

ICT-WEB-PROMS

Promoting ICT cooperation opportunities and policy dialogue with the Western Balkan Countries

FP 7 - Grant agreement 231549 Support Action

Deliverable D2.1: Summary information about relevant policy and projects in WBC

Deliverable due date:	31/03/2009
Status:	First draft
Version No.:	3.1
Version date:	30/03/2009
Responsible Organization:	EBA
Author(s):	Ira Vater
Distribution:	Public
Document description:	Report summarising information about relevant policy and projects in the Western Balkan Countries

Revision History

<i>Version</i>	<i>Date</i>	<i>Author</i>	<i>Organization</i>	<i>Comment</i>
1.0	12.02.2009	Ira Vater	EBA	First version with table of contents circulated with request for partners' input
2.0	23.03.2009	Ira Vater	EBA	First draft circulated to the consortium, incorporating partners' input
3.0	27.03.2009	Ira Vater	EBA	Second draft circulated to the consortium for final comments and approval
3.1	30.03.2009	Ira Vater	EBA	Final version for submission to the Commission

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Release Control

<i>Name</i>	<i>Organisation</i>	<i>Role</i>	<i>Date</i>
Ira Vater	EBA	WP leader and Project Manager	30.03.2009

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1 Introduction

ICT-WEB-PROMS aims at increasing capacity of stakeholders in the Western Balkan countries (WBC) to fully participate in European ICT research and in the European Research Area.

By encouraging participation of West Balkan stakeholders in European ICT research, they will gain access to ICT technologies already developed in the EU, and European stakeholders will be able to introduce their technologies into the West Balkan market, thus also strengthening EU competitiveness.

The project will reach this goal by creating and supporting strategic partnerships between stakeholders in the EU and the WBC while providing access to relevant knowledge. Focus will be on direct support to stakeholders, creating understanding not only of procedural issues, but also for the technology of the ICT FP7 programme emphasising areas of mutual interest. Feedback will be provided for the implementation of ICT and information society strategies in the WBC and for considering the needs of the WBC in ICT research of the EU.

The summary information about relevant policy and projects in WBC provided in this Deliverable gives a clear focalisation of the project and defines its baseline, thus providing a basis for the training, support and networking activities to be carried out in the project.

This summary document of relevant EU policy and relevant R&D projects is based on the knowledge of the partners of the situation in WBC, past and on-going work in the European Commission and information published on other web sites or obtained from other projects. It is emphasised that partners and other EU funded projects have done research work about relevant policies and projects before, and this task therefore aims at documenting this information for the purposes of the project.

2 EU policy and projects relevant to the WBC

2.1 EU policy regarding the WBC

2.1.1 EU Enlargement Policy regarding the WBC

For half a century, the European Union has pursued ever-deeper integration while taking in new members. A growing membership has been part of the development of European integration right from the start. Today's EU, with 27 Member States and a population of close to 500 million people, the EU is not only bigger, it is also stronger, more dynamic and culturally richer than the original European Economic Community of 50 years ago, with its 6 members and population of less than 200 million.

The governments of the EU Member States agreed, in the EU-Western Balkans Summit of Thessaloniki in June 2003, to extend the EU perspective to countries in the Western Balkans - Croatia, the former Yugoslav Republic of Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia and Kosovo under UN Security Council Resolution 1244. Membership will happen after a gradual enlargement process, when the necessary requirements are met.

At present, two of them are candidate countries, namely Croatia and the Former Yugoslav Republic of Macedonia. Accession negotiations with Croatia started on 3 October 2005. The former Yugoslav Republic of Macedonia became a candidate country in December 2005 but accession negotiations have not yet started.

The other countries of the Western Balkans - Albania, Bosnia and Herzegovina, Montenegro, Serbia and Kosovo under UNSC Resolution 1244/99 - have all been promised the prospect of EU membership as and when they are ready. They are known as potential candidate countries.

With all the countries of the Western Balkans the EU has established a process – known as the Stabilisation and Association process - which aims to bring them progressively closer to the EU. Although Croatia and the former Yugoslav Republic of Macedonia are candidate countries, they remain part of the Stabilisation and Association process.

The Stabilisation and Association process

The Stabilisation and Association process (SAP) is the framework for EU negotiations with the Western Balkan countries, all the way to their eventual accession. It has three aims:

- Stabilising the countries and encouraging their swift transition to a market economy
- Promoting regional cooperation
- Eventual membership of the EU

The process helps the countries concerned build their capacity to adopt and implement EU law, as well as European and international standards. It is based on an ever-closer partnership, with the EU offering a mixture of:

- Trade concessions
- Economic and financial assistance
- Assistance for reconstruction, development and stabilisation
- Stabilisation and association agreements

Stabilisation and Association Agreements

The centrepiece of the Stabilisation and Association Process is the conclusion of a Stabilisation and Association Agreement (SAA) which represents a far-reaching contractual relationship between the EU and

each Western Balkan country, entailing mutual rights and obligations. It embodies the choice for Europe made by the Western Balkan countries and the membership perspective offered to them by the EU.

The EU's political strategy towards the Western Balkan relies on a realistic expectation that the contract it enters into with individual countries will be fulfilled satisfactorily. Careful preparation with each country before the EU offers such a contract has been and remains a vital component of the SAP.

The SAAs are tools which provide the formal mechanisms and agreed benchmarks which allow the EU to work with each country to bring them closer to the standards which apply in the EU. They focus on respect for key democratic principles and the core elements at the heart of the EU single market. Through a free trade area with the EU and the associated disciplines (competition and state aid rules, intellectual property etc) and benefits (e.g. rights of establishment), this process will allow the economies of the region to begin to integrate with that of the European Union. For those areas where the agreements do not impose specific obligations relating to the EU *acquis*¹, there are provisions for detailed co-operation and discussion with the EU which again have the purpose of helping each country move closer to EU standards.

The SAAs are tailored to the circumstances of each country. However, each agreement is intended to have the common purpose of achieving the sort of formal association with the EU described above. The destination for all countries is expected to be the same: the full realisation of association after a transitional period through implementation of the same core obligations.

Autonomous Trade Measures

The Autonomous Trade Measures that are applied to the whole of the Western Balkans, allow duty free access to the EU market for practically all products originating from the region. The Autonomous Trade Measures, together with the relevant provisions of the SAAs, and other trade arrangements, provide a favourable framework for the development of trade between the EU and the region, thus stimulating foreign direct investment in the region and economic development in general.

These trade preferences have proved successful, contributing to the average annual increase of 8% in the Western Balkan' exports to the EU (2000-2004). In 2005, they were renewed until the end of 2010.

The regional dimension

The SAP is not simply a bilateral process with each country. The Zagreb Summit of November 2000 placed considerable emphasis on the central need for regional co-operation as part of the EU's "contract" with the SAP countries. Similarly, enhanced regional co-operation is one of the major objectives set down in the Thessaloniki Agenda. The SAA include a clear commitment to regional co-operation. The EU's policy objectives are principally:

- to encourage the countries of the region to behave towards each other and work with each other in a manner comparable to the relationships that now exist between EU Member States.
- the creation of a network of compatible bilateral free trade agreements which means that there are no barriers to goods moving between the countries of the regions themselves nor with the EU and, in effect, neighbouring candidate countries;
- the gradual re-integration of the Western Balkan region into the infrastructure networks (TENS) of wider Europe (transport, energy, border management);
- to persuade the authorities in the countries of the region to work together to respond effectively to the common threats to the region's and the EU's security which come from organised crime, illegal immigration and other forms of trafficking.

Regional co-operation in the Western Balkan is an essential factor for political stability and economic prosperity and the only way for the counties of the region to successfully address key common challenges

¹ EU *acquis*: The term *acquis communautaire*, or (EU) *acquis* is used in European Union law to refer to the total body of EU law accumulated thus far. The term is French whereby *acquis* means "that which has been acquired", and *communautaire* means "of the community".

(such as energy shortages, pollution, transport infrastructure, cross-border criminal activities etc.)

Financial assistance

EU assistance to the Western Balkan is adapted as needs and political situation evolve. Initially, the focus was on humanitarian and emergency assistance. Later on, it concentrated on rebuilding infrastructure, and fostering reconciliation and the return of refugees. As each country moves deeper into the Stabilisation and Association Process, assistance focus increasingly on support for developing government institutions and legislation, and approximation with European norms and eventually harmonisation with EU acquis. Help is directed at reinforcing democracy and the rule of law, human rights, civil society and the media, and the operation of a free market economy. In addition, assistance is offered to help generate sustainable economic recovery, and promote social development and structural reform.

CARDS

Since 1991 the European Union has committed, through various assistance programmes, €6.8 billion to the Western Balkans. In 2000 aid to the region was streamlined through a new programme called CARDS (Community Assistance for Reconstruction, Development and Stabilisation). The programme's wider objective was to support the participation of the countries of the Western Balkans (Albania, Bosnia and Herzegovina, Croatia, Serbia and Montenegro, including Kosovo, under United Nations Security Council Resolution 1244/99 of 10 June 1999, and the former Yugoslav Republic of Macedonia) in the SAP.

Through the programme €4.6 billion was provided to this region in the period 2000 to 2006 for investment, institution-building, and other measures to achieve four main objectives:

- reconstruction, democratic stabilisation, reconciliation and the return of refugees
- institutional and legislative development, including harmonisation with European Union norms and approaches, to underpin democracy and the rule of law, human rights, civil society and the media, and the operation of a free market economy
- sustainable economic and social development, including structural reform
- promotion of closer relations and regional cooperation among countries and between them, the EU and the candidate countries of central Europe.

Instrument for pre-accession assistance (IPA)

IPA came into force on 1 January 2007, bringing all pre-accession support into one single, focussed instrument. The IPA Council Regulation replaces the 2000-06 financial instruments Phare, ISPA, SAPARD, the Turkish pre-accession instrument, and the financial instrument for the Western Balkans, CARDS.

All new pre-accession actions now come under the new Instrument for Pre-Accession Assistance. Pre-2007 programmes and projects under these former instruments will be gradually completed by around 2010.

The total pre-accession funding for the current financial framework (2007-2013) is €11.5 billion.

In order to achieve each country's objectives in the most efficient way, IPA consists of the following five components:

- Transition Assistance and Institution Building
- Cross-Border Co-operation (with EU Member States and other countries eligible for IPA)
- Regional Development (transport, environment and economic development)
- Human Resources Development (strengthening human capital and combating exclusion)
- Rural Development

The financial assistance under IPA is accession driven and actions stem from priorities identified in the European and Accession Partnerships for each country and in the enlargement strategy paper and progress reports that form the enlargement package published each autumn.

The enlargement package is accompanied by the IPA multi-annual indicative financial framework (MIFF). The MIFF is designed to provide information on the Commission's intentions in terms of indicative financial allocations by country and by component. This financial matrix forms the link between the political framework and the budgetary process. It is revised annually, on a rolling three year basis. Based on the allocations in the MIFF, and on the priorities identified within the political framework, multi-annual indicative planning documents (MIPD) for each country (plus one for all multi-beneficiary programmes) are prepared, through which the specific objectives and choices for pre-accession aid are presented by the Commission. These also cover a three-year period.

Each programme under IPA (and under the former pre-accession assistance) is made up of one or more projects which are concrete actions of the European Union to assist candidate and potential candidate countries in their preparations for joining the European Union. There are hundreds of ongoing projects across all sectors, countries and regions, some of which are in the sector of ICT. These are described in chapter 2.2 below.

Opening of Community Programmes

The Council Conclusions of 16 June 2003, adopting the Thessaloniki Agenda for the Western Balkans, laid down that Community programmes would be opened to SAP countries along the lines established for the participation of candidate countries. On the basis of framework agreements to be signed between the Community and each of the SAP countries and providing for the opening in principle of such programmes, the Commission would gradually implement them, by deciding on the specific programmes that would be opened in each case and agreeing with the respective countries on the modalities (through the conclusion of Memoranda of Understanding). Priority areas for the opening of Community programmes could include education and training, culture, research, energy, environment, civil society, SME support, and anti-fraud co-ordination.

In fact, candidate and potential candidate countries are entitled to participate in Community programmes on the basis of Framework Agreements. Participation in these programmes is an important means of facilitating integration, cooperation and policy development. The Community provides support and, in some cases, favourable terms for their participation. The Commission has been working closely with the countries in the region to identify the Community programmes for which there is interest and capacity and, where necessary, to prepare the parties for participation. Since 2007, most of the Western Balkan countries are associated to the 7th Framework Programme on research (see chapter 2.1.2 below) ; some of them also participate in the "Culture", "Progress", "Competitiveness and Innovation", "Customs" and "Fiscalis" programmes.

2.1.2 EU Research Policy regarding the WBC

As established in the Thessaloniki Agenda for the Western Balkans, candidate and potential candidate countries are entitled to participate in Community programmes. The association of these countries to the Seventh Research Framework Programme (FP7) has to be seen as a means to facilitate their integration into the (EU) and to support their economic development through joint research efforts. By participating in FP7 the WBCs gain familiarity with the EU decision-making on research policy. Traditionally the Balkan countries have a solid scientific base, and deeper research cooperation with the EU will allow for a greater flow of ideas, people and transfer of technology.

All WBC except Kosovo² are associated to FP7. Association is via a Memoranda of Understanding (MoU). The signing of the MoU is the last step in a long procedure starting with: the request to become associated; discussing the terms and conditions of the association to FP7 and completing the respective internal adoption procedure.

The Memoranda of Understanding (MoU) associating the Former Yugoslav Republic of Macedonia and Serbia to FP7 were signed on 13 June 2007. The provisions of these MoU were applicable as from 1

² under UNSC Resolution 1244/99

January 2007. Thus legal entities established in the Former Yugoslav Republic of Macedonia and Serbia are able to receive Community contributions for contracts/grant agreements signed after 1 January 2007.

The Memoranda of Understanding associating Albania and Montenegro to FP7 were signed on 17 December 2007 and 25 January, 2008, respectively and the provisions of both association instruments apply as from 1 January 2008, enabling legal entities established in these countries to receive Community contributions for contracts/grant agreements signed after this date.

The Memorandum of Understanding associating Bosnia and Herzegovina was signed on 24 November 2008 with effect as from 1 January 2009.

Kosovo under UNSC Resolution 1244/99 can participate in FP7 as a third country with International Cooperation Country Partner (ICPC) status.

This "associated status" allows the WBC to participate in all calls for proposals and compete on an equal footing with the EU Member States and the other associated countries for research co-operation and support actions funded under FP7. This agreement is an important step in WBC's integration into the European Research Area and in the pre-accession process for European Union membership.

2.2 EU funded projects relevant to the WBC

2.2.1 IPA projects in ICT related sectors

NATIONAL VISA MANAGEMENT SYSTEM

Title: Technical Assistance to the Establishment of a National Visa Management System

Area: Reform of public administration

Country: The former Yugoslav Republic of Macedonia

Period: 28 August 2007 – 28 August 2008

MAPS OF SERBIA GO DIGITAL

Title: Provision of digital orto-photo maps

Area: Infrastructure and environment

Country: Serbia

Period: November 2005 – November 2008

FURTHER DEVELOPMENT OF THE ADMINISTRATIVE AND PROCESSING CAPACITY OF THE JUDICIARY SYSTEM

Title: Further development of the administrative and processing capacity of the Judiciary System

Area: Reform of police and judiciary

Country: The Former Yugoslav Republic of Macedonia

Period: 2006

SECURE COMMUNICATION FOR THE POLICE

Title: Supply of Police Digital Radio Communication System

Area: Reform of police and judiciary

Country: The Former Yugoslav Republic of Macedonia

Period: 2006-2008

SUPPORT AND EXPANSION OF THE ALBANIAN TREASURY SYSTEM

Title: Support and Expansion of the Albanian Treasury System

Area: Reform of public administration

Country: Albania

Period: 2009-2011

Detailed fact sheets describing the above mentioned projects can be found in Annex I.

2.2.2 R&D Framework Programme projects: ICT and ICT related sectors

2.2.2.1 FP7 ICT projects

ICT-WEB-PROMS

Title: Promoting ICT cooperation opportunities and policy dialogue with the Western Balkan countries

Research area: ICT-2007.9.2 International cooperation (ICT-2007.9.2)
Funded under 7th FWP (Seventh Framework Programme)

Project start date: [2009-01-01]

WINS-ICT

Title: Western Balkan countries Inco-Net Support in the field of ICT

Research area: ICT-2007.9.2 International cooperation (ICT-2007.9.2)
Funded under 7th FWP (Seventh Framework Programme)

Project start date: [2009-01-01]

2.2.2.2 FP7 projects relevant to the ICT sector

WBC-INCO.NET

Title: Western Balkan Countries INCO-NET

Research area: INCO-2007-1.1 Western Balkan countries Region
Funded under 7th FWP (Seventh Framework Programme)

Project start date: [2008-01-01]

2.2.2.3 FP6 ICT projects

ELLECTRA-WEB

Title: European electronic public procurement application Framework in the Western Balkan region

Research area: IST-2005-2.6.5.1.d eGovernment
Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-01-01]

GREAT-IST

Title: GREAT-IST

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST, FP6-2004-IST-3 Specific Support Action

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2005-06-01]

IDEALIST-EXTEND

Title: Extension of idealist34 project (the partner search and NCP support network for participants in the IST Priority) to INCO Balkan and NIS countries

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST
Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2005-09-27]

IS2WEB

Title: Extending information society networks to Western Balkan countries

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST, FP6-2004-IST-3 Specific Support Action

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2005-05-01]

J-WEB

Title: Collaboration environment for judicial European network in Western Balkans

Research area: IST-2005-2.6.5.1.d eGovernment

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-02-01]

SCORE

Title: Strengthening the strategic cooperation between the EU and Western Balkan region in the field of ICT Research

Research area: IST-2005-2.6.5.2 INCO

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-02-01]

SEEFIRE

Title: South-East Europe fibre infrastructure for research and education

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST,FP6-2004-IST-3 Specific Support Action

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2005-03-01]

SWEB

Title: Secure, interoperable, cross border m-services contributing towards a trustful European cooperation with the non-EU member Western Balkan countries

Research area: IST-2005-2.6.5.1.d eGovernment

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-01-01]

RACWEB

Title: Risk assessment for customs in Western Balkans

Research area: IST-2005-2.6.5.1.d eGovernment

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-01-01]

WE-GO

Title: Enhancing Western Balkan eGovernment Expertise

Research area: IST-2005-2.6.5.1.d eGovernment

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2006-12-01]

WEB.DEP

Title: Western Balkans democratic participation

Research area: IST-2005-2.6.5.1.d eGovernment

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-01-01]

2.2.2.4 FP6 projects relevant to the ICT sector

SEE-ERA-NET

Title: Southeast European ERA-NET

Research area: COOR-1.1 Networking of national or regional programmes or parts of programmes; actors: public authorities, research agencies, open call for proposals (ERA-NETs)

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2004-09-01]

SEE-INNOVATION

Title: Facilitating Innovation for ICT SMEs in South Eastern Europe

Research area: INNOVATION-5 Stepping up economic and technological intelligence

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2005-07-01]

ERA WESTBALKAN

Title: Opening up the European Research Area to the Western Balkan

Research area: INCO-C Western Balkan Countries

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2004-05-01]

ERA WESTBALKAN+

Title: Intensifying ERA in Western Balkan Countries

Research area: INCO Specific measures in support of international co-operation

Funded under 6th FWP (Sixth Framework Programme)

Project start date: [2007-01-01]

Detailed fact sheets describing the above mentioned projects can be found in Annex II.

3 The ICT landscape in Albania

3.1 Albania: a brief overview

The transition towards a modern, open-market economy in Albania has proven difficult, as successive governments have tried to deal with high unemployment, corruption, a dilapidated infrastructure, organised crime networks and a disruptive political environment.

The 1992 elections in Albania ended 47 years of communist rule. Although the country has made progress in its democratic development, deficiencies still remain. During the NATO bombing of Yugoslavia in 1999, nearly 500,000 ethnic Albanian refugees from Kosovo spilled over the border, imposing a huge burden on Albania's already fragile economy.

In 2003, the nominal GDP of Albania reached EUR 7.4 billion (about EUR 2,300 GDP per capita) and 25% of the population were living below the country-specific poverty level. However, Albania's cumulative growth has reached an annual average of 5.7% due to the implementation of largely successful stabilisation programmes, structural transformation and remittances sent home by migrants. In 2004 and 2005 the real GDP growth rate was 5.5% while in 2006 it was 5.7%.

Although the Albanian institutions were involved in European programmes since 1993, the technology and technical research in ICT has improved slowly. In fact no more than 6 years ago the Government has become more sensitive towards the need and goal of modernizing the national ICT sector. The policy plan has been implemented through the adoption of national strategies for the development of ICT and telecommunications and usage of ICT tools also in the education landscape. In some institutions several new scientific environments have been reorganised. In parallel also communication and information infrastructure, the network access for higher education and research institutes and library information systems are growing. In this context also an increasing number of private or not-for-profit organisations are offering and developing ICT basic solutions and internet services.

3.2 Main Stakeholders Involved in ICT Policy Making

ICT policy making in Albania is led by Council of Ministers. Several top level institutions are involved in this process. Public technical ICT centres involved in research, development and education exist in several universities, main centres situated in Tirana.

- Council of Ministers ³
 - Approves scientific and technological development policies
 - Proposes laws for scientific activities
 - Decides for creation, dissolving or merging of research institutions
 - Decides on research budget and related national programmes
 - Approves bilateral and multilateral agreements for science and technology
- Ministry of Education and Science (MASH) ⁴
 - The main government institution for science and technology
 - Prepares science and technology policies and national programmes
 - Proposes modifications for institutional, financial and legislative issues
 - Proposes the budget for scientific and technological activities
 - Proposes and organizes the international participation of the country
 - Promotes the qualification of new researchers

³ <http://www.mash.gov.al/>

⁴ <http://www.mash.gov.al/>

- Analyses results of scientific and technological activities
- Issues regulations for scientific and technological activities of state organizations
- Creates consultative commissions for science and technology
- The Directorate for Scientific Research manages national programmes and participation in international research programmes
- Other Ministries⁵
 - Organize and manage scientific and technological activities of their research institutions
 - Decide and organize international bilateral and multilateral collaboration in respective fields of science and technology.
- Academy of Sciences [Law no. 9655 dated 11.12.2006]
 - Created in 1972. The actual governing law is dated 11.12.2006; it defines the Academy as "autonomous scientific institution that functions through a selected group of scientists".
 - Collaborates with research and education institutions in the country and abroad that have necessary physical capacities for research in different fields of science.
 - Proposes new fields of research following the needs of the country.
 - Offers to high state institutions consultancy and expertise for resolving of important issues for the development of the country.
 - Publishes periodic and other works of high scientific level.
 - Organizes national, international and problematic congresses and conferences
 - Organizes competitions and distribution of scientific prizes.
- Council for Scientific Policies and Technological Development
 - Is composed by leaders of ministries and central institutions and distinguished scientists, not more than 15 members. Premier Minister is chairman of the Council and decides for its members.
 - Defines and manages scientific and technological policies for the development of the country
 - Approves directions and priorities of scientific and technological policies and development programmes
 - Gives opinions for project-laws and project-decisions on scientific and technological activities
 - Periodically asses realisations on scientific and technological policies
 - Defines tasks for state organizations for development and usage of scientific potentials
 - Creates commissions and working groups for specific problems
- National Agency for Information Technology (AKSHI)
 - Depends on Premier Minister, created with decision of government 248, dated 27.4.2007 (one month after dissolving of the Institute of Informatics and Applied Mathematics)
 - Preparation and implementation of policies, strategies, legislation for development of the sector of information society.
 - Coordination of policies and programmes in the field of information society.
 - Promotion of investments in the field of information society.
 - Promotion of new technologies in the field of information society.
 - Education and promotion of the use of ICT from the public.
- Authority for Electronic and Postal Communications (AKEP)⁶
 - Former Authority for Regulations of telecommunications (ERT).
 - Monitors the regulatory framework defined by the Law for Telecommunications and related development policies of government.
 - Issues licenses for Internet providers.
 - Manages the ccTld AL.
- Council of High Education and Science
 - Based on the Law for High Education (Law no. 9741 dated 21.05.2007)

⁵ <http://www.mash.gov.al/>

⁶ <http://www.ert.gov.al/>

- Created by Ministry of Education and Science jointly with the Parliament, Council of Ministers, and Conference of Rectors.
- Proposes / gives opinions for:
 - National strategies and programmes for high education and research, related policies and project laws.
 - Main fields and programmes for scientific research and technological development.
 - Budget for high education and science, and its distribution.
 - Standards for assessment and accreditation of institutions of high education and their teaching programmes.
 - Criteria for according of scientific degrees and titles, jointly with the Commission for Evaluation of Academic Titles.
 - Development of specific policies requested by Minister of Education and Science and the ways for their financing.
 - Other problems as requested by Minister of Education and Science.

Key research and education institutions with ICT departments:

- University of Tirana
 - Faculty of Natural Sciences
 - Department of Informatics
 - Faculty of Economy
 - Department of Mathematics, Statistics and Informatics
- Polytechnic University of Tirana
 - Faculty of Information Technology
 - Department of Computer Engineering
 - Department of Electronics and Telecommunications
 - Centre for R&D in Information Technologies (former INIMA)
- Other universities with IT departments
 - University of Shkodra
 - University of Elbasani
 - University of Vlora
 - University of Gjirokastra

3.3 Legal Framework for ICT R&D

Legal framework in Albania is based in laws for high education and for science:

- Law no. 9741 dated 21.05.2007 "for High Education", which defines that:
 - Mission of high education is to transmit, develop and protect knowledge through teaching, scientific research and services... to prepare high specialists and new scientists.
 - Academic freedom of high education institutions is expressed with the freedom of teaching, freedom of scientific research, freedom of creation following dispositions of this law.
 - Universities realize scientific and applied research and creative activities... and assures a suitable balance between teaching, scientific research and services.
- Law no. 9655 dated 11.12.2007 "for Academy of Sciences", which defines that:
 - Academy of Sciences of Albania is a scientific institution that functions through a selected group of scientists.
 - Academy is a legal public entity.
 - Academy is an autonomous institution, which supports its activity in the scientific truth and national interests.
- Law no. 7893 dated 22.12.1994 "for Science", which defines the bases and principles of organization, management, realization and evaluation of scientific activities and technological development in Republic of Albania:

- Scientific and technological activities are a national priority
- Freedom of scientific research is guaranteed by law
- Support from the state aims to achieve a right balance between the freedom of scientific research and the necessity to achieve as much as possible from the given funding.

Legal basis for R&D on ICT is detailed in national strategies and programmes for research and development.

3.4 ICT R&D Policy: Programmes and Strategies

Council of Ministers has adopted national strategies for the development of ICT, of telecommunications, and usage of ICT in education.

Main strategic documents directly linked with ICT include:

- National Strategy for ICT 2003 (depreciated in 2005)
- Inter-Sectorial Strategy for Information Society (January 2009)
- Masterplan for introduction of IT in all schools countrywide (December 2005)
- Policy for Development of Telecommunications in Republic of Albania (June 1999, modified)
- Law 9704 dated 2.4.2007 for ratification of the agreement between Council of Ministers of Republic of Albania and Government of Republic of Italy for realization of a service centre and a telematic network for universities. Creation of the academic (research and education) network of Albania is part of this agreement.
- The platform for reforming of the research system, 2006
- Draft strategy for development of research in preparation, 2009

Government priorities in the domain of ICT include:

- Access for all
 - E-schools
 - Universal services
- Increase of efficiency
 - One-Stop-Shop for public services
- E-government
 - Public procurement
- Priority for main actors
 - Electronic ID
 - Digital signature
- Increased participation in decision-making
 - Public information
 - E-meeting
 - E-democracy

These priorities are implemented through different programmes and projects undertaken, funded or supported by Council of Ministers.

3.5 National ICT R&D interventions and projects

Government of Albania has launched several national projects for implementation of ICT systems in public administration. Relevant state institutions are involved for their realization. Projects include:

- Taxes system
- Customs system

- General Registry of Population and Identity cards
- Public procurement system
- Electronic certificates

At the same time government has approved two national projects dealing with research and education. First, it is the project for introduction of ICT in all schools country-wide. A special working group is created in the Ministry of Education and Science, with participation of experts from UNDP, for implementation of this project.

Second, the project for creation of the Inter-University Services Centre and the Telematic Network (National Research and Education Network), funded by Italian government; is approved by Parliaments of two countries, and the PIU for its realization is operational in the Ministry of Education and Science.

Government has funded National Programmes for R&D in ICT since 1995. The actual programme 2007-2009 is funding several ICT projects:

- ALBGRID – development of grid systems in framework of Albanian Academic Network (Polytechnic University of Tirana and University of Tirana)
- Creation of network infrastructure in the Academy of Arts (Polytechnic University of Tirana and Academy of Arts)
- Development of videoconferencing systems for e-learning (Information Systems Technology Integration - ISTI)
- Development of a modern system for creation, storage, exchange and publication of information (University "Eqrem Cabej", Gjirokastra)
- A dynamic system for the exchange of information for communication between teachers, students, parents, education institutions and Ministry of Education and Science (University of Tirana)

International collaboration realized by Ministry of Education and Science includes several bilateral agreements with neighbour countries; as well as with relevant international institutions⁷

- Bilateral agreements with ICT components (actual / recent)
 - Italy 2008-2010
 - Greece 2005-2007
 - Slovenia 2007-2009
 - FYROM 2006-2008
- Framework Programme 7 (fully associated from 2008)
- TEMPUS (EU)
 - Training, research and infrastructure based on ICT
- NATO
 - Small projects for implementation of networking infrastructure
- UNESCO
 - UNESCO managed the project of UNDP for creation of the metropolitan network in Tirana in 1985.
 - Small projects for implementation of ICT infrastructure and training.

3.6 Cooperation with the EU in the field of ICT R&D

3.6.1 Relations between Albania and the EU

After breaking of relations with China in late seventies, the first international project implemented in Albania was funded by UNDP for creation of a metropolitan computer network in Tirana, connecting ministries and faculties of the university in 1985. During nineties exchanges with other countries and

⁷ <http://www.mash.gov.al/>

international organizations increased, and Albania was involved in many programmes, including:

- Early participation from 1993 in TEMPUS and COPERNICUS programmes
- Continuation of participation in framework programmes – example of participation in regional initiatives SEEREN and SEE-GRID, IDEALIST etc.
- Other EU programmes:
 - PHARE (a project for creation of first segments of the academic backbone in Tirana failed as result of wrong decision making and the events of 1997)
 - CARDS
 - INTERREG
 - CADSES
- Associated in FP7 from 1 January 2008

Official relations with EU are managed by ministries of Foreign Affairs, of European Integration, and of Education and Science. NCP for FP7 is within Ministry of Education and Science.

3.6.2 Projects and networks in the field of ICT R&D

Albanian institutions were involved in European programmes from 1993, including TEMPUS and INCO-COPERNICUS programmes). First ICT projects under INCO-COPERNICUS include:

- ETCETERA (1994-96, former Institute of Informatics and Applied Mathematics (INIMA))
- HANNIBAL (1995-97, former INIMA)
- ESATT+ (1996-97, former INIMA as subcontractor)

Key regional projects (after 2000) funded by European Commission in different programmes include:

- SEEREN⁸ (Academy of Sciences):
 - FP6: South Eastern European Research Education Network, 2003-2004
 - Create the next generation of the southeast European segment of GEANT
- SEEFIRE⁹ (Academy of Sciences) FP6 2005-2006
 - South-East Europe Fibre Infrastructure for Research and Education,
 - Analysis of the technical options available for the deployment of dark fibre, management of optical transmission and economic aspects and regulations to be used by NRENs in the region
- SEEREN2¹⁰ (Academy of Sciences, University of Tirana, Polytechnic University of Tirana) FP6 2006-2008
 - South Eastern European Research Education Network 2,
 - Enhance the next generation of the southeast European segment of GEANT
- SEE-GRID¹¹ (Academy of Sciences, University of Tirana, Polytechnic University of Tirana) FP6 2004-2006
 - South Eastern European Grid,
 - Create a grid eInfrastructure to serve the research and educational needs of the scientific communities
- SEE-GRID2 (Academy of Sciences, University of Tirana, Polytechnic University of Tirana) FP6 2006-2008
 - South Eastern European Grid 2¹²,
 - Deliver a grid eInfrastructure to serve the research and educational needs of the scientific communities

⁸ www.seeren.org

⁹ www.seefire.org See also annex II

¹⁰ www.seeren.org

¹¹ www.see-grid.eu

¹² www.see-grid.eu

- ELISA¹³ (Institute of Informatics and Applied Mathematics, Albanian Agency for Business and Investment) INTERREG-III/CADSES 2006-2008
 - e-learning for improving access to Information Society for SMEs in the SEE Area,
 - Improving the access to knowledge and the information society of SMEs in South-East Europe, through close cooperation of academic and business communities at a transnational level
- ISOTEIA¹⁴ (Institute of Informatics and Applied Mathematics) INTERREG-III/CADSES 2005-2007
 - Integrated System for the Promotion of Territorial & Environmental Impact Assessment in the framework of Spatial Planning.
 - Digital support centre for strategic environmental assessment (SEA)
- SEE-ERA.NET¹⁵ (Ministry of Education and Science):
 - South East European Era-Net
 - Linking research activities within existing national, bilateral and regional RTD programmes

Other projects in running or in starting phase are:

- SEE-GRID-SCI¹⁶ (Academy of Sciences, University of Tirana, Polytechnic University of Tirana) FP7 2008-2010
 - South Eastern European Grid for Science,
 - Leverages the SEE eInfrastructure to enable new scientific collaborations among user communities
- SEEERA-EI (Ministry of Education and Science, Polytechnic University of Tirana) FP7 2009-2011
 - South East European Research Area for eInfrastructures
 - Ensure equal participation of the region in European networking and Grid computing trends
 - In preparation for launch stage.

Projects dedicated to political issues and participation in FP6/FP7:

- IS2WEB¹⁷ (CIVET), FP6, 2005-2007
 - Extending Information Society Networks to the Western Balkan Countries
 - Assistance to research organisations in the Western Balkan countries to get informed about and actively participate in research funded by the European Commission in the field of IST.
- SCORE¹⁸ (ISETTI), FP7, 2007-2009
 - Strengthening the strategic cooperation between the EU and Western Balkan region in the field of ICT research.
- IDEALIST7 (former Institute of Informatics and Applied Mathematics), FP6, 2006-2008
- IDEAL2011¹⁹ (Polytechnic University of Tirana), FP7, 2008-2011
 - Assistance for project ideas in 7th European Framework Programme in ICT, quality-labeled Partner Search Service for connection with potential project partners worldwide.
- WBC-INCO²⁰ (Ministry of Education and Science, CIVET), FP6, 2008-2011.
 - Coordination of Research policies with the Western Balkan Countries
 - Dialogue on S&T issues between the EU and the Western Balkan countries and the integration of the research and innovation systems of the WBCs into the European Research Area (ERA)
- WINS-ICT (CIVET)²¹, FP7 2009-2011.

¹³ www.elisa-project.net

¹⁴ www.isoteia.org

¹⁵ www.see-era.net

¹⁶ www.see-grid-sci.eu

¹⁷ www.is2web.org

¹⁸ www.score-project.eu

¹⁹ www.ideal-ist.net

²⁰ www.wbc-inco.net

²¹ www.wins-ict.eu

- Western Balkan Countries Inco-Net Support in the field of ICT
 - Strengthen S&T cooperation between the EU and the Western Balkan countries by deepening the bi-regional strategic relations in the ICT field and promoting the participation of WB ICT researchers in FP 7

Projects involving public administration and SMEs include:

- ELLECTRA-WEB²² (Agency for Public Procurement), FP6 2007-2008
 - Project goals were to specify, develop and test an Open Source Application Framework for electronic Public Procurement. Albania served as one of WBC pilot sites for the solution.
- RACWEB²³, FP6 2007-2009
 - Improve the Western Balkans and EU neighbouring countries customs efficiency and transparency in risk assessment by enhancing the identification of risk profiles through the utilisation of data mining techniques and by developing an advanced, web-based risk assessment service in customs declarations.
- SWEB²⁴ (Municipality of Tirana) FP6 2007-2009
 - Secure, interoperable, cross border, mobile services contributing towards a trustful European cooperation with the non-EU member Western Balkan countries
- SEE-Innovation²⁵ (ISSETI) FP6 2005-2007
 - Assist SMEs from candidate and third South East European countries to actively participate in European R&D activities and programmes on IST research domains

3.7 Shortcomings in ICT R&D to be addressed in the future

R&D public entities are facing several problems that make difficult the participation of FP7.

- Funding issues:
 - Inadequate dedicated budget for R&D
 - Dependency of funding from official fiscal year
 - Lack of flexibility on the use of funding
 - Bureaucracies in public procurement procedures
 - Lack of financial autonomy for R&D departments
- Political:
 - Stability in time of research and high education system (frequent changes in legislation, lack of coordination and cohesion between different legislations and political documents)
 - Missing of support for solution of funding issues described above
 - Inadequate collaboration between government and universities
 - Example – the case of inter-sectorial strategy for ICT
 - Lack of support for projects that require some intervention from government instances
 - Example – project SEELIGHT in framework of HiPERB programme
 - Objective is getting optical dark fibre for international connectivity with GEANT for Balkan countries.
 - Participation is conditioned by co-funding of 20% and support from Ministry of Economy (responsible for participation in HiPERB)
 - Example: Support for the minimal maintenance of the future academic network
 - The idea for creation of the academic network remained unsupported for many years.
 - Despite the approval of the project funded by Italian government, continuation of the service when project will terminate remains an open question, and will be conditioned by technical solutions that will be adopted.

²² www.electra-web.eu

²³ www.racweb.org

²⁴ www.sweb-project.org

²⁵ www.see-innovation.org

4 The ICT landscape in Bosnia and Herzegovina

4.1 Bosnia and Herzegovina: a brief overview

Bosnia and Herzegovina is a small country within the Western Balkan region, with a population of about 4 million people (43% urban and 57% rural). Following its declaration of independence from the former Socialist Federal Republic of Yugoslavia (SFRY) in April 1992, Bosnia and Herzegovina was plunged into a three-year long war, which led to major displacements of population and extensive physical and economic destruction.

The Dayton Peace Agreement ²⁶ retained Bosnia and Herzegovina's international boundaries and created two entities within the Bosnia and Herzegovina state: Federation of Bosnia and Herzegovina and Republic of Srpska. There is also the self-governing district of Brčko, which remains under the sovereignty of the central-state government, the Council of Ministers of Bosnia and Herzegovina.

In accordance with the Dayton Peace Agreement, a Peace Implementation Council was established and a UN-mandated High Representative appointed, in order to support the peace implementation process. Currently, the High Representative - who has been granted strong executive powers - also acts as the EU's Special Representative. The Office of the High Representative (OHR) oversees the implementation of the civilian aspects of the Dayton Peace Agreement. Bosnia and Herzegovina is a parliamentary democracy and the constitution in force is defined by the Dayton Peace Agreement.

4.2 Main Stakeholders Involved in ICT Policy Making

The information and communications technology (ICT) policy environment is deadlocked by tensions around two bodies, the Agency for Development of the Information Society (AIS) and the Academic and Research Network (BIHARNET), both of which should be bodies operating at the state level. However, the AIS have still not been officially established, after several proposals were rejected. A draft law is now waiting for parliamentary approval. BIHARNET, which was formally registered at the state level but is seen to be part of the Federation of Bosnia and Herzegovina (i.e., one of the two national entities), is almost frozen by opposing veto powers held by the two main nationalities sharing power: Bosniaks and Croats. Another academic and research network, Serbian Academic Research Network of Republika Srpska - SARNET in the Republika Srpska, acts on its own, and is in regional and international partnerships with other academic networks.

ICT policy making in BIH is the responsibility of the Council of Ministers of BIH.

- Council of Ministers ²⁷
 - Approves scientific and technological development strategies, policies and action plans
 - Proposes laws for scientific activities
- Ministry of Civil affairs ²⁸
 - Coordination of all civil affairs at the state level. Responsible for education.
- Council for Economy ²⁹
 - The six-member coordinating body responsible at BIH level for Ministries for

²⁶ The General Framework Agreement for Peace in Bosnia and Herzegovina, also known as the Dayton Agreement, is the peace agreement reached at Wright-Patterson Air Force Base near Dayton, Ohio in November 1995, and formally signed in Paris on December 14, 1995. These accords put an end to the three and a half year long war in Bosnia, one of the armed conflicts in the former Socialist Federative Republic of Yugoslavia.

²⁷ <http://www.vijeceministara.gov.ba/bosanski/index.php>

²⁸ <http://www.vijeceministara.gov.ba/bosanski/index.php>

²⁹ <http://www.vijeceministara.gov.ba/bosanski/index.php>

- Telecommunications and transport.
- Foreign Investment Promotion Agency ³⁰
 - Attract and maximize the flow of foreign direct investment into Bosnia and Herzegovina, and encourage existing foreign investors to further expand and develop their businesses in BiH.
 - Facilitate the interaction between public and private sectors, and have an active role in policy advocacy in order to contribute to continually improving environment for business investment and economic development.
 - Promote a positive image of Bosnia and Herzegovina as a country that is attractive to foreign investors.

4.2.1 Main Stakeholders Involved in ICT Policy Making in Federation of Bosnia and Herzegovina (FBiH)

In FBiH the responsible policy maker is the Federal Ministry for Transport and Communications. Furthermore, division into 10 cantons implies that cantonal Councils are additional important policy makers. FBiH is currently in the process of competence transfer from Federal to ten Cantonal Ministries. Apart from government organizations, there are a number of public and private ICT centers involved in R&D and education connected or belonging to universities, situated in Sarajevo, Tuzla, Mostar, and Travnik.

- Federal Ministry for Transport and Communications ³¹
 - telecommunications and posts, except for establishment and functioning of the joint and international communication devices
- Federal Ministry of Education and Science ³²
 - development of scientific activity
 - protection of copyrights and intellectual property
 - coordination of scientific-researching activities
 - development of the scientific-researching institutions
 - encouragement of fundamental applied researches
 - development of investment technologies and human resources in scientific-researching field
 - follow-up innovations, development and improvements, and technologies, other tasks as laid down by the legislation governing this field
- Federal Ministry of Development, Entrepreneurship and Crafts ³³
 - stimulation of development, entrepreneurship and crafts;
 - support to application of innovations and introduction of modern technologies in the area of entrepreneurship and crafts;
 - increase of entrepreneurship and crafts share in the economy;
 - organizing of institutions for entrepreneurship and entrepreneurial infrastructure in the economy;
 - training of entrepreneurs and craftsmen through regular and supplemental courses, as well as other tasks established by law.
- Federal Institute for Development Programming ³⁴
 - programming development of information technologies and information training
 - analysis of the status of scientific and technological development and creating the environment for development of the applied sciences

³⁰ <http://www.fipa.gov.ba>

³¹ www.fmpik.gov.ba

³² www.fmon.gov.ba

³³ fmrpo@fmrpo.gov.ba

³⁴ www.fzzpr.gov.ba

- planning the environment for foreign investments
- monitoring of implementation of the inter-country agreements and treaties
- organizing seminars and preparation of programs for economic cooperation with countries of interest for the Federation BiH.

The responsible institutions for all financial and other issues not listed above are respective Cantonal institutions, mainly Councils and Ministries.

Key public research and education institutions with ICT departments:

- University “Dzemal Bijedic” of Mostar
 - Faculty of Information Technologies (FIT)
 - Faculty of Mechanical Engineering
 - Department of Informatics
- University in Mostar
 - Faculty of Mechanical and Computer Engineering ³⁵
- University of Sarajevo
 - Faculty of Electrical Engineering ³⁶
 - Department of Computer Science and Informatics
 - Faculty of Natural Sciences & Mathematics
 - Department for Informatics
 - Faculty for Transport and Communications
 - Department for Informatics
 - Faculty of Economy ³⁷
 - Center for Management And Information Technologies (MIT Center)
- University of Tuzla
 - Faculty of Electrical Engineering ³⁸
 - Department of Technical Informatics
 - Faculty of Natural Sciences & Mathematics
 - Department for Informatics

Private research and education institutions with ICT departments:

- Open University “APEIRON” Travnik
 - Faculty of Business Information Science, Travnik ³⁹
 - Department of Business Information Science
 - Department of Educational Information Science
 - Sarajevo School of Science and Technology, Sarajevo ⁴⁰
 - Department of Computer Science
 - Department of Information Systems

4.2.2 Main Stakeholders Involved in ICT Policy Making in Republika Srpska (RS)

Responsible ICT policy maker in RS is Public Institution Agency for Information Society of Republic of Srpska (AISRS) ⁴¹.

This institution, founded by Government of Republic of Srpska in December 2007, is in charge of development, overlooking and promotion of information society in Republic of Srpska. Agency officiate

³⁵ <http://www.fsr.ba/>

³⁶ <http://www.etf.unsa.ba>

³⁷ <http://www.efsa.unsa.ba/ef>

³⁸ <http://www.fe.untz.ba/>

³⁹ <http://www.out.edu.ba>

⁴⁰ <http://www.ssst.edu.ba/>

⁴¹ <http://www.aidrs.org>

activities of general interest for the Republic of Srpska. Control activities on Agency cover the Ministry of Science and Technology of RS.

- AISRS will be the key factor in construction of basis of information society in Republic of Srpska through:
 - Introduction of new electronic services for economy and citizens,
 - Planning, organization, implementation and coordination of informatics projects in fields of public administration, education system, health care,
 - Defining concepts and interconnection rules for informatics interoperability,
 - Establishing standards and procedures and undertaking steps for security and protection of data, role of national certificate authority in infrastructure of public keys,
 - Overlooking and fomenting of development of ICT industry,
 - Combating high-tech criminal and software piracy,
 - Measuring IT influence via development of information
 - Coordinating of Information Science and Internet development activities together with other responsible bodies in public government, education and health systems;
 - Proposing and realizing the measures of building of information systems of local government bodies (councils of cities and municipalities);
 - Coordination on building of common data base of state departments and bodies of local communities in RS;
 - Defining of concepts and interconnection rules for information interoperability;
 - Professional verification of ICT projects in public sector, especially in government;
 - Making of legislative development tasks, rules and laws preparing in field of information science and Internet applying in public government, business environment, and in educational system, and taking the measures for their implementation (eLegislative);
 - Technological standards ratifying, and of working process standards in field of information science and Internet applying.
- They have prepared and adopted:
 - The law on electronic signature of Republika Srpska (taken in December 2008)
 - The law on electronic document in Republika Srpska (November 2008)
 - The Law on electronic business (March 2009)
 - Document: The policy of information system security of Government of Republika Srpska (prepared in cooperation with Microsoft Co.).
 - Under patronage of the Ministry of science and technology of RS, AISRS has active participated in research and development project called ELLECTRA-WEB from FP6 EU program. [www.ellectra-web.eu]
 - In December 2008 AISRS has started project "RSNet"-Internet Relay Chat network of Republika Srpska, which has the goal to establish a non-commercial chat network for professionals⁴².
 - The strategy of development of electronic government (eGov strategy) has been accepted in December 2008, and the Action program, as well as the Strategy of RS Information Society Development, is now in preparing phase.
 - "Lanaco" private company, together with Microsoft partner, projected Electronic School Diary (the electronic version of real school diary) and is in testing phase now in one school of primary education ("Ivo Andric") in Banja Luka.
- In forthcoming period work of AISRS will be directed primarily towards:
 - Further development of e-business bills, as well as amendments to the Republic of Srpska Criminal Law,
 - Realisation of project "Electronic Signature" in Government of Republic of Srpska,
 - Initiation of campaign "Combating Cyber Criminal",
 - Preparation of regional Conference of Information Society Development.

⁴² <http://rsnet.aidrs.org>

- Ministry of Education and Culture of Republika Srpska⁴³
- Apart from government organizations, there are a number of public and private ICT centres involved in R&D and education connected or belonging to universities, situated in Banja Luka, Istocno Sarajevo-Lukavica, Bijeljina, Prijedor, and Gradiska.
 - Key public and private research and education institutions with ICT departments:
 - University of Banja Luka
 - Faculty of Electrical Engineering Banja Luka⁴⁴
 - Faculty of Economics Banja Luka⁴⁵
 - Faculty of Mechanical Engineering, Banja Luka⁴⁶
 - Faculty of Natural Sciences and Mathematics, Banja Luka⁴⁷
 - University of East Sarajevo-Lukavica⁴⁸
 - Faculty of Electrical Engineering, East Sarajevo-Lukavica⁴⁹
 - Private research and education institutions with ICT departments:
 - Pan European University “APEIRON” Banja Luka⁵⁰
 - Faculty of Information Technologies, Banja Luka⁵¹
 - College for Information Science and Management “Janjos“, Prijedor⁵²
 - College for Information Sciences and Management “Primus”, Gradiska”⁵³
 - BLC-Banja Luka College, Banja Luka⁵⁴
 - Slobomir P University, Bijeljina⁵⁵
 - Faculty for Information Technologies, Bijeljina⁵⁶
 - Banja Luka College of Communications Kappa Phi, Banja Luka⁵⁷

4.3 Legal Framework for ICT R&D

Legal framework in BIH is based on laws for higher education and for science:

- Frame Law on Higher Education in BIH (30.7.2007, 59/07)
 - Adapting the system of Higher education according the EU standards
 - Implementation of Bologna process
- Republika Srpska has their Law on higher education which is based on Frame Law on Higher Education in BiH (2007)⁵⁸

Frame Law on Higher Education is currently only partially implemented in FBIH for not all Cantonal Councils have approved it.

- Law on University (39/90, 3/93, 24/93 i 13/94)

⁴³ <http://www.vladars.net/sr-sp-latn/Vlada/Ministarstva/>

⁴⁴ <http://www.etfbl.net/>

⁴⁵ <http://www.efbl.org>

⁴⁶ <http://www.masinstvobl.rs.sr/>

⁴⁷ http://www.unibl.rs.sr/index.php?option=com_firma&firmaid=7

⁴⁸ <http://www.unssa.rs.ba/>

⁴⁹ <http://www.etf.unssa.rs.ba>

⁵⁰ <http://www.apeiron-uni.eu/>

⁵¹ <http://www.apeiron-uni.eu/fakmaticne/informatika.html>

⁵² <http://koledzprijedor.org/>

⁵³ <http://www.primus-gradiska.com/>

⁵⁴ http://www.blc.edu.ba/about_us.htm

⁵⁵ <http://www.spu.ba/>

⁵⁶ <http://www.spu.ba>

⁵⁷ <http://www.kfbl.edu.ba>

⁵⁸ http://www.unibl.rs.sr/doc/zakon_o_visokom_obrazovanju.pdf

- Law on Science and Research (38/90) implemented in Cantons where there is no other Cantonal Law.

4.4 ICT R&D Policy: Programmes and Strategies

Council of Ministers has adopted national strategies for the development of ICT, of telecommunications, and usage of ICT in education.

The Strategy of Development of Republika Srpska Information Society is now in the preparation phase.

Not all of the Cantonal Councils in FBiH have adopted adequate documents.

Council of Ministers BiH adopted the following main strategic documents directly influencing ICT:

- Policy for Development of the Information Society of Bosnia and Herzegovina (June, 22, 2004)
- Strategy for development of the Information Society of Bosnia and Herzegovina (November, 16, 2004)
- Action plan for Development of the Information Society of Bosnia and Herzegovina (November, 16, 2004)

All Documents has been prepared in cooperation with the United Nations Development Program (UNDP) in Bosnia and Herzegovina.

From the listed documents it follows that the priorities are the following:

- e-Legislation
- e-Education
- e-Governance
- ICT Infrastructure
- ICT Industry

4.5 National ICT R&D interventions and projects

The Government of BiH has launched several national projects for implementation of ICT systems in public administration. The most important are:

- CIPS Project (29 April 2002) , resulted in Agency for Identification Documents, Registers and Data Exchange of Bosnia and Herzegovina
- Taxes system (ELMO project just started)

and the following legislative law:

- Law on e-business and electronic signature in BiH (June, 2005)
- Law on Agency for e-business BiH (June, 2005)
- Provision on electronic signatures protection measures (May, 2005)

4.6 Cooperation with the EU in the field of ICT R&D

4.6.1 Relations between Bosnia and Herzegovina and the EU

Official relations with EU are managed by ministries of Foreign Affairs, of Civil Affairs, of European Integration, and of Education and Science. NCP for FP7 is within Ministry of Education and Science.

After the war, international community strongly supported the recovery through various programs including:

- Intensive participation in TEMPUS and WUS programmes
- Participation in framework programmes – example of participation in regional initiatives SEEREN and SEE-GRID, IDEALIST etc.
- Other EU programmes:
 - PHARE (In post war Bosnia, academic and research network – BIHARNET (Academic Research Network of Bosnia and Herzegovina) and BIHARNET Centre were established on February 12, 1998 by the University of Banja Luka, the University "Džemal Bijedić" in Mostar.)
 - CARDS
 - INTERREG
 - CADSES
- Associated in FP7 from 1 January 2008

Official relations with EU are managed by ministries of Foreign Affairs, of European Integration, and of Education and Science. NCP for FP7 is within Ministry of Education and Science.

The University of Banja Luka has developed a scientific and technical collaboration with numerous universities all over the world. The co-operation with the majority universities from Serbia is very successful, as well as with the University of Montenegro (Podgorica) and also those from Ljubljana and Maribor.

4.6.2 Projects and networks in the field of ICT R&D

FBIH and RS institutions were involved in European programmes from 1995, including TEMPUS and WUS programmes). Universities in BIH have fruitful international cooperation:

Key regional projects (after 2000) funded by European Commission in different programmes include:

- SEEREN⁵⁹ (BIHARNET⁶⁰):
 - FP6: South Eastern European Research Education Network, 2003-2004
 - Create the next generation of the southeast European segment of GEANT
- SEEFIRE⁶¹ (BIHARNET) FP6 2005-2006
 - South-East Europe Fibre Infrastructure for Research and Education,
 - Analysis of the technical options available for the deployment of dark fibre, management of optical transmission and economic aspects and regulations to be used by NRENS in the region
- SEEREN2⁶² (BIHARNET) FP6 2006-2008
 - South Eastern European Research Education Network 2,
 - Enhance the next generation of the southeast European segment of GEANT
- SEE-GRID⁶³ (BIHARNET) FP6 2004-2006
 - South Eastern European Grid,
 - Create a grid eInfrastructure to serve the research and educational needs of the scientific communities
- SEE-GRID2 (Faculty of Electrical Engineering, University of Sarajevo, Faculty of Electrical

⁵⁹ www.seeren.org

⁶⁰ In post war Bosnia, academic and research network – BIHARNET (Academic Research Network of Bosnia and Herzegovina) and BIHARNET Center were established on February 12, 1998 by the University of Banja Luka, the University "Džemal Bijedić" in Mostar, The University of West Mostar, the University of Sarajevo and the University of Tuzla. The Government of Slovenia Republic provided. financial recourses for that activity. The donors project finished at the end of 1999. <http://www.biharnet.ba>

⁶¹ www.seefire.org

⁶² www.seeren.org

⁶³ www.see-grid.eu

Engineering East Sarajevo, Faculty of Natural Sciences, University of Sarajevo)

- South Eastern European Grid 2⁶⁴,
 - Deliver a grid eInfrastructure to serve the research and educational needs of the scientific communities
- ELISA⁶⁵ (Delegation of the European Commission to Bosnia and Herzegovina) INTERREG-III/CADSES 2006-2008
 - e-learning for improving access to Information Society for SMEs in the SEE Area,
 - Improving the access to knowledge and the information society of SMEs in South-East Europe, through close cooperation of academic and business communities at a transnational level
- ISOTEIA⁶⁶ (Hydro - Engineering Institute of Civil-Engineering Faculty of Sarajevo) INTERREG-III/CADSES 2005-2007
 - Integrated System for the Promotion of Territorial & Environmental Impact Assessment in the framework of Spatial Planning.
 - Digital support centre for strategic environmental assessment (SEA)
- SEE-ERA.NET⁶⁷ (NIP FP6 BiH):
 - South East European Era-Net
 - Linking research activities within existing national, bilateral and regional RTD programmes

Other projects in running or in starting phase are:

- SEE-GRID-SCI⁶⁸ (Faculty of Electrical Engineering, University of Banja Luka) FP7 2008-2010
 - South Eastern European Grid for Science,
 - Leverages the SEE eInfrastructure to enable new scientific collaborations among user communities

Projects dedicated to political issues and participation in FP6/FP7:

- IS2WEB⁶⁹ (World University Service Bosnia And Herzegovina (SUS B&H), FP6, 2005-2007
 - Extending Information Society Networks to the Western Balkan Countries
 - Assistance to research organisations in the Western Balkan countries to get informed about and actively participate in research funded by the European Commission in the field of IST.
- SCORE⁷⁰ (Svjetski univerzitetski servis- SUS BiH), FP7, 2007-2009
 - Strengthening the strategic cooperation between the EU and Western Balkan region in the field of ICT research.
- IDEALIST7 (Faculty of Science, University of Sarajevo), FP6, 2006-2008
- IDEAL2011⁷¹ (Faculty of Science, University of Sarajevo), FP7, 2008-2011
 - Assistance for project ideas in 7th European Framework Programme in ICT, quality-labeled Partner Search Service for connection with potential project partners worldwide.
- WBC-INCO⁷² (SUS-BIH), FP6, 2008-2011.
 - Coordination of Research policies with the Western Balkan Countries
 - Dialogue on S&T issues between the EU and the Western Balkan countries and the integration of the research and innovation systems of the WBCs into the European Research Area (ERA)
- WINS-ICT⁷³ (EXIT Consulting Ltd. (EXIT), Bosnia and Herzegovina), FP7 2009-2011.

⁶⁴ www.see-grid.eu

⁶⁵ www.elisa-project.net

⁶⁶ www.isoteia.org

⁶⁷ www.see-era.net See also Annex II

⁶⁸ www.see-grid-sci.eu

⁶⁹ www.is2web.org

⁷⁰ www.score-project.eu

⁷¹ www.ideal-ist.net

⁷² www.wbc-inco.net

⁷³ www.wins-ict.eu

4.7 Shortcomings in ICT R&D to be addressed in the future

R&D public entities are facing several problems that make difficult the participation of FP7.

- Funding issues:
 - Inadequate dedicated budget for R&D
 - Lack of cooperation with entrepreneurship
 - Lack of flexibility on the use of funding
 - Lack of financial autonomy for R&D departments

- Political ⁷⁴

Extracts from Report: referred to in article “Reforms stalling in Bosnia and Herzegovina, warns PACE committee”:

 - ... The Assembly notes, however, that the effective implementation of the Stabilisation and Association Agreement requires close and efficient co-operation between various State and Entity level structures and institutions. This has yet to be achieved, given the complex political and constitutional set up of Bosnia and Herzegovina. Without proper reforms, the country will not be able to make full use of the benefits European integration can bring.
 - ... Constitutional revision is also required to implement key reforms in areas where the distribution of competences between the Entities and the State needs to be changed.
 - ... Entity institutions, especially in the Federation of Bosnia and Herzegovina, should be further reformed in a spirit of cost-effectiveness and with the aim of ensuring coherent policy-making and enforcement of the legislation at all levels of public institutions.
 - ... while welcoming the good co-operation between the Bosnian authorities and the Group of States against Corruption (GRECO), regrets the perceived high degree of political corruption and organised crime in the country
 - Missing of support for solution of funding issues
 - Problems evolving from political climate in the country.
 - Inadequate collaboration between government and universities
 - Example – the case of university network BIHARNET 1998-2000 (the BIH Council of Ministries dedicated to finance the network, but it is not functional since the donation ended in 2000)
 - Lack of support for projects that require some intervention from government instances or indirectly from stakeholders (responsible Cantonal/Federal institutions do not have a policy for funding allocation, consequently stakeholders are not encouraged to become contractors in EU co-funded projects)

Example – The proposition of the Cantonal Law in HNK states that Cantonal Ministry for Education should be in charge of any activity for the University: all financial issues, creation of a new department, etc.

⁷⁴ http://assembly.coe.int/CommitteeDocs/2008/20080911_amondoc25_2008.pdf

5 The ICT landscape in FYR of Macedonia

5.1 FYR of Macedonia: a brief overview

The ICT research policy is mentioned as a separate part of the National Strategy for Development of Electronic Communications with the Information Technologies⁷⁵. In the National Strategy it is proposed that a special program for ICT research will be developed. The program will include projects proposed by the business community, academic institutions, independent development centre, consultants, civil sector, research projects proposed by the EU and other international institutions and foundations. There are no guides in which specific areas research will be directed. The program will be supported by a special fund created only to support the research in the ICT area.

Moreover, the Ministry of Education and Science, has several financial instruments for the support of scientific research, in which ICT research is also included. The funds for this research are allocated from the state Budget.

Additionally, the Program of the new Government for 2006 – 2010⁷⁶ envisages to:

- Increase investments in scientific-research infrastructure to the create basis for application
- of modern research methods;
- Budgetary funds for scientific-research work in function of the private sector, following
- the example of more developed European countries;
- Encourage and support science through fiscal policy;
- Granting favourable and stimulating loans with payment deadlines up to 30 years for
- newly-weds with university education;
- Promotion of cooperation with scientific-research institutions abroad for better knowledge transfer;
- Establishment of strict and fair criteria for personnel selection in scientific research
- institutions;
- Support the cooperation between scientific-research institutions and economic institutions.

NGOs are also involved in ICT research and are also financially supporting the ICT research. Major NGO that supports the research in the field of ICT is Metamorphosis. It has researched topics primarily in the area of open software and local government. Metamorphosis is an independent foundation since 2004.

A new non-profit organization Information Technology Service Management Forum Macedonia was formed. It is established as a forum for Information Technology (IT) service/product providers, IT service/product users, and related parties to explore all means available to maximize IT business value.

Regarding the 6th and 7th Framework Programmes for Research and Technological Development, there has been reasonable progress in preparing and participating with project proposals of Macedonian research organisations. The level of applications submitted by Macedonian research organisations in FP6 calls for proposals is increased especially in the field of ICT.

5.2 Main Stakeholders Involved in ICT Policy Making

ICT policy making in Macedonia is led through several Ministries.

- Ministry of Information Society⁷⁷, is the basic authorized institution for coordination of the activities for developing information society and coordination of the measures which derived from the strategies:
 - National strategy for developing the information society and action plan (NSDIS)⁷⁸
 - Basic challenge in building the Strategy is defining the economic, social and political vision of

⁷⁵ http://mio.gov.mk/files/pdf/na_angliski/NSEKIT_English_Parlament_2.pdf

⁷⁶ <http://vlada.mk/assets/program%20of%20the%20government%202006-2010.pdf>

⁷⁷ www.mio.gov.mk

⁷⁸ http://www.mio.gov.mk/files/pdf/na_angliski/Strategija_i_akcionen_plan.pdf

the society based on knowledge, through development and application of ICT in all living aspects, creating modern and efficient citizen and business services.

- National strategy for developing electronic communications with information technologies
 - Basic challenge of the Strategy is the enabling of aggressive implementation and massive, efficient utilization of electronic communications and information technologies, which will assist the involvement of the Republic of Macedonia in the global net economy and the achievement of leap fogging in the economy.
 - Realization of their program is thru several pillars defined in the NSDIS, e-infrastructure, e-government, e-business, e-health, e-education and e-citizens.
- Ministry of Education and Science , at its disposal has the following financial instruments for the support of scientific research⁷⁹, in which ICT research is also included:
 - financing the national research and technology development projects;
 - awarding scholarships for post-graduate and doctoral studies at local and foreign universities;
 - financial support for research workers participating at international conferences;
 - financial support in organizing international scientific conferences;
 - contribution for publishing scientific and research publications;
 - development of the research and technology development infrastructure.

Within the framework of the Ministry of Education and Science, a Science and Technological Development Sector has been established, which comprises the following units: the Unit of Financing the Research and Technological Development, Unit of Normative and Legal Procedures in the Research and Technological Development, Unit of Technological Development and Technical Culture, Projects Unit, and the Unit of International Scientific and Technical Cooperation. Also a Scientific Research Council exists that is the strategic body for the promotion and development of science and research.

- Other Ministries⁸⁰
 - Organize and manage scientific and technological activities of their research institutions
 - Decide and organize international bilateral, regional and multilateral collaboration in respective fields of science and technology.
- Macedonian Academy of Sciences and Arts: The Macedonian Academy of Sciences and Arts was established by the Macedonian Assembly on 22nd February 1967 as the highest scientific, scholarly and artistic institution in the country with the aim of monitoring and stimulating the sciences and arts. The Academy's objectives are to survey the cultural heritage and natural resources, to assist in the planning of a national policy regarding the sciences and arts, to stimulate, co-ordinate, organize and conduct scientific and scholarly research and to promote artistic achievement, especially where they are particularly relevant to the Republic of Macedonia. Their activities in the field of ICT goes through Research Center for Energy, Informatics and Materials.

Key research and education institutions with ICT departments:

- "Ss Cyril and Methodius" University in Skopje
 - Faculty of Natural Sciences and Mathematics (Department of Informatics)
 - Faculty of Economy (Department of Mathematics, Statistics and Informatics Department of E-business)
 - Faculty of Electrical Engineering and Information Technologies (Department of Computer Technologies and Informatics, Department of Telecommunications)
- University "St. Clement from Ohrid" in Bitola
 - Faculty of Technical Sciences (Department of Informatics and Computer Engineering)
 - Faculty of Economy – Prilep (Department for Business Statistics and Informatics)

⁷⁹ www.gtzpsp.com.mk/Uploads/e-DeclarationMacedoniaEng.pdf and www.mon.gov.mk

⁸⁰ <http://www.gov.mk>

- South Eastern European University in Tetovo
 - Faculties of Contemporary Sciences and Technologies, Computer Sciences, Business Informatics, Information and Communication Technologies
- Other Universities with IT departments:
 - University "Goce Delcev" in Stip
 - FON University
 - University American College Skopje
 - European University-Republic of Macedonia
 - University of Studies Struga "EuroCollege"
 - MIT Faculties
 - New York University Skopje
 - Higher Education Professional Institution for Business Studies "Euro College" Kumanovo
- MASIT - Chamber of Commerce for Information and Communication Technology aims to improve the legal and economic business environment in Macedonia, as well as promotion of the business ethic, creation of the cooperation between the domestic and the foreign institutions, representing and protecting the interest of the ICT companies in Macedonia.
 A main goal of the Chamber of Commerce for Information and Communication Technology - MASIT is to create throw operations and concrete activities the following:
 - Development of the market economy, free entrepreneurship and competitiveness in the ICT sector
 - Improvement of the efficiency of work in the ICT business and enhanced training of the ICT skills members
 - Giving competent help to the members in the ICT development, implementing and obtaining of the modern technology of work in the ICT industry and the industry as whole
 - Enhancing of the research and development
 - Achieve appropriate and qualified help for the members with the business services
 - Creation and development of the cooperation with the foreign companies, promotion of the goods and services, presentations on international fairs and cooperation with the other associations in the world
 - Enhancement of the development in the ICT sector
 - Qualified training and qualification of the ICT workers
 - Basic system of communication between domestic and foreign companies on special projects, information of the banking, tax, customs and technology policy in the market
 - Representing the interest of the members in front of the Government, support in the creations of the Law in the ICT sector, taking care of the measures and mechanisms of the economy and macroeconomic policy giving constant information for the changes in the Law for the ICT sector
 - Making and following the work agreements
 - Giving information for the ICT sector
 - Other activities in the member's interest.

5.3 Legal Framework for ICT R&D

Legal framework in Macedonia is based in laws for high education and for science and research:

- Law for High Education, Official Gazette 35/2008 from 14.03.2008, in which is defined that:
 - Mission of high education is to develop, protect and transmit knowledge through teaching, in order to assure social and economic prosperity and progression in the society, preparing students to work in the fields where necessity of scientific and skilled staff appears, with cultural and linguistic diversity, actuation of technological development, development of arts, technical culture and sports.

- Academic freedom of high education institutions is expressed with the freedom of teaching, freedom of scientific research, freedom of creation of its own Statute.
 - University is the highest autonomous educational and research institution, where the scientific and applied research is being realized.
- Law for Science and Research, Official Gazette 46/2008 from 7.04.2008:
With the establishment and organisation of the scientific and research activities and creation of financial resources for them, it will be possible to ensure:
 - consecutive advancement in S&R activities,
 - correlation between science and education,
 - coordination between all subjects responsible for S&R activities,
 - promotion of national and international cooperation in education, research, training and applications,
 - promotion of deployment of the scientific results,
 - transparency in scientific research and exploitation of its results,
 - enhancement of individual and public quality of life ...

5.4 ICT R&D Policy: Programmes and Strategies

The legal basis for R&D on ICT is detailed in the following documents:

- e-Declaration⁸¹
- The National Strategy for Information Society and
- The National strategy for development of electronic communications with the information technologies.

An additional relevant document is

- The Program of the Government of Republic of Macedonia for 2006 - 2010 period.

The e-Declaration was brought in 2002 and its goal was to give recommendations for rapid development of an information society and digital economy in the FYR of Macedonia as a national priority. Recommendations are given to the following stakeholders: the Government of the FYR of Macedonia, all business entities, the IT companies, the Universities, the units of local self-government and the government. As a result of this declaration in 2005 the National Strategy for Information Society and the National Policy for Information Society were developed. The strategy was accepted by the Assembly of FYR of Macedonia on the 21st of September 2005. The mission of these documents is to create a supportive environment for the Information Society in the FYR of Macedonia. The strategic objectives envisaged to be achieved by 2007 are:

- Fully liberalized market of the electronic communication services;
- Significantly increased number of Internet users;
- Established electronic public services;
- Implemented priorities for sustainability of the strategy and the action plans related to the Information Society.

These objectives will be achieved through seven pillars:

- e-infrastructure
- e-business
- e-government
- e-education
- e-health
- e-citizens
- e-legislation

⁸¹ www.gtzpsp.com.mk/Uploads/e-DeclarationMacedoniaEng.pdf

After finishing the process of public debate the National Strategy for Development of Electronic Communications with the Information Technologies was adopted. The vision of this strategy is FYR of Macedonia to be an advanced information society. The mission is to enable rapid introduction and massive efficient use of electronic communications and information technologies that will contribute to the inclusion of FYR of Macedonia in the global networked economy and achieving significant leap frog. The specific goals of the strategy are to achieve according to most important ICT indicators:

- 80% of the average of the new EU member states by 2010 and
- 90% of the average of the new EU member states by 2012

The Program of the Government of Macedonia is for the period 2006 until 2010.

In the section on Information technology and e-business, the government plan foresees the following actions:

- Set-up of IT Ministry,
- computerization & wide-encompassing training in computer literacy,
- wireless network installations throughout the country,
- internet usage and office administration programs,
- introduction of a mandatory IT subject in primary schools & full computerization of schools,
- connection of all border crossings in the country into a centralized information system compatible with the EU system,
- implementation of an integrated medical information system and introduction of e-health card,
- computer system for court files management;
- computerization of the procedure for issuing personal ID documents at the Ministry of Interior,
- digitalization of the Cadastre and application of geographic-information system (GIS),
- promotion of non-cash payment, e-trade, e-banking and e-government.

An implementation and realization of some of the above listed actions was already done (Set-up of IT Ministry).

5.5 National ICT R&D interventions and projects

The Ministry of Information Society has launched several national projects for implementation of ICT in all seven pillars of the National Strategy for Information Society.

- E-Infrastructure
 - Macedonia connects - third component that has plans for establishment of National broadband network that will be implemented through the project Macedonia Connects in coordination and support of USAID.
 - Government network - The Governmental network refers to the establishment of backbone communication infrastructure which will connect all Ministries in safety and interoperability network, through the establishment of standards for effective communication among institutions, implementation of techniques for identification of users and safety digital signatures through electronic identification cards. The aim of the project is the establishment of good infrastructure among the Governmental institutions.
- E-Government
 - Strategy preparation for e-Parliament - In accordance with e-Government, there is a proposed strategy for establishment of Parliament electronic session. The aim is to decrease the printing costs and to increase the work efficiency.
 - System for managing documents in all the Ministries - This project should enable the Government of the Republic of Macedonia to automate the business processes and to implement a document flow in the confirmation process in each governmental institution and between them.
 - ICT in the Justice - The goal of this project is to establish and develop modern automated

justice system in the Republic of Macedonia, in direction of increasing the efficiency of the system, based on ICT solutions and systems that will be harmonized with the European and international standards. That will be accomplished by the establishment of Integrated Justice Information System (IJIS) and a centre of data for connecting the different segments and providing efficient and secure data and report exchange.

- Integrated border management - The project “Integrated border management” is in its implementation phase. The goal of the project is increasing the efficiency of the custom administration through exchange of information in digital form with our neighbour countries and international agencies against criminal. The goal will be accomplished through establishing unique system for connecting (electronically) all borders and customs points, that will be integrated with the international ones.
 - Electronic application for employment - Online application⁸² for electronic application enrolment for employment in governmental institutions is available. Important increscent of the efficiency, time and cost saving and reduction of the bureaucracy.
 - Electronic payment of the government institutions services (electronic postage due stamp) - The project for upgrading the electronic service with a module which enables electronic payment of government services that require tax payment. The portal www.uslugi.gov.mk⁸³ is an government electronic service that enables entry to the ministries’ and other institutional electronic services. The realization of the project is in collaboration with Microsoft cooperation based on the Agreement made in 2003).
 - Citizens’ portal - A portal for all citizens⁸⁴ enables access to about 200 services, without any procedure, forms or contacts. The citizens can ask questions and get answers. Also, the Election list is available, so citizens can get the information and data that is necessary for the election process.
 - Implementation of business process management system in the Government and the Ministries - E-session is part from the project E-Government and means electronic preparation and following up the sessions of the Government. Now, an upgrade of the application is in progress. This upgrade will result in reducing the paper in the Government sessions processes. By the implementation of this project- the system for electronic delivery of the documents, average saving in about 8000- 11000 Euros will be made (resources that are used for paper and printing).
- E-Business
 - Application for Export/Import Licenses and Quotas - EXIM - The application for export/import licenses and quotas (EXIM) significantly facilitates the process companies have to go through to get licenses or quotas they need to perform foreign trade operations.
 - Online registration of employments - The Ministry of Information Society and the National Employment Agency of Republic of Macedonia, in cooperation with USAID e-Gov Project developed and implemented software application for online registration of employments.
 - Digital certificates for the employers - By the implementation of this project, 60 000 employers, that have legal obligation to submit and pay taxes, will be supplied with public digital certificates (by Accredited Certificate Authority). The goal is to give opportunity to the employers to submit their taxes electronically and to minimize the time of going and submitting the tax data to the national institutions.
 - Agriculture information system - Agriculture information system is one of the projects that is big challenge and requires special attention. “CARDS” is already supporting the National system for identification of animals and Registry of grape plants.
 - E-cadaastre - The project e-cartulary is one of the basic components of e-Government and economy development. This project, except the establishment of basic maps for GIS (geographic information system), has another goal, building efficient and effective system for cartulary of real estates and registration, contributing for the development of efficient markets for land and real estate.

⁸² <http://prijava.ads.gov.mk>

⁸³ www.uslugi.gov.mk

⁸⁴ <http://www.uslugi.gov.mk>

- E-procurement - The project for upgrading the system for electronic public procurement is in its final phase. The upgrade consists of implementation of a module for negative auction. That will give a possibility for a transparency in the electronic way of choosing the most appropriate (lowest) price for the public procurement.
 - E-taxing - The Public Revenue Office, who is responsible for collecting taxes, with help and financial support from project for e-Government of USAID, is restructuring its operations through implementing e-tax⁸⁵
- E-Health
 - Electronic health card - The basic idea of this project is the realization of integrated health information system (IHIS) and implementing electronic health card.
- E-Education
 - Computer for every child - The Government project “Computer for every child” is a part from the government initiative “education and training for everyone”. The project is based on the National program for the development of the education (2005-2015 year). For the purpose of this project, a supply of 17818 personal computers, 98710 LCD monitors, 98710 keyboards and mouse and 80892 tin clients was made, for the primary and secondary schools in the Republic of Macedonia.
 - Scholarship for talented students in informatics - 125 scholarships with an amount of 5000 denars per month were awarded to talented students in informatics, from the National and private Universities in the republic of Macedonia.
 - Free internet access in the student dormitories - Setting LAN and free Internet connections in the student dormitories.
 - E-Dorming - By implementing this project⁸⁶, there will be possibility for a student to apply online for a place (room) in a student dormitory.
 - Internet learning - There are two E-learning courses for the citizen servant and the candidates for citizen servants. USAID and project for e-Government give adherence for developed of this courses for e-learning application.
 - Vouchers for the students - As a part of the project “Land of IT specialists”, there was an activity by which each regular student (citizen of the Republic of Macedonia) enrolled in the 4th year (last year of his/her studies) in the 2007/2008 school year in one of the Macedonian accredited faculties and to all of the handicapped students. The project’s aim is to increase the number of computers in use among the young IT active generation-students which are the basic accelerator of the economic development.
- E-Citizens
 - ICT Education for everyone - The goal of the project ICT education for everyone is to increase the level of citizens’ ICT skills. The project includes free ICT courses, free Internet access and e-learning.
 - Digital clubs for bridging the digital gap - The goal of this project is bridging the digital gap through establishing public Internet access points in the rural and low developed areas.
 - Responsibility through transparency - The goal of this project is to make easily the monitoring of the local governments work and in the same time, to strengthen the dialog between the citizens and the local Governments. Besides the citizens web access through one computer, which will be made available by each of the local societies, each citizen will have access to the program “Responsibility through transparency” by writhing comments or questions.
 - E- Rider - The aim of this project is to give a support to the nongovernmental organization and local self-government in the development of strategies for the IC technologies usage.
 - E-Governance - This project introduces tools for local e-governance, through establishing public access points for the citizens of the Republic of Macedonia.
 - Free of charge Internet clubs - One from the Government initiatives for approximation of the ICT to the citizens of the Republic of Macedonia is the project “The World in hand”. The Government is providing free access to computer centres equipped with personal

⁸⁵ www.etax.ujp.gov.mk

⁸⁶ www.raspredelba.gov.mk

computers connected to the Internet.

It is sad to say that even though Government has funded National Programmes for R&D in ICT for a long period of time, there are only national Research Projects started in 2006. There is a gap of two years for new projects.

There is one intervention of the Government concerning Faculty laboratories equipment, which is not completely realised.

5.6 Cooperation with the EU in the field of ICT R&D

5.6.1 Relations between FYR of Macedonia and the EU

- International collaboration realized by Ministry of Education and Science includes several bilateral agreements signed in:
 - Germany 1997;
 - Slovenia 1993;
 - France 1998;
 - Albania 2006;
 - Serbia 1997;
 - Bulgaria 2005.
- Framework Programme 7 (fully associated from 2007)
- Donation of the Austrian Government - GMON Gigabit MARNET Metro Optical Network
- TEMPUS (EU)
 - Training, research and infrastructure based on ICT
- NATO
 - MANI- MARNet Advanced Network Infrastructure.
- UNESCO
 - UNESCO managed the project financed by HP for donating equipment for establishing GRID laboratory at Ss Cyril and Methodius University.
- Other EU programmes:
 - PHARE
 - CARDS
 - INTERREG
 - CADSES

Official relations with EU are managed by ministries of Foreign Affairs, of European Integration, and of Education and Science. NCP for FP7 is within Ministry of Education and Science.

5.6.2 Projects and networks in the field of ICT R&D

ICT Research Area	Name of International-funded Projects	Source of funding
e-Procurement	ELLEKTRA-WeB	FP6
e-Government	We-Go	FP6

ICT research awareness and training	IS2WEB SEE-Innovation ERA WESTBALKAN IDEALIST7FP SEEGRID SEEREN SEEREN-1.5 SEEGRID-2 SEFIRE SEEREN-2 SCORE XPERO SEEGRID-SCI	FP6 FP6 FP6 FP6 FP6 FP5 EU-DANTE+M.Gov FP6 FP6 FP6 FP6 FP6 FP7
e-Customs	RACWeB	FP6
e-Mobility	WEB-MOB - Development of Researchers Mobility Policy Guidelines for the Region of Western Balkans	FP6

5.7 Shortcomings in ICT R&D to be addressed in the future

Regardless of the fact that various institutions, mechanisms and procedures for managing ICT policy and programmes are now operative, ICT governance still represents an important structural problem in the FYR of Macedonia.

Currently both private and public entities are facing the following problems:

- Inadequate funding dedicated for R&D
- Lack of cooperation among researchers entrepreneurship and world of business
- discrepancies between the actions portended in the laws and programmes and their actual implementation
- ICT R&D is closely entangled with higher education but not yet with technology or economic policy.
- More closer integration with mainstream international research network
- Problem of brain drain like in other South Eastern European countries

6 The ICT landscape in Kosovo⁸⁷

6.1 Kosovo: a brief overview

From an economic point of view Kosovo is challenging a transition phase from the previous model of socialistic economy towards a functioning, socially equitable market economy. The situation presents wide retarded rural areas and high levels of unemployment especially among women and youths. The previous overall political uncertainty had negative repercussions on foreign investment and currently Kosovo is still a heavily cash-based economy. The general economic trend presents an inclination towards the deindustrialisation and a subsistence-oriented increasing production in agriculture while the tertiary sector is largely based on trade and construction.

Despite the decrease of foreign assistance, real output slightly grew during the last years but private capital transfers from diasporas remains high. The foreign trade balance is extremely unfavourable and reflects the lack of export capacity and competitiveness. The private sector is characterised by a large number of micro and small enterprises as well as outdated technologies resulting in low production quality and productivity. The technology base of the economy is extremely weak and major institutional arrangements are still at an early stage of implementation. Therefore these circumstances shed light on the fact that Kosovo's population is under-educated in comparison with the needs of a modern economy even if this gap was considerably generated by the situation of the 90s. The needed reforms in the education sector are properly meant to prepare the young generation in order to be better introduced in the labour market of the 21st century which is largely based on the deployment of ICT technologies.

6.2 Main Stakeholders Involved in ICT Policy Making

ICT policy making in Kosovo is led by Kosovo Government.

Several Ministries and other government institutions are involved in this process. Public technical ICT centres involved in research, development and education exist in several universities, main centres situated in Prishtina.

- Kosovo Government⁸⁸
 - Proposes laws for Technology and communications policies
 - Proposes technological development policies
 - Decides and sets up roadmaps for development and research in the ICT
 - Decides on research and spending budget on the related ICT field nationwide
 - Approves bilateral and multilateral agreements between countries and companies in the ICT field
- Ministry of Education, Science and Technology (MASHT)⁸⁹
The main government institution for education science and technology:
 - Prepares science and technology policies on the national level
 - Proposes modifications for educational, science and technology issues
 - Proposes the budget for scientific and technological activities
 - Promotes the qualification of new researchers
 - It makes the allocation of means to the public providers for the researches with interest of the public within the general provisions of the effective law for the public financing of public services in Kosovo;

⁸⁷ UNSCR 1244/99

⁸⁸ <http://www.ks-gov.net/portal/eng.htm>

⁸⁹ <http://www.masht-gov.net>

- It plans and organizes the structure of the higher education and scientific institutions in Kosovo, based on the economic and social needs in Kosovo;
 - It makes the professional control of the National Centers for Science, Technology and International Cooperation in the field of science, technology transfer and scientific researches;
 - It's advised and coordinates the work with the higher education institutions in order to provide a useful cooperation for the relevant scientific issues;
 - It observes the work and legal implementation in cooperation with the department of the inspection for the all higher education institutions in the field of science and technology development;
 - It initiates and develops the necessary procedures for the change of effective legislation and it even can propose new legislation and other sub legal acts;
 - It helps in setting and cultivating the cooperation relationships with the sister scientific institutions in the country and abroad;
 - It helps the Kosovo institutions of the higher education in the process of integration in the European Area research.
- Ministry of Public services (MSHP)⁹⁰
 - Research on the short term and long term requirements and development on the IT filed for the Kosovo Public Institutions (Ministries, Municipalities, Government Agencies, Universities and Schools)
 - Planning and implementing the e-government portal
- Other Ministries⁹¹
 - Organize and manage technological activities of their institutions
 - Plan and Implement new projects related to the ICT field according to their needs
- Kosovo Academy of Sciences and Arts - Law no. 2004 / 19 dated 16.06.2004⁹²
Created on 20 December 1975. The actual governing law is dated 16.06.2004;
Academy of Science and Arts of Kosovo ("The Academy") is the supreme Institution of science and arts in Kosovo established by the Assembly of Kosovo.
 - Participation in creating scientific activity and policies;
 - Evaluation of the existing circumstances and the proposal to take measures to
 - advance the scientific thinking and improve the quality and the creativity;
 - Reviewing general problems in the areas of the scientific activity
 - Organizing the scientific and research work with theoretical and practical
 - character in the different areas of knowledge through meetings, round tables, consultations, symposiums, scientific conferences and the
 - appropriate forms of expressing creativity,
 - Publishing its own regular and periodical publications in the area of science
 - Internal and international co-operation with corresponding institutions in the area of science;
 - Creating condition for abroad exchange of the scientific thinking
 - Carrying out other activities of special interest for Kosovo and its people, relying on the rights and obligations of the Academy to be suggestive and consultative institution for science and development in Kosovo, complying with the needs of country development.
- Kosovo Telecommunications Regulatory Authority (ART)⁹³
Based on the regulation adopted by the Kosovo Assembly REGULATION NO. 2003/16 on the date of 12 May 2003

⁹⁰ <http://www.ks-gov.net/mshp/Default.aspx>

⁹¹ <http://www.ks-gov.net/portal/eng.htm>

⁹² <http://www.ashak.org/>

⁹³ <http://www.art-ks.org/>

- Monitors the regulatory framework defined by the Law for Telecommunications and related development policies of government.
- Issues licenses for Telephony landline and mobile carriers, internet providers, radio and television broadcasters.

Key research and education institutions with ICT departments:

- University of Prishtina⁹⁴
 - Faculty of Electrical & Computer Engineering
 - Automatics
 - Computers
 - Electronics
 - Telecommunication
 - Electro-engineering Systems
 - Industrial Electronics
 - Faculty of Natural Sciences
 - Department of Computer Science
 - Faculty of Economy
 - Department of Management and Informatics
- Other universities with IT departments
 - American University of Kosovo⁹⁵
 - University Iliria⁹⁶
 - University Reinvest⁹⁷
 - University UBT⁹⁸
 - University AAB⁹⁹

6.3 Legal Framework for ICT R&D

Legal framework in Kosovo is based on laws for high education and science:

- Law No.2004/42 on scientific research which defines that:
 - Having continuous advance of scientific research activities in different scientific fields;
 - Advancing general material goods by increasing their quality, in accordance with the development of new processes;
 - Creating respective conditions and regulations in different fields of science;
 - Having accessibility to scientific research results for providers of new technologies and those to lead and impact in social – economic developments in Kosovo;
 - Functioning of scientific-research work and its development according to overall
- Law no. 2003/14 dated 12.05.2003 "for High Education", which defines the objects of higher education which are:
 - To establish, develop, protect and transmit knowledge through teaching and scientific work and research;
 - To provide opportunities for all inhabitants of Kosovo with the ability to benefit from such education, throughout their lives.

⁹⁴ <http://web.uni-pr.edu/>

⁹⁵ www.aukonline.org/

⁹⁶ <http://www.uiliria.org/cms/>

⁹⁷ <http://www.riinvest-uni.net/>

⁹⁸ www.ubt-uni.net/

⁹⁹ www.universitetiaab.com/

6.4 ICT R&D Policy: Programmes and Strategies

Government has adopted national strategies for the development of ICT, of telecommunications, and usage of ICT in education.

Main strategic documents directly linked with ICT include:

- National Strategy for ICT
- Strategy and Implementation of Computer Labs and internet access in all schools nationwide

Government priorities in the domain of ICT include:

- Access for all
 - E-government
 - E-schools
- IT Services for Universal Institutions
- Priority for main actors
 - Electronic ID

These priorities are implemented through different programmes and projects undertaken, funded or supported by the Kosovo Institutions.

6.5 National ICT R&D interventions and projects

The Government of Kosovo has launched several national projects for implementation of ICT systems in public administration. Relevant state institutions are involved for their realization. Projects include:

- Tax Administration System
- Business Registration Information
- General Registry of Population and Identity cards - CPC
- Electronic certificates
- Electronic vehicle Insurance system and vehicle registration
- Technical Control of vehicles

Government has approved national projects dealing with research and education. The project for introduction of ICT in all schools nation-wide and the Introduction and implementation of the ECDL program in the education level in the secondary schools.

International collaboration realized by Ministry of Education and Science includes several bilateral agreements with neighbour countries; as well as with relevant international institutions¹⁰⁰

- E-gov solution - World Bank & Canadian Government Funded Project¹⁰¹
 Funded by the World Bank and Canadian International Development Agency (CIDA) and contracted for consultancy Services, an e-gov solution for the Ministry of Local Government Administration has been developed.
 Stakeholders:
 - Prime Minister of Kosovo,
 - Minister of Local Government Administration
 - Mayors of Municipalities of Kosovo
 - UNMIK representatives and Media

¹⁰⁰ <http://www.mash.gov.al/>

¹⁰¹ <http://www.logicplus.org/cms/latest/world-bank-canadian-government-funded-project-2.html>

- Kosovo Council of Research and Technology
Mission of the NRC is to encourage and stimulate scientific, research and innovation at home and to initiate integration processes that would ensure presence and active participation of Kosovo in the European Research Area (ERA). The NRC will thus work to build capacities for development of scientific, research and innovative work in Kosovo, contributing thus to creating conditions for sustainable development of the country.
- Strategy for Development of Higher Education in Kosovo (2005-2015)
This is a strategy conducted by the Ministry of Education, Science and Technology. The 10-year strategy of the Higher Education in Kosovo is the document that articulates a vision about the type of higher education that is aimed and envisions the direction of fulfilling the strategic objectives. This strategy reflects the consensus amongst political factors, academic and scientific community, students, civil society, other stakeholders and the wide public community. The document of the strategy is a proposal for transformation, reform and development of the higher education according to a more efficient model, planning, administration and managing.
- NATO
 - Small projects for implementation of networking infrastructure

6.6 Cooperation with the EU in the field of ICT R&D

6.6.1 Relations between Kosovo and the EU

All the relations between Kosovo and the EU in the field of ICT and R&D before the independence were done through EAR Agency and other European Agencies that help Kosovo in Development in the ICT field.

Kosovo has received more than € 2 billion in EC assistance since 1999. While it initially focused on emergency relief actions and reconstruction, it now concentrates on fostering Kosovo's development of stable institutions and sustainable economic development and ensuring Kosovo's European future.

The European Union's presence in Kosovo can be summarized as follows:

- The European Commission Liaison Office to Kosovo
- European Union Special Representative (EUSR)/ International Civilian Office (ICO)
- EULEX
- The Presidency of the European Union
- The EU Member States

6.6.2 Projects and networks in the field of ICT R&D

- Scientific monitoring of the project "Reform of Higher Education, Research and Innovation in Kosovo"
Unit: Research Policy & Development
Kind of project: Policy Advise
Running time: 06/2007 - 06/2010
Program: OZA

The project consists of the following main tasks:

- scientific advisory in the context of developing a research and innovation system in Kosovo
- thematic support in identifying additional experts
- professional support in terms of internal reflection and monitoring of the entire project

- participation in the meetings of the „Austrian-Kosovo Steering Committee on Higher Education, Research and Innovation
- Innovation Infrastructures in the Western Balkan Countries – Information Office of the steering platform on research for the western Balkan¹⁰²
The Information Office of the Steering Platform on Research for the Western Balkan Countries is a project (Specific Support Action, Contract Number: 031770) co-funded by the European Community's Programme for Specific International Scientific Cooperation Activities (INCO) under the 6th Framework Programme for Research and Technological Development (2002-2006).
Project duration is 24 months: May 2006 till April 2008.

6.7 Shortcomings in ICT R&D to be addressed in the future

R&D public entities are facing several problems that make difficult the participation of FP7.

- Funding issues:
 - Inadequate dedicated budget for R&D
 - Dependency of funding from official fiscal year
 - Lack of flexibility on the use of funding
 - Bureaucracies in public procurement procedures
 - Lack of financial autonomy for R&D departments
- Political
 - Missing of support for solution of funding issues
 - Inadequate collaboration between government and universities
 - Lack of support for projects that require some intervention from government instances
 - Unclear status and the lack of recognition of Kosovo as a state and the incapability to take part or affiliate in the international institutions or associations represent a major handicap and represent a problem for the ICT R&D.

¹⁰² www.see-science.eu

7 The ICT landscape in Montenegro

7.1 Montenegro: a brief overview

Montenegro is a country located in Southeastern Europe. It has a coast on the Adriatic Sea to the south and is bordered by Croatia to the west, Bosnia and Herzegovina to the northwest, Serbia and the disputed entity of Kosovo to the north and east, and Albania to the south. Its capital and largest city is Podgorica, while Cetinje is designated as the former Royal Capital City. According to 2003 census, Montenegro has 620,145 citizens. If the methodology used up to 1991 was used in the 2003 census, Montenegro would officially have 673,094 citizens. Most recent stake estimates somewhere below 700,000 inhabitants.

Montenegro is a member of the United Nations, the Organization for Security and Co-operation in Europe, Council of Europe and Montenegro is also a founding member of the Union for the Mediterranean. It is also a potential candidate for membership in the European Union and NATO.

A sovereign principality since the Late Middle Ages, Montenegro saw its independence from the Ottoman Empire formally recognized in 1878. From 1918, it was a part of various incarnations of Yugoslavia. On the basis of a referendum held on 21 May 2006, Montenegro declared independence on 3 June. On 28 June 2006, it became the 192nd member state of the United Nations, and on 11 May 2007 the 47th member state of the Council of Europe. On 15 December 2008, Montenegro presented its official application to the European Union, with the hopes of gaining EU candidate status by 2009.

Montenegro passed hard transition from the state to the private ownership. It was the transformation of the political, institutional, economic and social system. At the first place it was painful change of people's way of thinking. However, in period since 1998 until the 2006, many changes in different sectors and parts of the society have happened in Montenegro. Following the independence referendum, Montenegro's economy has continued to transform into a more service-based one, with the proclaimed goal of becoming an elite tourist destination and joining the European Union.

Montenegrin ICT sector is showing positive trends in the period 2001-2008. It can be concluded through the analysis of main ICT indicators like PC and Internet penetration, mobile and fixed phone penetration rates as well as IT consumption per capita which is still below the expected level. New projections are showing that it would increase by 30% in average, until 2011. During the recent several years telecommunication sector shown positive trends and it was faced with the process of liberalization and market opening. Competition in this area increased number of market players (mobile phone operators) which caused price decreasing in area of mobile telephony. Based on that fact, today Montenegro has the highest mobile phone penetration rate in the region and EU.

Important positive trend of ICT sector in generally is addressed to ME domain. Namely, future plans for investment in research and generally ICT are directly connected to the revenues which Montenegro can have from ME domain. That can be sustainable resource for future research project development and better involvement of Montenegro in existing research programs. Implementation of goals until 2013 regarding information society development can be achieved which can put Montenegro one step forward to the concept of highly developed information society.

7.2 Main Stakeholders Involved in ICT Policy Making

ICT policy making in Montenegro is led by Government of Montenegro ¹⁰³. Two ministries are involved in this process. Main stakeholders involved in ICT sector of Montenegro are:

- Ministry for Information society ¹⁰⁴
 - the most important institution in charge for ICT development in Montenegro
 - focused on adoption and implementation of key documents in area of information society
 - Strategy for information society developing
 - Methodology for monitoring and measuring of information society development
- The Ministry of Education and Science ¹⁰⁵
 - The main government institution for science and technology
 - Prepares science and technology policies and national programmes
 - Proposes modifications for institutional, financial and legislative issues
 - Proposes the budget for scientific and technological activities
 - Proposes and organizes the international participation of the country
 - Promotes the qualification of new researchers
 - Analyses results of scientific and technological activities
 - Issues regulations for scientific and technological activities of state organizations
 - Creates consultative commissions for science and technology
 - Proposes laws for scientific activities
 - Decides for creation, dissolving or merging of research institutions
 - Decides on research budget and related national programmes
 - Approves bilateral and multilateral agreements for science and technology
- The Agency for the International Scientific, Educational, Cultural and Technical Cooperation (ZAMTES)
 - deals with a form of the so-called “operative diplomacy”, a connective tissue between several key ministries
 - cooperates with eminent experts from different areas – prominent scientific workers for the area of international scientific–technical and educational cooperation.
 - coordinates the cooperation between the institutions of the Republic of Montenegro and many international partners
- Agency for electronic communications and post ¹⁰⁶
 - Monitors the regulatory framework defined by the Electronic communications Law and Post Law.
 - Issues licenses for communications providers.

Key research and education institutions with ICT departments are:

- University of Montenegro (Podgorica)
 - Faculty of Electrical Engineering
 - Faculty of Economy
 - Faculty of Mathematics
- Other universities with IT departments
 - University Mediteran (Podgorica)
 - University UDG (Podgorica)

¹⁰³ <http://www.gov.me/eng/>

¹⁰⁴ <http://www.gov.me/eng/rsr>

¹⁰⁵ <http://www.gov.me/eng/minprosv>

¹⁰⁶ <http://www.agentel.cg.yu/>

7.3 Legal Framework for ICT R&D

Legal framework for ICT R&D in Montenegro is based on:

- Law of science and research (Official Gazette of Montenegro, 71/2005), which defines that:
 - Most important bodies that are in charge for science and research activities are: Montenegrin Academy of Science, University of Montenegro, other institutions in area of high education, research institutes and other private and public institutions.
 - Strategy on science and research have to define priorities, motivate and monitor area of the science and research.
 - Scientific and technological activities are a national priority
 - Freedom of scientific research is guaranteed by law
 - Academic freedom of high education institutions is expressed with the freedom of teaching, freedom of scientific research, freedom of creation following dispositions of this law.
 - Universities realize scientific and applied research and creative activities and assure a suitable balance between teaching, scientific research and services.

7.4 ICT R&D Policy: Programmes and Strategies

Government of Montenegro has adopted national strategies for the development of ICT, and of electronic communications.

Main strategic documents directly linked with ICT are:

- Strategy for information society developing (February 2009)
- Strategy on science and research (2008)
- Strategy of electronic communications (2007)

Government priorities in the domain of ICT include:

- Reaching EU standards
- Development of new institutional and legislation framework
- E-education
- E-government
- E-business and E-banking
- E-health
- ICT infrastructure improving
- Fast development of ICT sector

These priorities are defined in new Strategy for information society developing.

7.5 National ICT R&D interventions and projects

Government of Montenegro has launched several national projects for implementation of ICT systems in public administration. At the same time government has approved national strategy dealing with research and education.

Government has funded National Programmes for R&D in ICT. The actual National programme for ICT R&D in 2008-20011 is funding several ICT projects:

- Design of specialized hardware for processing high no stationary one and multidimensional signals of time-variable percolation (University of Montenegro)
- General time-frequency distribution: application in multimedia systems and hardware realization (University of Montenegro)

- Research of influence on the structure switching fabric on the packets switch performance implement on NetFPGA platform (University of Montenegro)
- Analysis performances OFDM relay i OFDM cooperative diversity systems (University of Montenegro)
- Management of Switched reluctance motor by FPGA chip (University of Montenegro)

International collaboration realized by Ministry of Education and Science ¹⁰⁷ includes several bilateral agreements with:

- neighbour countries;
- international institutions (UNESCO, NATO...).
- EU (FP7, TEMPUS,...)

7.6 Cooperation with the EU in the field of ICT R&D

7.6.1 Relations between Montenegro and the EU

On 25th January 2008 the Republic of Montenegro signed Memorandum of Understanding (MoU) with the European Commission which enabled research organisations from Montenegro to participate fully in the EU's Seventh Research Framework Programme (FP7) which includes a period from 2007 to 2013. This associated status allows Montenegro to participate in all calls for proposals and compete on an equal footing with the EU Member States for research co-operation and support actions covering a large number of strategic areas, such as health, agriculture, biotechnology, information and communication technology, energy, nanotechnology, materials and new technologies, environment, sustainable tourism, transport and many others. Association of the Republic of Montenegro to the biggest European programme for science is opening big opportunities to Montenegrin scientists, faculties, institutes and companies for cooperation in researches and support activities which are sponsored by this fund, including scientific areas relevant for implementation legislation of EU. This is the way Montenegro is entering the society of other countries from West Balkan which are already joined to Seventh Research Framework Programme (FP7): Serbia, Croatia, Macedonia and Albania.

On 7th February 2008, University of Montenegro signed a Memorandum of Understanding with the Austrian Development Agency and WUS Austria. A Memorandum refers to the projects in the area of higher education support lasting three years. During past several years, Montenegro was building its own research capacities.

On March 1st 2007, University of Montenegro, Centre of Information System, Faculty of Mechanical Engineering, Faculty of Metallurgy and Technology, Faculty of Natural sciences and Mathematics, Faculty of Civil Engineering, Institute of Marine Biology, Hydrological and Meteorological Service of Montenegro, T-com, Cikom – ICT engineering, ltd and IT Advanced Services ltd. (ITAS) signed Memorandum of supporting and developing GRID technologies in Montenegro as well as its implementation in scientific and research purpose. SEE-GRID-2 project supported the launch of the Montenegrin Grid Initiative (MGI). Senior members of the SEEGRID-2 project supported their Montenegrin colleagues from the research community who joined their forces to form the National Grid Initiative (NGI), under the official auspices of the Montenegrin government. Montenegrin Research and Education Network (MREN) is responsible for MGI, and enables to all researchers and science workers of our institution access to GRID infrastructure. MREN also provides help for GRID services.

Official relations with EU are managed by Ministry of Foreign Affairs, Secretariat of European Integration, and Ministry of Education and Science. NCP for FP7 is within Ministry of Education and Science.

¹⁰⁷ <http://www.mpin.vlada.cg.yu/>

7.6.2 Projects and networks in the field of ICT R&D

Key regional projects funded by European Commission in different programmes include:

- SEEREN2 (University of Montenegro) FP6 2006-2008
 - South Eastern European Research Education Network 2,
 - Enhance the next generation of the southeast European segment of GEANT¹⁰⁸
- SEE-GRID2 (University of Montenegro) FP6 2006-2008
 - South Eastern European Grid 2,
 - Deliver a grid eInfrastructure to serve the research and educational needs of the scientific communities¹⁰⁹
- SEE-GRID-SCI (University of Montenegro) FP7 2008-2010
 - South Eastern European Grid for Science,
 - Leverages the SEE eInfrastructure to enable new scientific collaborations among user communities¹¹⁰
- SEEERA-EI (Ministry of Education and Science, University of Montenegro) FP7 2009-2011
 - South East European Research Area for e-Infrastructures
 - Ensure equal participation of the region in European networking and Grid computing trends
 - In preparation for launch stage.
- IDEAL2011 (Ministry of Education and Science), FP7, 2008-2011
 - Assistance for project ideas in 7th European Framework Programme in ICT, quality-labeled Partner Search Service for connection with potential project partners worldwide.
 - www.ideal-ist.net
- WINS-ICT (Ministry of Education and Science), FP7 2009-2011.
 - Western Balkan Countries Inco-Net Support in the field of ICT
 - Strengthen S&T cooperation between the EU and the Western Balkan countries by deepening the bi-regional strategic relations in the ICT field and promoting the participation of WB ICT researchers in FP 7¹¹¹
- IWP (University of Montenegro), FP7 2009-2011.
 - aims at increasing capacity of stakeholders in the Western Balkan countries (WBC) to fully participate in European ICT research and in the European Research Area.
 - This will be done by creating and supporting strategic partnership between stakeholders in the EU and the WBC while providing access to relevant knowledge¹¹².

7.7 Shortcomings in ICT R&D to be addressed in the future

R&D public entities are facing several problems that make the participation of FP7 difficult.

- Lack of regulation and inefficient existing legislation
- Small number of realized research projects
- Inadequate research infrastructure
- Lack of information literacy
- Digital divide between the regions
- Low ICT investment per capita
- Inadequate dedicated budget for R&D

¹⁰⁸ www.seeren.org

¹⁰⁹ www.see-grid.eu

¹¹⁰ www.see-grid-sci.eu

¹¹¹ www.wins-ict.eu

¹¹² www.ict-web-proms.eu

8 The ICT landscape in Serbia

8.1 Serbia: a brief overview

ICT research in Serbia was present for decades, but it was just recently that it got integrated to some extent into the European research community. On 13th June 2007 the Republic of Serbia signed Memorandum of Understanding (MoU) with the European Commission which enabled research organisations from Serbia to participate fully in the EU's Seventh Research Framework Programme (FP7). During past years, Serbia has been building its research capacities, which is supported by the fact that there are a great number of research projects that were carried out in Serbia in this period.

8.2 Main Stakeholders Involved in ICT Policy Making

The main ministry in Serbia with responsibility for ICT policy making is the Ministry of Telecommunications and Information Society. Besides that, the Ministry of Science is responsible for policy, management, planning and financing of public R&D activities in all areas of Science and technology, while Higher education policy is managed under the authority of the Ministry of Education.

- Ministry of Telecommunications and Information Society, responsible for:
 - Definition and implementation of the policy and strategy of building an information society;
 - Applying information sciences and Internet;
 - Development and functioning of the academic computer network of Serbia

- Ministry of Science, responsible for:
 - System, development and advancement of scientific research activities to support scientific, technological and economic development;
 - Definition and implementation of the policy and strategy of S&T development;
 - Definition and implementation of the programmes of scientific, technological and developmental research;
 - Training and development of researchers;
 - Definition and implementation of innovation policy;
 - Stimulating entrepreneurship, transferring knowledge and technologies into the industry, development and advancement of the system of innovation; Development of the system of S&T information and the programme of S&T infrastructure;
 - Research in the field of nuclear energy, security of nuclear objects, etc.

- Council for the Development of University Level Education, responsible for:
 - The provision of high-quality education,
 - The implementation of scientific work programmes at higher education institutions
 - The development of higher education policy

Key research and education institutions with ICT departments:

- Public Universities:
 - University of Belgrade,
 - University of Novi Sad,
 - University of Kragujevac,
 - University Niš

- Private universities:
 - University Singidunum
 - Union University

Other important stakeholders:

- Intellectual Property Office
- Council for the Development of University Level Education
- Rectors Conference
- National Council for RTD

8.3 Legal Framework for ICT R&D

A legal framework is indispensable in the organisation of R&D institutes and the development of innovation infrastructure and programmes that provide grants to research organisations and innovative companies. Most frequently, laws are prepared separately for the areas of S&T and higher education, although legislation in Serbia is still undergoing a process of transition.

The following laws are related to ICR R&D:

- Law on the Scientific and Research Activity
Defines scientific activity, specifies programmes and regulates the financing and managing of state-owned R&D institutions and possibilities for their privatisation. A newer version has been in place since December 2005.
- Law on Higher Education
Adopted in September 2005. Fully implements the Bologna Declaration.
- Law on the Innovative Activity
Adopted in 2005, this law defines the innovation activity and regulates its organisation, infra-structural support, programmes, financing, IP rights deriving from such activity etc.
- Laws on IP Protection:
Patents Law, Copyrights and Related Rights Law, Trademark Law, Legal Protection of Designs Law, Protection of Integrated Circuit Topographies Law, Geographical Indications Law
- The Law on Scientific-Research Activity defines the scope of scientific activities in Serbia, specifying the definition of state-owned R&D institutions, financing and managing these institutions and possibilities for their privatisation. Furthermore, it specifies the programmes for which the ministry provides grants. The law was adopted in 1993, and reviewed and updated in December 2005.

8.4 ICT R&D Policy: Programmes and Strategies

The main document which defines the ICT policy framework is the Strategy for Development of an Information Society of the Republic of Serbia. The Strategy was adopted by the Government of Serbia in October 2006 (Official Gazette of Serbia, no. 87/2006). The process of defining and writing the Strategy started in April 2005. Many interested parties (local and international, e.g. UNDP) and stakeholders took part in broad public discussion.

The Strategy for Development of an Information Society of Serbia is a framework document which gives developmental directions and identifies key areas and activities in the Information Society domain reflecting a vision and linking local/ national developmental aspirations and global IS streams.

The main objectives of the Strategy for Development of an Information Society of Serbia are:

- To improve the situation in the broad field of Information and Communication technologies
- To clarify roles, build public-private partnerships, and facilitate participation by all stakeholders, including NGOs
- To focus scarce resources on exploiting ICT for national priorities, help sequence, and phase complementary investments
- To address the special needs and dynamics of promising segments of the ICT industry for export and economy-wide competitiveness
- To re-orient the national innovation system to meet the substantial and cumulative technological learning requirements of ICT (as a general-purpose technology)
- To address coordination failures, exploit network effects, and secure complementary investments to use ICT as empowerment and service delivery infrastructure.

The Strategy defines the following sections and according to them defines strategic priorities:

Section	Strategic Priority
Information Society Development Strategic Priorities and Initiatives	Perform E-Readiness Assessment
	Develop Sectoral E-Strategies
	Integrate ICT in sustainable development
Institutional Framework for the Information Society Development	Develop legislation framework and set up institution which will be in charge for implementation of the Strategy for Development of an Information Society of the Republic of Serbia
E-legislative	Create legislative framework for information society
Telecommunication and information infrastructure	Develop access to ICT infrastructure
eGovernment	Plan and organise eGovernment development
	Create an environment for eGovernment Development
	Develop eGovernment services
eEducation	Make citizens equal members of information society
	Build educational system adapted to the needs of information society
	Foster research and development
	Provide access to information about national cultural and historical heritage
eHealth	Develop Health Information System
eBusiness and eBanking	Create an environment for e- business
	Facilitate business processes and accept international standards
	Support the enterprise sector for e-Business implementation
ICT business sector	Develop software development strategy
Other	Ensure the relevance of Strategy for Development of an Information Society of the Republic of Serbia within regional and European Context
	Monitor information society development in Serbia (benchmark process)

Overview of Strategy for Development of Information Society

8.5 National ICT R&D interventions and projects

Obtained from Ministry of Science, below is given the summary (pie chart) of research projects carried out in public research institutions and for which realization was supported by the Ministry.

ICT Research Field	National-funded Projects
Software	<ul style="list-style-type: none"> • Modularni softverski paket za dimenzionisanje i pracenje rada procesnih aparata (<i>Modular software package for dimensioning and tracking operation of processing machines</i>) • Multimedijalna platforma za upravljanje vanrednim situacijama u tehnološkim sistemima (<i>Multimedia platform for managing extraordinary situations in technological systems</i>) • E-rentgenologije Specijalne bolnice za plućne bolesti "Dr Vasa Savić" Zrenjanin (<i>e-rendgenology of special hospital for lung diseases "Dr Vasa Savic" Zrenjanin</i>) • Implementacija RFID tehnologije (<i>Implementation of RFID technology</i>) • Primena termovizije, razvoj novih metoda ispitivanja i softvera za obradu termovizijskih slika (<i>Application of thermo vision, development of new examination methods for and software for processing thermo visual pictures</i>) • Razvoj virtuelnog okruženja za trodimenzionalnu vizuelizaciju oblaka i dejstvo na gradonosne ćelije (<i>Development of virtual environment for 3D shapes visualization and its influence on some type of cells</i>) • Razvoj govornih tehnologija za srpski jezik i primena u Telekomu (<i>Development of speech technologies for Serbian language and its application in Telekom</i>) • Razvoj kompjuterskih metoda i softvera za modeliranje i simulacije u oblasti opšteg i biomedicinskog inženjeringa (<i>Development of computerized methods and software for modeling and simulation in general biomedical engineering</i>) • Razvoj metodologija i softvera za projektovanje, simulaciju i optimizaciju krilnih pumpi (<i>Development of methodologies and softwares for design, simulation and optimization of certain type of pumps</i>) • Razvoj softvera za analizu čvrstoće i procenu radnog veka konstrukcija (<i>Development of software for analysis of hardness and evaluation of life cycle of constructions</i>) • RAZVOJ SOFTVERA ZA INTEGRISANE SISTEME MENADŽMENTA (<i>Development of software for integrated management systems</i>) • Razvoj softvera za podršku izradi prototipova pomoću 3-D štampača u Internet okruženju (<i>Development of software for support in production of prototypes with 3-D printer in Internet environment</i>) • Razvoj softverskih rešenja u Internet/Intranet okruženju za integrisani razvoj proizvoda i procesa (<i>Development of software solutions in Internet/Intranet environment for integral development of products and processes</i>) • Savremeno daljinsko upravljanje sistemima za vodosnadbevanje i tretman otpadnih voda (<i>Modern remote control of systems for watering and sewage water treatment</i>) • Simulator potrošnje električne energije za elektroenergetski system sa dinamičkom dodelom tarifa – SIMEPS (<i>SIMEPS – Simulator of electrical energy spending for electromagnetic system with dynamic price assignment</i>) • Softverski sistemi u službi održivog tehnološkog razvoja (<i>Software systems like diving force of sustainable development</i>) • Govorni portal za slepe i slabovide osobe na srpskom govornom području – Kontakt

	<p><i>(Kontakt - Speech portal for blind and sight impaired people in Serbian speaking region)</i></p> <ul style="list-style-type: none"> • Merači softverskih metrika u proceduralnom, objektnoorijentisanom i Internet programiranju <i>(Measurers of software metrics in procedural object-oriented and Internet programming)</i>
Computer hardware and system	<ul style="list-style-type: none"> • Novi procesni računar za upravljanje u elektroenergetici baziran na real-time Linux OS <i>(New processing computer in electromagnetic based on real-time Linux OS)</i> • Razvoj i proizvodnja elektronski senzorski upravljano bistabilnog elektromagnetnog hidrauličkog ventila <i>(Development and implementation of electro-sensor managed bi-stable electromagnetic hydraulic ventil)</i> • Razvoj metoda i opreme za prikupljanje i prenos mernih podataka pri ispitivanju vučnih vozila <i>(Development of methods and equipments for gathering and transfer of measurable data in examination of freight vehicle)</i> • Implementacija kontrolera Internet rutera <i>(Implementation of Internet router controller)</i> • Win logon sistem na bazi smart kartica za zaštićenu kontrolu pristupa radnim stanicama <i>(Smart card based Win logon system for protected access to workstations)</i> • Automatizovani sistem protivgradne zaštite <i>(Authorized system for frosted rain protection)</i> • Laka bespilotna letilica sa pratećom elektronikom <i>(Light pilotless airplane with accompanying electronics)</i> • Mobilna automatizovana platforma za otkrivanje i prostorno mapiranje dejstva jonizujućih izvora zračenja <i>(Mobile automated platform for detection and special mapping of influence of ionized radiation sources)</i> • Razvoj digitalno upravljano elektronskog automatizovanog sistema za biohemijsku analizu uzoraka krvi <i>(Development of digitally managed electro-automated system for biochemical analysis of blood samples)</i> • Razvoj tehnologije proizvodnje termičkih prekidača <i>(Development of technologies for production of thermo switches)</i> • Razvoj uređaja i metoda za neurorehabilitaciju osoba sa poremećajima senzorno-motornih funkcija <i>(Development of appliances and methods for neurological rehabilitation of people with sensor-motoric functions disorders)</i> • Sistem za kontrolu i upravljanje javnom rasvetom <i>(System for control and management of public lights)</i> • Razvoj kompjuterizovanog mernog sistema za termotehnička ispitivanja parnih turbopostrojenja <i>(Development of computerized measuring system for thermo technical observations of steam turbo systems)</i> • Razvoj, izrada i ispitivanje hardvera i softvera inteligentnih izvora napajanja za primenu u galvanotehnici <i>(Development, production and assessment of hardware and software of intelligent energy sources to be applied in galvano-technics)</i> • Projektovanje i izrada uređaja za ranu dijagnostiku pigmentnih kožnih tumora i melanoma <i>(Design and development of appliance for early diagnostics of pigmented skin cancers and melanoma)</i>
Telecom	<ul style="list-style-type: none"> • PoC <i>(Push to talk over Cellular)</i> aplikacija za mobilne telephone sledeće generacije <i>(PoC application for next generation of cell phones)</i> • RF i mikrotalasne komponente i antene za bežične računarske mreže i WiFi Internet

	<p>infrastrukturu (<i>RF and microwave components and antennas for wireless comuter networks and WiFi Internet infrastructures</i>)</p> <ul style="list-style-type: none"> • Antikolizioni radarski sistem na 24 gigaherca (<i>Anti-collision radarsystem at 24 GHz</i>) • Bežične senzorske mreže (<i>Wireless sensor networks</i>) • Nova generacija linkova kapaciteta (155Mbit/s) na frekvencijskim opsezima 4,6,13,15,18,23,26 i 38GHz (<i>New generation of links (capacities 155 Mbit/s) in frequencies 4,6,13,15,18,23,26 i 38GHz</i>) • Prognoziranje, planiranje i tarifiranje u telekomunikacionim mrežama (<i>Forcasting, planning and charging in telecom networks</i>) • Razvoj elemenata telekomunikacione mreže nove generacije (<i>Development of new generation telecom networks' elements</i>) • Razvoj i realizacija softvera, hardvera i usluga na bazi softverskog radija za bežične komunikacije (<i>Development and realization of software, hardware and services based on software radio for wireless communications</i>) • Razvoj nove generacije komunikacionih sistema u funkcionalnim mrežama (<i>Development of new generation of communication systems in functional networks</i>) • Razvoj softverske i hardverske podrške za potrebe telekomunikacionih pristupnih mreža (<i>Development of software and hardware support according to the needs of telecommunication access networks</i>) • Razvoj dodatnih servisa u radio komunikacionim mrežama na bazi digitalne obrade signala (<i>Development of additional services in radio communicational networks based on digital signal processing</i>) • Razvoj FM pojačavača i FM predajnika snaga od 1 kW do 10 kW (<i>Development of FM amplifier and FM transmitter of 1kW to 10kW</i>)
Micro electronics	<ul style="list-style-type: none"> • Visokokvalitetni transponderi pritiska nove generacije (<i>New generation pressure transmitters of high quality</i>) • Projektovanje i izrada debeloslojnih pasivnih mikroelektronskih kola i mreža za rad na visokim učestanostima (<i>Design and production of thick layered passive microelectronic circuits and networks for operation on high frequencies</i>) • Razvoj i industrijska primena novih tehnologija projektovanja integrisanih elektronskih kola i sisteme (<i>Development and industrial application of new technologies of ingeral circuits and systems design</i>) • RAZVOJ NOVIH POLUPROVODNIČKIH MATERIJALA I IZRADA DEBELOSLOJNIH SENZORA (<i>Development of new semiconducting materials and realization of think layered sensors</i>) • Linija za automatizovanu pripremu elektro-kontaktata (<i>Automated line for preparation of electrical contacts</i>)
Digital libraries and content	<ul style="list-style-type: none"> • Digitalizacija naučne i kulturne baštine (<i>Digitalization of scientific and cultural inheritance</i>)
Expert systems	<ul style="list-style-type: none"> • Web inteligencija i elektronsko učenje (<i>Web intelligence and elearning</i>) • Sistem za objektivnu procenu kvaliteta artikulacije i njegova primena u korekciji patološkog izgovora (<i>System for objective evaluation of articulation quality and its application correlated to pathological pronunciation</i>)

Internet technologies	<ul style="list-style-type: none"> • Korporativni Web portal za permanentno obrazovanje zaposlenih • ETHERNET 10/100baseTx/1GbE – prenos Ethernet saobraćaja preko SDH optičkih sistema prenosa i fleksibilnih multipleksa IRITEL • Istraživački Web portali
Nano technologies	<ul style="list-style-type: none"> • Mikro i nanosistemske tehnologije, strukture i senzori (<i>Micro and nano system technologies, structures and sensors</i>) • Nova generacija milimetarskih linkova na bazi kompozitnih nanostrukturisanih materijala (<i>New generation of millimetre links based on composite nanostructure material</i>)
Electronics	<ul style="list-style-type: none"> • Razvoj višenamenskog multisenzorskog sistema za kontrolu i nadzor u javnom i privrednom sektoru (<i>Development of multipurpose multisensored system for control and</i>)
GIS	<ul style="list-style-type: none"> • Geografski informacioni sistem za evidenciju, održavanje i analizu elektrodistributivne mreže
Robotics	<ul style="list-style-type: none"> • Sistem za daljinsko upravljanje robotizovanim sistemima putem glasa (<i>System for remote control of robotized systems via voice</i>)

List of national ICT projects in Serbia

It can be concluded that the areas of great interest in Serbian research community include software, computer hardware and systems and telecommunication. However, official data on private financed and implemented research are not available. SME research capacities data provided by the FP6 funded project SEE Innovation can be used as an indication, and it shows that embedded systems, computing and control and well as intelligent infrastructure are fields in which SME IT companies (with research activities) are most active in.

8.6 Cooperation with the EU in the field of ICT R&D

8.6.1 Relations between Serbia and the EU

The government of Serbia officially declared European integration to be one of the strategic priorities for the country. The European Commission report states that since 2001, Serbia has benefited from the EU policy advice provided through the EU-FRY Consultative Task Force (CTF), later replaced by the Enhanced Permanent Dialogue (EPD), the task of which is to encourage and monitor the reforms based on the European Partnership¹¹³. EPD structures will remain in place and continue to support the reforms in Serbia until formal contractual relations between Serbia and the EU are established through the Stabilisation and Association Agreement (SAA), which will provide a legal framework for relations during the entire period prior to the possible future accession.

8.6.2 Projects and networks in the field of ICT R&D

Regarding international cooperation during the past 5 years, numerous projects have been realized within the 6th Framework Programme. Below is the list of research projects funded under FP5 and FP6 by the IST Programme and names of participating organisations from Serbia.

Project Acronym	Partners from Serbia
ELLECTRA-WEB	EVOLUTION ONLINE DOO PUBLIC PROCUREMENT OFFICE
FIT	CIM COLLEGE D.O.O.

¹¹³ Adopted by the EU Council in June 2004 and updated in January 2006

SCORE	INFORMATION SOCIETY SCG BELGRADE OPEN SCHOOL
SEE Innovation	INFORMATION SOCIETY SCG
CALIMERA	LIBRARY "MILUTIN BOJIC"
IDEALIST-EXTEND	MINISTRY OF SCIENCE OF THE REPUBLIC OF SERBIA
IS2Web	BELGRADE OPEN SCHOOL
SEE-GRID	UNIVERSITY IN BELGRADE
WE-GO	UNIVERSITY IN BELGRADE PEXIM LTD
SEEFIRE	UNIVERSITY IN BELGRADE NEWS AGENCY TANJUG
WEB.DEP	EUROPEAN CENTER FOR PEACE AND DEVELOPMENT OF THE UN UNIVERSITY OF PEACE
SWEB	MUNICIPALITY STARI GRAD AUTONOMOUS PROVINCE OF VOJVODINA MATHEMATICAL INSTITUTE OF SERBIAN ACADEMY OF SCIENCES AND ARTS PROZONE LTD
TEAM	CIM COLLEGE LTD
RACWEB	MINISTRY OF FINANCE, CUSTOMS ADMINISTRATION
WEB4WEB	MIHAILO PUPIN INSTITUTE
REFLECT	MIHAILO PUPIN INSTITUTE
ICT-WEB-PROMS	MIHAILO PUPIN INSTITUTE

List of ICT projects funded by the FP5, FP6 and FP7

8.7 Shortcomings in ICT R&D to be addressed in the future

One of the key social challenges faced by Serbia is the subsequent brain drain which followed the dissolution of former Yugoslavia. Socio-economic crises and brain drain influenced negatively on the Serbian science and technology system. Also, years of isolation of the country resulted in researchers being practically excluded from the international scientific community.

However the quality of the science system in Serbia is generally considered to be much higher than the level of economy would suggest, possibly as a result of the sufficient supply of human capital. The education system, although not generally modernised and consequently facing difficulties in providing highly qualified graduates on a large scale, is capable of supplying competent scientists to keep up the status of the science sector. However, the continuous brain-drain poses a severe threat to science in Serbia.

Research and development of information and communication technology could be a strong driver for economic and overall development of Serbian society. ICT and R&D are widely promoted and supported by the European Commission in order to increase economic growth and employability. Some recently conducted studies showed that, between 1995 and 2003, information and communication technologies

significantly contributed to the productivity and overall economic growth in the 10 new member states and through that also facilitated their process of European integration.

The public sector could also have a special role in driving ICT-led growth. Public “push strategy” is particularly important in the context of transition economies, where the market mechanisms do not yet work as efficiently as in developed countries and thus leave more scope for effective public intervention. That could be done primarily through full development of public e-services (e-government). This would not only bring considerable savings in the public sector, decrease bureaucracy, reduce corruption, facilitate the dialogue between government and citizens and enhance the quality of the business climate, but also stimulate the interest of enterprises in using more advanced ICT applications. A number of countries in the CEE region have demonstrated the benefits of active public ICT policies. This in particular concerns Estonia and Slovenia, the two regional leaders in ICT diffusion and the development of information society.

9 Conclusions

This survey is based on an analysis of national policies and specific initiatives that Western Balkan Countries implemented in order to improve their ICT national landscape. The comprehensive state of art shows how WBC are lagging behind the EU 15 area but the respective central governments are actually striving to pursue several initiatives and programmes to fill this gap.

As results from the study, each government has shaped national governance strategies through the creation of agencies and support given to specific programmes. The general situation demonstrates how each central government realised the need for a national ICT policy, supported by explicit development programmes which should be managed and monitored by appropriate entities in order to pursue the progress of Information Technology. In this context every WBC provides an array of stakeholders, whereby each country lists more or less the same categories. Among these categories the Educational and Information Technology Ministries play an important role. The Ministries of Education realise that the quality of the science system is inadequate to respond to the demands of the current work-market as the level of economy would suggest. In fact, the education systems are generally not modernized and consequently face difficulties in providing highly qualified graduates at large scale. To tackle this problem the main national ICT programmes are meant to promote the progressive use of computers in the educational systems. On the other hand, the public sector and especially the Information Technology Ministries have a special role in driving ICT-led growth. In fact, public strategies are particularly important in this context of transition economies where the market mechanisms do not yet work as efficiently as in developed countries, thus allowing for effective public intervention in key sectors.

National policies are also supported by a legal framework implemented through the progressive adoption of laws and acts appositely meant to regulate ICT matters. Nevertheless these specific regulations are not comprehensive and therefore do not include all the possible situations related to information technology. However, the introduction of regulatory acts is a valuable attempt to pursue a harmonic development of ICT in the WBC.

The examination of national programmes sheds the light on the main ICT areas of interest for WBC. These areas could be individuated in the domain of:

- eGovernment
- eLearning
- eBusiness
- eHealth
- ICT Infrastructure

Even though the above-mentioned areas represent the main prongs of ICT development, each sector is characterised by specific programmes and projects. The priority areas which seem to be covered by most national programmes of the WBC, are eGovernment and eLearning/eEducation. As far eLearning/eEducation is concerned, all of the countries have implemented national programmes to promote the use of ICT at school and university. This strategy is also pursued by ensuring the widest possible access to web technology and facilities. With respect to eGovernment, effort is made to develop ICT solutions in public services. Also the creation of an environment for eBusiness, the development of health information systems and the improvement and further development of ICT infrastructure are considered priority areas.

The priority domain of eGovernment is also reinforced by the EU funded projects relevant to the WBC. When looking at the recently funded IPA and FP6/FP7 projects, it becomes clear that many of these projects, that are not general ICT support actions but that have a specific objective, are clearly focused on eGovernment.

Notwithstanding the fact that various institutions, mechanisms and procedures for managing ICT policy and programmers are now operative, ICT governance still represents an important problem. Thus, the most common shortcomings of ICT development in WBC could be summarized and regrouped in the following categories:

- Structural shortcomings:
 - Inadequate research infrastructure
 - Digital divide between the regions
 - Lack of up-to-date knowledge on recent ICT developments
 - ICT R&D is closely linked to higher education but not yet with technology firms or economic policy
 - Lack of integration with mainstream international research networks
 - Small number of realized national research projects

- Economic shortcomings:
 - Inadequate dedicated budget for ICT R&D
 - Lack of flexibility while use funding
 - Discrepancies between the actions foreseen in the laws and programmes and their actual implementation

- Political shortcomings:
 - Missing support for solution of funding issues
 - Inadequate collaboration between government and universities
 - Lack of support for projects that require some intervention from government instances
 - Problems of brain drain
 - Lack of institutional stability in research structures

10 Abbreviations

AISRS	Agency for Information Society of Republic of Srpska
BiH	Bosnia and Herzegovina
BIHARNET	Academic and Research Network
CARDS	Community Assistance for Reconstruction, Development and Stabilisation
DoW	Description of Work (Annex I to the contract)
FBiH	Federation of Bosnia and Herzegovina
FYROM	Former Yugoslav Republic of Macedonia
EC	European Commission
EU	European Union
FP7	Seventh (EC) Research Framework Programme
ICPC	International Cooperation Country Partner
ICT	Information and Communication Technology
IPA	Instrument for pre-accession assistance
ISPA	Instrument for Structural Policies for Pre-Accession
IWP	ICT-WEB-PROMS
MASH	Albanian Ministry of Education and Science
MASIT	FYROM Chamber of Commerce for Information and Communication Technology
MIFF	IPA multi-annual indicative financial framework
MIPC	IPA multi-annual indicative planning documents
MoU	Memorandum of Understanding
MSHP	Kosovo Ministry of Public services
NCP	National Contact Point
NSDIS	FYROM National Strategy for Developing the Information Society and Action Plan
R&D	Research and Development
RS	Republika Srpska
SAA	Stabilisation and Association Agreement
SAPARD	Special Accession Programme for Agriculture & Rural Development
SAP	Stabilisation and Association Process
UNSC	United Nations Security Council
WBC	Western Balkan Countries

11 References

This summary document of relevant EU policy and R&D projects is based on the knowledge of the partners of the situation in WBC, past and on-going work in the European Commission and information published on other web sites or obtained from other projects. It is emphasised that partners and other EU funded projects have done research work about relevant policies and projects before, and this task therefore aims at documenting this information for the purposes of the project.

Websites and documents that were used for the scope of this deliverable are:

- http://ec.europa.eu/enlargement/index_en.htm
- <http://ec.europa.eu/research/iscp/index.cfm>
- http://cordis.europa.eu/fp7/projects_en.html
- <http://cordis.europa.eu/fp6/projects.htm>
- Reports of the Information Office of the Steering Platform on Research for Western Balkan Countries “Science and Technology in the Western Balkans” (Dall 2008) from the SEE-SCIENCE and WBC-INCO.NET projects
- “Overview of the ICT research environment in the Western Balkan countries”(SCORE 2007) by the SCORE project

12 Annexes

12.1 Annex I – IPA project factsheets

The following factsheets describe in more detail the IPA funded projects that are mentioned in section 2.2.1 and that are related to ICT.

NATIONAL VISA MANAGEMENT SYSTEM

Official title of the project: Technical Assistance to the Establishment of a National Visa Management System

Country: The former Yugoslav Republic of Macedonia

Sector: Support of good governance, institution building and the rule of law

Budget/EC contribution: 1,200,000 euros

Implementation period: 28 August 2007 – 28 August 2008

Expected results: Implementation of a new National Visa Information System (N-VIS) composed by the following modules: visa management, control of the visa management, visa parameters management, system management, compatibility, bilingual system.

Coordinator: European Agency for Reconstruction

Beneficiary: Ministry of Foreign Affairs
 Consular Department within the Ministry of Foreign Affairs
 Diplomatic missions and consular posts
 Border Crossing points
 Ministry of Interior

Contact details: sanja.frkovic-gelevska@ec.europa.eu

The European Union allocated €750.000 for the National Visa Information System (N-VIS) as part of the technical assistance project to enhance the operational capacity of the Consular Department within the Ministry of Foreign Affairs. The N-VIS introduces significant changes in visa issuing processes in the country. It implements clearly defined, standardized visa issuing procedures, rapid, consistent and accurate verification of each and every applicant through the existing databases.

The System is internet based and consists of a central application running at the Ministry of Foreign Affairs' National Visa Management Centre and local applications allowing for local scanning of the accompanying documents and for contingency situation.

After the 12 months of project implementation, the 45 Diplomatic missions and consular posts, 6 major and 2 Airports Border Crossing points and the Department for Foreigners in Ministry will be connected to the Visa Centre through an internet based IT system. The Visa issuing process – estimated at 120.000 visas per year – will then only be possible through the N-VIS system, which can be used by a as much as 200 concurrent users at any time.

Alongside the advisory support the EU has also provided €450.000 worth equipment for the Centre.

MAPS OF SERBIA GO DIGITAL

Official title of the project: Provision of digital orto-photo maps

Country: Serbia

Sector: Institution building

Budget/EC contribution: 4.6 million euro

Implementation period: November 2005 – November 2008

Expected results: Digital maps and cadastre of Serbia

Coordinator: European Agency for Reconstruction

Beneficiary: Serbian Geodetical Institute

Partners: Serbian Geodetical Institute
COWI

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Clarity of ownership, use, and all the legal rights associated with a property, reduce risks and costs in buying and selling land and real estate as well as improving access to credit. This in turn allows businesses to expand and develop more easily, the true value of property to be reflected in the market, and households to change their accommodation as family circumstances evolve.

Serbia's Republican Geodetic Authority (RGZ) has launched a major initiative to ensure that the country has a secure and reliable registration and cadastre system. It is working in a variety of areas to achieve this – developing the legislative framework, updating cadastral maps and improving the registration of properties.

A €4.6 million EU-funded project is helping the RGZ to use the latest digital technology so that it can rapidly supply high quality services to businesses and households alike. Computer hardware and software have been provided, experts from similar authorities in Germany are providing hands-on support, and leading expertise from Denmark is producing new, very accurate digital maps of the whole of Serbia (excluding UN-administered Kosovo) for RGZ using the most up-to-date technology.

The Ministry of Infrastructure and Municipal authorities will be better able to plan spatial development and the infrastructure requirements, such as transport, water and sewerage facilities, etc. The Ministry of Environment will be better placed to manage natural resources, national parks and the like as well as being better able to monitor environmental degradation and control pollution. Likewise the veterinary and phytosanitary services of the Ministry of Agriculture will be able to develop spatial systems to monitor and respond to any outbreaks of animal or plant diseases.

FURTHER DEVELOPMENT OF THE JUDICIARY SYSTEM

Official title of the project: Further development of the administrative and processing capacity of the Judiciary System

Country: The former Yugoslav Republic of Macedonia

Sector: EU Integration and Justice

Budget/EC contribution: 2.5 million euro

Implementation period: 2006

Expected results: The programme supported key elements of the country's judicial reform strategy aiming to establish and develop a sustainable caseload processing capacity within the court system and judicial administration.

Coordinator: European Agency for Reconstruction

Beneficiary: Ministry of Justice

Contact details: European Agency for Reconstruction –
Operational Centre Skopje
Information Officer: Gonca Stojanovska
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gonca.stojanovska@ear.eu.int

A focus on IT support to the judiciary

In 2002 the EU provided €2 million to reform the court system and judicial administration. Initiatives included provision of automated administrative support systems for courts and public prosecutors as well as support of the professional development of judges and expert associates.

A new IT Centre for the judiciary

The plan to set up a complete network linking the IT systems in the courts, prosecutor's offices, penitentiary institutions, Ministry of Justice and the Judicial Council was announced for the first time in the National Strategy for the Reform of the Judicial System adopted in November 2004. The EU, through the European Agency for Reconstruction, provided €300,000 to refurbish and equip the IT Centre for the Judiciary. The assistance included provision of a video surveillance system, telephone, IT support equipment and office furniture. The IT Centre is now enshrined in the country's new Law on Courts (in force since 1 January 2007), and also in the National Strategy for Information and Communication Technology.

Hardware provided

Another €1 million EU-funded project providing hardware, made it possible for the Ministry of Justice and judicial institutions across the country to be put jointly under a single optical Wide Area Network (WAN) connection, ITVPN. The courts' and prosecutors' offices, the prison administration, the Judicial Council, the Ministry of Justice and the IT Centre have also been supplied with 10 servers and 500 desktop PCs with TFT monitors, 24 laptop PCs, 240 local printers and 50 network printers. The WAN established through this assistance is unique in the Western Balkans in covering the entire territory of the country.

SECURE COMMUNICATION FOR THE POLICE

Official title of the project: Supply of Police Digital Radio Communication System

Country: The former Yugoslav Republic of Macedonia

Sector: Police & Border Management

Budget/EC contribution: 9 million euro

Implementation period: 2006 - 2008

Expected results: A secure and reliable communication network allowing the service to effectively manage and coordinate operational activities through their areas of operation.

Coordinator: European Agency for Reconstruction

Beneficiary: Ministry of Interior

Contact details: European Agency for Reconstruction –
Operational Centre Skopje
Information Officer: Gonca Stojanovska
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The EU is providing €9 million to help establish a digital radio communication system for the police. The project operates in two phases. The key target of the project is sustainability: establishing a secure police radio system that functions long after the EU-funded project is completed.

Under the Private Mobile Radio (PMR) project, the Interior Ministry will introduce approximately 2,000 TETRA standard radios, together with switching and dispatching centres, base-stations and microwave links to support the public safety services in the country. The PMR system will provide secure and reliable communication among all of the country's police services, and is similar in design to systems already in use in a number of EU countries. Under the two-year EU funded project, a full terrain survey was completed in August 2006. This provided estimates on the amount of equipment needed, identified potential installation sites and assisted in the preparation of the design of the system.

Based on the results of the survey in March 2007, the European Agency for Reconstruction and a consortium led by Siemens AG Austria signed a €5.15 million contract for the supply and installation of a high-tech TETRA digital radio communications network for the Ministry of Interior.

This project will be followed by a separate procurement for TETRA radio terminals, to directly assist the actions of Police operational departments. The establishment of proper lines of communication between the police's operational branches will support the day-to-day operation of the Ministry of Interior's services, optimising coverage in terms of population and territory, including main highways, green border lines and international border-crossing points. Upon installation of the TETRA system, approximately 40% of the national territory will be covered by radio signal.

SUPPORT AND EXPANSION OF THE ALBANIAN TREASURY SYSTEM

Official title of the project: Support and Expansion of the Albanian Treasury System

Country: Albania

Sector: Reform of public administration

Budget/EC contribution: 1.5 million euro

Implementation period: 2009 - 2011

Expected results: To substantially strengthen the capacities of the Ministry of Finance (MoF), Line Ministries and Local Government Units to assure an optimal financial management of government resources and the expansion of the network between the MoF (Treasury District Offices, Line Ministries and Local Government Units, thereby strengthening public financial management in Albania in compliance with the European Partnership and the National Strategy for Development and Integration.

Contracting Authority: Delegation of the European Commission to Albania

Implementing Agency: Austrian Development Agency (ADA)

Beneficiary: Ministry of Finance
General Treasury Department
6 main Treasury offices in regional districts
100 local and central government units

Contact details: Project Manager: Ms. Anila Çili, Director of Treasury Directorate
Ministry of Finance, Bulevardi "Deshmoret e Kombit", Nr.4, Tirana
Email: acili@minfin.gov.al Tel: ++355 4 250 687

The Public Finance Strategy 2007-2013 has outlined as a priority that the Computerised Treasury System (AMoFTS) should be expanded to cover all budgetary institutions (at present there are approximately 2400 budgetary institutions), enabling the Treasury to focus on its main functions: monitoring, managing the government liquidities, financial controlling before the payment and preparation of the consolidated financial reports for the government.

In light of the above, AMoFTS needs to be upgraded to a Public Financial Management System (PFMS) which could: (i) link the medium term planning process with yearly budgetary planning; (ii) make line ministries and local government units more accountable during the planning phase and cash forecasting process; (iii) help the Ministry of Finance (MoF) to achieve active cash management; (iv) provide support for all public finance operations, (v) collect directly on line accurate, timely, complete, reliable and consistent information on all financial events from central and local government units, (vi) provide adequate management reporting, (vii) support government-wide and agency policy decisions, (viii) provide complete audit trail / auditable financial statements.

12.2 Annex II – FP6 and FP7 project factsheets

The following factsheets describe in more detail the FP6 and FP7 funded projects that are mentioned in section 2.2.2 and that are relevant for the WBC.

FP7 ICT projects:

ICT-WEB-PROMS

Promoting ICT cooperation opportunities and policy dialogue with the Western Balkan countries

Research area: ICT-2007.9.2 International cooperation (ICT-2007.9.2)

Project website: www.ict-web-proms.eu

Project details

Project Acronym: ICT-WEB-PROMS
Project Reference: 231549
Start Date: 2009-01-01
Duration: 24 months
Project Cost: 702011.00 euro
Contract Type: Coordination and support actions
End Date: 2010-12-31
Project Status: Execution
Project Funding: 480000.00 euro

ICT-WEB-PROMS aims at increasing capacity of stakeholders in the Western Balkan countries (WBC) to fully participate in European ICT research and in the European Research Area.

This will be done by creating and supporting strategic partnerships between stakeholders in the EU and the WBC while providing access to relevant knowledge. By encouraging participation of West Balkan stakeholders in European ICT research, they will gain access to ICT technologies already developed in the EU, and European stakeholders will be able to introduce their technologies into the West Balkan market, thus also strengthening EU competitiveness.

Workshops and road shows will be organized in the whole area of the WBC, also outside the big cities, an interactive web portal in several languages provided, and a network of stakeholders created all over the WBC and the EU, building on existing networks. Focus will be on direct support to stakeholders, creating understanding not only for procedural issues, but also for the technology of the ICT FP7 programme emphasising areas of mutual interest. Feedback will be provided for the implementation of ICT and information society strategies in the WBC and for considering the needs of the WBC in ICT research of the EU. Activities are defined in order to achieve maximum impact, to work efficiently towards achieving the goals, and to build on previous and on-going support actions as much as possible.

The partnership includes universities and research centres in all Western Balkan countries. These have been chosen in view of their capacity with respect to understanding of technology and their ability to best promote the ICT programme and networking with the EU. All are ICT experts in their countries, are well respected and have contributed to developing national ICT strategies. Partners are committed to sustain activities in continuing the operation of the web portal and working with stakeholders after the end of the project.

Coordinator

EBA - EUROPEAN BUSINESS ASSOCIATES SRL
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 ITALY

Participants	
Fatultet Informacijskih Tehnologija	Bosnia And Herzegovina
Cactus Sha	Serbia
Javna Ustanova Univerzitet Crne Gore Podgorica	Montenegro
Ursit Ood	Bulgaria
University Ss Cyril And Methodius	The Former Yugoslav Republic Of Macedonia
Universiteti Politeknik I Tiranes	Albania
Institut Mihajlo Pupin	Serbia
Univerzitet U Banjoj Luci Elektrotehnicki Fakultet	Bosnia And Herzegovina
Kentro Erevnon Notioanatolikis Evropis Astiki Mi Kerdoskopiki Etaireia	Greece

WINS-ICT

Western Balkan countries Inco-Net Support in the field of ICT

Research area: ICT-2007.9.2 International cooperation (ICT-2007.9.2)

Project details

Project Acronym: WINS-ICT
Project Reference: 231648
Start Date: 2009-01-01
Duration: 24 months
Project Cost: 1.1 million euro
Contract Type: Coordination and support actions
End Date: 2010-12-31
Project Status: Execution
Project Funding: 849993.00 euro

WINS-ICT aims to strengthen S&T cooperation between the EU and the Western Balkan countries by deepening the bi-regional strategic relations in the field of ICT and promoting the participation of WB ICT research actors in FP 7.

The objectives of the WINS-ICT project are to

- Provide comprehensive understanding of the current framework of EU-WBC ICT RTD policies and RTD collaboration
- Optimize the current policy framework and establish strategic partnerships with other projects, such as WBC-INCO.NET
- Support the building of sustainable networks between innovative WBC ICT researchers and their EU counterparts
- Enhance the capacities and capabilities of WBC researchers to successfully participate in the FP7 ICT research activities

The WINS-ICT project will thus contribute to the Commission's priority to extend future EU-Western Balkan S&T co-operation by promoting WBC involvement in the ICT programme at multiple levels comprising support to the regional and bi-regional dialogues, capacity building at the regional and national levels, and targeted dissemination strategies. The political dimension will in particular be closely intertwined with the WBC.INCO-NET project, and will further entail regional dialogue and regular information exchange with ICTC members and other EC Directorates General. The ultimate aim is to fully integrate researchers from the region into networks of FP-active EU organizations and enable their related research organisations to submit their own project proposals as coordinating institutions.

The main output of the project will be an improved policy dialogue in the field of ICT, reflecting the WBCs needs and priorities in future ICT Work Programmes and thus providing the ground for enhanced participation from the target region. The project consortium includes 15 partners from the EU Member States, Accession Candidate Countries and the Western Balkan region, covering all countries within the latter. WINS-ICT's duration is 24 months.

Coordinator

ZENTRUM FUER SOZIALE INNOVATION
 Linke Wienzeile 246
 AUSTRIA

Participants	
Ince Iniziativa Centro Europea - Segretariato Esecutivo	Italy
Europe For Business Ltd	United Kingdom
Ministarstvo Za Telekomunikacije I Informaciono Drustvo	Serbia
Croatian Chamber Of Economy Cce	Croatia
Information And Communication Technologies Chamber Of Commerce Masit Skopje	The Former Yugoslav Republic Of Macedonia
The Association Of Citizens Exit Centar - It Business Support Centre	Bosnia And Herzegovina
Beogradska Otvorena Skola	Serbia
Ministarstvo Prosvejeje I Nauke	Montenegro
Turkiye Bilimsel Ve Teknolojik Arastirma Kurumu	Turkey
Sc Ipa Sa	Romania
Zenit Zentrum Fuer Innovation Und Technik	Germany
Civet 2000 Sh.P.K	Albania
Greek Research And Technology Network S.A.	Greece
Technical Support For European Organisations Sprl	Belgium

FP7 - other relevant projects**WBC-INCO.NET****Western Balkan Countries INCO-NET****Research area:** INCO-2007-1.1 Western Balkan countries Region**Project website:** www.wbc-inco.net**Project details****Project Acronym:** WBC-INCO.NET**Project Reference:** 212029**Start Date:** 2008-01-01**Duration:** 48 months**Project Cost:** 2.66 million euro**Contract Type:** Coordination (or networking) actions**End Date:** 2011-12-31**Project Status:** Execution**Project Funding:** 2.05 million euro

WBC-INCO.NET's core objectives are to support the bi-regional dialogue between the EU, associated FP7 countries and the West Balkan Countries (WBC) and to enhance the participation of WBC researchers in European RTD projects by structural measures. The consortium includes 26 partners. Among them are the S&T ministries from Albania, Bosnia-Herzegovina, Croatia, FYROM, Montenegro and Serbia. In addition, S&T ministries from Austria, Bulgaria, Germany, Greece, Slovenia and Turkey participate in the consortium to add critical mass and momentum.

The political dimension at the bi-regional level is closely intertwined with the Steering Platform on Research for WBC, implemented under the Austrian EU Presidency together with the EC in 2006. WBC-INCO.NET also supports the dialogue within the region and an information exchange with several EC Directorates General and international stakeholders, such as UNESCO or World Bank. The dialogues are substantiated with several analytical inputs.

Coordinator

ZENTRUM FUER SOZIALE INNOVATION
Linke Wienzeile 246
AUSTRIA

Participants

Ministarstvo Prosvjete I Nauke Crne Gore	Montenegro
Mihailo Pupin Institute	Serbia
Universiteit Maastricht.	Netherlands
General Secretariat For Research And Technology	Greece
Ministeria E Arsimit Dhe E Shkences	Albania
Ministry Of Education And Science.	Bulgaria
Ministry Of Civil Affairs - Mca	Bosnia And Herzegovina
Austrian Federal Ministry Of Science And Research	Austria

Ministerstvo Za Obrazovanie I Nauka	The Former Yugoslav Republic Of Macedonia
Kosova Education Center	Serbia
Turkish Research And Business Organizations	Belgium
South East European Research Centre	Greece
Ministrstvo Za Visoko Solstvo, Znanost In Tehnologijo	Slovenia
Slovenian Business & Research Association	Belgium
Civet 2000 Sh.P.K	Albania
Foundation For Higher Education World University Service	Bosnia And Herzegovina
Ministarstvo Znanosti, Obrazovanja I Sporta	Croatia
Institute Of Social Sciences Ivo Pilar	Croatia
Ministarstvo Nauke Republika Srbija	Serbia
Deutsches Zentrum Fur Luft Und Raumfahrt E.V.	Germany
Oesterreichische Forschungsfoerderungsgesellschaft Mbh	Austria
Turkiye Bilimsel Ve Teknolojik Arastirma Kurumu	Turkey
Commission Of The European Communities - Directorate General Joint Research Centre - Jrc	Belgium
Bundesministerium Fuer Bildung Und Forschung	Germany
Agenzia Per La Promozione Della Ricerca Europea	Italy

FP6 ICT projects:

ELLECTRA-WEB

**European electronic public procurement application Framework in the Western Balkan region
Funded under 6th FWP (Sixth Framework Programme)**

Research area: IST-2005-2.6.5.1.d eGovernment

Project website: www.ellectra-web.eu

Project details

Project Acronym: ELLECTRA-WEB
Project Reference: 045153
Start Date: 2007-01-01
Duration: 24 months
Project Cost: 1.87 million euro
 Contract Type: Specific Targeted Research Project
End Date: 2008-12-31
Project Status: Completed
Project Funding: 1000000.00 euro

Western Balkan countries in view of their path to EU economic and political integration will concretely benefit from the early adoption of electronic Public Procurement systems that are compliant to the new EU legislative framework on public procurement, due to:

- a) More transparent procurement processes that ensure fair utilisation of public funds
- b) Achieving equal opportunity to the participation of both SMEs and large suppliers within each country
- c) Facilitating access of EU suppliers to Western Balkan public procurement markets resulting in transfers of EU expertise and know-how to the region
- d) Timely preparing full participation of Western Balkan suppliers in the EU public procurement markets via interoperable electronic Public Procurement solutions.

Addressing the above opportunity, the overall aim of the ELLECTRA-WeB (European Electronic Public Procurement Application Framework in the Western Balkans Region) project is to: "specify, develop and test an Open Source Application Framework for electronic Public Procurement and a set of Supporting Guidelines that will enable, on the one hand, Western Balkan ICT developers to cost-effectively develop, and, on the other hand, Western Balkan Public Administrations and Suppliers to easily adopt and use interoperable, user-friendly, secure and EU compliant electronic Public Procurement solutions".

The usability of the ELLECTRA-WeB Application Framework will be demonstrated by developing, testing and evaluating 4 distinct electronic Public Procurement solutions in Albania, Bosnia-Herzegovina, Former Yugoslav Republic of Macedonia and Serbia, respectively.

The ELLECTRA-WeB project involves 3 EU technology partners, 4 IT consulting companies / research organizations from the Western Balkan Region and public administrations representing all Western Balkan countries: Albania, Bosnia-Herzegovina, Former Yugoslav Republic of Macedonia and Republic of Serbia.

Coordinator

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 1253 LUXEMBOURG

LUXEMBOURG

Participants	
Ministarstvo Nauke I Tehnologije Republika Srpska	Bosnia And Herzegovina
C-Center Engineering And Consulting Shpk	Albania
Cim College D.O.O.	Serbia
Stiftelsen Sintef	Norway
Ministry Of Finance	The Former Yugoslav Republic Of Macedonia
Evolution Online Doo	Serbia
Public Procurement Office	Serbia
St's Cyril And Methodius University Of Skopje	The Former Yugoslav Republic Of Macedonia
Exit Centar - It Business Support Centre	Bosnia And Herzegovina
Planet Ae	Greece

GREAT-IST

GREAT-IST

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST,FP6-2004-IST-3 Specific Support Action

Project website: <http://www.great-ist.org>

Project details

Project Reference: 015878	Contract Type: Specific Support Action
Start Date: 2005-06-01	End Date: 2007-11-30
Duration: 30 months	Project Status: Completed
Project Cost: 456500.00 euro	Project Funding: 456500.00 euro

GREAT-IST is a strategic project involving the following target countries (TC) subdivided into 4 categories: Accession Countries: Bulgaria and Romania Candidate Countries: Croatia Western Balkans: Albania, Bosnia and Herzegovina, FYROM and Serbia and Montenegro Newly Independent States: Belarus, Moldova and Ukraine.

It aims at bringing together the IST research stakeholders of the TC and of other European countries, to share visions and experience in implementing Information Society, to contribute towards harmonization of IST research priorities and to enhance co-operation in the broader area of the "Great European East" in a view of facilitating gradual integration at a pan-European level. Project activities are divided into 3 Working Groups each addressing a specific area of IST research system in the TC:

- WG1-Developing institutional infrastructure in support of IST research and establishing effective communication with IST stakeholders
- WG2-Gradual harmonization of RTD policies and convergence of priorities in IST
- WG3-Linking research and business (particularly SMEs)

WGs will work under the coordination of a Steering Committee, which is meant to give input to the WGs activity in reviewing and evaluating draft meeting reports. WGs will work in parallel and come to a set of conclusions to be integrated into a coherent document, the Final Report, that will summarize shared visions among the WB, the NIS and the ACC for enlarged co-operation in the framework of EU programs in IST for the years to come. The Final Report will represent the technical position (recommendations and implementations methods) of all the WGs.

Beside that a Position Paper will be produced by the Steering Committee summarizing technical issues in a political document to be widespread to Ministries and other Governmental Institutions of the TC. The Final Report along with the Position Paper will be presented at a major conference and backed by a strong dissemination support.

Coordinator

TECHNICAL SUPPORT FOR EUROPEAN ORGANISATIONS SPRL
TESEO SPRL
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Participants

European Center For Peace And Development Of The UN University Of Peace	Serbia
Slovenian Business & Research Association	Belgium
In.C.E. - Segretariato Esecutivo	Italy
Southeastern Europe Telecommunication & Informatics Research Institute A.E.	Greece

IDEALIST-EXTEND

Extension of idealist34 project (the partner search and NCP support network for participants in the IST Priority) to INCO Balkan and NIS countries

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST

Project website: www.idealist-extend.net

Project details

Project Acronym: IDEALIST-EXTEND

Project Reference: 15813

Start Date: 2005-09-27

Project Cost: 493363.00 euro

Contract Type: Specific Support Action

Project Status: Execution

Project Funding: 449339.00 euro

In idealist-extend 9 organisations from 2 EU countries, 3 Western Balkan Countries and 4 Newly Independent States support proposers in their participation in the IST Programme. The partners are IST (Information Society Technologies) NCPs (National Contact Points) or are working in close cooperation with IST NCPs or may establish a NCP in future. Idealist-extend cooperates closely with the project idealist34 (proposal no. 511355), approved in IST Call 2 and started in June 2004. Both projects cover together 41 countries in Europe and neighbour regions and extend the IST project partner search to International Co-operation (INCO) countries. Idealist-extend strengthens NCP related organisations, trains both NCP related organisations and potential proposers in IST related questions, identifies experts for call evaluations and brings together institutions at Infodays and workshops.

Coordinator

DEUTSCHES ZENTRUM FUER LUFT UND RAUMFAHRT E.V.

Projekträger im DLR

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51147 KOELN

GERMANY

Participants

Ivane Javakhishvili Tbilisi State University	Georgia
Politechnika Slaska	Poland
Economic Chamber Of Macedonia	The Former Yugoslav Republic Of Macedonia
Ministry Of Science And Environmental Protection Of The Republic Of Serbia	Serbia And Montenegro
Baku Scientific And Training Center	Azerbaijan
Lviv Polytechnic National University	Ukraine
Internet Institute	Croatia
Information Society Technologies Center	Armenia

IS2WEB

Extending information society networks to Western Balkan countries

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST,FP6-2004-IST-3 Specific Support Action

Project website: www.is2web.org

Project details

Project Acronym: IS2WEB
Project Reference: 015746
Start Date: 2005-05-01
Duration: 30 months
Project Cost: 707753.00 euro
Contract Type: Specific Support Action
End Date: 2007-10-31
Project Status: Completed
Project Funding: 669980.00 euro

IS2WeB is a Specific Support Action aiming to identify suitable research organisations in the Western Balkan countries and assist them to get informed about and actively participate in EU-funded research in the field of Information Society Technologies.

The specific objectives of IS2WeB are to:

- Identify promising research organisations in the Western Balkan Region suitable for participation in future IST research activities, defining criteria for their selection.
- Provide mentoring / tutoring on IST programme opportunities and procedures to the identified research organisations as well as familiarize them with the European R&D culture.
- Transfer EU research results and technologies related to selected strategic objectives of the IST programme in order to assist the identified research organisations elaborate ideas for future research proposals.
- Facilitate the development of networks between research organisations in the Western Balkan region and the EU in order to exchange ideas and pursue joint research collaboration.

IS2WeB will contribute to the Commission's priority to open up the European Research Area in the Western Balkan region and pave the way for future EU-Western Balkan scientific and technological co-operation. IS2WeB will support this co-operation by facilitating independent and self-sustaining IST research activities and promoting the European R&D culture in the region, with the ultimate goal of extending Information Society Networks to the Western Balkan countries. All countries in the Western Balkan region are represented in the project: Albania, FYR of Macedonia, Bosnia-Herzegovina, Serbia & Montenegro and Croatia. The project's duration is 30 months.

Coordinator

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Participants	
Beogradska Otvorena Skola	Serbia And Montenegro
Zamirnet	Croatia
Civet 2000 Shpk.	Albania
St's Cyril And Methodius University Of Skopje	The Former Yugoslav Republic Of Macedonia
Svjetski Univerzitetski Servis Bosne I Hercegovine	Bosnia And Herzegovina
Universitat Fur Bodenkultur (An-Institut Zentrum Fur Soziale Innovation)	Austria

J-WEB

Collaboration environment for judicial European network in Western Balkans

Research area: IST-2005-2.6.5.1.d eGovernment

Project website: www.jweb-net.com

Project details

Project Reference: 045331	Contract Type: Specific Targeted Research Project
Start Date: 2007-02-01	End Date: 2009-01-31
Duration: 24 months	Project Status: Completed
Project Cost: 2.88 million euro	Project Funding: 1.61 million euro

J-WeB aims at designing and developing an innovative judicial cooperation environment to enable an effective judicial cooperation specifically in the cross-boarder criminal matters investigation phase carried out between EU and Associate countries.

The project focus is on the development of a designed to support the Judicial operators in their daily duties on the two main procedures preceding the request for warrant of arrest.

J- Web will be built on Web-based groupware tools supporting a more realistic collaboration and knowledge sharing and transferring also among geographically distributed workforces, within and between law organizations. It will represent the convergence of technologies such as multimedia document/image management, videoconferencing, in compliance with security requirements needs, helping public administrations transcend all sorts of boundaries (geography, time and organizational structure) by making available the right information to the right actor at the right place and at the right time.

Main J-WeB project objectives are:

- The analysis of the judicial communication process and the security constraints to "enter" some procedures/services
- The implementation of intelligent environments enabling judges, public employees, law enforcement authorities to access one-stop-shop knowledge transfer, sharing and management
- The strengthen of networking, mutual co-operation on general subjects of common interest to the Member States, Candidate Countries and Applicant Countries

Coordinator

PROJECT AUTOMATION SPA
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Participants	
Italdata Ingegneria Dell'idea Spa	Italy
Elsag Eastern Europe Srl	Romania
GI2006 Europe Ltd	United Kingdom
D.D. Synergy Hellas Anonymi Emporiki Etaireia Parochis Ypiresion Pliroforikis	Greece
Ministry Of Justice Of The Republic Of Montenegro	Serbia And Montenegro
Ministero Della Giustizia	Italy
Kentro Erevnon Notioanatolikis Evropis Astiki Mi Kerdoskopiki Etaireia	Greece
Straight Technology Limited	United Kingdom
Airial Conseil	France

RACWeB

Risk assessment for customs in Western Balkans

Research area: IST-2005-2.6.5.1.d eGovernment

Project website: www.racweb.org

Project details	
Project Reference: 045101	Contract Type: Specific Targeted Research Project
Start Date: 2007-01-01	End Date: 2009-06-30
Duration: 30 months	Project Status: Execution
Project Cost: 2.06 million euro	Project Funding: 1.1 million euro

RACWeB project aims to improve the Western Balkans and EU neighbouring countries customs efficiency and transparency in risk assessment by enhancing the identification of risk profiles through the utilisation of data mining techniques and by developing an advanced, web-based risk assessment service in customs declarations. The RACWeB service will be accessible by Western Balkans and EU neighbouring customs administrations or any other authorised user whenever the level of risk involved in a customs declaration made by a declarant needs to be further assessed. Such a service clearly does not intend to replace, but to complement current and future national customs systems and to assist human controllers in Western Balkans and EU neighbouring countries. Therefore, the service will be developed according to the Service-Oriented Architecture approach that allows for easy access and seamless integration with legacy systems.

The RACWeB project involves 4 EU technology/scientific partners, 4 central customs administrations along with 3 IT consulting companies / research organizations from Albania, Bosnia-Herzegovina and Former Yugoslav Republic of Macedonia respectively. The duration of the project is 30 months.

Coordinator
PLANET AE APOLLON TOWER, LOUISE RIENCOURT STREET 64 11523 ATHINA GREECE

Participants	
Uprava Carina Republika Crna Gora	Montenegro
C-Center Engineering And Consulting Shpk	Albania
Intrasoft International Sa	Luxembourg
Carinska Uprava Na Republika Makedonija	The Former Yugoslav Republic Of Macedonia
Ministarstvo Finansija, Uprava Carina	Serbia
Exit Centar - It Business Support Centre	Bosnia And Herzegovina
Ministria E Financave	Albania

Agilis Anonymi Etaireia Statistikis Kai Pliroforikis	Country: Greece
Faculty Of Economics, St's Cyril And Methodius University	The Former Yugoslav Republic Of Macedonia
Fraunhofer-Gesellschaft Zur Foerderung Der Angewandten Forschung E.V	Germany



SCORE

Strengthening the strategic cooperation between the EU and Western Balkan region in the field of ICT Research

Research area: IST-2005-2.6.5.2 INCO

Project website: www.score-project.eu

<p>Project details</p> <hr style="border-top: 1px dashed #000;"/> <p>Project Acronym: SCORE Project Reference: 045384 Start Date: 2007-02-01 Duration: 24 months Project Cost: 919345.00 euro Contract Type: Specific Support Action End Date: 2009-01-31 Project Status: Completed Project Funding: 858878.00 euro</p>

SCORE is a Specific Support Action that addresses the need for well-defined future research priorities that will enhance scientific and research co-operation between the Western Balkan region and the EU. SCORE addresses specifically the thematic area of Information Communication Technologies (ICT), which corresponds to one of the nine thematic areas of the FP7's "Co-operation" Programme.

Addressing the above need, the objectives of SCORE are to:

- a. Develop a Strategic ICT Research Agenda for the Western Balkan region that will define the region's ICT research priorities following a broad consultation with affected stakeholders (e.g. national RTD policy-makers, research actors including academic, not-for-profit and private sector research organisations, and ICT companies).
- b. Develop a Policy Paper with "Recommendations for shaping EU scientific co-operation with the Western Balkan Region in the field of ICT research: 2007-2013". The policy paper will contribute to the shaping of the FP7's Co-operation programme.
- c. Transfer EU research results and technologies in the identified ICT research priorities / thematic areas in order to familiarise Western Balkan research actors with current research developments and state-of-art technologies in these areas.
- d. Facilitate the development of networks between research actors within the Western Balkan region and between the region and the EU in order to develop contacts, exchange ideas and pursue joint research collaboration.

The SCORE consortium represents all countries in the Western Balkan region (Albania, the Former Yugoslav Republic of Macedonia, Bosnia-Herzegovina, Serbia). The project's key results i.e. the Strategic ICT Research Agenda and the Policy Paper will be delivered within the first 15 months of the project, in order to allow their timely contribution to the shaping of the FP7 programme and future calls. The project's total duration is 24 months.

<p>Coordinator</p> <hr style="border-top: 1px dashed #000;"/> <p>PLANET AE APOLLON TOWER, LOUISE RIENCOURT STREET 64 11523 ATHINA GREECE</p>
--

Participants	
Information And Communication Technologies Chamber Of Commerce Masit Skopje	The Former Yugoslav Republic Of Macedonia
Drustvo Za Informacione Sisteme I Racunarske Mreze - Informaciono Drustvo Scg	Serbia
Beogradska Otvorena Skola	Serbia
Fondacija Za Visoko Obrazovanje-Svjetski Universitetski Servis Bih	Bosnia And Herzegovina
Faculty Of Economics, St's Cyril And Methodius University	The Former Yugoslav Republic Of Macedonia
Asocijacija Za Informacione Tehnologije Bait U Bosnia I Hercegovini	Bosnia And Herzegovina
Civet 2000 Shpk	Albania
Zentrum Fuer Soziale Innovation	Austria
Instituti Shqiptar Per Studime Dhe Edukim Ne Teknologjine E Informacionit	Albania

SEEFIRE

South-East Europe fibre infrastructure for research and education

Research area: IST-2004-2.3.6.2 To prepare for future international co-operation in IST,FP6-2004-IST-3 Specific Support Action

Project website: www.seefire.org

Project details

Project Acronym: SEEFIRE
Project Reference: 015817
Start Date: 2005-03-01
Duration: 12 months
Project Cost: 416273.00 euro
Contract Type: Specific Support Action
End Date: 2006-02-28
Project Status: Completed
Project Funding: 350000.00 euro

SEEFIRE aims to prepare for future collaboration in southeast Europe by studying the availability of options for network infrastructure and possible strategies for the development of research and education networking in the region, with a specific emphasis on the Western Balkan countries. The project will raise awareness, among stakeholders of NRENs, governments, users and telecom operators, about the results of the SEEREN and GN1 and the findings of SERENATE about the measures to reduce the digital divide in Europe.

The project will exploit the results of these IST projects and of national research and education networking projects in the Czech Republic, Hungary, Serbia-Montenegro and Greece. Southeast European countries have a strategic role in connecting SE Europe, Caucasian and Mediterranean countries to G-NT. The SEEREN network needs to be sustained and upgraded by exploring all available infrastructure solutions. SEEFIRE will contribute to the preparation of the next generation of this network (SEEREN2), by providing the tools and knowledge that may allow SEE NRENs to potentially obtain access to dark fibre. In this respect, it will considerably assist them in long-term sustainability plans. SEEFIRE will contribute to introducing SEE countries into the eInfrastructures community and will stimulate the launch of joint RTD projects, widening the scope of existing project, helping the participating countries to pursue forthcoming FP6 projects and to become more technology competent.

SEEFIRE will provide

- a benchmark of existing and potential optical fibre in the region,
- an analysis of the technical options available for the deployment of dark fibre and the management of optical transmission by NRENs in the region, thereby providing guidelines for future implementations,
- reports on economic aspects and regulations, and
- information dissemination activities targeting both technical and policy-making actors in the region.

Coordinator

TRANS-EUROPEAN RESEARCH AND EDUCATION NETWORKING ASSOCIATION
 TERENA SECRETARIAT
 SINGEL 468 D
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Participants	
Ustanova "Biharnet Centar" Sarajevo	Bosnia And Herzegovina
Akademia E Shkencave Te Shqiperise	Albania
St's Cyril And Methodius University Of Skopje	The Former Yugoslav Republic Of Macedonia
Information Society Technologies Foundation	Bulgaria
Oficiul Pentru Operare Si Administrare Al Infrastructurii De Comunicatii De Date "Roedunet"	Romania
Delivery Of Advanced Network Technology To Europe Limited	United Kingdom
Univerzitet U Beogradu	Serbia
Nemzeti Informacios Infrastruktura Fejlesztési Iroda	Hungary
Greek Research And Technology Network S.A.	Greece
Cesnet, Zajmove Sdruzeni Pravnickyh Osob	Czech Republic

SWEB

Secure, interoperable, cross border m-services contributing towards a trustful European cooperation with the non-EU member Western Balkan countries

Research area: IST-2005-2.6.5.1.d eGovernment

Project website: www.sweb-project.org

Project details

Project Acronym: SWEB
Project Reference: 044979
Start Date: 2007-01-01
Duration: 27 months
Project Cost: 1.63 million euro
Contract Type: Specific Targeted Research Project
End Date: 2009-03-31
Project Status: Execution
Project Funding: 1.3 million euro

In all West Balkans the penetration rates for mobile services are more than double that of fixed lines. This gives the advance to the regional public administrations to skip a step and enter directly the mobile Government. Enabling Western Balkan governmental organizations with the ability to provide secure m-services to other European public organizations and citizens holds a lot of future prospects by strengthening the fundamental structure of these organizations, by enhancing the European collaboration and by contributing towards the solution of difficult pan-European problems like illegal immigration/employment and money laundry.

SWEB directly contributes to the above-mentioned aims respecting the relevant European legislation, policies and European strategies. Its overall objectives are: to develop a secure, interoperable, open, affordable platform upon which two secure cross border government services will be built:

- Residence, Employment certification and permits issuance, in which a public organization or individual citizens' residence certification and permits and employment documents (work permits) may be securely issued, requested, sent and audited. This service will enhance the prevention of illegal immigration and employment and the secure movement of citizens in the European continent.
- Electronic/Mobile Invoicing has a pivotal role in all the stages of handling Value Added Tax (VAT) for European Member States. Through e/m-invoicing, tax administrators will be able to implement new tools and procedures to carry out alternative controls. This service prevents money laundry and promotes secure investments in the region.

The SWEB platform and services will be demonstrated, tested and evaluated in Municipalities and Cities of seven EU and non-EU Members. A preliminary list of candidates for the SWEB Advisory Committee has already been formulated, which will monitor and enhance the results in order to provide fundamental impact on the policy field.

Coordinator

FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V
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Participants	
Municipality Stari Grad	Serbia
Autonomous Province Of Vojvodina	Serbia
Institute Of Communication And Computer Systems	Greece
Prozone D.O.O. Za Razvoj I Implementaciju Informacion H Tehnologija	Serbia
Comune Di Siena	Italy
Trajkovski I Partneri D.O.O.E.L. Agencija Za Informaciski Izenering, Konsalting I Marketing	The Former Yugoslav Republic Of Macedonia
City Of Skopje	The Former Yugoslav Republic Of Macedonia
Bashkia Tirane	Albania
Qendra Shqiptare E Teknologjise Se Informacionit	Albania
University Of Piraeus Research Center	Greece

WE-GO

Enhancing Western Balkan eGovernment Expertise

Research area: IST-2005-2.6.5.1.d eGovernment

Project website: www.wego-project.eu

Project details

Project Acronym: WE-GO
Project Reference: 045472
Start Date: 2006-12-01
Duration: 24 months
Project Cost: 1.11 million euro
Contract Type: Coordination action
End Date: 2008-11-30
Project Status: Completed
Project Funding: 1.05 million euro

The proposed project will enable public administration in Western Balkan Countries (WBC) to reach higher productivity and equity by first establishing of an "We-Go" Interoperability Framework with focus on transactional cross border services and providing best practices for corresponding transactional application domains delivered as trial prototypes in order to enable follow-up implementation projects; second, by establishing "We-Go" Academies offering training courses as accompanying measures for the selected applications as well as foundation for future regional eGov course program deployments; third, by establishing of an "We-Go" Knowledge Net built by a system of federated registries which will ensure sustainability and further improvements beyond the end of the project.

Services addressed by the project include eCustoms - New Computerised Transit System, eFinance - VAT Information Exchange System, eJustice cross border cases - Automation of Court Procedures, European Companies Register and European Land Information System, eAdministration - Electronic Filing System and eTrade Facilitation for European waste transport.

The outlined Coordination Action will support the networking and coordination of eGovernment research and innovation activities in WBC together with European partners, building on the Austrian activities which made the European Commission's i2010 and especially eGovernment and eServices a priority during its tenure of the Presidency of Council in the first half of 06. Austria organizes a series of events and initiatives together with the European Commission, with other countries and with academic and industry partners with a specific focus on WBC.

The consortium combines the strength of leading EU and WBC governmental institutions, public service solution providers, applied research organisations and selected business associations to ensure the leverage effect intended by the coordination action.

Coordinator

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 DONAU-CITY-STRASSE 1
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Participants	
Faculty Of Natural Sciences And Mathematics, C.O.	The Former Yugoslav Republic Of Macedonia
Univerzitet U Beogradu	Serbia
Jozef Stefan Institute	Slovenia
Src.Si Sistemske Integracije D.O.O.	Slovenia
Pexim D.O.O. Preduzece Za Trgovinu, Konsalting I Informacioni Inzenjering	Serbia
Fondacija Metamorfosis	The Former Yugoslav Republic Of Macedonia
E-Riigi Akadeemia Sihtasutus	Estonia
Internet Institut	Croatia
Sveuciliste U Zagrebu, Fakultet Organizacije I Informatike	Croatia
Ekonomski Fakultet Sarajevo	Bosnia And Herzegovina
Asocijacija Za Informacione Tehnologije Bait U Bosnia I Hercegovini	Bosnia And Herzegovina
Bundesrechenzentrum Gesellschaft Mit Beschraenkter Haftung	Austria
Universitaet Wien	Austria
Chamber Of Commerce Of Macedonia	The Former Yugoslav Republic Of Macedonia
Bundeskanzleramt Der Republik Oesterreich	Austria
Donau Universitaet Krems	Austria

WEB.DEP

Western Balkans democratic participation

Research area: IST-2005-2.6.5.1.d eGovernment

Project website: www.web-dep.eu

<p>Project details</p> <p>Project Acronym: WEB.DEP Project Reference: 045003 Start Date: 2007-01-01 Duration: 24 months Project Cost: 845437.00 euro Contract Type: Specific Support Action End Date: 2008-12-31 Project Status: Completed Project Funding: 799500.00 euro</p>
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The project's primary aim is to establish an important communication and information management network hosted by the National News Agencies of the Western Balkan countries.

The project will involve policy makers and stakeholders from Western Balkans such as relevant Governmental Organizations (Ministries), Public News Agencies and citizens into the e-Democracy processes, supported through a unified environment, under a set of specified procedures and a common code of ethics.

The project brings together 8 partners representing three Western Balkan Countries (Albania, Serbia and FYROM) as well as two Member States (Greece and United Kingdom).

<p>Coordinator</p> <p>ATHENS TECHNOLOGY CENTER S.A. RIZARIOU 10 15233 HALANDRI - ATHENS GREECE</p>
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Participants	
Macedonian Information Agency	The Former Yugoslav Republic Of Macedonia
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Athinaiko Prakzoreio Eidiseon Ae	Greece
Journalists Union Of Macedonia And Thrace Daily Newspapers	Greece
National Technical University Of Athens	Greece
Napier University	United Kingdom

FP6 - other relevant projects**SEE-ERA-NET****Southeast European ERA-NET**

Research area: COOR-1.1 Networking of national or regional programmes or parts of programmes; actors: public authorities, research agencies, open call for proposals (ERA-NETs)

Project website: www.see-era.net

Project details

Project Reference: 515805 **Contract Type:** Coordination action

Start Date: 2004-09-01 **End Date:** 2009-08-31

Duration: 60 months **Project Status:** Execution

Project Cost: 3.43 million euro **Project Funding:** 2.81 million euro

SEE-ERA-NET aims at structuring and expanding the ERA to the West Balkan countries by co-ordinating and supporting RTD activities conducted at bilateral level. Mainly, but not exclusively, bilateral inter-governmental programmes between the 15 consortium partners are addressed. Through a well-targeted process of co-operation and co-ordination, added value will be achieved for the research communities of all 12 participating countries. An important fringe benefit of SEE-ERA-NET is, that also the interregional RTD co-operation of the involved new member states and candidate countries will be enhanced and a basis for a better involvement of these countries in RTD endeavours at European level will be created. The main objective of SEE-ERA-NET is to enhance RTD co-operation between already established and new EU member states, candidate countries as well as West Balkan countries. SEE-ERA-NET is designed to support a much better exploitation of existing bilateral RTD co-operations under a flexible network that enables a systematic exchange of information and best practice on bilateral RTD programmes and activities supported hereunder on the project level, a sound understanding of the state-of-art of the systems of research of the West Balkan countries, a comprehensive needs analysis from the viewpoint of collaborating researchers - especially - from the West Balkan countries as regards international RTD co-operation, awareness raising on important, yet sufficiently tackled, problems and opportunities, the identification of joint strategic activities and the development of practical policy recommendations, the implementation of joint instruments and initiatives under a variable geometry and the conduct of multinational research by implementing a regional RTD programme with a pilot multilateral call for proposals. SEE-ERA-NET contributes to the fulfilment of the EU-Balkan countries Action Plan adopted at the Ministerial Conference in Thessaloniki in 2003.

Coordinator

UNIVERSITÄT FÜR BODENKULTUR (AN-INSTITUT ZENTRUM FÜR
SOZIALE INNOVATION)
ZENTRUM FÜR SOZIALE INNOVATION
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AUSTRIA

Participants

Ministry Of Science Of The Republic Of Serbia

Serbia

Ministry Of Education And Science	Albania
Ministarstvo Prosvjete I Nauke Crne Gore (Ministry Of Education And Science Of Montenegro)	
Ministry Of Higher Education, Science And Technology	Slovenia
National Authority For Scientific Research	Romania
Deutsches Zentrum Fuer Luft- Und Raumfahrt E.V.	Germany
Ministère Des Affaires Étrangères	France
Ministry Of Education And Science	Bulgaria
Bundesministerium Für Wissenschaft Und Forschung	Austria
Ministarstvo Vanjskih Poslova Bosne I Hercegovine (Ministry Of Foreign Affairs)	Bosnia And Herzegovina
Ministerstvo Za Obrazovanie I Nauka Na Republika Makedonija	The Former Yugoslav Republic Of Macedonia
Nemzeti Kutatsi Es Technologiai Hivatal (National Office For Research And Technology)	Hungary
Bundesministerium Für Bildung Wissenschaft Und Kultur	Austria
Ministarstvo Znanosti, Obrazovanja I Sporta (Ministry Of Science, Education And Sports)	Croatia
Ministry Of Development - General Secretariat For Research And Technology	Greece
Bundesministerium Für Bildung Und Forschung	Germany
Centre National De La Recherche Scientifique	France

SEE-INNOVATION

Facilitating Innovation for ICT SMEs in South Eastern Europe

Research area: INNOVATION-5 Stepping up economic and technological intelligence

Project website: www.see-innovation.org

Project details	
Project Reference: 23318	Contract Type: Specific Support Action
Start Date: 2005-07-01	End Date: 2007-06-30
Duration: 24 months	Project Status: Completed
Project Cost: .00 euro	Project Funding: 530340.00 euro

SEE-Innovation is a Specific Support Action aiming to assist SMEs from candidate and third countries from the region of South Eastern Europe (SEE) to participate actively in EU-funded research in the field of Information Society Technologies. The specific aims of SEE-Innovation are to: (a) map the capacities and needs of SMEs operating in the ICT sector in the countries of South Eastern Europe in order to identify those companies that have the potential and the strong interest to participate in RTD-related activities; (b) provide training on opportunities offered by the EU FP6 for innovative ICT SMEs, in particular the IST and related programmes; (c) to support the South Eastern European SMEs in shaping a competitive technological offer (even as a cluster of companies) to be attractive to the future project consortia that will address the calls of IST and related programmes; and (d) facilitate the development of networks between SMEs in the region of South Eastern Europe in order to exchange ideas and pursue joint research collaboration as well as between SMEs and EU organisations, as this is the key to getting involved in joint project activities. SEE-Innovation is totally aligned with the objectives of the Economic and Technological Intelligence actions of the European Commission and contributes to the strengthening of the scientific and technological cooperation between EU member states, Associated Candidate Countries and Western Balkan countries. Seven countries from South Eastern Europe are represented in the project: Albania, Bulgaria, Croatia, FYROM, Romania, Serbia and Montenegro, and Turkey. The project's duration is 24 months.

Coordinator

PLANET S.A.
INTERNATIONAL GROUP
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GREECE

Participants

Drustvo Za Informacione Sisteme I Racunarske Mreze - Informaciono Drustvo Scg	Serbia And Montenegro
Macedonian Association Of Information Technology Zamirnet	The Former Yugoslav Republic Of Macedonia Croatia
Instituti Shqiptar Per Studime Dhe Edukim Ne	Albania

Teknologjine E Informacionit

Association Of Information Technology Companies Of Northern Greece	Greece
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Romanian Association For Electronic And Software Industry	Romania
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Bulgarian Association Of Software Companies Bascom	Bulgaria
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Universitaet Fuer Bodenkultur Wien	Austria
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Technical Support For European Organisations Sprl	Belgium
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Turkiye Bilimsel Ve Teknolojik Arastirma Kurumu	Turkey
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ERA WESTBALKAN

Opening up the European Research Area to the Western Balkan

Research area: INCO-C Western Balkan Countries

Project website: www.bit.or.at/erawestbalkan/

Project details

Project Reference: 502260	Contract Type: Specific Support Action
Start Date: 2004-05-01	End Date: 2006-04-30
Duration: 24 months	Project Status: Completed
Project Cost: 395391.00 euro	Project Funding: 395391.00 euro

The principle objective of the project is to raise the quantity and quality of participations from the Western Balkan Countries (WBC) in the 6th EU Framework Programme (FP6). In order to achieve this, the creation and support of the network of FP6-National Contact Points (Naps) in the countries of the region will be the key issue of the project. This project is submitted at the present time, as for the first time participants of the WBC will be offered broad opportunities of financially supported possibilities to participate in FP6.

Coordinator

OESTERREICHISCHE FORSCHUNGSFOERDERUNGSGESELLSCHAFT MBH
 BIT - UNIT FOR INTERNATIONAL COOPERATION
 Canovagasse 7
 AUSTRIA

Participants

Agency For International Scientific, Educational, Cultural And Technical Cooperation Of Montenegro	Montenegro
Ministry of Foreign Affairs of Bosnia and Herzegovina	Bosnia And Herzegovina
Ministry Of Education And Science	The Former Yugoslav Republic Of Macedonia
Ministry Of Science And Environmental Protection Of The Republic Of Serbia	Serbia
Ministry Of Higher Education, Science And Technology	Slovenia
National Documentation Centre/Nhrf	Greece

ERA WESTBALKAN+

Intensifying ERA in Western Balkan Countries

Research area: INCO Specific measures in support of international co-operation

Project website: www.erawestbalkanplus.net

Project details

Project Reference: 43797	Contract Type: Specific Support Action
Start Date: 2007-01-01	End Date: 2008-12-31
Duration: 24 months	Project Status: Completed
Project Cost: 454104.00 euro	Project Funding: 444996.00 euro

The ERA WESTBALKAN+ project's main objective is to intensify the opening up of the ERA to the Western Balkan Countries (WBC) of Serbia, Montenegro, FYR of Macedonia, Bosnia and Herzegovina, Albania and Croatia as an ACC through trans-regional network building of research centres in WBC with their counterparts in Austria, Slovenia and Greece.

This is achieved through a series of visits of WBC researchers to European colleagues and so-called Get in Touch Meetings, with the aim of supporting the development of joint project proposals. Through ERA WESTBALKAN+ the network of NCPs from the Western Balkan Countries and their links to NCPs in Member States and Candidate Countries will be substantially strengthened. The NCPs will participate in core events related to EU RTD cooperation and in a traineeship in Brussels, where they will meet with and deepen the connections to European institutions.

ERA WESTBALKAN+ will enhance the participation of the Western Balkan RTD community in FP7 by providing targeted information and training for NCPs and the specific RTD client groups. Communication with clients and consulting skills will be developed in the course of these activities, thus through the ERA WESTBALKAN+ project the knowledge, capabilities and skills of WBC NCPs as competent service- and information providers will be strengthened.

Data on the RTD landscape of Croatia and Albania will be integrated into the existing online database RTD in Westbalkan, which currently contains information on RTD key players from the other WBC. Further data collection is planned to provide a complete picture of the research landscapes of all WBC.

Both, the client base, which entries will be doubled, together with the implementation of appropriate tools for customer relations management, lay the basis for better success in FPs and a structured client approach. Thus, ERA WESTBALKAN+ will make the research potential of the Western Balkans both visible and accessible.

Coordinator

ÖSTERREICHISCHE FORSCHUNGSFÖRDERUNGSGESELLSCHAFT MBH

AUSTRIA

Participants

Helmholtz-Gemeinschaft Deutscher Forschungszentren E.V.	Germany
Ministry Of Science, Education And Sports Of The Republic Of Croatia	Croatia
Ministry Of Education And Science Of Albania	Albania
Agency For International Scientific, Educational, Cultural And Technical Cooperation Of Montenegro	Serbia And Montenegro
Fondacija Za Visoko Obrazovanje Svjetski Univerzitetski Servis Bosne I Hercegovine	Bosnia And Herzegovina
Ministry Of Education And Science	The Former Yugoslav Republic Of Macedonia
Ministry Of Science And Environmental Protection Of The Republic Of Serbia	Serbia And Montenegro
Ministry Of Higher Education, Science And Technology	Slovenia
National Documentation Centre/Nhrf	Greece