

## **Report of realized meetings at Universities in Serbia**

Given by Prof. Marjan Gusev on 4.10.2012

The meetings were planned in period of 1-3 October 2012 in the second part of the final year of the KNOWTS project. 4 Serbian Universities (University of Nis, University of Kraguevac, University of Belgrade and University of Novi Sad) were hosts as project partners and presented details about establishment of Technology Transfer Centers supported by the Universities.

The delegation present on all events consisted of Prof. Pedro Tomaz and Mr. Aleksandar Ilic from INESC and University of Lisbon, Portugal; Mr. Spike Tang from University of Alicante, Spain; Prof. Claudio Moraga, Germany as external expert; Prof. Katerina Georgulli from TEI Athens, Greece as external expert; Prof. Marjan Gusev from UKIM, Skopje, Macedonia as external expert; Prof. Teufik Tokic and Prof. Ivan Milentijevic from University of Nis, Serbia as representatives of the contractor.

### **Meeting in Belgrade**

The meeting in Belgrade was organized at University of Belgrade, Faculty of Electrical Engineering on 1 Oct 2012 at 11h. Prof. Zeljko Djurovic was the host of the University of Belgrade and introduced the distinguished hosts from the University of Belgrade and Faculty of Electrical Engineering. Prof. Kovacevic the former rector and now dean of Electrical Engineering Faculty gave the welcome message. Prof. Popovic was former dean and now vice-rector of the University of Belgrade also participated the event. Dr. Milosavljevic is appointed director of Center of Technology Transfer at University of Belgrade.

Prof. Milentijevic gave introductory note about the project and introduced the participants. 4 presentations were scheduled at the meeting.

Prof. Kovacevic gave presentation about University of Belgrade and their attitude towards technology transfer. The University has 90.000 students in 31 Faculties and 11 scientific research centers.

Prof. Popovic gave presentation of the Faculty of Electrical Engineering with accent on offered and realized programs. Currently there are 5 Tempus and 8 EU funded projects, 60 science and 200 industry projects.

Prof. Zeljko Djurovic presented several aspects of organization of science and research in Serbia. Ministry of Science was about to produce a platform of developing science in Serbia few years ago. The percentage is less than 0,3% of GDP. It is 10 times less than it should be. Typical EU average is 1,8% of GDP. However, the number of published papers in recognized and indexed journals increased.

Mrs. Gordana Danilovic Grkovic is manager of Business Technology Incubator and also acts complementary to the Technology Transfer Center. She gave a presentation about the center.

33 companies and 140 employees in these companies in 4 years in 600m<sup>2</sup> space. She highlighted mutual relations between TTC, BTI and future Technology park Zvezdara.

Problems faced: Lack of state systematic approach in a long term sense.

Good practices: Entrepreneurship is elective course, synergy started

Plan to create much larger number of companies at Zvezdara. The building is finished and expect to start soon, depending on government decisions.

Dr. Nedeljko Milosavljevic presented the Center of Technology Transfer. The first activity was IP policy approved in 2011. Donor conference was organized to present the center and fund Serbian enterprises. The project "from idea to license" was launched on December 2011 to award top ranked projects. 3 spin-out companies were created and 1 technology licensed to an existing company.

Prof. Kovacevic added that the Innovation center is working also at technical faculties.

Prof. Milentijevic commented that the knowledge transfer in Belgrade had problems and although started earlier it took them 2-3 years to start working with high capacity. He asked for explanation of sustainability measures.

Dr. Milosavljevic has commented that there is not enough support and that they are still fighting to solve initial problems. They expect that the projects initiated by the Center will enable sustainability.

All participants discussed implementation details for the TTC. The meeting finished at 13h.

## **Meeting in Novi Sad**

The meeting was held at University of Novi Sad, Faculty of Technical Sciences on 1 Oct 2012 at 17h. Prof. Veljko Malbasa was host and explained the nature of the Technical Sciences. He pointed that entrepreneurship is on high level. Two very successful companies were born and a lot of small companies up to 5 persons mostly in ICT. Formal approval of Technology Transfer Center is ongoing.

Maja Kondic is in charge of international projects and she will be in charge of TTC, as part-time employee. They expect to start with a new building. Office will serve the University and this faculty is most advanced in technology transfer. The faculty does not get any interest and do this job just to offer better opportunity for the students. There is an IT. They are planning some courses on entrepreneurship soon. There is no official TT center. For time being it is just a committee which acts as TTC and makes decisions.

Prof. Schenk and Prof. Ladislav Novak were present on the event. Prof. Schenk initiated course technology for Innovation. The first Tempus project in Serbia was the science park project initiated by prof. Schenk. He explained best practices and also worse practices. The goal was about courses how to transfer technology, and to write bizplan, how to spend money, how to promote, how to maintain quality. More than 150 companies were founded and worked in the science park. The university started 72 companies. However the idea about Technology Transfer Center did not work out and Prof. Schenk gave several reasons for not obtaining the sustainability conditions for it. TTC is one of the outcomes of Science park. The idea failed since

the people were not interested in local regulated offices and university did not give a lot of support. He also commented that now the situation is different, it goes with governmental support and it is easier to persuade students to use labs and expects good results.

Some worse experience – you can not make technology transfer by license, not like big companies, there is a belief that the University can not do it. For example, MIT can not cover the costs of licensing for last 50 years. The knowledge stays in company and can not be transferred. Therefore the professors should start with partial ownership in companies. The researcher should deliver to the company and it should start producing. The managerial skills are also needed to require results.

Prof. Milentijevic has explained the plan of next activities, mentioning the forthcoming meeting in Kraguevac and Nis, and also expectation of activities planned for the next 6 months.

The meeting finished at 19h after fruitful conversation about possibilities and conditions at University of Novi Sad to support activities for establishing TTC.

## **Meetings in Kraguevac**

The meeting was organized on 2<sup>nd</sup> Oct 2012 at 11h at Faculty of Engineering at University of Kraguevac. Prof. Dusan Gordic, vice dean of the Faculty was the host of the event.

Dr. Jasmina Milosavljevic gave presentation about city of Kraguevac and Faculty of Mechanical Engineering. 12 faculties are part of the University and only 7 are in Kraguevac. Faculty of Engineering is a new faculty accredited in 2011. There are 7 departments.

Prof. Dragan Milosavljevic, responsible for the Knowledge Transfer Office, will be open on University level and situated at the Faculty of Engineering. There are 11 labs and 24 research centers for scientific research. 65 researchers are classified in T1 to T7 level. In 2010 and 2011 approx. 67 papers were published per year. They have a lot of international projects funded by EU and also a lot of industrial related projects. Senate made decision to found the TTC office in Sept 2012.

Relationship between University and faculties is another huge problem. This was evident during the delivery of equipment for TTC office.

Prof. Milentijevic asked for models and rules for foundation of TTC. Prof. Milosavljevic explained that a set of rules was also proposed in the TTC initiation document.

Prof. Vesna Mandic, responsible for international projects. She explained how they plan to correlate business and science worlds. She works at two centers. They have also established collaboration training centers to give education about knowledge triangle and mechanisms to establish new technologies, products and services. She presented 7 new ways of regional model of University – enterprises cooperation. The first addresses establishment of science parks, and for example, 30 mil euros are dedicated by Serbian government for 4 science parks in Novi Sad, Belgrade, Kraguevac and Nis. Support is also given to 31 clusters and 8 technology transfer incubators on Serbian level. There is also initiative to establish consortiums and joint collaboration, like EU Cordis program. They have formed a network of vocational training centers in Serbia. The fifth proposal is establishment of virtual manufacturing network, where they have 170 documents on a common shared network. The last two programs refer to inter-

sector collaboration and industrial fellowship program. They have also established i3e wiki database of 120 good practices in transforming research into innovation.

The meeting finished at 13h with extensive discussion about possibilities and automotive industry triggering the need for technology transfer center.

## **Meeting in Nis**

The management meeting was organized in Nis on 3<sup>rd</sup> Oct 2012 at 10h at premises of Faculty of Electronic at University of Nis. Prof. Milentijevic was the host and addressed the audience with the agenda and explanation of relevant questions.

Prof. Milentijevic presented details from the self-evaluation report. The interim report was adopted in July 2011. He referred to the realized visits. Preparation for TTC in Nis were done in spring 2012, and the Belgrade TTC was upgraded. TTC in Novi Sad has appointed responsible person, purchased equipment.

Mr. Darko Tasic is appointed at University of Nis for the TTC Office.

Software support for TTC was developed by Prof. Ciric as a spin off idea in the project. It offers a single space as a database of available researchers and related topics. Software is tested and ready to be deployed. They plan to realize further trainings.

Prof. Gusev has recognized the noble idea and spin off idea and suggested if there is a possibility to upgrade the software to a cloud solution hosted on a single location and enable a unique system of categories and research areas, to be shared on regional, national and international level.

Prof Milentijevic referred to the process of creation of the National platform and difficulties to achieve it. Frequent organizational changes in governmental structures during the project life prolonged the creation of the National Platform for Knowledge Triangle. Intensifying the activities related to the National Platform consortium will completed the Platform. The work on draft version of the platform is still ongoing. 7 measures as discussed by Prof. Vesna Mandic and corresponding project were also covered in this platform. It is to be adopted by National Council for Higher education and National Council for Science and Technological development.

The project is officially terminating in January 2013, but the conclusions brought on previous meeting with the Tempus monitoring visits were to ask for 6 months prolongation in order to have better results of the project and better implementation achievements. These activities will not produce any financial requirements by EU.

The equipment purchase was realized by organizing relevant tender procedures and the equipment is delivered to all institutions.

Prof. Marjan Gusev and Prof. Claudio Moraga discussed a lot of details of implementation mainly concerning motivation and enabling necessary sustainability measures for long-term implementation of results. They gave several recommendations how to improve the visibility of results and how to improve the quality of achievements.

Some financial aspects were also presented and explained by the contractor. The meeting finished at 12h.

## ICT forum 2012

ICT forum 2012 is biannual event organized in Nis which gathered people from industry and academia in the region. A special session was dedicated for KNOWTS project starting from 14h. Several presentations were given for wider audience as part of the dissemination of results.

Dr. Nedeljko Milosavljevic has presented the experiences of introducing TTC in University of Belgrade. He addressed details of establishment, donor conference, realization the project “from idea to license”, and demonstrating the most successful projects.

Dr. Vladimir Ciric presented the realization of software to support the TTC. It allows establishment of information system about research activities., to gather data about users and potential areas.

Dr. Darko Tasic as TT Officer of TTC in Nis. He referred to steps undertaken to realize the project to establish the TTC, including office establishment, trainings via seminars, workshops, and preparation of legislation. The next steps are opening ceremony and promotion activities by presentations and marketing on TVs and other channels.

Prof. Claudio Moraga has presented a review on knowledge/ technology transfer. He commented the paradigm of “I need” and “I can”. The problem arises in matching. Another view on top of iceberg is treatment of pure and usable technologies, interfaces, support, legislation, patents etc. The aspect of research is one of the most important interactions between university and industry, along with technology transfer and education. Other interactions are also extension like the one between university and society and transfer back the knowledge from companies back to the universities. He referred to challenges of K/TTO like support the convergence of capabilities, developing perception of needs, and internal – external marketing.

Prof. Gusev has presented the role of University in knowledge transfer. He pointed out the relevant forms of knowledge transfer, and which are the activities required for it. The heart of knowledge transfer is the university, but it should not be the only actor. Industry is another player very important in all research activities. Several characteristics of research were analyzed in order to define applicable knowledge transfer that will produce innovation. Finally, Universities need to create a long term strategy for knowledge transfer including technology transfer offices, spin offs and start ups.

The session ended with fruitful discussion for all presentations at 16h.