



University of Niš

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**Improvement of Product Development Studies in Serbia And
Bosnia and Herzegovina**

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Tempus

Meeting of the Internal Project Management (IPM)

Activity date: 03rd, 04th and 05th of June 2013

Organizer: Karlsruhe Institute of Technology

Location: Institute for product Development, Karlsruhe Institute of Technology, Karlsruhe, Germany

Present: 10 participants out of 10 with voting rights

- UNI – Prof. Dr.-Ing. Vojislav Miltenović,
- UB – Prof. Dr.-Ing. Radivoje Mitrović,
- UNIKG – Doc. Dr.-Ing. Mirko Blagojević,
- UNS – Ass. Dipl.-Ing. Milan Rackov as a replacement of Prof. Dr.-Ing. Siniša Kuzmanović,
- UBL – Ass. Dr.-Ing. Milan Tica,
- UES – Doc. Dr.-Ing. Biljana Marković,
- SVEMO – Doc. Dr.-Ing. Adisa Vučina,
- TUS – Doc. Dr.-Ing. Angel Bacvarov as a replacement of Prof. Dr.-Ing. Stefan Stefanov,
- KIT – Dipl.-Ing. Norbert Burkardt,
- STU – Ing. Jana Gavačová as a replacement of Prof. Dr.-Ing. Miroslav Vereš

Other present participants from consortium members:

- UNI – Ass. Dipl.-Ing. Milan Banić,
- UB – Ass. Dipl.-Ing. Žarko Mišković
- KIT – Dipl.-Ing. Markus Blust.

Report:

The meeting was opened at 09:00 h on Monday, 03rd June 2013 by the Coordinator of the project Prof. Dr.-Ing. Vojislav Miltenović. The venue of the meeting was the Room 805 at Institute for product Development (IPEK) of the Karlsruhe Institute of Technology. Coordinator of the project passed the chairman position to meeting host Dipl.-Ing. Norbert Burkardt. Chairman opened the meeting, introduced participants with meeting Agenda, and invited presenter Dipl.-Ing. Milan Banić to present the first topic of the meeting – Regular project management.

Dipl.-Ing. Milan Banić thanked chairman, greeted participants and started with presentation about Regular project management. He informed the participants that the aim of his presentation is informing of Internal Project Management (IPM) committee about all realized project management activities since start of the project. In this regard, he presented performed activities and workplan from project proposal. Dipl.-Ing. Milan Banić explained in detail all workplan activities marked as finished, partially finished or not started and said that most of activities which are not started are connected with this meeting and will be started immediately after the meeting of the IPM. He reminded participants that there is some delay of realization of activities and explained reasons for deviation from plan. He informed the meeting participants that delay in project realisation is approximately two months. Also, he reminded all participants that communication between WP managers and team members from partner universities must be improved for successful realisation of the project. Presenter said that, because of deviation from the plan, Prof. Dr.-Ing. Vojislav Miltenović, as coordinator, revised the workplan. Dipl.-Ing. Milan Banić presented the revised work plan and gave additional explanation about activities in this plan. After that, Dipl.-Ing. Milan Banić informed participant about Revision 3 of Manual for contractual and financial management and presented the changes compared to the previous versions. He reminded all participants that they have to send reports to the coordinator and informed the participants that the report should be submitted till 31.10.2013. according to the activities realised till 01.10.2013. IPM will, based on coordinator recommendation, accept or reject the partner reports on the next meeting of IPM. Coordinator reminded the participants that the financing of partner institutions is depended on accepting of report. Presenter explained technical and financial reports in detail and gave additional explanation about project co-financing and finished the presentation. After that, chairman opened discussion. Present participants discussed about ways for improving of communication between the WP managers and teams for realisation of work packages as well as the reports regarding the realisation of activities and technical and financial report which should be submitted to coordinator. Doc. Dr.-Ing. Biljana Marković suggested that coordinator should make some examples of activity reports and forward it to project partners as a template. Coordinator explained that is not possible, because all participants begin their activities in same time, so, if this suggestion is accepted, there will be delay in realization of project activities which is not acceptable. However, he said that coordinator will gladly answer on all questions and give support in realization of activities and preparation of reports. Doc. Dr.-Ing. Biljana Marković agreed with that and said that if any participant has a problem, the whole project consortium should engage in overcoming of noted problem. After discussion, the chairman Dipl.-Ing. Norbert Burkardt closed the first meeting topic.

Meeting chairman suggested continuing of meeting with Topic 2. Dipl.-Ing. Banić presented the report of realization of activity WP 1.1. He notified the meeting participants that report was made by WP 1 manager Prof. Dr.-Ing Dušan Stamenković. Mr. Banić reminded participants that all project partners from PC performed survey of industrial enterprises based on template defined by University of Niš. The goal of the survey was to gather information about the state of the art in field of industrial product development as well as the required competences in the area of project focus. Mr. Banić emphasised that the first part of the survey, related to state of the art in field of industrial product development, is an addition to project proposal as it was necessary to determine why regional companies have a low competitiveness. Mr. Banić gave the number companies and explained structure of companies which participated in the survey. Afterwards, the main subject topics of the survey, as well as the survey results related to enterprises product development strategy and innovation activities were discussed. Based on results, meeting participants concluded that survey results are devastating, and some of reasons why companies in Serbia do not have innovations can be identified from the survey results. Meeting participants concluded that survey defines next activities which are necessary for improvement of regional industry competitiveness. In order to define those activities it is necessary to perform deeper analysis of survey results, although it was not planed under the project proposal. Meeting participant agreed that coordinator should make a report in which he will analyse the survey results regarding the state of the art in field of industrial product development. The results of the analysis will be used to improve cooperation between PC universities and regional industrial enterprises. Afterwards, Mr. Banić presented survey results regarding the required competences and learning outcomes of curriculums in field of Management of Product Development & Innovations management, Eco-product development and Industrial Product Development. From the results it was

evident that technical knowledge is more valued in regional enterprises than management and methodical knowledge. Furthermore, competences in economics and legal knowledge are completely neglected. Dipl.-Ing. Milan Banić said that there is a significant difference between companies in relation with their size and presented differences of results. After the presentation, participants discussed about results and conclusions from survey and how that will have an effect on project realisation. During discussion it is emphasised that regional industry is not aware of importance of competences in field of It is suggested that, based on answers from questionnaires, some kind of statistics could be done. Mr. Banić reminded participants that all partners, before final report, have to send representative answered questionnaires. The questionnaires have to be, according to partner's judgment, selected based on two criteria – size and area of operation of company. Dipl.-Ing. Norbert Burkardt emphasized that is very important to identify companies which are appropriate for broader survey analysis. Because there were no further questions, chairman closed the discussion.

Dipl.-Ing. Norbert Burkardt as meeting chairman suggested continuing of meeting with Topic 3. Dipl.-Ing. Banić presented the report of realization of activity WP 1.2. He notified the meeting participants that report was made by WP 1 manager Prof. Dr.-Ing Dušan Stamenković. Dipl.-Ing. Milan Banić presented the analysis of the state of curriculums in the PC countries and notified the participants that the final report will be available at end of June. After the short discussion the participants agreed that the final report will be reviewed by EU partners. The chairman closed the discussion.

Meeting chairman suggested continuing of meeting with the report about realisation of WP 4.1. Mr.-Ing. Milan Rackov, in the name of Prof. Dr.-Ing. Siniša Kuzmanović, gave presentation about analysis within the realization of WP 4.1. Analysis covered 21 colleges of applied science, most of them with mechanical engineering professional studies. He said that colleges are divided in 14 fields based on high school curriculum content and presented how they are divided with number of colleges by field. After that, he presented results of analysis for every college emphasising the subjects which are connected to Industrial Product Development. Mr. Rackov, also presented the basic information about subjects which are connected to Industrial Product Development. Chairman thanked on presentation and opened discussion. Dipl.-Ing. Milan Banić reminded what is goal of this WP and that professors from colleges will be trained to introduce formal product development education in different forms. He said this analysis is very important for realization of this WP, so next steps are to define required competences for appropriate level of studies, to make competences framework and to define curriculum of training course which will be also discussed. Also, Mr. Banić reminded present participants about deadline for realization of this WP. As there were no questions, chairman closed discussion.

Meeting chairman suggested, as the program for the first day of the meeting was finished earlier than planned, that the meeting should continue with the discussion about topics scheduled for the second day of the meeting. Furthermore, he notified the participants that the visit to the Robert Bosch GmbH in Bühl is moved to the morning of the next day so the meeting of the IPM will continue at the premises of Robert Bosch GmbH. Furthermore, meeting chairman announced a meeting brake during which a training of PC teachers will be held.

First part of the meeting concluded at 12:00 h.

The meeting was continued at 15:30 h on Monday, 03rd June 2013. The venue of the meeting was the Room 805 at Institute for product Development (IPEK) of the Karlsruhe Institute of Technology.

Meeting chairman introduced the discussion about the start of realisation of the activities WP 1.3: Development of structure and content of curriculum in field of Management of Product Development and Innovations management at master/specialist and doctoral level, WP 1.4: Development of structure and content of curriculum in field of Eco product development at master/specialist and doctoral level and WP 1.5: Modernisation of structure and content of curriculum in field of Industrial Product Development at master and doctoral level. The project coordinator Prof. Dr.-Ing. Vojislav Miltenović said that all partner universities must oblige which curriculums should be introduced or restructured during the project lifetime. Project coordinator emphasised that the decision

made on the meeting will be final for all PC universities. He also announced that due to accreditation process in Republic of Serbia some of the universities already performed introducing of new type of studies or modernisation of the existing curriculums. Prof. Dr.-Ing. Vojislav Miltenović said that the University of Nis will introduce a new master course in the field of Innovations management till the November of 2013. Furthermore, University of Niš will modernise the already existing studies in field of Industrial Product Development at basic, master and doctoral level also till the November of 2013. Prof. Miltenović emphasised that the plan of University of Niš is in accordance with project proposal. Prof. Dr.-Ing. Radivoje Mitrović as the representative of University of Belgrade said that University of Belgrade have already restructured studies at basic, master and doctoral level in field of Industrial Product Development. Prof. Mitrović explained that, as the accreditation is already finished, University of Belgrade will nor introduce new study programs which is in accordance with project proposal. Doc. Dr.-Ing. Mirko Blagojević as the representative of University of Kragujevac said that University of Kragujevac has already restructured studies at master and doctoral level in field of Industrial Product Development, which is in accordance with project proposal. Moreover the modernisation of the master programme was comprehensive so in practice new module at master studies was defined. Ass. Dipl.-Ing. Milan Rackov as the representative of University of Novi Sad said that University of Novi Sad has already restructured studies at master level in field of Industrial Product Development. According to the needs of University of Novi Sad the restructured master programme offers specialisation in field of development of agricultural and food processing machines. Furthermore, University of Novi Sad introduced a new master programme due to full modernisation of the existing curriculum in field of engineering management. Mr. Rackov emphasised that the performed activities of University of Novi Sad are in line with the project proposal. Doc. Dr.-Ing. Biljana Marković, as the representative of University of Eastern Sarajevo, said that they will modernise curriculum just for master level till October of 2013, which is in line with project proposal. Mrs. Marković said that there is a possibility for introducing doctoral studies in field of industrial product development during the project lifetime. Prof. Dr.-Ing. Adisa Vučina said that at University of Mostar there are study modules called Methodical design, Eco design and Product development. She suggested that University of Mostar will only perform a modernization of current studies at this University, which is in line with project proposal. Ass. Dr.-Ing. Milan Tica, as the representative of University of Banja Luka, said that the University of Banja Luka will introduce a new master course in the field of Eco product Development. Furthermore, University of Banja Luka will modernise the already existing studies in field of Industrial Product Development.

Chairman opened the discussion about the committed obligations of PC universities. Dipl.-Ing. Milan Banić said that it is very good that some universities already finished the realisation of activities. Participants discussed about defining standards for introducing product development education at PC universities, but they concluded that is not possible to do so due to differences between the project partners. Dipl.-Ing. Norbert Burkardt emphasised that the PC universities shouldn't just copy the EU study programs and that they must define a product development education that will correspond to specifics of each university involved. Meeting participants also discussed about what is necessary to prepare for IPM and PMC meeting in Novi Sad. They agreed that are student competences are very important and it is necessary to discuss about curriculum content, outcomes and national qualification. It is concluded that, at meeting in Novi Sad, there have to be a special topic named "What are outputs and outcomes of education in fields of project interest", with reports from PC universities about what is their opinion about outputs and outcomes for noted fields of studies. Dipl.-Ing. Norbert Burkardt said that is very interesting to get up information what PC universities think about competences and difference in teaching of product development at bachelor, master and doctoral studies. He reminded participants that is product development very important for industry. It is concluded that, at meeting in Novi Sad have to be one more topic named "What is Product Development at bachelor, master and doctoral studies". Coordinator will inform Prof. Dr.-Ing. Dušan Stamenković, as responsible person for realisation of WP 1, about defined topics for meeting in Novi Sad. Chairman thanked the participants and closed discussion.

Chairman opened the next topic of the meeting regarding the realisation of WP 2.3: Procurement of equipment, software and literature. Dipl.-Ing. Milan Banić gived an presentation about procurement of equipment. He reminded which equipment is allowed according to Tempus rules. Also,

he reminded participants about budget for equipment and that this activity has to be realized in five months because of tendering procedure. Also, he reminded participants to list of equipment with budget by every university, and said that every university has until 15th of July to change the procurement plan because of tendering procedure. Every change of procurement plan has to be justified to the coordinator with explanation Coordinator will pass the request to Project Officer who will make a final decision. It is not allowed to make significant changes, Also, he said that is not allowed to procure equipment which will affect to greater budget then determined one. Mr. Banić said that will be two tenders for both countries, Serbia and Bosnia and Herzegovina. All universities will have designated lots, so every university will pay his equipment to the lot supplier. By that, equipment becomes a property of the university which paid for the lot, which is requested by internal agreement between universities in Serbia, as well as in Bosnia and Herzegovina. He said that WP manager already started the preparation of tendering procedure and documentation, so until July, 15th, all universities have to send any change in procurement plan. Transferring of additional funds to PC universities will be performed in order to cover the procurement expenses when tender suppliers are chosen. Mr. Banić thanked participants on attention and realization of project activities. IPM members decided that University of Niš will be responsible for tender organisation in Serbia. They also decided that that University of Banja Luka will be responsible for tender organisation in Bosnia and Herzegovina. Chairman thanked Dipl.-Ing. Milan Banić at presentation and opened discussion. After short discussion about tendering procedure and delivering of equipment, chairman thanked participants and concluded the first day of the meeting of Internal Project Management.

The second part of the meeting concluded at 18:10 h.

The meeting was continued at 13:00 h on Tuesday, 04th June 2013. The venue of the meeting was the multimedia room at Robert Bosch GmbH in Bühl.

The meeting started with short presentation of PC universities to Robert Bosch GmbH management. After the presentations the meeting chairman, Dipl.-Ing. Norbert Burkardt opened the discussion about WP 3.1: Development of business and marketing plan for creating of network with regional industrial enterprises and WP 3.2: Development of structure and content of curriculums of continuous education courses. Doc. Dr.-Ing Mirko Blagojević as WP 3 manager presented in detail “Plan for Connecting Universities With Regional Companies”, which is essentially business and marketing plan for creating of network with regional industrial enterprises. The discussion was started by meeting chairman. All the participants of the meeting as well as managers of Robert Bosch GmbH participated in the discussion about the presented document as well as the curriculums which should be introduced. The staff of IPEK and managers of Robert Bosch GmbH gave many useful suggestions for improving of the business and marketing plan for creating of network with regional industrial enterprises. Moreover, possibilities for expanding of cooperation between the PC universities and WBC industry were discussed in detail. The following conclusions from the discussion were made:

- Trainings will be performed at UNIKG, UNS and SVEMO. The other locations are also possible and they will be defined according to toe industry request
- At least 100 participant should be trained during the project lifetime
- The three universities which are primarily responsible for training organization must gather at least 35 participants per university. Single participant can enroll multiple trainings.
- The primary target group are the engineers involved in product development as well as unemployed engineers from the labor market
- The curriculums must correspond to learning outcomes defined in “Plan for Connecting Universities With Regional Companies”. The learning outcomes were properly defined based on analysis performed in WP 1.1.
- UNIKG, UNS and SVEMO must organise the motivational workshops to gather training participants and improve the cooperation with the industry.
- The first motivational workshop will be held at UNS during the PMC meeting. The course curriculums should be introduced during this firs motivational workshop.
- The course curriculums should be defined till 15.09.2013.

The chairman thanked participants and concluded the second day of the meeting of Internal Project Management.

The third part of the meeting concluded at 17:00 h.

The meeting was continued at 11:30 h on Wednesday, 05th June 2013. The venue of the meeting was the Creativity centre at Institute for product Development (IPEK) of the Karlsruhe Institute of Technology.

During the meeting all the conclusions from the previous days were summarised. Furthermore, IPM precisely defined the responsibilities of all the project partners in the next six months of project realisation.

The fourth part of the meeting concluded at 13:00 h.