Kick off meeting

25th March 2009. Kragujevac

WBC-VMnet Project presentation

Prof. dr Vesna Mandić, Project Coordinator

This project has been funded with support from the European Commission

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Project presentation

Outline

- Project background
- Project CV – basic information
- Partners and external experts
- Strategic project objective
- Specific objectives / expected achievements
- Technical approach and methodology

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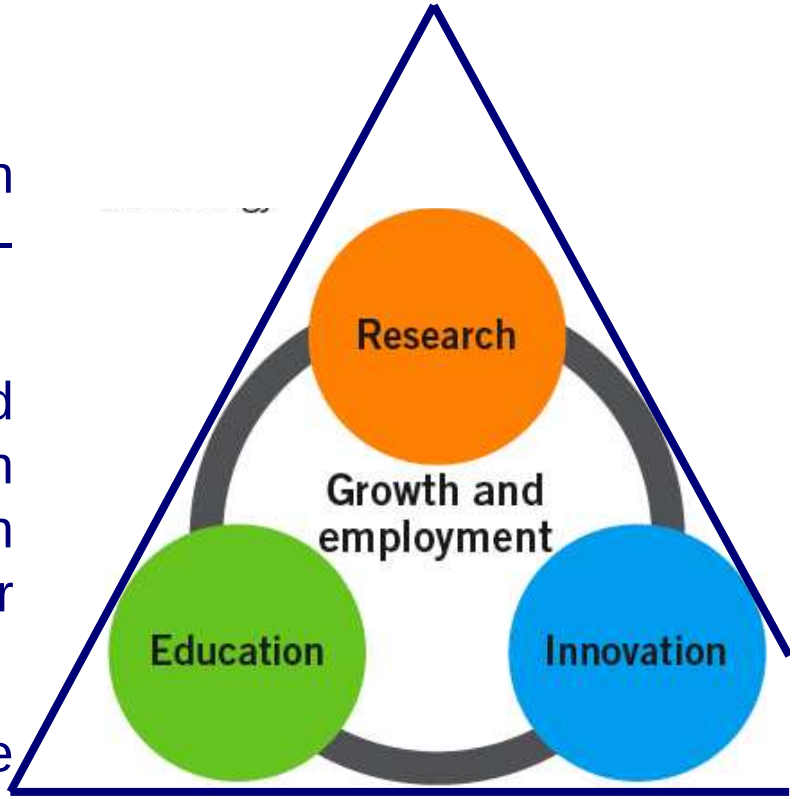
Project background - MOTIVATION

❖ The renewed **Lisbon agenda** aims to turn Europe into a modern, dynamic, outward-looking knowledge economy.

❖ Investment in education, research and innovation – **the knowledge triangle** - lies in the heart of successful economies, with higher rates of economic growth and higher levels of productivity.

❖ **The knowledge triangle** refers to the interaction between **research, education and innovation**, which are key drivers of a knowledge-based society



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Project background – MOTIVATION

❖ **Progress and the Knowledge Triangle in South Eastern Europe,** Janez POTOCNIK, European Commissioner for Science and Research, South Eastern European Forum and Ministerial Round Table, 1-3 July 2008, Budva, Montenegro

"None of the three sides of the knowledge triangle can stand alone. Excellence in research is impossible without quality in education, and research efforts are wasted – excellent or not - if they do not lead to the innovation that builds economies. "

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Project background – problems analysis

Problems and needs in the WBC region in the areas of Education, Research and Innovation

- University-enterprise cooperation
- Higher education and training for SMEs
- Innovation and competitiveness of enterprises

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Project background – problems analysis

University-enterprise cooperation

- The lack of effective linkages between knowledge institutions (HE and R&D) and industry;
- Universities find it difficult to attract social partners;
- There is little awareness of the mutual benefits of cooperation with industry;
- Actual cooperation between university and industry takes place mainly with large companies;
- Despite of the fact that Universities consider SMEs to be the most relevant and interested partners, cooperation with them is not so active and long-term.

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Project background – problems analysis

Higher education and training for SMEs

- Universities are focused on academic knowledge, insufficiently oriented towards professional practice and experience; there is lack of IT skills, entrepreneurial culture and customer focus;
- Employers are generally not involved in the definition of HE programmes;
- The rate at which individuals are engaged in lifelong learning is less then EU aver.
- State support for small business training is still limited to business startup, management and administration; there is little in-house or own-funded training efforts;
- Small business training needs analysis does not exist or is based on 'ad hoc' surveys only, without systematic collection of data;
- Quality assurance mechanisms for the training sector is significantly underdeveloped;

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Project background – problems analysis

Innovation and competitiveness of enterprises

- There is a low level of awareness of the concept of innovation and its role in economic growth and competitiveness among general public, policy-makers and many enterprises;
- Cooperation between universities and enterprises is generally at a very low level in terms of technology innovations and transfer; there are few support structures and platforms, and little dissemination of good practice for existing cooperation;
- Main barrier to the provision of services and trainings to enterprises and to more intensive knowledge and technology transfer is lack of finance.

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Project CV – basic information

Contract number	144684-TEMPUS-2008-RS-JPHES
Project acronym	WBC-VMnet
Project name	WBC Virtual Manufacturing Network – Fostering an Integration of the Knowledge Triangle
Project duration	January 2009 – January 2012
Programme	TEMPUS IV, DG for Education and Culture
Thematic priority	Higher education and society
Total cost of the project	720 370 €
Commission funding	673 370 €
Coordinator contact	Prof. dr Vesna Mandic
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Tempus Project University of Kragujevac
WBCVMnet
WBC Virtual Manufacturing Network
Fostering an Integration of the Knowledge Triangle

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Partners and external experts

Lead Partner	EU Universities	WBC Universities	EU R&D centres and institutes	WBC SMEs	Social partner
University of Kragujevac, RS	University of Padova, IT	University of Banja Luka, BIH	C3M d.o.o, SI	SCGM d.o.o, RS	Regional Economic Development Agency for Sumadija and Pomoravlje, RS
External experts		University of Montenegro, ME	Institute for Production Engineering, DK	Tri best d.o.o, BIH	
1. Mrs. Lana Hopkinson, UK 2. Prof.dr Goran Stojanovic, RS	University of Ljubljana, SI	University of Rijeka, HR		Elcon Geratebau d.o.o, HR Metalik d.o.o, ME	

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Strategic project objective

❖ Within the knowledge triangle of education, research and innovation in the area of virtual product and process development the proposed TEMPUS project is intended **to establish efficient and effective mechanisms and structures** of collaboration between key actors for the **knowledge triangle** throughout the WBC region – HE institutions, enterprises (especially SMEs), research and innovation centers, local and regional authorities.

❖ The project will contribute **to enhance and modernize HE capacity** in the area of virtual manufacturing technologies, as condition for success of renewed Lisbon strategy.

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Specific objectives

1. To set up and equip regional **Collaborative Training Centers** in four WBC countries
2. To enlarge **VMnet network** throughout the WBC region, bringing new experts and members of academia, research, business and governments
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.

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Technical approach and methodology

1. Development, assessment and implementation of the **new regional model of university-enterprise cooperation in the WBC region**, in consultation with community members and EU partners.
   - At least 20 EU models of university-enterprise cooperation will be analyzed, as the best practice examples
   - Development of the new regional model, with efficient mechanisms and structures for sustainable cooperation
   - Assessment of the model through case studies and benchmarking, with SMEs in consortium and others in the region, through application of Virtual Manufacturing Technologies in innovative product and process development
   - Dissemination of publication “The regional model for university-enterprise cooperation” (in English and local languages)
   - Establishment of joint structures of SMEs (for example Research-driven clusters…)

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Technical approach and methodology

2. Establishment of four **Collaborative Training Centers** in the WBC region, as the first collaborative mechanism:
   - CTC Kragujevac, RS
   - CTC Banja Luka, Bosnia and Herzegovina
   - CTC Rijeka, Croatia
   - CTC Podgorica, Montenegro
3. Purchasing equipment for CTC centres, for application of VM technologies, (specialized software, RP equipment, RE equipment, classroom equipment…)
4. A cycle of study visits to EU partners, aimed to retrain academic and administrative staff of CTCs (around 20 flows, for 12 persons)
5. Market and marketing activities.

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Technical approach and methodology

6. The second collaborative mechanisms will be the **enlarged VMnet network** throughout the WBC region, supported by communication tools on WEB portal.
7. The portal will provide well-timed information on all important events interesting for network members: conferences, workshops, seminars, trainings, project contests, the state of the art in the world, in the area of VM technologies, new products etc.
8. Updated **systematization of knowledge** will be available on WEB portal only to the registered VMnet members, as well as undergraduate students, within similar subjects of engineering study.
9. At least **300 new WBC-VMnet members and 5 new experts** per year, during the project implementation is planned.

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Technical approach and methodology

10. The **Training/service needs analysis** will be undertaken in the WBC region, during the first year, to identify enterprises' needs for advanced trainings and R&D services.
11. Also, survey will cover analysis of **labour market needs** for vocational trainings of unemployed graduates.
12. The final goal is to determine **knowledge and skills gaps**, **weaknesses and new competence** requirements in enterprises, and labour market.
13. PC partners will conduct competition and selection of national and regional **experts-trainers and service providers**,
14. Syllabuses for **vocational trainings** (at least 10) will be developed by experts-trainers, engaged by CTC by June 2010.
15. Teaching material for the developed vocational trainings will be redesigned and prepared for setting up at **MOODLE platform, supporting e-learning**.

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Technical approach and methodology

16. Development of **Industrial Fellowship Programme (IFP),** establishing sustainable partnerships between universities, enterprises and graduates.
17. Industrial fellows will serve as «gatekeeper» for knowledge and technology transfer from university to their enterprises and provide excellent communication channels between them.
18. Development of sustainable **Practical Placement Programme (PPP)** for students, providing them with the opportunity to gain practical experience in industry, and to further develop their professional, technical and interpersonal skills.

- **10** practical placements for 10 students from WBC to EU, for 1 month.
- **10** practical placements, for 10 students from PC to other PC
- **80** practical placements will be undertaken in domestic enterprises, SMEs and the companies.

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Technical approach and methodology

19. **Dissemination strategy** will ensure appropriate and the most effective communication and visibilty:

- ✓ Mailing lists (e-brochures, e-leaflets, e-mails on project progress);
- ✓ WBC Virtual Manufacturing Network
- ✓ WEB site of WBC-VMnet, the project, and CTC centres;
- ✓ Systematization of knowledge, available on WEB portal for registered members;
- ✓ At least 8 Informative days, 3 seminars, 3 workshops, 3 brokerage events;
- ✓ Meetings with policy-makers and key actors for the knowledge triangle;
- ✓ One-to-one (telephone or personal interview);
- ✓ Printed material (brochures, leaflets, reports, posters, banners…);
- ✓ Demonstration and Good practice reports (available on the web portal);
- ✓ Vocational trainings and e-learning material;
- ✓ Questionnaire

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Technical approach and methodology

20. **Monitoring and evaluation** will be undertaken through formalised procedure of monitoring, evaluation and documenting of all foreseen activities.

21. In the beginning of the project implementation **Quality Assurance Project Team (QAPT),** led by the Project Coordinator, will develop quality control and monitoring strategy defining all the necessary procedures for:

    1) Internal monitoring,
    2) External monitoring,
    3) Technical and financial intra-project reporting.

22. **Quality monitoring of vocational trainings, IFP and PPP** programme is planned in order to follow their quality and trainees improvement.

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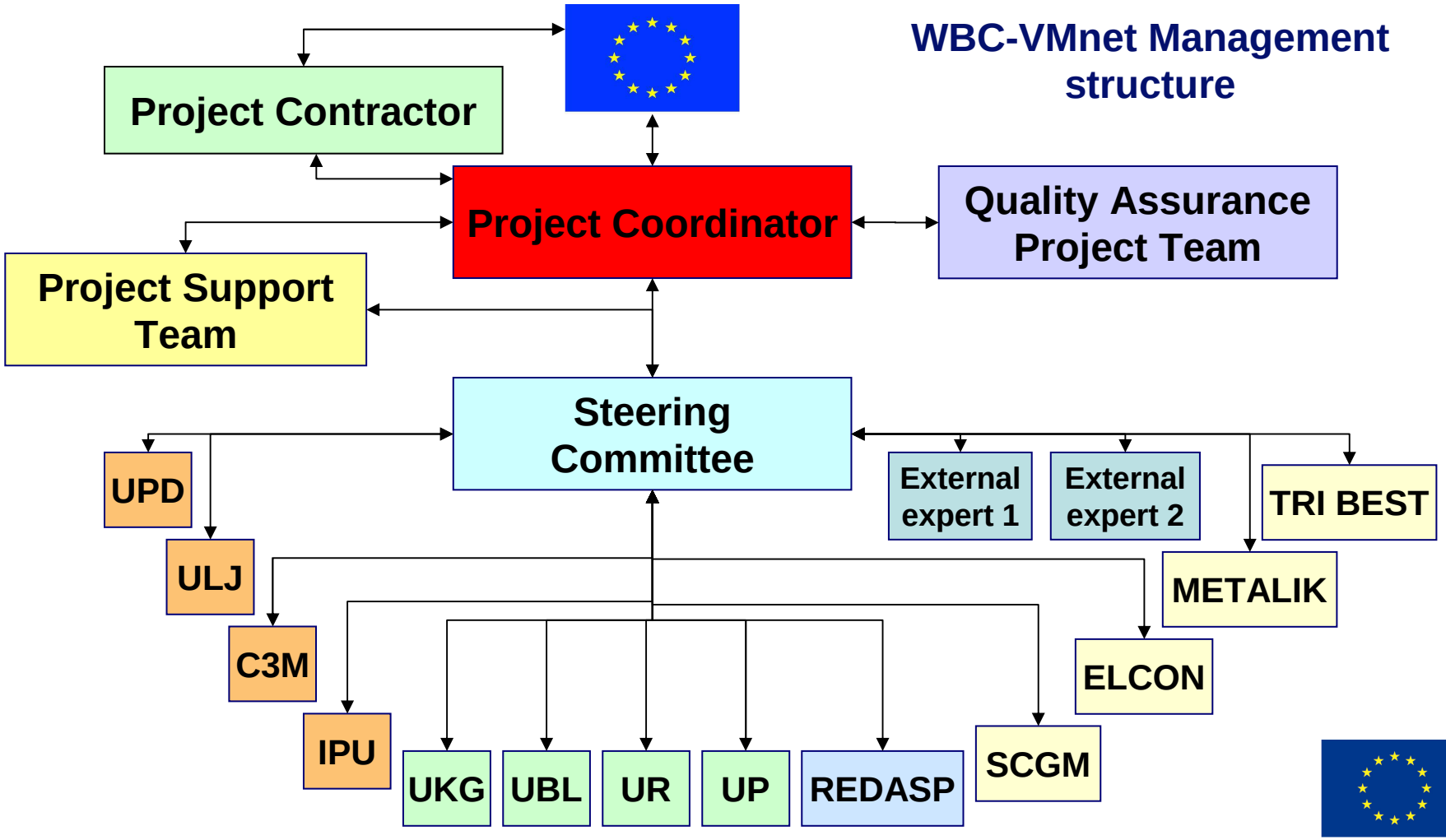
Technical approach and methodology



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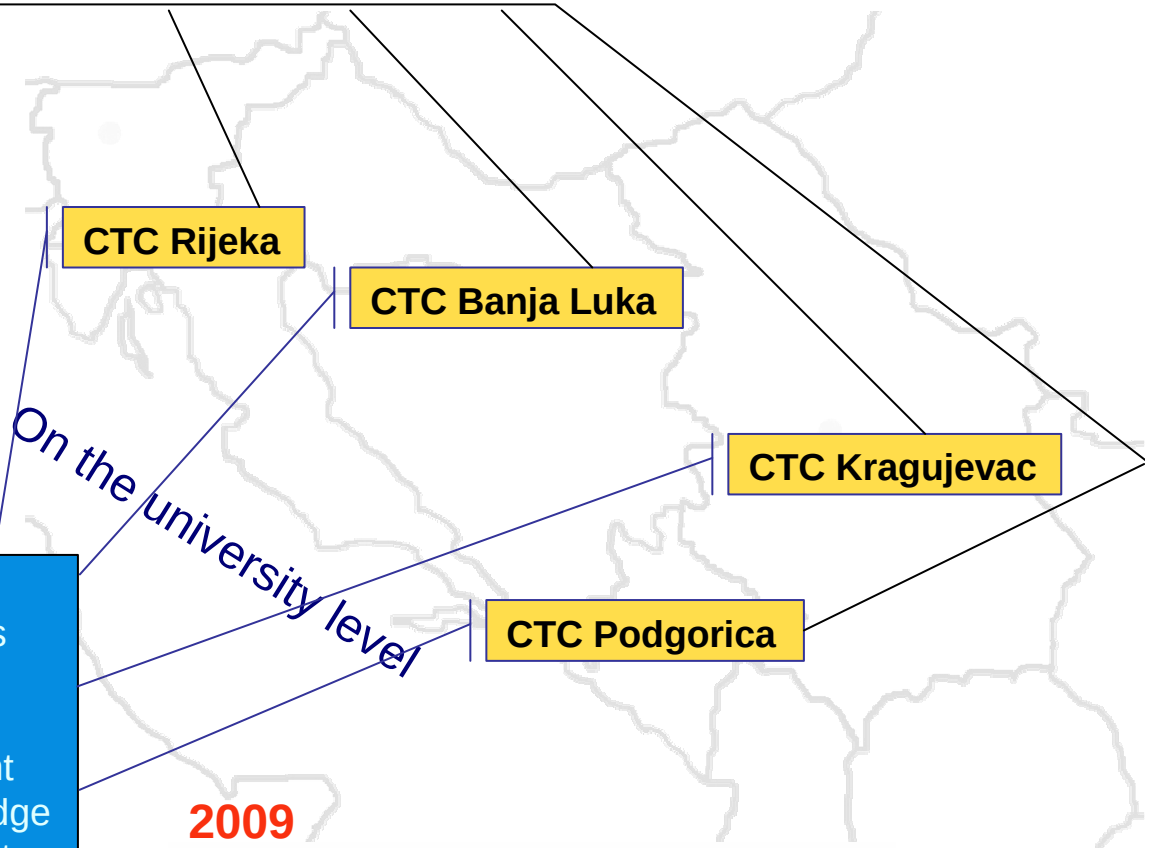
Expected achievements

2012

- New regional model of UNI-ENTRP.
- 1000 new VMnet members
- At least 15 new experts, trainers…
- +6 VM software, 4 new PC classrooms, RP and RE equipment
- Updated sistem. knowledge
- 5 new international projects
- 3 semin, 3 worksh, 3 brock. events
- 10 new vocational courses
- SME joint structure (cluster…)
- 30 Industrial fellowships
- 100 students past PPP programme



2008

- On the MFK level
- VMnet - 440 members
- 13 VM experts
- 6 VM software
- VR and QC equipment
- Systematized knowledge
- Reference list – 35 enter.
- 9 international projects
- Seminars, workshops…

2006

CeVIP CENTAR ZA VIRTUELNU PROIZVODNJU

2009

WBCVMnet

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Thank you for your attention

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