. Containing up-to-date information related to business start-ups in Germany, Ireland, Poland, Romania and the UK, EU-IMMINENT is the first pan-European online entrepreneurship resource aimed at immigrant communities. It is an interactive platform for current and future entrepreneurs with an immigrant background. Funded by the Leonardo da Vinci programme, a European Commission venture concerned with vocational education and training, it offers expert advice on both business and immigrant issues. Resources include a comprehensive training course, podcasts, videos and ezines covering local issues.

August 2010

On 4 August 2010, the Catholic University of Leuven (*Katholieke Universiteit Leuven* - K.U.Leuven) [released](#) a [freeware extension](#) for an open source Software suite that enables users to save documents as Braille, or to send them directly to a Braille embosser.

The freeware extension in question is available for most operating systems. The current version supports eight Braille embossers, with additional embossers slated for further release. It is being developed by the [ÆGIS project](#), a research and development project supported by the European Commission. The [ÆGIS project](#) develops software for persons with disabilities, covering the desktop platform, the Web and mobile devices.

The application is suitable for both Braille experts and occasional users. In addition to converting text documents to Braille, it allows users to directly input Braille in a document. Specifically, users can determine which particular Braille codes should be transferred to paper. More significantly, text documents can be converted to Braille automatically.

July 2010

The ÆGIS ('Open Accessibility Everywhere: Groundwork, Infrastructure, Standards') project [has announced](#) the availability to the general public of the [project's online user forum](#) where interested registered parties could comment on a variety of topics, sharing their expertise/experience with others:

- ▶ Developers involved in software development for desktop, mobile, the Internet and rich Internet applications commenting on accessibility aspects related to assistive technologies.
- ▶ End-users (Web applications) expressing their views on the accessibility of Internet applications and the Internet in overall.
- ▶ End-users expressing their thoughts on the accessibility of mobile applications.
- ▶ End-users sharing their experiences with screen readers.
- ▶ End-users commenting on their experiences and opinions regarding assistive technologies in general.
- ▶ End-users commenting on their experiences and opinions regarding assistive technologies in the area of desktop applications.

The ÆGIS project seeks to determine whether third generation access techniques can provide a more accessible, more exploitable and deeply embeddable approach in mainstream ICT (desktop, rich Internet and mobile applications). This approach is developed and explored with the Open Accessibility Framework (OAF) which provides embedded and built-in accessibility solutions, as well as toolkits for developers for 'engraving' accessibility in existing and emerging mass-market ICT-based products, thus making accessibility open, plug and play, personalised and configurable, realistic and applicable in various contexts; ÆGIS is placing users and their needs at the centre of all ICT developments.

Based on a holistic User-Centred Design (UCD), ÆGIS identifies user needs and interaction models for several user groups (users with visual, hearing, motion, speech and cognitive impairments, as well as application developers) and develops open source-based generalised accessibility support into mainstream ICT devices/applications (i.e. desktop, web applications and Java-based mobile devices). The project includes strong industrial and end-user participation. Much of the technology results will be either new open source applications, or will be built into existing and already widely adopted open source ICT.

March 2010

The '[Open architecture for Accessible Services Integration and Standardization \(OASIS\) project](#)' – a Large Scale Integrated Project co-financed by the European Commission under the 7th Framework Programme – [has recently released](#) its first animated project video. The OASIS project's scope is to revolutionise the interoperability, quality, width, and usability of services for all the daily activities of the **elderly**. More specifically, OASIS intends to use ICT and other key technologies aiming to provide holistic services to older people in order to support their physical and psychological independence, stimulate their social or psychological engagement and foster their emotional well-being. OASIS thus addresses key areas of the activities of the elderly encompassing: independent living and socialising, autonomous mobility and flexible work-ability. In the newly released video, the two main characters (John and Sue) use the OASIS services on a daily basis. Romania participates in the OASIS Consortium, which consists of a total of 33 Partners from 11 countries.

News 2009 and before

2009

In *summer 2009*, the '[Accessible Applications Design and Development](#)' (ACCESSIBLE) project [launched](#) a set of [online questionnaires](#) aimed at Developers, Accessibility Assessors, Elderly and Disabled People, Public Bodies and Service Providers respectively. The objective was to identify the user needs regarding accessibility of software usage and development. ACCESSIBLE was an EU FP7 project spanning over 36 months. Started on 1 September 2008, it aimed to improve the **accessibility** of software development products, by introducing a harmonised accessibility methodology into accessible software development processes, using significantly better measurement strategies, methodologies, etc. The envisaged improvement will enable large organisations, Small and Medium-Sized Enterprises (SMEs) or individuals (developers, designers, etc.), to produce software products of superior accessibility and usability, accompanied with the appropriate measures, technologies and tools that improve their overall quality. The proposed system will be demonstrated in the four pilots of ACCESSIBLE for the assessment of: a) Mobile applications, b) Web applications, c) Web services (mainly focusing on infomobility services), and d) description languages (e.g. UML, SDL, etc.).

2008

On *3 September 2008*, the Romanian Ministry of Communications and Information Technology (*Ministerul Comunicatiilor si Tehnologiei Informatiei*, MCIT) [launched](#) a speaking version of its website in a bid to help increase the accessibility of public services. The content of the pages were read by a voice synthesiser, needing only the keyboard for navigation. This eAccessibility action aimed at **ensuring equal access** for the blind and partially sighted, people with dyslexia, and those who have not had proper access to education. According to national statistics, Romania counted approximately 240 000 sight-impaired people, whose right to information is the same as that of any other citizen. The new

facility provided visitors with advanced zoomed page visualisation, and high contrast colour schemes. Access to public information has been one of the basic principles of the state-citizen relationship; the MCIT committed itself to promoting the 'access for all' concept, aimed at removing all barriers and sources of discrimination. In addition to the launch of this website, MCIT has also published a guide for the development of public authority websites, highlighting accessibility issues in particular. The guide provides an overview of internationally accepted accessibility requirements.

2001

Due to high importance of ICT sector for the Romanian economy and also due to the government commitment to ensure the transition to **Information Society**, the Ministry of Communications and Information Technology (*Ministerul Comunicatiilor si Tehnologiei Informatiei*, MCIT) was established in 2001.

eInclusion Strategy

Main strategic objectives and principles

Overview

Even though an eInclusion-dedicated strategy was never in place, the subject was a constant target of the Ministry of Communications and Information Technology (*Ministerul Comunicatiilor si Tehnologiei Informatiei*, MCIT), which was renamed into [Ministry of Communications and Information Society](#) (*Ministerul Comunicațiilor si Societății Informaționale*, MCSI) in January 2009. eInclusion can be found in all strategies and political documents related to Information Society:

- ▶ e-Romania Strategy
- ▶ Strategy for broadband electronic communications development
- ▶ Strategy for public services development through electronic means
- ▶ National Strategy for transition to New Economy and Information Society implementation
- ▶ Strategy for Knowledge Based Economy development
- ▶ National Government Plans
- ▶ National Development Plan
- ▶ National Reform Plan
- ▶ National ICT strategies in place
- ▶ National Plan for Antipoverty and Social Inclusion.

Therefore, throughout the years, specific **eInclusion initiatives** were put in place in order to:

- ▶ develop an Information Society potential by:
 - creating convenient online content and services;
 - attracting local communities in networks, and stimulating them to provide electronic services;
- ▶ remove barriers for the Information Society by:
 - increasing awareness related to the opportunities offered by Information Society;
 - providing digital literacy and creating ICT skills;
 - ensuring ICT availability and access to:
 - universal service
 - public Internet Access Points
 - subsidies for the purchase and effective use of ICT
 - ICT infrastructure in remote areas.

Government Programme 2009-2013 (e-Romania)

This policy paper is aimed at leading the entire public sector to the information society and knowledge based society. The eGovernment system would be the main tool for building a **national integrated system** for the online public services designed for citizens and businesses.

The main objectives stipulated by the National Government Plan with regard to ICT include the increase of:

- ▶ citizens' comfort;
- ▶ public administration's performance through coherent and efficient implementation of IT integrated systems;
- ▶ competitiveness of national economy by promoting information society.

eInclusion actions had been promoted under the objective of 'increasing the citizens' comfort'. All national ICT policies and strategies in place recognise that the construction of the new society model requires a series of major socio-political changes. These changes are related to the decrease of the exclusion phenomena thanks to the benefits of the new technologies ('digital pide') to certain social categories and geographical regions/areas; these problems concern the social cohesion, the promotion, and conservation of the specific culture of the nation and local community, the protection of the citizen and consumer.

In order to overcome those challenges, the main activities are concentrated on:

- ▶ offering new and convenient electronic services;
- ▶ extending the access to communication services all throughout Romania;
- ▶ raising the awareness and increasing trust in ICT;
- ▶ increasing human capacity through education and training.

Among the programme's main priorities, **eInclusion** can be identified in the following:

- ▶ provision of high quality public services, financially accessible and acceptable;
- ▶ increased capacity of the Government to make decisions regarding the participative and consultative process;
- ▶ the responsible and efficient approach, together with lowering the costs, of all the involved parties.

According to the programme, particular focus will be placed on adopting the **large-scale use of IT** in the business environment, in relation with the citizens and the Public Administration.

e-Romania will centre on the following groups of goals, each one with its specific eInclusion characteristics:

Goals related to the public institutions:

- ▶ Raising trust among beneficiaries of electronic public services through ensuring the security of technical equipment and programmes, personal data protection, as well as life privacy, which can lower the resistance of marginalised citizens who are usually sceptic in their relation to the state.
- ▶ Cooperation within the Public Administration for providing integrated secure electronic public services, accessible and relevant, through a central point of access, which assists elders, disabled, or people in remote areas to access the public services.
- ▶ Development of interoperability for the national electronic public services and the promotion of local interoperability, which narrows the geographical digital divide.
- ▶ Building the national electronic registers, an enabler for all such services.
- ▶ Auditing and certifying the quality and general performance of all eGovernment services; recognising a high level of quality for services at national level; raising trust and creating incentives for increased digital literacy.
- ▶ Providing quality services for all with minimum costs.

Goals related to community recommendations or specific legislative provisions for Romania:

This group of goals aims at delivering specific services, taking into consideration their quality. Mainly, the **eInclusion-related goals** would focus on:

- ▶ access to geographical data and services, and cartographic applications through a national geographic portal;

- ▶ submitting VAT/income/fiscal declarations;
- ▶ a unique mechanism for person identification;
- ▶ harmonisation of national registers.

In order to implement the current strategy, the Ministry for Communications and Informational Society (*Ministerul Comunicațiilor și Societății Informaționale*, MCSI) will elaborate national guidelines and priorities, standards, as well as an interoperability framework. The local and regional authorities will formulate their own strategies addressing main user groups. The implementation of the strategy will be completed according to different protocols of cooperation and funding.

eInclusion Legal Framework

Main legal texts impacting on the development of eInclusion

eAccessibility Legislation

Governmental Emergency Ordinance No. 180/14.12.2005 (*Ordonanță de urgență nr.180 din 14 decembrie 2005*)

The Governmental Emergency Ordinance No. 180 of 14 December 2005, which was ratified by the Romanian Parliament through Law No. 92/2006, sets the legal framework for the 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaștere, KEP*), which holds a central place in the eInclusion-related activities of the public administration.

eCommunications Legislation

[Ordinance Nr. 34 of 30 January 2002 on access to the electronic communications networks and to the associated facilities, as well as their interconnection](#) (*Ordonanta Guvernului nr.34 din 30 ianuarie 2002 privind accesul la retelele publice de comunicatii electronice si la infrastructura asociată, precum si interconectarea acestora, aprobată, cu modificări si completări, prin Legea nr.527/2002*)

Romania was the first country in Europe to transpose the **EU regulatory framework** for electronic communications into national legislation. In January 2002, the Government approved the Ordinance on access to the electronic communications networks and to the associated facilities, and their interconnection (no. 34/2002). Its provisions are organised around the following points of interest:

- ▶ defining new concepts related to electronic communications, rights and obligations of the operators;
- ▶ powers of the national regulatory authority;
- ▶ possibility for the regulatory authority to impose specific obligations on operators with significant market power.

The above points create a framework that supports the access to communications networks irrespectively of age, ability, location, and education of the citizen. Special attention was paid to the obligations for unbundled access to the local loop: the regulatory authority may impose on an operator with significant power on the market for local loop, the obligation to publish a reference offer for unbundled access to the twisted metal pair local loop. This law transposes the [2002/19/EC](#) (Access Directive) into national legislation.

[Law Nr. 304 of 4 July 2003 regarding the Universal Service and the Users' Right related to the Networks and Electronic Communications Services](#) (*Legea nr. 304 din 4 iulie 2003 pentru serviciul universal si drepturile utilizatorilor cu privire la retelele si serviciile de comunicatii electronice*)

The total liberalisation of the telecom market on 1 January 2003 set the conditions for the availability of better and diversified services at lower costs for all citizens. In July 2003, the Law regarding the **universal service** and the users' right related to the networks and electronic communications services (no. 304/2003) came into force. The law implements principles such as the interdiction to grant any special or exclusive rights for the provision of directory services and transposes the [2002/22/EC](#) (Universal Service Directive) into national legislation.

eInclusion Actors

Main roles and responsibilities

National eInclusion

Policy/Strategy

Ministry of Communications and Information Society (*Ministerul Comunicațiilor și Societății Informaționale, MCSI*)

The Ministry is the main policy and strategy producer in relation to ICT. As the specialised body of central public administration in the ICT sector, it was established in 2001 with the objective of implementing the Romanian Government policy in this sector, which aims at making accessible the public administration services. It is responsible for defining the restructuring policies, coordinating the privatisation process in the ICT sector, financing the main projects to make the transition of the Romanian society to an Information Society, and promoting the development of the Internet for the benefit of all citizens in both urban and rural areas of the country. Moreover, the MCSI is in charge of the harmonisation of the specific legislation with the European Union provision.

Coordination

Ministry of Communications and Information Society (*Ministerul Comunicațiilor și Societății Informaționale, MCSI*)

According to its mandate mentioned above, the MCSI is also responsible for coordinating the implementation of policies and strategies, together with the subordinate agencies and departments.

National Centre for Management of Information Society (*Centrul Național de Management pentru Societatea Informațională, CNMSI*)

The CNMSI was established according to Government Decision No.1439/2009. The CNMSI is a public institution with legal personality, subordinated to the Ministry of Communications and Information Society (*Ministerul Comunicațiilor și Societății Informaționale, MCSI*), and has as a main task to implement and operate the national information systems that provide services for eGovernment.

National Centre 'Digital Romania' (*Centrul Național 'România Digitală', CNRD*)

According to Government Decision No.1439 of 18 November 2009, the work and duties of the former Agency for the Information Society Services (*Agentia pentru Serviciile Societatii Informaționale, ASSI*) were taken over by the National Centre for Management of Information Society (*Centrul Național de Management pentru Societatea Informațională, CNMSI*) and the National Centre 'Digital Romania' (*Centrul Național 'România Digitală', CNRD*). In particular, they regulate, implement, operate, and manage, at national level, the electronic systems that provide eGovernment public services. CNRD has as main tasks the management and operation of information systems through which electronic public services are provided within e-Romania and the implementation, operations and management of the project 'Electronic single contact point' (*Punct de Contact Unic electronic, PCU electronic*) under the Services Directive and Gov. number 49/2009. Their mission remains to increase citizen's comfort by improving the Public Administration performances. It specifically aims to:

- ▶ ensure **unique access** between the public institutions and the beneficiaries of their services;
- ▶ become the central provider of back office services for common and specific processes of several institutions;
- ▶ ensure the re-use of data among public institutions.

MCSI 'Knowledge Economy Project' (KEP) Management Unit

The unit of the Ministry of Communications and Information Society coordinates and manages the 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaștere*, KEP) which aims to support knowledge-driven activities at national level and within the local communities, and in particular, to accelerate the participation of knowledge-disadvantaged communities in the knowledge economy and society. Through the project, 255 of Electronic Networks of Local Communities (ENLC) have been established with the support of each city hall. Each network includes a Public Information Access Point (PIAP) and more access points in schools in the community, in every public library and every town hall.

The project is considered as an example of good practice for effective use of ICT and digital technology to tackle social disadvantage and digital exclusion. It was awarded by the European Commission at the e-Inclusion Awards 2008, at geographical inclusion section. The contest awards projects and initiatives that can benefit disadvantaged groups by using information and communications technology.

Implementation

Ministry of Communications and Information Society (*Ministerul Comunicațiilor și Societății Informaționale*, MCSI)

Implementation and support is centrally managed by the Ministry of Communications and Information Society through private sector contractors.

National Centre for Management of Information Society (*Centrul Național de Management pentru Societatea Informațională*, CNMSI)

CNMSI is involved in the implementation, operation and management, at national level, of the electronic systems that provide eGovernment public services for all citizens.

Ministry of Labour, Family and Social Protection (*Ministerul Muncii, Familiei și Protecției Sociale*, MMUNCII)

The Ministry of Labour, Family, and Social Protection (*Ministerul Muncii, Familiei și Protecției Sociale*, MMUNCII) participates in the implementation of the eInclusion targets of the Public Administration mainly focusing on the Digital Literacy and eAccessibility subjects. More specifically, the Ministry's mandate states that the Ministry has to ensure the development, coordination and monitoring, as well as enforcement of strategies and government policies in the areas of labour relations, inclusion and social assistance; employment and social security, in full compliance with Community policies, principles, law and democracy.

Ministry of Education, Research, Youth and Sports (*Ministerul Educației, Cercetării, Tineretului și Sportului*)

The Ministry of Education, Research, Youth, and Sports (*Ministerul Educației, Cercetării, Tineretului și Sportului*), with consultation of other interested ministries and institutions, designs and applies the Romanian strategy on education, determines the objectives of the education system as a whole, and the educational goals on education levels and profiles. For its task, the Ministry of Education, Research, Youth, and Sports relies on expert advisory bodies. Among them, the National Council for Education Reform and the National Council for Training and Continuing Education incorporate eInclusion in their scope.

The Ministry of Education, Research, Youth, and Sport targets several eInclusion-related national policy goals. In this direction, the Ministry provides specialised education and adequate pedagogical support to children and young people with physical, sensory, or mental disorders, and it examines how to ensure social protection in education with respect to geographical diversity. It also develops and implements reform strategies, in medium and long terms, regarding education and training.

eInclusion Who's Who

Main eInclusion decision-makers and executives

Ministers responsible for eInclusion



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eInclusion Areas

Riga Declaration Priorities

ICT and Ageing

Status in ICT & Ageing

According to Eurostat, 87 % of Romanians aged 55-74 have never **used a computer**, and only 12 % used one in the past 12 months (2009). In comparison, the EU-27 average is 52 % and 42 %, respectively, which leaves Romania behind most EU Member States.

Regarding **Internet usage**, 91 % of Romanians aged 55-74 have never used the **Internet**, and only 8 % of them used it in the past 12 months (2009). In comparison, the EU-27 average is 59 % and 38 %, respectively.

As regards the human factor, it should be noted that, compared with the western European countries, the population of Romania is relatively young. However, this seems to be only temporary, taking into consideration the general trend of population ageing combined with the migration phenomena and the decrease of the birth rate.

The human resources of Romania have a high level of education, especially in the ICT field; this is however mostly applicable to the young generation. Generally, the ageing population is reluctant to technology. For instance, 86 % of people aged 16–34 use mobile phones compared with only 24 % of the people aged 55 or more.

Actions to support ICT & Ageing

The support to people that become excluded as a result of their age passes through the following list of main strategic goals:

- ▶ Lifelong learning
- ▶ Promotion of benefits of Information society
- ▶ Launch of the portal for professional improvement
- ▶ Regional and local programmes for creation of basic IT skills for adult population.

Geographic Digital Divide

Status of Common Access to Electronic Content and Services

Romania faces a significant **infrastructure** problem in the communications area, mainly due to its geographical characteristics and population density diversity. As far as internet penetration is concerned, there is a significant difference between rural and urban areas. Bucharest proportionally has twice as many internet connections than the rest of the country.

Actions to support Common Access to Electronic Content and Services

'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaştere, KEP*)

The 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaştere, KEP*) project aims to support knowledge-driven activities at the national level, as well as directly within local rural and small

urban communities, and in particular to accelerate the participation of **knowledge-disadvantaged communities** in the knowledge economy.

Knowledge Economy Project's components include:

- ▶ Access to ICT in Knowledge Disadvantaged Communities and Improved Digital Literacy
- ▶ Development and promotion of eGovernment services and
- ▶ Promotion of eCommerce and innovation support for medium, small and micro enterprises (MSMEs).

KEP finances the establishment of 255 **Local Communities e-Networks** (LCeNs) through which rural and small urban communities will have access to knowledge via a number of modern electronic services and technologies, including infrastructure, broadband Internet and communication services.

The value added of this Project consists in providing specific content provision for local administration, citizens, local businesses, and pupils in rural and small urban communities; LCeNs would interconnect multiple nodes: main secondary schools, all secondary schools from the belonging villages, the town hall, public library and a Public Point of Access to Information (PPAI).

Major outcomes of KEP include:

- ▶ deployment of modern ICT equipment;
- ▶ diffusion of knowledge and access to information;
- ▶ creation of a critical mass of ICT trained human local resources;
- ▶ significant progress on eGovernment online services in knowledge-disadvantaged areas;
- ▶ encouraging the intake of eBusiness solutions; and,
- ▶ role enforcement of an innovative entrepreneurial culture with close cooperation between the R&D sector and various industries/service providers.

These goals contribute to the elimination of geographical digital divide through the promotion of ICT services. The landscape in the ICT market, especially in rural Romania, can identify significant opportunities for the innovative eBusinesses promoted by the project.

The 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaştere*, KEP) was a finalist in the category of 'Geographic Inclusion Award' in the eInclusion Award contest in Vienna, in 2008. According to the eInclusion Award website, "The project has set up knowledge centres in **disadvantaged communities** throughout Romania to provide information services, to improve the quality of government services, as well as creating an enabling business environment with a particular focus on SMEs".

Telecentres – communications to all

Ministry of Communications and Information Society (*Ministerul Comunicațiilor și Societății Informaționale*, MCSI) and the National Authority for Management and Regulation in Communications of Romania (*Autoritatea Națională pentru Administrare și Reglementare în Comunicații*, ANCOM) aim to ensure **access to communications** services for all citizens of Romania in a large-sized community, with great geographical diversity and many small communities without access to fixed or mobile telephony. Telephone service providers mainly target the urban areas, where business users and higher income population ensure profitability, while the state budget resources are insufficient to subsidise the net cost of providing an individual connection to all those who request it. It was therefore necessary to design a national programme aimed at ensuring community access to telephone and Internet services in the rural areas deprived of/with limited availability of communications' infrastructure.

The cost-effective solution for connecting around 600 isolated villages consists in providing access to the public telephone network, at a fixed location, for an entire community at a time, by means of telecentres. The telecentres are meant to offer, near people's homes, at affordable prices, telephone, fax and Internet services as well as non-stop access to emergency calls. There are at least two telephone sets, two computers connected to the Internet and one fax machine in every station.

Telecentres establish infrastructure '**bridgeheads**' in the areas with extremely low or no coverage at all, aiming to stimulate future market supply, and therefore facilitate natural rollout of communications networks, without distorting competition. Deployment of telecentres helps educating consumers to use communications services, increasing market demand and fostering social, economic and cultural development.

The national programme for **installation of telecentres** in communities without access or with low access to electronic communications can be expressed in numbers, as follows:

- ▶ 626 telecentres installed by now, almost half of total 633 remote communities included in the programme;
- ▶ the life of almost 382 500 people has changed as they can easily communicate with their dear ones and can have access to information;
- ▶ more than 17 000 children will enlarge their horizons having access to information and knowledge.

Subsidies for PC acquisition - EURO200 Project

EURO200 is a project that provides financial support of € 200 for scholars and students deriving from low-income families. The project has been set in place in 2004 in order to stimulate the acquisition of computers.

The Government of Romania remarked the subsidy of more than 38 000 computers. Through this Portal for acquisition of PC based on financial support – <http://euro200.edu.ro/> – one may find public information, for instance: list of beneficiaries, contact information of county Commissions, or Commissions of the education institutions, information about the performed acquisitions.

The projects 'Public areas with free Internet access' and 'Increased access to Internet services'

Following the provisions of the government strategy for broadband electronic communications development and with the aim to broaden the access to broadband services, the Ministry of Communications and Information Society carried out the projects: 'Public areas with free Internet access'- which resulted in 11 outdoor hotspots being installed and 'increased access to Internet services'- with 200 hotspots installed in 110 towns.

The aim of these projects was to increase the number of public areas with a flexible Internet connection service for the population, so that the users could access the needed information using a laptop, PDA or desktop equipped with a WiFi network card, or a PCMCIA card without using cables.

eAccessibility

Status of eAccessibility

No particular data has been available on this subject; [Law 161/2003](#) however stipulates the norms for web pages in such a manner that easy access for all citizens will be ensured, making sure that no barriers are set by using ICT in interaction with the Public Administration.

Actions towards eAccessibility

The support to people that become excluded as a result of their physical or mental disorders passes through the following list of main strategic goals:

- ▶ A new strategy in preparation for the reform of **public administration by ICT** means that would also refer to the eAccessibility issues.
- ▶ **Web design norms** for public administration in preparation: Guidance on the implementation of web pages for authorities, central government and local institutions. Websites should be accessible to all. To guarantee the quality and usefulness of websites of public authorities and institutions at

central and local government, a thorough planning design, implementation and maintenance sites before starting the project were recommended in order to improve the accessibility of existing sites. Image of public authorities and institutions, as well as Romania depend on the quality of the designed websites. This guide is addressed to public administration using ICT for interaction among citizens, businesses and government, as well as inter-institutional report in order to increase effectiveness and efficiency, improving web accessibility to public services.

Digital Literacy and Competences

Status on Digital Literacy and Competences

eLearning systems support the generation of better-prepared labour power, more flexible and adapted to market requirements, having positive effects upon labour productivity, wages and occupation. In addition, the system offers the advantage of controlling what, when, where and how to improve the **level of knowledge**, help people to become more active and confident about the continuous learning process, being a catalyst for the changes inside organisations. The ICT instruments for learning and progressing stimulate innovation and improve efficient learning, contributing to the process of creativity and innovation.

The Romanian ICT becomes more and more visible both in Europe and in the world, especially in the software area. In addition, there is a need to preserve and improve this national sector. For these reasons, **investments in the education** area are needed in order to support one of the most productive Romanian industries that provide a large quantity of the national export.

The Ministry of Communications and Information Society (*Ministerul Comunicațiilor și Societății Informaționale*, MCSI) has as priority the increase of technology access and the decrease of the digital divide. Acknowledging the significant differences between urban and rural education, the Ministry is running a software programme for the computerisation of schools, the introduction of information technologies, from the first years of school, and the increase of awareness.

Best practices by 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaștere*, KEP) include: access to national and county eGovernment services to greatly reduce the need of individuals to travel to administrative centres and create greater knowledge of what services are available. This has assisted those in poverty to gain additional resources and small often informal businesses, especially farm businesses, to access government support programmes. The same centers are also practically helping access eCommerce services, from crop prices and second hand machinery through to internet banking and travel tickets. Such practical services help overcome the barriers to knowledge and services experienced by isolated poor communities and the practical experience of what is available to overcome the reluctance to use ICT services.

www.ecomunitate.ro portal – a national repository of the most relevant contributions of the new knowledge-enhanced workers. More than 800 success stories, thousands of blog type articles generate the most powerful web 2.0 learning instrument used by civil servants, teachers, entrepreneurs, and local leaders. It is probably for the first time when Government interventions foreseen the building of web 2.0. techniques within deprived population on a certified basis.

10 000 local people certified in IT&C, 60 accreditations as ITC Professional Training Centres have been given, hundreds of public-private partnerships have been developed, inter-institutional public partnerships have been consolidated.

Applied training for enabling local communities to absorb external funds by developing ITC related projects was a key success factor for more than 300 eligible projects. Training on Web Development and application of ICT tools in business enabled presence of hundreds of local entrepreneurs to practice eCommerce.

70 % of teachers are using ICT in day-by-day didactic activities (from 45 % in 2008) and the majority of schools' projects have an ICT component irrespective of their specific (social, human rights, ecological,

cultural) components. In addition, the average within adults and retired persons using IT&C services increased by 10 % in 1 year.

Actions towards stimulating Digital Literacy and Competences

Training sessions developed under the 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaştere, KEP*)

- ▶ **Training in basic ICT for local pilot communities** (project's pilot-phase, 200 participants)
Objective: to elaborate and implement a training model for the Project's national roll-out.
- ▶ **Training for teachers on the use of ICT in KEP schools**
Objective: to deliver training services to the pilot schools in order to use the ICT in the education/didactic process.
- ▶ **Training for local staff for the use of ICT in community development**
Objective: to provide the trainees with information and knowledge related to the financing opportunities (national grants, European projects, private partnerships and donations).
- ▶ **Training of Local Community Electronic Network's (LCEN) staff** (510 participants)
Objective: to design and implement a training programme for the LCeNs staff in order to provide the target group of the assignment with specific knowledge and the skills needed for a quality management of the LCEN.

The SEI Programme (the IT based education system)

It is a national programme for introducing IT in the pre-university education system which includes the nationwide implementation of AeL platform in over 13 181 Romanian schools. SEI implements the Romanian Government's strategy in the field of ICT. It supports the education reform objectives and conforms to the eEurope 2005 action plan developed by the European Union, also being part of the eLearning European initiative; ADLIC -Computerised system for centralising the results of the high school admission exam and candidates distribution in high schools at national level in 2001-2009; [SEI Educational Portal](#), a unique Internet communication channel between the Romanian Ministry of Education, Research, Youth and Sports (*Ministerul Educaţiei, Cercetării, Tineretului şi Sportului*) and the general public in Romania, with over 180 000 registered users.

SEI addresses all educational zones:

- ▶ Didactic – through programmes for assisted learning and multimedia content (AeL platform and AeL lessons)
- ▶ School management – AeL modules, document management
- ▶ National exams – applications to administer data for the pupils who take national exams and to distribute them
- ▶ Communication – developing and administering the [SEI Educational Portal](#), the most active educational virtual community in Romania
- ▶ Social programmes for education – software applications to administer beneficiary data for Euro 200 and Money for High school programmes.

Educational programmes financed from Structural Funds for teachers and students from pre-university national educational system

▶ **Digital tools to improve the quality of assessment in secondary education**

Objective:

Improve student performance assessment through the development of information applications and a database with specific digital resources (assessment items) that can be used both by teachers and students in the process of assessment and self-assessment.

▶ **The teacher - a creator of educational software**

Objective:

Develop and implement a training programme for teachers in university education to develop their skills in making their own educational software applications and improving the ability to use interactive teaching-learning.

▶ **Six projects for improving, diversifying and modernising services in six universities**

Objective:

The objective is to improve and diversify the University's educational services, in the context of the existence of modern teaching methodologies, promoting lifelong learning and use of information and communications technology in all aspects of life, including education, by introducing the learning eSolutions within Universities.

▶ **eLearning system for civil services training and development (beneficiary: The National Institute for Public Administration)**

Objective:

The objective is to increase the accessibility and flexibility of the ICT based training offers of the National Administration Institute for the public servants – this objective helps to increase economic competitiveness by developing and raising the efficiency of the public services.

▶ **Supporting the educational system especially through a specialised educational portal**

Objective:

The objective is to develop and boost the special education system in order to bring the children with special education needs (mental deficiencies in particular) to a better understanding about the environment and society in which they live, and to ensure their integration as well as their responsible and active participation in society.

▶ **The project 'e-School'**

Objective:

The objective is to develop and modernise the pre-university education system through the creation of digital skills, the use of IT for knowledge and problem-solving, including axiological or assessment skills, required for an active and responsible participation in the social life of the targeted beneficiaries' group.

Inclusive eGovernment

Status on inclusive eGovernment

The current eGovernment plan of Romania specifically aims at an inclusive eGovernment where all citizens are able to enjoy better services through the use of ICT. Below, the main related activities are presented:

- ▶ **National electronic system:** A unique access point to services and information of the central and local public administration was launched in 2003, and it has continuously expanded since then.
- ▶ **Virtual pay office:** This project aims to facilitate the interaction between the citizen and the institutions of the public administration by ensuring a fast way of paying the debts to the state (taxes, fines etc.) in the most transparent, efficient and safe way possible. This project aims to improve the existing situation regarding the possibility of remote electronic payment by means of banking cards.
- ▶ **Judicial and prison system:** This is a Justice's electronic system, which created a VPN between all courts-of-law in Romania, and implemented a system for electronic file management and other custom made applications, including a portal for public access to legal information (portal.just.ro).
- ▶ **Visa Online System:** It allows visa applications to be submitted and sent to the designated institutions, and takes care of the remittance of the consultative permit by Foreign Authority and the processing of the approval, or rejection of the visa application by the Department of Consular Relations.

Since the last Manchester Ministerial Conference on eGovernment, a positive evolution can be distinguished both at central and local public administration. Each year brings quantitative and qualitative growth and complex solution implementation.

As referring to the progress achieved, the most complex projects were administered by the central government, for instance the computerisation of justice system, the systems developed by the Ministry of Interior or the projects in the field of finance.

Regarding the local public administration, gaps can be identified between cities and villages on the one hand and counties councils and municipalities on the other hand. The first ones need investments in infrastructure hardware and communications while the second category requires a qualitative growth through the implementation of integrated systems. Steps have been made as 80 % of municipalities have web pages, sophisticated systems have been implemented in some important cities, but in order to reach the goals of eGovernment Action Plan there is a need for a greater effort and **massive investments**.

Actions towards inclusive e-Government

The institutional transparency, the regulation credibility, the cut of costs for regulation and management processes represent a fundamental factor of the **economy's competitiveness**. All these will be aimed through indicative actions of development and efficiency improving the modern electronic public services of eGovernment, eLearning and eHealth on a non-discriminatory basis.

The goals of eGovernment services that **support eInclusion** entail the existence of public administrations on the web, making the information more accessible for citizens and companies, and increasing the utility and use of interactive services by the citizens and companies.

The **eHealth services** will raise the savings both from the viewpoint of the medical system and from the viewpoint of patients. This is supported by the use of ICT instruments in medicine, using Internet both by specialists and by citizens in order to access medical information, the information exchange by e-mail and dedicated networks by experts and specialised institutions – concomitantly with the development of Internet broadband networks.

This measure will aim at the following indicative actions:

- ▶ offering financial and institutional support for the broadening of electronic public services;
- ▶ stimulating the interoperability of public, national and pan European services, in exchange of best practices;
- ▶ supporting the development of eLearning national programmes (infrastructure-applications for distance learning);
- ▶ supporting the development of eHealth national programmes, which include:

- support for ensuring the **online availability** of information and medical services of diagnosis and treatment, preventive medicine and sanitary education;
- support for the creation of medical units Extranet network through **access to high-speed networks**.

By defining specific rules to regulate the use of electronic means and instruments, within the eGovernment services area, the free and non-discriminatory access to these services can be assured.

Actions under the 'Knowledge Economy Project' (*Proiectul Economia Bazată pe Cunoaştere*, KEP)

The following KEP activities foster an inclusive eGovernment:

Issuance/Renewal of Civil Documents (e.g. birth/death certificates, marriage certificates)

- ▶ **Beneficiaries:** citizens at large, all territorial-administrative units, Ministry of Interior and Administrative Reform, civil servants and Romanian embassies and consulates;
- ▶ **Objective:** to ensure a faster, more transparent and efficient public service for:
 - a modern on-line application process for issuance/renewal of civil status certificates, such as birth, marriage and death certificates;
 - developing specific operations regarding the registration process of civil documents and events;
 - an improved civil register management.
- ▶ **Benefits:**
 - significant reduction of the average processing time for civil status procedures;
 - providing increased integrity of the data available through the reduction of processing times for inputs and updates, as well as real-time cross-referencing between local and national databases;
 - optimising transaction processing time and data storage costs for both, the local administration and the Romanian Government.

eCommunity Portal

- ▶ **Beneficiaries: citizens at large**, all territorial-administrative units, local public administration, national and international bodies and entities.
- ▶ **Objectives:**
 - to act as key external promotional and information tool of the Knowledge Economy Project addressing target audiences, both internal and external;
 - to constitute a modern basis for sharing resources between various Project's stakeholders;
 - to support the dissemination process (good practices about using ICT in education, local administration, business sector and cultural environment);
 - to evolve into an essential communication tool for all target audiences;
 - to offer the online infrastructure and promotion for community business environment;
 - to offer the online infrastructure for schools to access specific resources and to share results and best practices.

The Future of eInclusion

Research in Practice & Future Challenges

Research in Practice

National Projects

[National Institute for Research and Development in Informatics](#) (*Institutul Național de Cercetare-Dezvoltare în Informatică*, ICI)

For the last 40 years, the National Institute for Research and Development in Informatics (*Institutul Național de Cercetare-Dezvoltare în Informatică*, ICI) represents the most important research and innovation institution in the field of Information Technology and Communications in Romania. ICI's mission is to consolidate the position achieved and to ensure the **scientific support** in the field of ICT in order to support Romania's transition towards Information Technology.

[National Communications Research Institute](#) (*Institutul Național de Studii și Cercetări pentru Comunicații*, INSCC)

National Communications Research Institute - INSCC, Bucharest performs fundamental and applicative **research**, technological development, technical and economic studies. INSCC also carries out tests, measurements and trials, conformity assessment and certification of communications equipment and services.

[National Authority for Scientific Research](#) (*Autoritatea Nationala pentru Cercetare Stiintifica*, ANCS)

The National Authority for Scientific Research (*Autoritatea Nationala pentru Cercetare Stiintifica*, ANCS) constitutes the specialised body of the central public administration in Romania in the field of research, with the aim of implementing the policy of the Romanian Government in this field. The authority is under the coordination of the Ministry of Education, Research, Youth and Sports (*Ministerul Educației, Cercetării, Tineretului și Sportului*).

'ASK-IT' Project

'ASK-IT' is a **research project**, partially funded by the European Commission, carried out in eight European cities (Athens, Thessaloniki, Bucharest, Nuremberg, Helsinki, Newcastle, the Hague, and Genoa), and aimed to develop services based on information technology and communications that allows people with disabilities to become independent. Romania participates to this project through the General Directorate for Social Assistance of the Bucharest City Hall.

The research activities for the ASK-IT project began in October 2004 with the possibility of extension until the end of 2008. This project addresses the blind, the deaf, or people with hearing impairment, people with walking deficiency or travelling in wheelchairs, dyslexic and illiterate people.

Partners of this project are companies such as industrial research firms, mobile phone operators, software companies, telecommunications, research institutes and universities together with organisations for people with disabilities ('Independence Life', the Deaf Association, the Association and Foundation of Physical Handicapped People 'Motivation' for work integration of the persons with disabilities). All these partners aimed to develop integrated services that should aid people with special needs in order to **enhance their quality of life**.

Persons with mobility disabilities will benefit from the services offered by the project, which has facilitated their public transportation, their organisation of leisure time involving them in educational,

economic and social activities. Information provided by the programme may consist in assisting a person who has just reached an airport to find a bus station, to guide a person to a hotel or a restaurant proper for his/her needs. The services offered by the implementation of the pilot project in Bucharest are:

- ▶ transport services: information on available means of transport and their routes;
- ▶ tourist services: information on hotels with facilities for people with special needs;
- ▶ public service: the list of the buildings which have facilities for persons with special needs;
- ▶ educational support: the list of libraries accessible to persons with disabilities;
- ▶ received information adjustment service: for the blind, the service translates text messages in voice messages, whereas for the deaf, it translates voice messages in text messages.

European Commission - eInclusion Practice

eInclusion practice (epractice.eu) is an information and exchange service for European professionals.

The eInclusion factsheets are one of the epractice.eu services. The factsheets present an overview of the eInclusion status and progress in the European countries.

The eInclusion factsheets are produced and updated once a year.

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