# III.3 LOGICAL FRAMEWORK MATRIX – LFM

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What is the overall broader objective, to which the project will contribute?

- To contribute to enhace capacity of HE institutions in the WBC region, in order to integrate fully the three sides of the knowledge triangle, in line with principles of renewed Lisbon agenda.
- To establish effective structures of collaboration between key actors of knowledge triangle throughout the WBC region
- To improve innovation potential and competitiveness of regional enterprises, especially SMEs on the global market

## **Indicators of progress:**

What are the key indicators related to the wider objective?

- Close interaction and cooperation between WBC universities and industry
- Number of contracts on businesstechnical cooperation increased
- Key actors for knowledge triangle are satisfied and motivated to cooperate
- Indicators of implementation of innovations in industry in WBC region

### How indicators will be measured:

What are the sources of information on these indicators?

- Annual university and faculty reports on scientific-research work, cooperation with industry, education
- Contracts with enterprises
- Questionaires and interwievs with key actors of knowledge triangle
- State statistics on innovations, export and economic growth

# Specific Project Objective/s:

What are the specific objectives, which the project shall achieve?

- 1. To set up and equip regional Collaborative Training Centers (CTC) in four WBC countries
- 2. To enlarge VMnet network throughout the WBC region
- 3. To develop, assess and implement new regional model for university-enterprise cooperation
- 4. To modernize and adjust vocational training programme to address the needs of small business and labour market
- 5. To provide students with opportunity to gain practical experience in industry
- 6. To raise awareness in the society about necessity of integration of the knowledge triangle for the region prosperity and to ensure quality dissemination of project results and ideas

### **Indicators of progress:**

What are the quantitative and qualitative indicators showing whether and to what extent the project's specific objectives are achieved?

- CTC Kragujevac, CTC Banja Luka, CTC Podgorica and CTC Rijeka are opeartional by Decembar 2009
- CTC staff are retrained and ready to support implementation of training, IFP and PPP programme by June 2010
- VMnet members and experts are well connected and informed about new trends in VM
- Qualitative assessment of new regional coopeartion model through interwievs (at least 200) of target groups
- Quality and number of vocational trainings have increased and more targeted to SME needs
- Students gained practical skills and increased their employability
- At least 40 measurable improvements have been achieved in WBC industry

### How indicators will be measured:

What are the sources of information that exist and can be collected? What are the methods required to get this information?

- Project progress reports
- Retraining completion reports
- VMnet statistics on site
- Project files and minutes
- Questionaries and interwievs
- Vocational training evaluation reports
- Number of employed graduates of engineering who passed PPP programme
- Enterprises calculations on improvements in innovation potential and business growth

# **Assumptions & risks:**

What are the factors and conditions not under the direct control of the project, which are necessary to achieve these objectives? What risks have to be considered?

- Public awareness campaign by local Governments impacts positively on integration of the knowledge triangle
- Acceleration of the process of the WBC integration in EU
- Stakeholders can effectively negotiate a consensus position on means of integration of the knowledge triangle
- Regional enterprises and SMEs mainly endorse Industrial Fellowship and Student Practical Placement programme
- Vocational training and knowledge transfer programme effectively support improved innovational potential and competitiveness of regional SMEs
- Political and economic instability in the region
- Lack of local institutional support

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# Outputs (tangible) and Outcomes (intangible):

Please provide the list of concrete outputs/outcomes leading to the specific objective/s, using bullet points, considering the following questions for their definition:

What are the envisaged quantifiable and nonquantifiable effects and benefits of the project? What improvements and changes will be produced by the project?

- 1. Four Collaborative Training Centres (CTC) are established and equipped in each partner country, whose staff are able to effectivelly perform In-Service-Training by June 2010
- 2. VMnet network is enlarged throughout the WBC region providing the enhanced collaboration between the leading players in the knowledge triangle
- 3. Model for university-enterprise cooperation developed in consultation with community members and EU partners and validated using up to case studies
- 4. Training/service needs identified and trainers/service providers selected and retrained, by May 2010
- 5. Programme of vocational training, industrial fellowship and student practical placement developed and carry out successfully throughout the WBC region
- 6. Dissemination
- 7. Sustainability
- 8. Quality control and monitoring
- 9. Management of the project

### **Indicators of progress:**

What are the indicators to measure whether and to what extent the project achieves the envisaged results and effects?

- Four WBC CTC have human and technical potential and capabilities to do effective training and knowledge transfer programme in the area of virtual product and process development by June 2010
- VMnet brings at least 10 new experts from multidisciplinary fields and 300 new members per year from WBC region (professors, reserachers, managers, engineers, entreprenaurs, SMEs, national and regional authorities, ministry staff and other stakeholders...)
- New regional model adopted, validated by at least three case studies in each of WBC, and carried out, leading to measurable improvements in universityenterprise cooperation
- Data for quality TSNA analysis collected through at least 400 interwievs of SMEs staff and representatives throughout WBC, and TSNA finished by December 2009
- At least 15 trainers and service providers selected and retrained by May 2010
- At least 10 new or modernized training courses and instruction material developed and redesigned simultanuoslly for e-learning on Moodle platform by September 2010
- At least 30 Industrial felowship programme realized in cooperation with industry by the end of project
- At least 100 students of engineering passed PPP programme in industry and improve their practical skills by the end of 2011
- Over then 15 dissemination and awarenes events performed during the whole project, with good impact on public at large

### How indicators will be measured:

What are the sources of information on these indicators?

- Council act on CTC foundation
- Equipment register
- New VMnet experts CV
- List of VMnet members sorted by affiliation
- Case study reports
- TSNA report
- Stakeholder interwievs
- Retraining and travel reports
- Training manuals
- Industrial felloship report
- Practical placement reports
- Vocationl training completion reports
- Training evaluation reports
- Information public and awareness reports
- Seminar reports
- Workshop reports
- Brokerage event reports
- Quality monitoring files
- Financial management records
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### **Assumptions & risks:**

What external factors and conditions must be realised to obtain the expected outcomes and results on schedule?

- Appropriately skilled and motivated staff of CTC are available and continue to work on the project after re-training
- Quality communication infrastructure is established with high-speed transfer (1Gbps) on academic network
- Recommended model of cooperation are acceptable and endorsed in a timely manner
- Limited selection of students and graduates with high-quality potential intereseted in IFP and PPP programme
- Uninterested management of enterprises and SMEs to fill out questionaries for TSNA analysis
- Local media support disseminationa activities and follow up project events

### **Activities:**

What are the key activities to be carried out and in what sequence in order to produce the expected results?

- 1.1Found and equip four CTC and define Action plan
- 1.2 Re-training for staff
- 1.3 Market and marketing activities
- 2.1 Develop collaborative web tools and communication strategy
- 2.2 Bring new VMnet members and experts for multidisciplinary approach
- 2.3 Update existing systematization knowledge e-base with new topics
- 3.1 Analyze the EU models for cooperation in the knowledge triangle
- 3.2 Develop, assess and adopt the new regional model of cooperation
- 3.3 Set up joint structure of SMEs
- 3.4 Case studies—benchmarking best practice
- 4.1 Training/service needs analysis (TSNA)
- 4.2 Selection and re-training of trainers and service providers
- 4.3 Quality monitoring of training/services
- 5.1 Develop and delivery vocational trainings for SME, unemployed graduates, non-university teachers and students
- 5.2 Develop and redesign instructional material for e-learning
- 5.3 Develop and conduct Industrial Fellowship Programme (IFP) for graduates and engineers from industry
- 5.4 Develop and conduct Practical Placement Programme (PPP) for students
- 6.1 Prepare Programme for public information, dissemination and raising awareness
- 6.2 Printing and publishing of brochures,

## **Inputs:**

What inputs are required to implement these activities, e.g. staff time, equipment, mobilities, publications etc.?

- 8 CTC academic staff; 4 CTC administrative staff; 4 EU academic staff; 2 Individual experts; 4 SME managers; 4 SME engineers, 2 REDASP staff; 4 SME administrative staff; 2 EU managers; 4 EU researchers; 10 expert-trainers; 4 service providers; 3 EU expert trainers, 2000 VMnet members.
- 40 teaching staff; 10 trainers trained; 400 Trainees; 4 CTC administrative staff trained; 100 students passed PPP programme, 15 graduates passed IFP programme.
- 60 flows of staff, expert-trainers, teachers, service providers and researchers from PC to EU for 6 days; 54 flows of staff and experts from EU to PC for 4 days; 8 flows of staff, expert-trainers and researchers from EU to EU for 3 days; 66 flows of staff/trainers from PC to other PC for 4 days; 152 flows of staff, teachers, trainers, service providers, managers, researchers within the same PC.
- 10 flows of Students (PPP) from PC to EU, for 1 month; 10 flows of Students from PC to PC institutions, for 1 month.
- Equipment: 35 PC computers, 2 servers, 6 Software for VM technologies, 3 Projectors, Laboratory CMM machine, Printer, 3D Printer, License maintenance
- Printed and published material: posters, leaflets, flyers, brochures, documents, reports, registration forms, manuals, electronic materials, marketing materials, teaching materials, monitoring reports, promotional materials, instructions, notebooks, folders, pans and bags
- In-kind contribution: Place, furniture,

### **Assumptions, risks and pre-conditions:**

What pre-conditions are required before the project starts? What conditions outside the project's direct control have to be present for the implementation of the planned activities?

- Efficient procedure of acquisition, VAT exemption and import of equipment and software
- Timely availability of human and technical resources
- Places are available at WBC universities for planned training events and dissemination activities
- Realization of financial transactions from EC, within deadline specified in the contract
- Competence of administrative staff for efficient project implementation
- Readiness, availability and the interest of target groups to participate in the project activities

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Application Forms; Tempus Joint Project – Deadline: 28/04/2008

leaflets and other material	telephone line, internet connection, places	
• 6.3 Information days and public	for organizing of seminars, workshops, and	
appearances	other disseminating events, etc.	
• 6.4 Organize three motivational seminars		
• 6.5 Organize three workshops		
• 6.6 Organize three brokerage events		
• 7.1 Institutional sustainability		
• 7.2 Financial sustainability		
• 8.1 Develop quality control and		
monitoring strategy		
• 8.2 Internal monitoring and interwievs of		
target groups		
• 8.3 External monitoring and inter-		
Tempus coaching		
• 9.1 Overall project management and		
administration		
• 9.2 Local management on the level of		
WBC partners		
• 9.3 Local management on the level of EU		
partners		