



Feasibility study: “Best WBC Technology Innovation Competition”

Deliverable Number:	D8.58
Deliverable Nature:	R
Deliverable dissemination level:	PU
Workpackage Number:	WP 8
Workpackage Title:	Innovation Support
Task Number:	T8.3
Task Title:	Joint innovation activities in WBC (sub-task: Contribution to Innovation Dialogue in WBC)

Submission Date:	April 30, 2014
Task Leading Partner:	ZSI
Contributing Partners:	MPI, external experts

Document Revision History

Version	Date	Comment	Author
(1)	December 2013		Vojin Senk, Djuro Kutlaca
(2)	February 2014		Vojin Senk, Djuro Kutlaca
(3)	February 2014		Vojin Senk, Djuro Kutlaca
(4)	April 2014	QA	Athanasia Halatzouka, Nikos Zaharis
(5)	April 2014		Vojin Senk, Vesna Raskovic Depalov, Djuro Kutlaca
(6)	April 2014	QA	Athanasia Halatzouka, Nikos Zaharis, Ines Marinkovic
(7)	30. April 2014	Final version	Vojin Senk, Vesna Raskovic Depalov, Djuro Kutlaca

Executive Summary

This deliverable outlines the pilot-project ***Competition for Best Technology Innovation*** which has the objective to promote entrepreneurship and technology incorporation (as alternative to technology transfer) in the domain of high technologies, and gives assistance to potential and existing innovative entrepreneurs, who are willing and able to spill their own ideas and inventions onto the market to realize valuable innovations.

Connecting innovativity and entrepreneurship is a recipe for competitiveness of individuals, companies, universities, and the states themselves. Best technology innovation competition has been developed based exactly on this idea and the wish to promote entrepreneurial spirit among researchers, students, innovators, creative individuals, teams and companies, focused on those who would contribute towards transforming the economy of Serbia into a knowledge based one.

The experience gained in Serbia with this competition, lasting from 2005 without breaks, and being all the time modified based on observations of the outcomes, enabled the organizing team to gain evidence into strengths and weaknesses of the Serbian R&D sector, education system and entrepreneurial climate. This, in turn, has been transformed into best practice directions used by the Ministry of Education, Science and Technological Development.

The idea for internationalizing the competition stems directly from this outcome. It is an instrument to get insight into strengths and weaknesses of different systems, in order to have a direct measuring instrument for evaluating different innovation parameters in participating countries. These parameters include, among others: percentage of researchers involved in the innovative activities, percentage of successful innovations created by researchers, percentage of innovations resulting in technology incorporation (creation of new companies), percentage of innovations licensed to third parties, pervasiveness of entrepreneurial spirit among students, percentage of innovative individuals, teams and companies in a certain country. Based on these multidimensional variables, correlation of effectiveness of different system measures applied in different countries can be drawn using econometric tools. If this measure would be accepted, at the end of 2018 year observation period using the competition as a measuring tool, recommendations about which policies are to be implemented in which country could be issued.

The best technology innovation competition could be, therefore, used as tool for evaluation of the progress in creation of the national innovation system in Western Balkan countries, and instrument for benchmarking exercise in order to promote best practice in innovation support as well. This is another added value of the competition: besides promotion of the innovation culture and building of entrepreneurial capacities based on innovativeness, the competition could and will become part of the evaluation system in the monitoring of the effectiveness of public support in creation and functioning of the national innovation systems in WBC.

National competitions should give the overall picture about the innovation climate in each participating country. Common reviewing process and finals indicate differences between education systems, economic climate, cultural differences etc.

Second huge advantage is that larger quantity draws new quality. Here, amassing innovations from a larger audience enables investors, and particularly VCs to enter strongly into the process and thus give a significant impuls to the innovative process in the whole WBC region.

A third advantage is that, based on experiences obtained so far, the competitors do connect between themselves, and start planning common projects. In the case of internationalization of the competition, this process would yield connections between different markets, and thus enable larger success rate, new features of the products and services based on varied feedback etc.

The target group of the Competition includes researchers, students, innovators, creative individuals, teams and companies, who will contribute to transform the economic life of West Balkan countries to a knowledge-based economy.

The competition has several rounds. In the first round, submission of summary report via Internet is required. Those who pass the first round get expertise through training and consulting in how to create an innovative strategy altering the product / service / process / software so as to create or fit a market niche. The second round requires preparation of business or marketing model (depending on the category in which the team competes). Participants are assisted through more vocational training and other forms. Competitors who show the greatest progress have the opportunity to present their ideas publicly, first at an exhibition of the prototypes, and then in the semi-finals and finals. These last three rounds imply a public presentation before the jury, where the finals are transmitted nationally in a TV show.

Since 2005, the project **Best Technology Innovation Competition** in Serbia has achieved the following results:

- More than 80 technology incorporations in Serbia and Bosnia & Herzegovina. A more important result is the change in consciousness of the research sector on the one hand and business sector on the other hand about the needs and possibilities in the high-tech sector (3612 researches, innovators or companies were educated, 529 business plans, 176 market plans and 150 business models were written).
- The research community is fully aware of the competition, but unfortunately mostly unprepared for personal involvement. This is an area for improvement of activities from the side of the ministry in charge of research and innovation as financier of the research community, proposing conditions for involvement of the researchers in competition with results realized under R&D projects financed by this ministry. Since the criteria for advancement in the R&D area are, at the time being, being focused entirely on publishing papers in the journals from the SCI list, there is no incentive for the researchers to take any risk and start to commercialize their knowledge.

Innovative individuals and companies are exposed to technology paradigm as way of making business - possibility to license IPR from research institutions to companies, either existent or new. Experience shows that Technology transfer offices have little if any success, and that the costs of their maintenance are usually higher than the income they provide. On the other hand, Technology Incorporation, as introduced by the Silicon Valley example, shows tremendous earnings when newly developed IP is incorporated in a company whose founders have the tacit knowledge (know-how) needed to transform it into a marketable product. On the other hand, researchers are not born managers, and usually make errors during the growth period of the company.

Researchers should be enticed to try the entrepreneurial venture, in order to market their inventions. On the other hand, they should be aware that as soon as the new company takes off at a larger extent, they should engage a professional manager and slowly exit from the business with a profit. Their home institutions should participate in the profit as well, and should seek their sustainability through this process.

Therefore, project Competition for Best Technology Innovation is a way of introducing technology incorporation as successful entrepreneurial paradigm, and to measure the effects of this paradigm on the rate of successful applications of R&D expenditure in each participating country.

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1 Description of the measure: Technology incorporation

The pilot-project **Competition for Best WBC Technology Innovation** is based on Competition for Best Technology Innovation in Serbia that was initiated in 2005 by the Ministry of Science and Environmental Protection (now: Education, Science and Technological Development) of Serbia based on pilot competition conducted in 2003 at the Faculty of Engineering (aka Technical Sciences) of the University in Novi Sad for its staff and students. The success of this competition initiated proposal for a national competition to the Ministry. The cooperation between Ministry of Science and Technological Development of Serbia and the Ministry of Science and Technology of Republic Srpska started in 2007, and the competition runs in two countries from that date on.

The mission of the Competition for Best Technology Innovation states that it promotes innovative entrepreneurship and technology incorporation in Serbia in the domain of high technologies, and gives assistance to potential and existing entrepreneurs, who are willing and able to spill their own ideas and inventions onto the market to realize valuable innovations.

The most important pillar of this Competition is education of innovators in how to create market for their innovation. Results gained through the competition in Serbia till now are 75 established high-tech companies (not all of them report after the competition is finished), 3612 researches, innovators or companies educated, 529 business plans, 176 market plans and 51 business models written.

The target group of the Competition includes researchers, students, innovators, creative individuals, teams and companies, who will contribute to transform the economic life of Serbia to a knowledge-based economy.

The competition has several rounds. In the first round, submission of summary report via Internet is required. Those who pass the first round get expertise through training and consulting in how to create an innovative strategy altering the product / service / process / software so as to create or fit a market niche.

The second round requires preparation of business or marketing model (depending on the category in which the team competes). Participants are assisted through more vocational training and other forms.

Competitors who show the greatest progress have the opportunity to present their ideas publicly, first at an exhibition of the prototypes, and then in the semi-finals and finals. These last three rounds imply a public presentation before the jury, where the finals are transmitted nationally in a TV show.

During the competition, over three hundred reviewers evaluate applications, business and marketing plans.

Target group: potential and existing high-tech entrepreneurs.

The pilot-project **Competition for Best Technology Innovation** aims to:

- Promote Technology incorporation as a viable alternative to technology transfer,
- Promote the entrepreneurial climate based on innovation and
- Assist potential and existing high-tech entrepreneurs in getting to market.

Target group: creators of the national innovation systems in Western Balkan countries

The pilot-project **Competition for Best Technology Innovation** aims to:

- Provide an instrument to get insight into strengths and weaknesses of different systems, in order to have a direct measuring instrument for evaluating different innovation parameters in participating countries
- Enable use of econometric tools to detect correlation of effectiveness of different system measures applied in different countries and different innovation parameters.
- Provide recommendations about which policies are to be implemented in which country at the end of observation period (2018), using the competition as a measuring tool.
- Provide a tool for evaluation of the progress in creation of the national innovation system in Western Balkan countries, and instrument for benchmarking exercise in order to promote best practice in innovation support as well.
- Provide a tool for promotion of the innovation culture and building of entrepreneurial capacities based on innovativeness.
- Become part of the evaluation system in the monitoring of the effectiveness of public support in creation and functioning of the national innovation systems in WBC.

The project **Best Technology Innovation Competition** has achieved the following results so far:

- So far more than 80 technology incorporations in Serbia and Bosnia & Herzegovina. A more important result is the change in consciousness of the research sector on the one hand and business sector on the other hand about the needs and possibilities in the high-tech sector (3612 researches, innovators or companies were educated, 529 business plans, 176 market plans and 51 business models were written).
- It is good that the research community is fully aware of the competition, but unfortunately mostly unprepared for personal involvement. This is an area for improvement of activities from the side of the ministry in charge of research and innovation as financier of the research community, proposing conditions for involvement of the researchers in competition with results realized under R&D projects financed by this ministry. Since the criteria for advancement in the R&D area are, at the time being, being focused entirely on publishing papers in the journals from the SCI list, there is no incentive for the researchers to take any risk and start to commercialize their knowledge.

Expected impact:

It is expected that the results obtained in Serbia and Bosnia & Herzegovina will be rescaled to each participating country in accordance to its own population and technological level.

2 Development of the measure in country of origin

2.1 Implementing agency

Initiators of the Competition for Best Technology Innovation in Serbia are:

- Ministry of Science and Technological Development and
- Faculty of Engineering (aka Technical Sciences), Novi Sad

Implementer: Faculty of Engineering (aka Technical Sciences), University of Novi Sad.

University of Novi Sad has been creating sustainable ground for its innovative spin-offs since 1990ties. Professors/researchers are in active role of establishing companies upon their research. As a result, 97 spin offs are established at the University of Novi Sad, which produced 44.40 million Euros in 2011 and over 100 million Euros in 2013 (still unofficial till the end of May 2014). Predominately, these spin offs are in the ICT sector and come from the Faculty of Engineering.

First of these companies were established during the turbulent times of nineties (embargo, hyperinflation, etc.) or soon after. In order to be profitable in those times, they turned to ICT sector, since this sector requires low investments, renders income from day one, and in the long run yields scalable products, where effort made once can be turned into successful sales a large number of times.

Important role in their success has research process and knowledge-based innovations. In order to successfully place innovation onto the market, spin offs whose managers are engineers needed business knowledge and skills.

These spin offs have became benchmark for new researchers at University of Novi Sad and wider.

In order to stimulate others to create entrepreneurial ventures and ease their first innovative steps into business, a team of professors and assistants from Faculty of Engineering has started The Best Technology Innovation Competition (first at the University level in 2003, and later on at the national level since 2005).

2.2 Budget:

The Competition for Best Technology Innovation is funded by ministry in charge of S&T, (at the moment, as of February 2014, it is Ministry of Education, Science and Technological Development). Here is the estimated budget for Serbia realised in 2013.

Budget Competition for Best Technology Innovation Serbia						
No.	Activity / Item	Unit	Quantity	Price (EUR)	Item Costs	Activity Cost
1.	Promotion and communication					25,350.00 €
1.1.	Organizational team				13,350.00 €	

Budget Competition for Best Technology Innovation Serbia						
No.	Activity / Item	Unit	Quantity	Price (EUR)	Item Costs	Activity Cost
	PR staff	Fee	5.0	1,335.00 €	6,675.00 €	
	Communication with competitors	Fee	5.0	1,335.00 €	6,675.00 €	
1.2.	Fair, semifinals				5,000.00 €	
1.3.	Final event				5,000.00 €	
1.4.	Printing				2,000.00 €	
2.	Consulting and Training – Business Model for Innovative Business					9,435.00 €
2.1	Consulting in writing Business Model				1,335.00 €	
	Consultant	Fee	1.0	1,335.00 €	1,335.00 €	
2.2.					1,000.00 €	
	Trainer n.n.	Fee	4.0	250.00 €	1,000.00 €	
2.3.	Business model of innovative business – hypothesis and practical implementation				1,000.00 €	
	Trainer n.n.	Fee	4.0	250.00 €	1,000.00 €	
2.4.	Financial analysis of business model				1,000.00 €	
	Trainer	Fee	4.0	250.00 €	1,000.00 €	
2.5.	Training for trainers	Fee	3.0	500.00 €	1,500.00 €	
2.6.	Refreshments		12.0	300.00 €	3,600.00 €	
3.	Web portal				10,000.00 €	10,000.00 €
4.	Reviewing process					15,340.00 €
4.1.	Organizational team	Fee	4.0	1,335.00 €	5,340.00 €	
4.2.	Reviewers				10,000.00 €	
5.	Management		8.0	1,335.00 €	10,680.00 €	10,680.00 €
6.	Travelling costs		0.0	- €	3,000.00 €	3,000.00 €
7	Overhead				4,000.00 €	4,000.00 €
					Sum	75,805.00 €
8	Awards				50,000.00 €	50,000.00 €

2.2.1 Administration of the measure

The measure is to be administered in each participant country independently according to a common template, whereas the overall reviewing process is to be coordinated at the Faculty of Engineering (aka Technical Sciences), Novi Sad.

2.2.2 Financing the implementation of the measure

Since daily income in each participant country is different, financing in each country should comply with the local daily/monthly rate. Monthly rate for Serbia is 1335 EUR overall. Training the trainers is 500 EUR per training day, including preparation of material in English and delivering trainings. Trainings for participants are 250 EUR per day.

2.3 Human resources

2.3.1 Management

Coordination of the entire project Best Technology Innovation in Serbia has been lead by Vojin Šenk, professor at the University of Novi Sad, Serbia since 2003

Besides of his original interest in Communication and Signal Processing Engineering, prof. Šenk has developed an expertise in the field of high-tech entrepreneurship, and especially in the area of Science & Technology Parks and the link between innovatively based on research and development and start up and growth of new companies.

Vojin Šenk is/was: coordinator a Technology based project "Strategy of Implementation of Innovation Centres in Serbia" for the Ministry of Science, Technology and Development of Serbia, 2001-2002; Coordinator a Tempus JEP project "Science Parks - Organizational Framework", 2002-2004; Coordinator of NOSIC (Novi Sad Incubation Centre) project, with Prof. Miroslav Despotović, funded by GTZ, 2003-2004; Coordinator of the "Best Technology Innovation" Competition in Serbia organization committee since 2005; For the Serbian Ministry of Science, and Environmental Protection coordinator of the Feasibility Study preparation and evaluation for future Science & Technology Parks, Technology Incubators and similar institutions in Serbia (2005-2007); Coordinator of PETITHA (Promoting Entrepreneurial Thinking in the High-Tech Area), a project financed by European Agency for Reconstruction; Author of the ICT part of the Technological Development Strategy for AP Vojvodina (2007-2008); Part of the committee for preparation of the new law on Innovation Policy in Serbia; Coordinator of University of Novi Sad team as part of EEN (Enterprise Europe Network) since 2009; Co-founder of Konekta Konsalting, a consulting agency for high-tech entrepreneurs; Co-founder of two high-tech companies in the area of communication software development. President of the advisory board of Business Incubator Novi Sad and of the general assembly of the Vojvodina ICT Cluster.

2.3.2 Operational staff

Organization of the Best Technology Innovation Competition is carried by professional and highly skilled staff in domain of starting innovative technology incorporation. Most of them have PhDs in innovation business, finance, marketing, strategy etc.

Here is the list of the staff with their role in the project:

- Milica Mušicki, University of Novi Sad, administrative jobs, organization of reviewing process.
- Vesna Rašković Depalov, PhD, University of Novi Sad, organization of the trainings, consultant and trainer.
- Vladimir Nikić, University of Novi Sad, organization of communication process with competitors.
- Đuro Kutlača, PhD, Institute Mihajlo Pupin Belgrade, organization of the international part of the competition.
- Dragan Povrenović, PhD, University of Belgrade, organization of promotional campaign and the finals.
- Đorđe Čelić, University of Novi Sad, trainer.
- Dušan Dobromirov, PhD, University of Novi Sad, trainer.
- Jelena Borocki, PhD, University of Novi Sad, trainer.
- Viktorija Petrov, University of Novi Sad, trainer.

They share the same vision and innovative approach to target group. Group of trainers develops custom-made trainings to target group. They have interactive approach and provide

Serbian innovative start-up examples. Staff responsible for reviewing process develops own process of reviewing and keep it with the integrity. Staff responsible for communication and promotion has open and honest approach.

2.4 Users (beneficiaries, clients) of the measure

Main users of the Best Technology Innovation Competition are: Innovators, innovative entrepreneurs, researchers, students, and SMEs. Competition has valuable database of almost 4000 users. 2/3 of them is trained and has knowledge for defining novelty of their innovation; for creating business plan/model upon its innovations; for creating minimum valuable product; for understanding customer voice, etc.

- Innovative start ups learn on domestic examples and can foresee future challenges but also have inspiration and motivation for its business
- Inventors learn how it is doable to have own company and work on putting innovative product on market. They also see how important it is business part of innovation
- Researchers learn how to earn money on their knowledge (invention) and how it is possible to be scientist and businessman at the same time
- Professors use domestic examples and inspire students for future business life
- Students learn what works in domestic environment and can compare with foreign examples. They also learn on SMEs stories which can help them to understand challenges from the start up to leader position.

Secondary users are creators of innovation policies in West Balkan countries. They can use the competition as an evaluation tool, as described above.

2.5 Procedure for implementation:

2.5.1 Public calls, ToR (Term of Reference) for would-be applicants

All competitors are obliged to be registered thorough on-line procedure on the official web site of the competition: <http://www.inovacija.org/index.php/sr-rs/>

Conditions and rules for registration and for competition are defined for appropriate sort of competitors and for year of competition on the official web site of the competition: <http://www.inovacija.org/index.php/sr-rs/>

2.5.2 Criteria for selection

Major criteria for evaluation of the innovation registered for Competition are:

- Economic impact,
- Novelty,
- Growth potential,
- Social impact.

Each round has its own set of criteria for selection and accordingly reviewer/judging forms. The Best Technology Innovation Competition has developed set of:

- Criteria for selection: 5 forms for each round of the Competition
- Reviewing forms: 2 forms for first and second round which are anonymous
- Judging forms: 3 forms for third, fourth and fifth round of the Competition

- Business model form: 1 form for the second round of the Competition
- Instruction guide: 1 form for the second round of the Competition.

For the purpose of the WBC-INCO.net project additional criteria should be defined:

- Potential for connecting WBC countries in the later stages of the competition.

2.5.3 Procedures for selection

In the first round of the Competition, each team that applied for the Competition has to fill in *Application form*. This Application form, developed by the training staff, has several questions regarding technology, market, management, IPR and finance. Teams are also familiar with the *Reviewers form* upon they will be marked. This Reviewing form has two parts, first for judging the innovation and second one, for judging itself (business and technology expertise).

In the second round of the Competition, each team receives *Business model form*, which they have to fill in accordance with instruction received during trainings, consulting and *Instruction guide*. These Business model form and Instruction guide are developed by the training staff. Reviewers receive three business models and have to decide which two of them are the best.

In the third round of the Competition, each team has to present technology part of the innovation in one minute and to answer questions in total 4 minutes. Teams are also familiar with the *Judgers form* upon they will be marked. This Judgers form, developed by the training staff and staff responsible for the reviewing process, has questions for judging novelty part of each innovation.

In the fourth round of the Competition, each team has to present its innovative business in 10 minutes and to answer questions in total 10 minutes. Teams are also familiar with the *Judgers form* upon they will be marked. This Judgers form, developed by the training staff and staff responsible for the reviewing process, has questions for judging business part of each innovation.

In the fifth round of the Competition, each team has in total 4 minutes to answer questions of the judges. Teams are also familiar with the *Judgers form* upon they will be marked. This Judgers form, developed by the training staff and staff responsible for the reviewing process, has questions for judging each innovation in total.

2.5.4 Awarding of applicants

Each country will determine the national award budget. Overall winners across WBC are to be determined after negotiations with the grant scheme financing the overall competition. In Serbia, award budget was 50,000 EUR in 2013.

2.5.5 Procedure for complaints

Since the reviewing process is anonymous, and the deadlines for proceeding to the next round are tight, the competitors agree by signing electronically the initial application to renounce to the right to complain. Experience teaches that every rejected applicant complains otherwise, and that, since reviewers are anonymous and have signed NDA regarding the submitted material, there can be no advance if complaints are allowed. On the other hand, the organization of the reviewing process is transparent as much as possible keeping the identity of the competitors and reviewers anonymous to each other, and is guaranteed impartial. Errors of judgement can always happen, but the system is optimized

regarding the impartiality not against occasional errors in judgement (which, btw, are a strictly subjective category and cannot be deemed as errors in the strict sense).

2.6 Monitoring of implementation of measure

2.6.1 Reporting

Regular reporting consisting of realised activities and financial statements should be provided to financing authority according to national rules.

2.6.2 Interim evaluation of the implementation of the measure

Main obstacle for sustainable continuation of the Best Technology Competition in Serbia is status of the competition within MSTD's annual programme of activities and budgeting. The recommendation is to define appropriate managerial as well as financial scheme which could allow sustainability and continuation joined with adequate monitoring and assessment of effectiveness and performance of the competition. The same will be valid for all other participants.

2.7 Evaluation of the measure

The project Best Technology Competition is one of the most attractive approaches of government towards promotion of innovation culture and technology incorporation.

The measure of the Best Technology Innovation Competition (number of technology incorporation) has been administrated in following ways:

- During the whole year of the Competition through consulting and training support
- After the Competition through company visit, questioner, EEN activities, web portal, official data such as Public Enterprise Registry etc.

The target group of the Competition has been supported in different stages of putting invention onto market and in different ways during the whole process of the Competition in order to incorporate their technology.

Established enterprises and help provided to entrepreneurs represent positive ex-post evaluation. This positive evaluation is recommendation for itself.

2.7.1 Ex-post evaluation of the results

More than 80 start ups stemming from the existing Serbian competition, and more than 300 successful businesses whose innovations were demonstrated during the first 9 years of the competition in Serbia are a proof of the utility of the scheme.

Teams gained all necessary information about novelty of innovation, how to observe the market differently, and find customers for their innovation, how to reach, understand and listen their customers, and develop the best way of market entrance (training objectives,

content and methodology is in Program of the training). Teams were trained to make strategy for their innovative business with special attention on business model. Teams were informed how to perceive how successfully they can operate over a certain period of time, how much money they need to have constantly engaged in current business, how to make operational decisions related to cash flow management, how to define a point of return for their innovative business, and how to perceive their financial position (training objectives, content and methodology is in Program of the training).

2.7.2 Cost-benefit analysis

Annual budget in Serbia is around 100,000 EUR (organization and awards included, for entire period), yielding about 10 new innovative SMEs per year and about 30 new jobs in them and 100 new jobs in the already existing companies participating in the competition. Conservatively, the investment per new job is under 10,000 EUR, and nearer to 1000 EUR, which is hardly attained by any other governmental scheme.

2.7.3 Impact evaluation

The project **Best Technology Innovation Competition** has achieved the following results so far:

- So far more than 80 new enterprises started in Serbia and Bosnia & Herzegovina. A more important result is the change in consciousness of the research sector on the one hand and business sector on the other hand about the needs and possibilities in the high-tech sector.
- It is good that the research community is most aware of the competition, but unfortunately most unprepared for personal involvement as well. This is area for improvement of activities from the side of the ministry in charge of research and innovation as financier of the research community, proposing conditions for involvement of the researchers in competition with results realized under R&D projects financed by this ministry.

2.8 Publication and dissemination of the information about implementation, results and impacts of the measure

All information about Competition, including communication with participant is achieved through the official web portal: <http://www.inovacija.org/>

The Best Technology Innovation Competition promotes innovative business of its clients during and after finishing the Competition, disseminates information about implementation of the Competition as well as results and impacts of the Competition through:

- Local and national media TV and radio (in fourth and fifth round)
- Local and national media TV and radio (after finishing the Competition)
- Social network (in fifth round and after finishing the Competition)
- Local, national and international conferences (after finishing the Competition)
- Case study book (after finishing the Competition)
- Local, national and scientific papers (after finishing the Competition), etc.

3 Setting-up of measure in WBC - proposed structures:

Regional Competition for the WBC Best Technology Innovation [WBC BTIC] (web based competition)

Regional Competition for the WBC Best Technology Innovation will raise awareness of innovation importance as a base of competition advantages especially in small countries, and technology incorporation as a proof of innovation success in business sense, among public funds, ministries charged with innovation activity, researchers, students, innovators, and SMEs.

Regional Competition will be organised by FE-UNS, completely as web based, from registration of competitors, evaluation of innovation, and all communication.

Trainings of competitors will be organised by partners in each WBC in their languages. FE-UNS will organise training for trainers in the area of business model writing, market research, intellectual property protection and the like, in order to establish a common framework for the competition, not to pretend that those themes are unknown to partners.

Partners from WBC will be responsible for selection of evaluators and management of competition until final round.

Final round of competition will be organised as a public event. Winners from each WBC or first two will be competitors, depending on the number of participating countries.

3.1 Organisational structure(s) of implementing agency

Responsible partner for Regional Competition for the WBC Best Technology Innovation [WBC BTIC] will be Faculty of Engineering, University of Novi Sad (FE-UNS), Serbia.

Participating partners from WBC-INCO.NET and/or experts: Existing partners from WB countries.

Faculty of Engineering will be responsible for following tasks:

- Regional level:
 - Web portal administration (WBC countries' languages and English)
 - Registration of the competitors from WBC countries
 - Communication with the competitors from WBC countries regarding web portal
 - Evaluation of the innovation from WBC countries and announcement of the results
 - Provision of the evaluation forms (Criteria for selection: 5 forms for each round of the Competition; Reviewing forms: 2 forms for first and second round which are anonymous; Judging forms: 3 forms for third, fourth and fifth round of the Competition; Business model form: 1 form for the second round of the Competition; Instruction guide: 1 form for the second round of the Competition)
 - Train the trainers

- Training development
- Management of the regional competition and final round
- Reporting
- National level:
 - Promotion of the Competition
 - Finding of the teams with innovation
 - Training of national teams
 - Consulting of national teams
 - Management of the Competition
 - National award budget.
- Participating partners from WBC-INCO.NET and/or experts will be responsible for following tasks on national level: Promotion of the Competition
- Finding teams with innovation
- Translation of the training materials
- Training of its national teams
- Consulting of its national teams
- Communication with its national teams regarding training organization/participations, etc.
- Selection of evaluators for third and fourth round
- Communication with Faculty of Engineering, University of Novi Sad
- Management of competition until final round
- National award budget
- Reporting.

3.2 Human resources

As described in 2.3.

3.2.1 Management

Coordination of the entire proposed project for Regional Competition for the WBC Best Technology Innovation will be lead by Vojin Šenk, professor at the University of Novi Sad, Serbia and Djuro Kutlaca, Institute Mihajlo Pupin Belgrade, Serbia.

Each WBC country will delegate up to two persons who will be responsible for managing the Competition on national level and organization of final round.

Coordinators (Vojin Šenk and Djuro Kutlaca) will be in communication with WBC country managers.

3.2.2 Operational staff

Responsible partner, Faculty of Engineering, University of Novi Sad, will have engage following staff for *regional implementation of the project*:

- Milica Mušicki, University of Novi Sad, administrative jobs, organization of reviewing process.
- Vesna Rašković Depalov, PhD, University of Novi Sad, organization of the trainings, and trainer.
- Vladimir Nikić, University of Novi Sad, organization of communication process with competitors.
- Đorđe Čelić, University of Novi Sad, trainer.
- Dušan Dobromirov, PhD, University of Novi Sad, trainer.

Here is the list of the staff with their role in the project on *national level*:

- Milica Mušicki, University of Novi Sad, administrative jobs, organization of reviewing process.
- Vesna Rašković Depalov, PhD, University of Novi Sad, organization of the trainings, consultant and trainer.
- Vladimir Nikić, University of Novi Sad, organization of communication process with competitors.
- Dragan Povrenović, PhD, University of Belgrade, organization of promotional campaign and the finals.
- Đorđe Čelić, University of Novi Sad, trainer.
- Dušan Dobromirov, PhD, University of Novi Sad, trainer.
- Jelena Borocki, PhD, University of Novi Sad, trainer.
- Viktorija Petrov, University of Novi Sad

Participating partners from WBC-INCO.NET will provide its staff for each part of the Competition.

3.3 Possible users of the measure

Main users of the Regional Competition for the WBC Best Technology Innovation will be: innovators, innovative entrepreneurs, researchers, students, and SMEs. It will be important to raise awareness of innovation importance as a base of competition advantages especially in small countries, and technology incorporation as a proof of innovation success in business sense, among public funds, ministries charged with innovation activity, researchers, students, innovators, and SMEs.

Secondary users will be the creators of innovation policies across West Balkan Countries.

3.4 Procedures for implementation of the measure:

3.4.1 Public calls

All competitors from WBC countries are obliged to be registered through on-line procedure on the official web site of the Competition: <http://www.inovacija.org/index.php/sr-rs/>

Conditions and rules for registration and for Competition are defined for appropriate sort of competitors and for year of competition on the official web site of the competition: <http://www.inovacija.org/index.php/sr-rs/>

3.4.2 Selection and awarding of users

Major criteria for evaluation of the innovation registered for Regional Competition for the WBC Best Technology Innovation are:

- Economic impact,
- Novelty,
- Growth potential,
- Social impact.
- Potential for connecting WBC countries in the later stages of the competition.

The first five rounds of selection are organized on the national level. Web application will be central, using the software tool already implemented at www.inovacija.org, and used in Serbia since 2005.

In the first round, evaluation of initial applications must be conducted using 16-20 different parameters defined within broad set of criteria listed within 2.5.2. Sorting the list of

competitors should be made according to parameters, and passing as much applicants as the budget allows.

In the second round, business models must be submitted after a set of trainings, and compared to each other (selection by comparison of three applications and elimination of the most week one).

In the third round, an exhibition should be organized where 12 best innovations could be selected. The stress here is on the functionality of the prototype.

In the fourth round, two semi-final groups should be formed, each with six participants, and each yielding three finalists.

National finals should be organized for six best innovations per participating country.

WBC finals should be organized for as many innovations as there are participating countries.

Each country will determine the national award budget. Overall winners across WBC are to be determined after negotiations with the grant scheme financing the overall competition. In Serbia, award budget was 50,000 EUR in 2013.

3.4.3 Monitoring of the implementation of the measure

Regular reporting consisting of realised activities and financial statements should be provided to financing authority according to national rules.

The recommendation is to define appropriate managerial as well as financial scheme which could allow sustainability and continuation joined with adequate monitoring and assessment of effectiveness and performance of the competition. The same will be valid for all other participants.

3.4.4 Evaluation of the realisation of the measure

The Competition so far was constricted to Serbia, and was thus conducted in Serbian language. Naturally, the competition in each participating country should be organized in their respective languages. One of the recommendations could be that at least in some part the materials should be in English. For example the awarded finalists should have presentations of their innovations in English and also the website of the whole contest should have its translation in English as well as the national languages of participating countries.

During the competition phase and specifically the presentation of innovations the awarding committee consists of competent researchers and of business people as well, contributing with additional expertise in every stage of the competition. With additional competency both technically and commercially, the inventors and innovators are brought closer to the market with their new ideas and pilot products.

The competition and specifically the award event might need more targeted promotion. The final event is always broadcasted on national TV at prime time. The award event should be held with the presence of the business society. At one point of the competition phase measures or events might be organized to enable a closer presence of innovations and inventors to potential investors or users/buyers of inventions. A special presentation to this group of investors is recommended.

3.4.5 Publicity of the implementation, results of the measure

All information about Regional Competition for the WBC Best Technology Innovation is achieved through the official web portal: <http://www.inovacija.org/>

The Regional Competition for the WBC Best Technology Innovation will promote innovative business of its clients during and after finishing the national/regional Competition, will disseminate information about implementation of the national/regional Competition as well as results and impacts of the national/regional Competition through:

- Local and national media TV and radio (in fourth and fifth round)
- Local and national media TV and radio (after finishing the Competition)
- Social network (in fifth round and after finishing the Competition)
- Local, national and international conferences (after finishing the Competition), etc.

It is expected that the results of the Regional Competition for the WBC Best Technology Innovation obtained in Serbia and Bosnia & Herzegovina will be rescaled to each participating country in accordance to its own population and technological level.

3.5 Budget

Estimated costs based on foreseen expenditures (person days per partner involved, travel costs for partners/experts, fees?, catering, logistics, printing ...):

- €50.000 for award
- €26.180 for project realisation – work of FE-UNS:
 - a. 1.3 Organisation of final events – fair, semi-finals and finals, as public event, competition between best innovations from participating WBC.
 - b. 2.5 Organisation of trainings for trainers,
 - c. 3. Web portal
 - d. 5. Organisation of web based competition,

In addition, every partner from WB countries must be responsible for organisation of trainings for competitors within country. This must be financed by their respective country sources (ministries). Here is the estimated budget for Serbia in 2013.

Budget Competition for Best Technology Innovation Serbia						
No.	Activity / Item	Unit	Quantity	Price (EUR)	Item Costs	Activity Cost
1.	Promotion and communication					25,350.00 €
1.1.	Organizational team				13,350.00 €	
	PR staff	Fee	5.0	1,335.00 €	6,675.00 €	
	Communication with competitors	Fee	5.0	1,335.00 €	6,675.00 €	
1.2.	Fair, semifinals				5,000.00 €	
1.3.	Final event				5,000.00 €	
1.4.	Printing				2,000.00 €	
2.	Consulting and Training – Business Model for Innovative Business					9,435.00 €
2.1	Consulting in writing Business Model				1,335.00 €	
	Consultant	Fee	1.0	1,335.00 €	1,335.00 €	
2.2.	Innovation understanding: innovator vs. customer view				1,000.00 €	
	Trainer n.n.	Fee	4.0	250.00 €	1,000.00 €	
2.3.	Business model of innovative business – hypothesis and practical implementation				1,000.00 €	
	Trainer n.n.	Fee	4.0	250.00 €	1,000.00 €	
2.4.	Financial analysis of business model				1,000.00 €	

Budget Competition for Best Technology Innovation Serbia						
No.	Activity / Item	Unit	Quantity	Price (EUR)	Item Costs	Activity Cost
	Trainer	Fee	4.0	250.00 €	1,000.00 €	
2.5.	Training for trainers	Fee	3.0	500.00 €	1,500.00 €	
2.6.	Refreshments		12.0	300.00 €	3,600.00 €	
3.	Web portal				10,000.00 €	10,000.00 €
4.	Reviewing process					15,340.00 €
4.1.	Organizational team	Fee	4.0	1,335.00 €	5,340.00 €	
4.2.	Reviewers				10,000.00 €	
5.	Management		8.0	1,335.00 €	10,680.00 €	10,680.00 €
6.	Travelling costs		0.0	- €	3,000.00 €	3,000.00 €
7	Overhead				4,000.00 €	4,000.00 €
					Sum	75,805.00 €
8	Awards				50,000.00 €	50,000.00 €

3.5.1 Administration of the measure

The measure is to be administered in each participant country independently according to a common template, whereas the overall reviewing process is to be coordinated at the Faculty of Engineering (aka Technical Sciences), Novi Sad.

3.5.2 Financing the implementation of the measure

Since daily income in each participant country is different, financing in each country should comply with the local daily/monthly rate. Monthly rate for Serbia is 1335 EUR overall. Training the trainers is 500 EUR per training day, including preparation of material in English and delivering trainings. Trainings for participants is 250 EUR per day.

4 Possible barriers and obstacles in implementation of the measure in WBC

The lack of financial resources seems to be the greatest risk. The effects of the economic and financial global crisis are still evident, and the impact of the national economy and national budget are struggling to survive. Therefore, this risk must be considered as real and treated as potential obstacle.

Also, the lack of expert capacities in this field and demand for their services is another warning issue.