

Extending future EU-WB ICT RTD cooperation through ICT priority setting and activities contrasting current barriers: **SCORE and WINS-ICT projects**

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cooperation framework 1/2

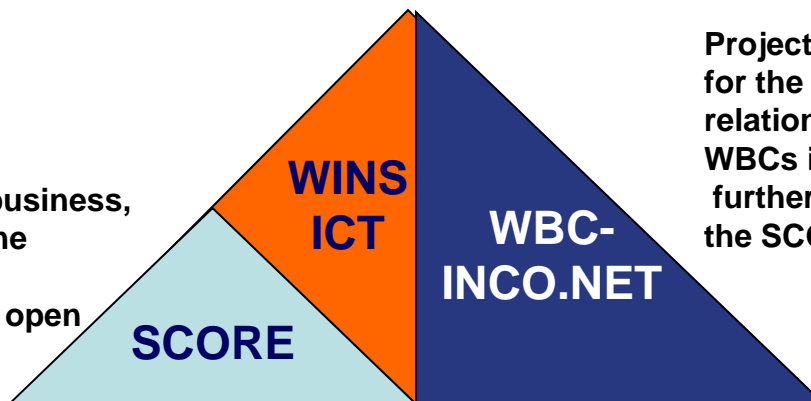
- Strengthening of WB R&D landscape and WBC integration in the ERA have long been important priorities at both WB and EU levels as they are critical for stability and economic competitiveness of the region as well as for the potential accession of WB countries to the EU
- A series of supporting actions and initiatives have led to considerable progress in S&T relations between the WBC and the EU
- All WBC but Kosovo/UNMIK are currently associated to the FP7 and can participate on equal grounds with the MS
- Participation of WBC in FP7 has increased compared to FP6 but, apart Croatia and Serbia (also good number of CPs), the most frequent funding scheme is CSA

cooperation framework 2/2

- ICT is the most important field in FP7 as to participation from WBC (20 projects out of 189) but there is only 1 coordinator from Serbia (PRODI)
- WBC research capabilities have been affected by rapid political changes, internal disputes and the transformation from state run to market economies. Specific barriers and problems are obstacles for researchers willing to participate in international R&D cooperation.
- There are still important challenges both vis-à-vis the internal research vision and capacity and the sufficient integration of WB researchers into FP7 and ERA. Moreover there is a need for improved cooperation between the different support actions taking place at different layers.

WINS-ICT and previous supporting actions

1st project in the region that:
→ brings together academia, business, government and NGOs to define **ICT research priorities**
→ employs consultation as an open and transparent process
→ develops recommendations to both the WBC and the EU



Project acting as political forum for the development of the relationship between the EU and the WBCs in the area of S&T. It can further deepen and implement the SCORE recommendations

IS2WeB (SEE Innovation): based on the community ISIS, identification & training of key ICT research actors

ISIS: the first support action in SE Europe. Awareness, networks and community building

Full Title	Strengthening the Strategic Co-operation between the EU and Western Balkan Region in the field of ICT Research
Project Instrument	Specific Support Action (SSA)
Project start	01 February 2007
Duration	24 months (project end: 31 January 2009)
EC	DG Information Society and Media
Funding	858,878 Euro (maximum EC contribution)
Partners	10 highly complementary partners: 8 – from Western Balkan countries 2 – from EU countries

SCORE activities & main achievements 1/2

- Defined **ICT Strategic Research Agendas of the WB countries reflecting the ICT priorities** of each country for the period 2007 – 2013
 - Following **broad consultation** with ICT stakeholder communities (e.g. national RTD policy makers, research actors, ICT companies)
- Developed a **Policy Paper** “*Shaping EU - WB co-operation in the field of ICT R&D in the period 2008-2013: Priorities and Recommendations*”
 - That provides valuable input for the up-to-date shaping of the FP7' Cooperation programme and future calls

SCORE activities & main achievements 2/2

- 4 workshops to transfer EU research results and technologies in the identified ICT research priorities, with the aim to
 - familiarise WB research actors with the current research developments and state-of-the-art technologies in these fields
 - contribute to the liaisons between the participants and the EU research experts in the selected ICT priorities
- Several dissemination activities to facilitate the development of collaborative networks between ICT research actors
 - within the Western Balkan region and between the region and the EU
 - with the final goal to develop contacts, exchange know-how, experience and ideas so to pursue joint research collaboration

SCORE Impact and Sustainability

- ...outstanding results, beyond expectations, and should be considered as an example of a very successful project...which will substantially contribute to the shaping and implementation of research and development agendas in the ICT field in the Western Balkan region.
- ...its success in attracting top-level players ... This is taken as evidence that the project SCORE achieved high credibility within its target community,...
- It is not the intention of SCORE to become one more project whose results are “stored in the shelf” but the implementation of the recommendations goes certainly beyond the influence of SCORE partners.
- Under this consideration SCORE “delivered its results” to WBC-INCO.Net and WINS-ICT, with the expectations that they could further deepen and implement the SCORE recommendations.

wins-ict  **eu**

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

intends to strengthen S&T

cooperation between the EU and the WBC

by **deepening the bi-regional strategic relations** in the field of ICT and **promoting the participation of WB ICT research actors in FP7**

Conceived to move forward

...in a threefold approach involving:

1. **Consolidation of national cooperation priorities and improvement of research capabilities in ICT** areas identified as relevant for economic and social development
2. **Alignment of national ICT policies** at the regional level, leading to an improved political dialogue between the EU-WBC and setting the basis of a closer match between the future ICT Work Programmes with the priorities and needs of the WB region
3. Additional support towards **increasing the visibility of the WBC ICT research potential** in the EU, the **forging sustainable networks** between EU-WB researchers and the **building of FP7 participation capacity** amongst the WB ICT research community

The project at a glance

Project instrument	<ul style="list-style-type: none"> • Support Action (SA) funded under FP7-ICT-2007-3 call • Action line: ICT-2007.9.2 International cooperation
Duration	01 January 2009 - 31 December 2010
EC	DG Information Society and Media
EC contribution	Project Cost: 1,1 million euro Project Funding: 849.993 euro
Partners	15 highly complementary partners: from the EU Member States, Accession Candidate Countries and WB region
Costant collaboration with similar initiative ICT-WEB-PROMS	

Specific objectives... ...and **key activities**

1. Provide comprehensive **understanding** of the current **EU-WBC ICT RTD policies** and RTD collaboration
 - **Analysis** of national policies, current participation and cooperation patterns of research organizations from the target region, factors hindering cooperation, as well as available funding opportunities
2. Address and involve the **relevant stakeholders** so as to optimize the policy and research collaboration framework
 - **Support to regional and bi-regional policy dialogue on ICT research**, feeding also the Steering Platform on Research for the WBC through an appropriate Dialogue Forum on ICT research

Specific objectives... ...and **key activities**

3. Support the building of **sustainable networks** between innovative WB –EU ICT researchers for the collaboration in the FP7 - ICT Priority
 - **Increase of visibility** of both WB and EU organizations interested in collaboration by providing regular **targeted information**, developing an **ICT key research actors database** and organising **networking and brokerage sessions** at relevant events.

4. Enhance the **capacities and capabilities** of WBC researchers to **successfully participate and compete** in FP7 as co-ordinators
 - **Capacity building and training events** for different types of WBC organizations and support of relevant stakeholders by providing concise background documentation on issues relating to the state-of-the-art in ICT research in WBC.

2009 activities and achievements

- **Analysis of WBC participation in ICT related Calls**
- **Cooperation – Opportunity Matrix**
- **Development of ICT research actor Database (261 profiles)**
- Development of WINS-ICT portal and Team Zone + updating
- Two Dissemination Strategies for promoting FP7 in the region and for promoting the WB region in EU + dissemination material
- **Development of questionnaire for consultation on ICT priorities**
- **7 training and mentoring workshops** with additional coaching sessions (204 participants 15 coaching discussions)
- **1 Capacity Building Training Workshop (14 participants + Report)**
- **2 networking sessions**
 - eChallenges 2009 in Istanbul (50 participants and 12 partner search presentations)
 - BCI 2009 in Thessaloniki (50 participants and 6 partner search presentations)
- 2 meetings of the Dialogue Forum on ICT for the WBC
 - May and November 2009 (20 WB delegates each)
- Contacts and networking with ICT NCPs, other CSAs such as: IDEAL-IST, WBC-INCO.NET, SEE-ERA.NET and ICT-WEB-PROMS

Brief overview of the

- main WBC ICT priorities
- current factors hindering FP7 collaboration
- Possible remedial actions

Based on the SCORE and WBC-INCONET studies, findings are to be further confirmed by WINS-ICT and sister-project ICT-WEB-PROMS

ICT R&D	ALBANIA		BiH		FYROM		SERBIA		CROATIA		MONTENEGRO	
	High A + High R	High A + Low R	High A + High R	High A + Low R	High A + High R	High A + Low R	High A + High R	High A + Low R	High A + High R	High A + Low R	High A + High R	High A + Low R
ICTs for Government & eGovernment	✓		✓		✓		✓		✓		✓	
ICTs for Enterprises & eBusiness	✓		✓		✓		✓		✓		✓	
Internet & Broadband Technologies	✓			✓	✓		✓			✓	✓	
Software Engineering		✓		✓	✓		✓		✓			✓
ICTs for Learning & eLearning	✓		✓		✓			✓	✓			✓
ICTs for Health & eHealth		✓	✓			✓		✓		✓		✓
Mobile Technologies					✓		✓				✓	
ICTs for Agriculture						✓		✓				✓
Digital Content & Digital Libraries		✓				✓				✓		✓
Distributed Systems	✓											✓
Embedded & Pervasive Systems								✓				✓
Network Technologies		✓									✓	
Knowledge Technologies						✓						✓

Figure 1 – Regional ICT R&D priorities, including Montenegro & Croatia
(Legend: “A” stands for attractiveness, “R” stands for readiness)

Identifying Barriers

SCORE Policy Paper *vis-a-vis* WBC-INCO.NET Study

SCORE Policy Paper	WBC-INCO.NET Study
Result of a broad consultation process among ICT stakeholders	Research carried out by the Institute of Social Sciences Ivo Pilar , Zagreb (contact: Jadranka Švarc (jadranka.svarc@pilar.hr))
FP7 – ICT co-operation	FP and bilateral S&T co-operation
320 Respondents from 4 WBC	809 Respondents from WBC + Turkey + EU MS
Data collection at different levels and by different means	Web questionnaire
Final categorization of regional barriers with mirror recommendation, and mapping of their impact to specific ICT research priorities	Different dimension (impact perception) of barriers shown with correlation btw. independent and dependent variables
31 itemised barriers in 7 categories	58 itemised barriers in 6 categories

Barriers- most important

1. The most important barriers are administrative barriers, of the two types:

- “**Project management barriers**” which are driven by the researchers’ incapacities to manage the projects in terms of: finding appropriate call, finding research partners/building consortium, accounting and financial rules, understanding the application procedures (technical knowledge on how to submit project) and co-financial obligation of institutions;
- “**EU Bureaucratic barriers**” related to the modus operandi of EC administration and includes : constant changes of the rules and procedures in project submission and monitoring, changes in projects objectives and deliverables, duration of project evaluation, payment delays and long response time to technical questions.

The essence of the problem is expressed by the barrier formulated as “**a small acceptance rate of project proposals in relation to invested efforts**” – which receives absolutely the highest score among all 58 itemized barriers

N.B. Experienced researchers with more intensive cooperation perceive EU barriers as more important

Barriers – “very” to “medium” important

2. **National capacity barriers** (very important” to “medium” important)
 - Lack of a country’s lobbying skills (negotiation with the EC is recognised as very important for awarding project grants);
 - Lack of industrial partners;
 - Low scientific image of a country;
 - Difficulties in mobility of researchers (rules and procedures, e.g. visa work permits, health care insurance) ;
 - Parochialism (low international openness);

3. **Socio-cultural and political barriers** (medium importance), of the two types:
 - **Political instability:** mutual political antagonism, democratic deficits;
 - **”EU scientific superiority”:**
 - WBC suffer inferiority complex; “EU 27 looks down on WBC scientific potentials”;
 - WBC think that they are responsible themselves for their scientific reputation but also they indicate a long isolation from EU integrations;
 - WBC are more concerned about socio-cultural obstacles to cooperation than MS;
 - MS are more aware of the cultural differences than WBC but they don’t perceive them as the obstacles to cooperation; cooperation with WBC is for them of the same importance as with MS
 - All agree (WBC more) that EU should heavily invests in science of WBC

Barriers – “medium” to “not important”

4. **Institutional barriers of research organisation** (Surprisingly!) are **not recognised as important barriers**, i.e. respondents are **mainly satisfied** with the capacities of their institutions to provide professional support and assistance for FP: overall advisory support, engagement of leadership, strategic orientation towards FP, ICT capacities, etc.

Only 4 out of 11 barriers are perceived as “medium” important :

- Lack of time – researchers are occupied with other priorities;
- Lack of skilled accounting professionals;
- Lack of assistance in project managing;
- Lack of adequate research equipment

5. **Scientific excellence** is not perceived as a barrier:

- respondents are convinced that their scientific competences and network connections are sufficient for participation in FP; they have prominent scientists but they are not internationally recognised

6. **Personal barriers** (age, health and gender - are not perceived as barriers):

- language skills are indicated as a certain barrier;
- “unforeseen difficulties related to international cooperation” are indicated as a barrier (researchers from WBC are more “afraid” of FP than from MS);

1. Institutional / Political barriers & recommendations

Barrier/Problem	Recommended action(s)
<p>Lack of defined government policy for ICT research (at a national and regional level)</p>	<ul style="list-style-type: none"> • Development of clear regulations and guidelines for ICT research, including national funding schemes, criteria for application etc. • Lack of initiatives encouraging intra-regional ICT R&D collaboration
<p>Weak communication channels between policy makers and researchers</p>	<ul style="list-style-type: none"> • Formation of central co-ordinating body for ICT research & development within each country • Establishment of permanent communication channels between policy makers and researchers e.g. consultation processes (during the definition of ICT strategies)
<p>Insufficient encouragement policies for the collaboration between business and academic communities for ICT research</p>	<ul style="list-style-type: none"> • Development of incentives for public-private partnerships e.g. national co-funding based on criteria
<p>Political instability in the countries/region hinders cooperation within the region and with the EU</p>	<ul style="list-style-type: none"> • Continued initiatives by political leadership in the region for the implementation of measures for stability in the region • Speed up of region's integration process in the EU
<p>Difficulties with researchers' mobility exchange (i.e. visa, residence permits, work permits etc.)</p>	<ul style="list-style-type: none"> • Complete liberalization of the visa process. Until this is achieved: facilitation of process by reducing the required documentation and waiting times. • Development of twinning programs in which local researchers visit EU organisations and then visit together the originating Western Balkan country.

2. Financial barriers & recommendations

Barrier/Problem	Recommended action(s)
<p>Low level of national funds for ICT research (significantly lower than EU average)</p>	<ul style="list-style-type: none"> • Increase of the % of national budget dedicated to research in ICT • Development of a fund for supporting advanced R&D in the ICT field • Initiatives in collaboration with neighbouring countries for funding regional collaboration in ICT research • Better exploitation of existing funds (if applicable)
<p>Absence of defined financial support policy (at a national level) for participating in FP projects</p>	<ul style="list-style-type: none"> • Improvement of national financial rules so as to facilitate the participation in EU FP projects
<p>Lack of investments from the business sector in R&D</p>	<ul style="list-style-type: none"> • Determination of tax incentives for companies investing in R&D • R&D activities by private companies should be valued as a competitive advantage during the tendering process (for national projects). • Scholarships from business sector for PHD research
<p>Lack of financial incentives for collaboration between universities and businesses</p>	<ul style="list-style-type: none"> • Development of financial incentives for the facilitation of RTD collaboration in public-private partnerships • Follow-up existing collaborations and publication of success stories

3. Education related barriers & recommendations

Barrier/Problem	Recommended action(s)
<p>Lack of high-level willingness by academic leadership to engage in FP projects</p>	<ul style="list-style-type: none"> • Determination of incentives for the participation of academia in FP ICT research projects
<p>Low motivation for students who could be involved in FP projects.</p>	<ul style="list-style-type: none"> • provision of incentives to students in order to obtain qualification in R&D within the country and abroad e.g. study trips in EU countries • Financial support for full-time PHD students involved in ICT research
<p>Lack of specialized ICT professors</p>	<ul style="list-style-type: none"> • Incentives for advanced specialization of ICT professors in European universities
<p>Education system not in line with needs of ICT industry</p>	<ul style="list-style-type: none"> • ICT businesses to be consulted (for their current and future needs) in the development of academic curricula

4. Human resource barriers & recommendations

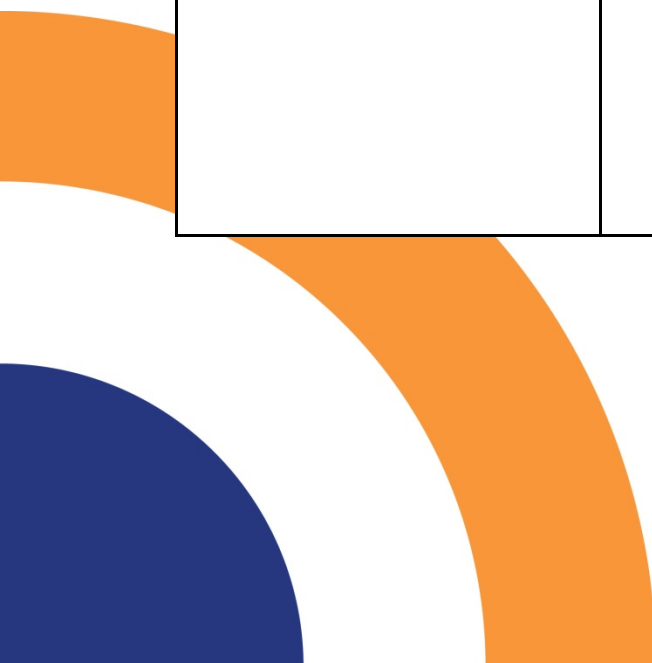
Barrier/Problem	Recommended action(s)
<p>Skilled ICT researchers leaving the country (brain drain).</p>	<ul style="list-style-type: none"> • Incentives for researchers to remain in their country (financial as well as immaterial) • Development of Centers of Excellence focusing on ICT research • Creation of ICT Business Incubators
<p>Weak local and regional ICT research networks</p>	<ul style="list-style-type: none"> • Development of networks able to attract and encourage young researchers not just in pure science but also in ICT research development and innovation • Improving access for researchers to research environments of a significant size at a national, regional and EU level (i.e. through research networks).
<p>Lack of professionals able to provide assistance on FP proposal writing and project management</p>	<ul style="list-style-type: none"> • Raising awareness on the importance of the research manager within SMEs and other organisations • Training on proposal development and project management (including financial management) in the FP project context.

5. Ict business sector related barriers & recommendations

Barrier/Problem	Recommended action(s)
<p>ICT private companies are not recognized as R&D organizations by the state institutions (and as a result are not eligible for national funding)</p>	<ul style="list-style-type: none"> • Recognition of private companies that pursue R&D activities as R&D organisations • Opening up of the tendering process for national R&D funds to private companies
<p>Limited ICT research in the business community / private sector</p>	<ul style="list-style-type: none"> • Demonstrating the added value for participating in FP projects especially for SMEs (business decision on investment). This could be supported with case studies to be developed by the EU and disseminated through National Contact Points. • Fiscal and administrative incentives to ICT companies for pursuing research activities • Development of action plan to raise the awareness among the companies about the benefits of research within their companies. There should be focused on the results (impact) of such projects.
<p>Insufficient collaboration between the ICT industry and universities</p>	<ul style="list-style-type: none"> • Development of industry-university co-operation mentality through specific national programmes and appropriate legal framework. • Cooperation between universities and companies can start with co-operation in teaching, to be followed with joint research. • Develop opportunities for student internships within private companies (e.g. through memoranda and agreements between universities and business associations)

6. Infrastructure barriers & recommendations

Barrier/Problem	Recommended action(s)
<p>Insufficient ICT research infrastructure</p>	<ul style="list-style-type: none"> • Further national & international investments in ICT infrastructure • Incentives (such as co-investments, subsidies) to be offered to infrastructure providers for ICT investments in rural areas • Investments in the set-up of cutting-edge R&D laboratories, business incubators, innovation centres, centres of excellence etc.



7. Cultural / other barriers & recommendations

Barrier/Problem	Recommended action(s)
<p>Lack of familiarity with FP and other funding programs.</p>	<ul style="list-style-type: none"> • Organisation of dedicated training courses on the FP and other funding programs (in collaboration with National Contact Points and the EC).
<p>ICT R&D projects, after being completed, disappear without producing a real impact.</p>	<ul style="list-style-type: none"> • Actions should be taken by government policy-makers to ensure the sustainability and impact of ICT R&D projects e.g. appropriate monitoring mechanisms, exploitation of research outputs.
<p>Low appreciation of international cooperation in R&D (resulting in low levels or EU-regional and intra-regional R&D collaboration).</p>	<ul style="list-style-type: none"> • Measures for the facilitation of contacts between research organisations in the country and others in the region and EU. • Presentation of benefits from international collaboration to ICT companies.
<p>Low international reputation of the “scientific image” of countries.</p>	<ul style="list-style-type: none"> • Promotion of the countries’ ICT research strengths and achievements abroad e.g. through supported participation in relevant EU or regional events. • Development of success stories. • Organisation of more regional ICT R&D conferences and other events.

ICT R&D PRIORITIES	BARRIERS / COUNTRIES	ICT for Government & eGovernment FVR				ICTs for Enterprises & eBusiness FVR				ICTs for Learning & eLearning FVR				ICTs for Health & eHealth FVR				Software Engineering FVR				Internet & Broadband Technologies FVR				TOTAL SCORE All countries
		AL	OM	BH	SR	AL	OM	BH	SR	AL	OM	BH	SR	AL	OM	BH	SR	AL	OM	BH	SR	AL	OM	BH	SR	
		Institutional/Political barriers																								
IP1	Lack of defined government policy for ICT research	7	7	7	7	4	4	4	7	4	7	7	7	7	4	4	7	4	4	1	7	7	4	4	4	129
IP2	Non-institutionalised regional ICT R&D Collaboration	4	4	4	4	4	4	1	4	7	4	7	4	4	4	7	4	4	1	7	7	4	7	1	4	105
IP3	Weak organisational support to R&D organisations and researchers	7	7	4	4	4	4	1	4	7	4	7	4	4	4	4	4	4	7	7	1	4	7	1	1	105
IP4	Weak communication channels with policy makers	7	7	4	7	1	4	4	4	4	4	7	4	4	4	7	7	4	1	7	4	4	4	4	4	111
IP5	Government funding intended only for organizations recognized as research organizations	1	7	4	7	7	1	1	1	1	7	7	4	1	7	7	4	4	4	7	1	1	4	7	4	99
IP6	Difficulties with researchers' mobility exchange (e.g. visa regime)	1	4	4	4	4	4	1	4	7	4	7	4	4	4	1	4	4	4	7	4	4	1	1	4	90
IP7	Unclear intellectual property rights	4	4	4	1	4	7	1	4	4	7	7	1	4	4	4	4	4	7	7	4	4	1	4	1	96
IP8	Political instability in the countries/region	7	7	4	7	1	4	1	4	4	7	7	1	4	4	7	4	4	1	7	4	1	1	4	4	99
Financial barriers																										
F1	Low level of national funds for ICT research & development	7	7	4	7	4	7	1	4	7	7	7	7	7	4	7	7	7	7	7	7	7	4	1	7	141
F2	Absence of defined national financial support policy for participating in FP projects (and preparatory events).	4	7	4	4	4	1	1	4	4	4	4	4	4	7	7	4	4	4	7	1	4	4	7	4	102
F3	Lack of investments from the business sector in R&D.	1	1	4	4	7	7	4	4	1	4	7	1	4	1	4	4	4	7	7	7	1	4	4	4	96
F4	Lack of financial incentives for collaboration between universities and businesses.	1	4	4	4	7	4	1	4	1	7	7	4	4	4	7	4	4	7	7	4	1	4	4	4	102
F5	Different financial rules among research organisations and those stipulated by FP projects.	4	4	4	1	4	4	1	1	4	4	7	1	4	4	7	1	4	4	7	1	4	4	4	1	84
Education / Academic sector barriers																										
E1	Lack of high-level willingness by academic leadership to engage in FP projects	7	7	4	4	4	4	1	4	7	4	7	4	7	4	7	4	7	4	7	4	4	4	4	4	117
E2	Low motivation for students who could be involved in FP projects	4	4	4	1	4	4	1	1	4	7	7	1	4	4	7	1	4	7	7	1	4	4	4	1	90
E3	Lack of specialized ICT professors	4	4	4	4	4	7	1	4	4	4	7	1	4	7	7	4	4	7	7	4	4	4	4	4	108
E4	Lack of ICT PHD studies and programmes	4	7	4	7	4	7	1	4	4	4	7	1	4	4	7	7	4	7	7	4	4	4	4	7	117
E5	Education system not in line with needs of ICT industry	4	4	4	7	4	7	1	4	4	4	7	7	7	4	7	4	4	7	7	7	1	4	4	7	120
Human Resource barriers																										
HR1	Skilled ICT researchers leaving the country (brain drain).	7	1	1	7	4	4	1	7	7	4	1	4	7	4	1	7	7	7	7	4	4	4	4	7	111
HR2	Weak networks/contacts among researchers and R&D organisations within the region and with Europe.	7	4	4	7	7	4	7	7	7	4	7	7	7	4	7	7	7	7	7	7	7	4	7	4	147
HR3	Lack of professionals to support FP proposal writing and project management	7	7	7	4	7	7	7	4	7	7	7	4	7	4	7	7	7	7	7	4	7	4	7	4	147
ICT business sector related barriers																										
B1	ICT private companies (not recognized officially as R&D organizations) are not eligible for national funding.	1	4	1	7	7	4	1	4	4	4	7	4	4	1	7	7	1	4	7	4	1	4	4	4	96
B2	Limited ICT research in the business community / private sector.	1	4	1	4	7	4	1	4	1	4	7	4	1	4	7	4	1	7	7	4	1	1	4	4	87
B3	Insufficient collaboration between the ICT industry and universities.	4	4	7	4	4	7	1	7	4	4	7	4	4	4	7	4	4	7	7	7	4	4	4	7	120
Infrastructure barriers																										
INF1	Insufficient ICT research infrastructure	1	1	1	1	1	4	1	1	1	4	7	1	4	4	1	4	1	4	7	1	4	4	4	4	66
Cultural & other barriers																										
C1	Insufficient demand for ICT Research & Development	7	4	4	4	7	7	4	4	4	4	4	1	7	4	4	4	7	7	4	1	7	4	4	4	111
C2	Lack of familiarity with FP and other funding programs.	4	4	1	4	4	4	1	4	4	4	7	4	4	4	1	4	4	7	7	4	4	4	4	4	96
C3	ICT R&D projects, after being completed, disappear without producing a real impact.	4	7	4	4	4	4	1	4	4	4	7	4	4	4	4	4	4	1	7	4	4	1	4	4	96
C4	Low appreciation of international cooperation in R&D	4	4	4	4	4	4	1	4	4	7	7	1	4	4	4	4	4	4	7	1	4	4	4	4	96
C5	Low international reputation of the "scientific image" of countries.	7	7	7	1	7	1	1	4	7	4	7	1	7	4	7	4	7	7	7	1	7	4	4	4	117
C6	Lack of information and statistics on R&D activities	7	1	1	1	7	1	1	1	7	1	1	4	7	1	1	4	7	1	1	1	7	4	1	4	72

Table 4 – Mapping of barriers to regional ICT R&D priorities
 (Legend: 7 indicates High impact, 4 indicates Medium impact, 1 indicates Low impact of a barrier per each R&D priority;
 AL: Albania ; FYROM: Former Yugoslav Republic of Macedonia ; BH: Bosnia-Herzegovina; SR: Serbia)

Impact of barriers and mirror recommendations

- **Highest impact by HUMAN RESOURCES**, attention should be given to:
 - the weak research networks between the region and the EU
 - >> Recommendation is to develop improved processes for partner search facilities in the region and the development of a regional comprehensive database of ICT research actors to be managed at regional level and constantly updated.
 - and the lack of professionals to support FP proposal writing and project management
 - >> Recommendation is not only to train on project proposal development and management but also to create awareness on the importance of R&D managers within organisations and the encouragement of WB researchers to act as evaluators of FP proposal.
- Important barrier perceived is also the **LOW LEVEL OF NATIONAL FUNDS FOR ICT** (extra funds for project preparation, for covering overheads) that is related also to the „lack of defined government policy for R&D in ICT“ (medium- high impact in all countries)
 - >> Policy makers in the WBC should be encouraged to define specific policies for ICT R&D and to run open consultation during this process and accompany them with the appropriate budget allocation.

Impact of barriers and mirror recommendations

- The **LOW COLLABORATION between the ICT industry and universities** (linked to the barriers „education system not in line with needs of ICT industry“, „lack of ICT phd studies and programmes“, „lack of high level willingness of the academic leadership to engage in FP projects“ have a medium-to-high impact in all priorities
 - >> There is the need to to develop an industry –university co-operation mentality through specific national programmes and appropriate legal framework, to consult also the ICT businesses in the development of the academic curricula, to develop state- of- the-art IT courses at all levels of education.
- The last barrier with medium-to-high impact is **the INTERNATIONAL REPUTATION of the scientific image of WBC.**
 - >> There is the recommendation to effectively promote the region’s R&D strengths and achievements across Europe, as well as to provide support to participation of ICT researchers in relevant event taking place in the EU and to co-organise conferences, events in the region. The development of sustainable contacts and cooperation.

HOW THE EU CAN ENHANCE R&D COLLABORATION WITH THE WESTERN BALKAN COUNTRIES: SOME RECOMMENDATIONS

Recommendation	Justification
<p>Targeted regional calls should be retained for key/common Western Balkan ICT research priorities.</p>	<p>In previous FP6 calls, targeted objectives for the region enabled Western Balkan organisations to participate more successfully. ICT experts in all countries mentioned that the same approach should be retained in future FP calls</p>
<p>Targeted calls should focus on application-oriented priorities.</p>	<p>The results of the consultations reveal the need for research in specific ICT application areas and in particular in eGovernment, eBusiness and eLearning.</p>
<p>Apart from targeted calls on regional priorities, there should be support actions for other (EU) priorities that are underdeveloped in the region.</p>	<p>Overall, the EU should encourage the participation of more Western Balkan partners in horizontal non-targeted objectives so that they can obtain know-how on state-of-art research carried out at a pan-European level.</p>
<p>Inclusion of R&D priorities in the next work-programmes that reflect the actual needs and R&D capacities of the Western Balkan countries.</p>	<p>R&D priorities and objectives well-reflecting the needs and capacities of the region can help in better mobilizing the participation of actors from the Western Balkan Countries.</p>

HOW THE EU CAN ENHANCE R&D COLLABORATION WITH THE WESTERN BALKAN COUNTRIES: SOME RECOMMENDATIONS (*cont'd*)

Recommendation	Justification
<p>Support actions on FP7 procedures and proposal development are still considered important for the region, in order to assist research actors in the region to fully exploit FP7 opportunities.</p>	<p>Although a number of support actions have been completed in the region, there is still a need for support to organizations with regards to understanding the FP programme and procedures.</p>
<p>Future RTD projects should strongly encourage cooperation between academia and business in applied research.</p>	<p>Although this is a fundamental principle of FP, it could be further encouraged by determining for example a minimum number of organizations representing academia and the private business sector.</p>
<p>Need for stricter evaluation and review procedures with regards to the sustainability and impact of ICT R&D projects (both at the proposal and project implementation phases).</p>	<p>ICT projects upon completion usually end in a vacuum. They have limited follow-up activity and results are seldom actually used either in further research or real-life application.</p>

Finally to conclude...

According to the studies conducted by WBC-INCONET and SCORE it is clear that the:

- **Pattern of barriers and Motivation to do research is similar for researchers of WBC and EU-MS but the perception and impact** of barriers are different in WBC and EU-MS
 - Same barrier makes international cooperation more difficult for WB researchers
- **Human resources** proved to be the most sensitive issue
- WBC researchers currently participate in international R&D cooperation to a significant smaller extent and this means that **policy measures aimed at building the CAPACITIES in the WBC to participate in FP initiatives are definitely necessary**, and its need is perceived in the WBC more than in the EU MS
- A proper policy mix of measures at both WB national level, WB regional level and at the level of the EC should be addressed.

Thank you for your attention!

**Register to www.wins-ict.eu
and to the ICT research actors database !**

For any further information:

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