Tempus Success Story: International Sharing of Best Practices Workshop

Process of Developing an EU-Tempus Proposal and Implementing a Working Structure

24th of June 2011, Moscow (The Russian Federation)

Prof. Dr. Dr. h.c. Ulli Arnold (Grantholder)
Agenda


- Genesis of the Tempus Proposal „Advanced M.Sc. Program in Ecology for Volga-Caspian Basin“
- Networking consortium
- Strengths of the consortium partners
- Problem analysis
- Working Structure

Implementation of the Working Structure

- Project Impressions and Successful Activities
Genesis of the Tempus Proposal „Advanced M.Sc. Program in Ecology for Volga-Caspian Basin“

1997

Development of a new Tempus Project Idea „Environmental Management in the Volga-Region“

Tempus JEP 10356-97

2008

Preparation of a new Tempus Proposal „Environmental Management in the Volga-Region“

Dec 2009

Dec: Acceptance Notification by the European Commission
Creation of a new model of economic education through market-oriented curricula and related restructure of Saratov State Technical University’s Economic Faculty

### Outputs

1. New market-oriented curricula B.Sc. and M.Sc. degree programs in „Economics“
2. New specialisations
3. Restructure and development of fundamental new and existing courses of Economics
4. Cooperation between SSTU’s academic staff and EU consortium partners
5. Education of SSTU’s university teachers in economic areas (student mobility flows)
6. Dissemination Center of Excellence in Modern Market Knowledge

### Project Consortium

**European Consortium Members:**
- University of Stuttgart
- Maastricht University
- Lisbon University

**Russian Consortium Members:**
- Saratov State Technical University
Networking Consortium

European Consortium Members

EU1: USTUTT
  Prof. Arnold

EU2: UPC
  Prof. Romera
  Dr. Puiggermanal

EU3: WU
  Prof. Wilkomirski
  Dr. Suska-Malawska

EU4: Parma
  Dr. Maestri
  Dr. Malcevschi

Expert:
  Prof. Ribarovic

Russian Consortium Members

RU1: VSTU
  Prof. Navrotsky

RU2: SSTU
  Prof. Slepukhin

RU3: ASTU
  Prof. Kurylyov

RU4: SamSTU
  Prof. Yakubovich

RU5: KSTU
  Prof. Mingaleev
European Consortium Members

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Russian Consortium Members
Strengths of the Consortium Partners

**EU Partner**
- Stuttgart, Prof. Arnold
- Barcelona, Prof. Romera
- Warsaw, Prof. Wilkomirski
- Parma, Dr. Maestri
- Split, Prof. Ribarovic

**RU Partner**
- Volgograd, Prof. Navrotsky
- Saratov, Prof. Slepukhin
- Astrakhan, Prof. Kurylyov
- Samara, Prof. Yakubovich
- Kazan, Prof. Mingaleev

**Selection Criteria**
- reputation in the field of environmental management
- experiences in Tempus projects and other EU funded projects (e.g. 7th framework programme, Erasmus)
- international cooperations with other universities
- cooperations with enterprises
- geographical dispersion in the European Union → wide dissemination/impact
Problem Analysis

Modernizing the Russian Higher Education System

- federal law No. 232 (Oct. 24, 2007) 2-level B.Sc.-M.Sc. must be introduced since Sept. 1, 2010 in Russia
- universities must pay attention to experiences and demands of regional business
- new educational programmes should be based on achievements of the world science and engineering
- establishment of partnerships with EU area network

Ecological and Environmental Management

- continued worsening of environment state (air/water pollution, removal of waste,…)
- growing importance of interdisciplinary environmental management at Russian companies/organizations
- Volga-Caspian Region: waste treatment is urgently needed
Working Structure

- Clear focus/responsibilities
- Regular communication
- Engagement
  - conduction of activities
  - dissemination of achieved results
- Reliability of partners
Objective 1: To modernize curriculum for M. Sc. Courses in ecology on basis of the 3-cycle course system and on basis of the EU ECTS model to achieve course recognition within the consortium

Objective 2: to upgrade RU educational methodic (teaching methods and material) in ongoing (self)modernization according to the European experience

Objective 3: to overcome fragmentation of EU-RU HEI & RU HEI and enterprises through international collaboration between the consortium and enterprises by training highly qualified specialists for the interdisciplinary system of ecological management of the Volga-Caspian basin, i.e. students (employability) & employees of industrial enterprises

▷ Bologna-Process
▷ Methodology: Interdisciplinarity, eLearning, …
▷ Employability
▷ International Cooperation
▷ Dissemination
▷ Quality Control and Monitoring
### Working Structure: Outcomes of the Project

<table>
<thead>
<tr>
<th>Outcome 1:</th>
<th>Detailed analysis of specific Russian higher education institution situation and project expert team building</th>
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<tbody>
<tr>
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<td>Working Team, Survey, Brochure</td>
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<td>Outcome 2:</td>
<td>Development of the M. Sc. Program in Environmental Management</td>
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<td>Curricula Development, Seminars, National Legislation</td>
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<td>Outcome 3:</td>
<td>Teachers‘ skills, teaching materials and teaching methods upgrading</td>
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<td></td>
<td>Teachers‘ skills, Facilities, Brochure, Teachers‘ Seminar</td>
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<td>Outcome 4:</td>
<td>Course Teaching for Master students</td>
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<td>Outcome 5:</td>
<td>Dissemination</td>
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<td>Web-portal, Workshops, International Conference</td>
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<td>Outcome 6:</td>
<td>Sustainability</td>
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<td>Accrediation, Cooperation Agreements, Alumni Association</td>
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<td>Outcome 7:</td>
<td>Quality Control and Monitoring</td>
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<td>University Control, Inter-Tempus coaching, External evaluation</td>
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<td>Outcome 8:</td>
<td>Management of the Project</td>
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<td>Coordination Meeting, Reports, Representative Meeting Brussels</td>
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Implementation of Working Structure: Outcome 1

• Conference:
  Modernization of educational programs in Technical Universities in the Volga Region: Contribution of TEMPUS

• Workshops:
  Discussions and development of the brochure

Part 1 EU experience in teaching Waste
Part 2 Usage of advanced IT in teaching
Part 3 Local situation in teaching project related subjects
Part 5 Prospects for introduction of an environmental management M.Sc. at 5 RU universities
Implementation of Working Structure: M.Sc. Programme, Outcome 2

Basis for the M.Sc. Programme:

WASTE Air Quality Control, Solid Waste and Waste Water Process Engineering at University of Stuttgart

Module 1. Environmental science (RU2)
Module 2. Economic analysis and ecological management (RU5)
Module 3. Information Technology in environmental management (RU3)
Module 4. Environmental pollution and quality control (RU1)
Module 5. Technologies and methods of environmental protection (RU4)
Implementation of Working Structure: Selected Trainings, Outcome 2 and 3

Barcelona Training Session:
- Academic system of UPC
- technologies and methodological approaches in teaching at UPC
- Implementation of the principles and of the Bologna process

Stuttgart Training Session:
- WASTE study program in Stuttgart
- Environmental Issues of the Ministry of the Environment Baden-Württemberg
- Environmental challenges of German and international enterprises
- Inter-Tempus coaching with project managers at University of Hohenheim

Warsaw Training Session:
- visit of the experimental station „Mazur Lake“
- focus: recycling of different wastes
- adaption of 2-level system at University of Warsaw
Implementation of Working Structure: Dissemination Strategy, Outcome 5

**Stuttgart:** Publication in a German well-known newspaper ("Stuttgarter Zeitung") and university newsletter; regular inter-Tempus coaching with university of Hohenheim

**Parma:** Integrating a Tempus session during the "PHYTOTECHNOLOGIES – 7th International conference", (26-29th of September 2010)

**Saratov:** Publication of Tempus project’s events on website of the university; article publication in university brochure

**Astrakhan:** article publication in Astrakhan educational journal; presentation at the First International Caspian educational forum in October, 2010; presentations at administrative bodies of the Astrakhan region and in the Astrakhan Chamber of Commerce and Industry; presentation to auditors from DQS (Germany) – the body on certification of quality management systems – in the course of ASTU re-certification in December, 2010.

**Samara:** Regular publications about in the university’s newsletter.
Implementation of Working Structure: Project Management, Outcome 8

1st Coordination Meeting, Saratov:
- opening of the project
- discussion of financial rules
- discussion of detailed activity plan for coming months

2nd Coordination Meeting, Barcelona:
- focused on project current activities and first results
- introduction of the project quality control and monitoring

3rd Coordination Meeting, Samara
- focused on results of the project implementation and budget issues during 1st project year
- activities of 2nd project year (dissemination, quality control, sustainability)
- preparation of the Progress Report.