University Meets Industry: Calling in Real Stakeholders

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CSEE&T
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Motivation

Theory → Practice
Motivation: Case study based learning

- Formal education in RE provides knowledge
- How about the skills?
  - Application of knowledge
  - Communication
  - Team skills
  - Affective attributes
Motivation: Case study based learning & research

- Recruiters look more for soft skills [Hermann2013]
- Practicing in a “safe” learning environment
- Chance to perform research
Outline

- Study Design
- Study Implementation & Results
- Discussion
- Conclusion & Future Work
Learning Goals

Target Skills

Analysis
Abstraction
Phrasing
Creativity
Customer Focus
Communication
Method
Reflection
Study Design

Prepare
• Initial Lectures
• Team Building
• Stakeholder Presentation

Elicit & Analyze
• Brainstorming
• Interviews
• Workshops
• Modelling

Finalize
• Documentation
• Presentation
• Examination
## Study Implementation

<table>
<thead>
<tr>
<th>University</th>
<th>TU München</th>
<th>Univ. of Namur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible</td>
<td>Manfred Broy</td>
<td>Patrick Heymans</td>
</tr>
<tr>
<td>Designer</td>
<td>Birgit Penzenstadler</td>
<td>Martin Mahaux</td>
</tr>
<tr>
<td>Trainees</td>
<td>22 MSc students Software Engineering</td>
<td>18 MSc students, 50% Info Systems, 50% Mngmt Science</td>
</tr>
<tr>
<td>Time frame</td>
<td>28 lecture + 32 case study</td>
<td>4 lecture + 46 case study</td>
</tr>
<tr>
<td>Stakeholder</td>
<td>Project manager „DriveNow“ BMW</td>
<td>HR director UN, experts in mobility &amp; application design</td>
</tr>
<tr>
<td>Project</td>
<td>Case study for system already implemented</td>
<td>System possibly intended to be built</td>
</tr>
</tbody>
</table>
Implementation - Artefact Model for Requirements

How do you document requirements?

Have you ever done that?
Implementation - Tooling for Artefact Model

Scenarios

Cockburn-Template

Element Description
Allowing for creativity and autonomy means we need to allow mistakes. We need to give feedback so they learn from those mistakes.
Assessment & Lessons Learned

- Students
  - Feedback: good
  - Artifact quality: decent
  - Success rate: high
  - Competencies: improved

- Stakeholders
- Research
- Responsibility
- Effort & Costs
Assessment & Lessons Learned

- Students: successful
- Stakeholders
  - Positive feedback
  - Different objectives
- Research
  - Creativity: improv techniques
  - Sustainability requirements
- Responsibility: high motivation
- Effort & Costs: planning
Outline

- Study Design
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- Discussion
- Conclusion & Future Work
Discussion

- **Benefits**
  - Improved skills
  - Research

- **Drawbacks**
  - Close-to industrial setting
  - Availability of stakeholders
  - Different learning goals

- **Success Factors:**
  - Freedom
  - Feedback
  - Real problem
  - Teams
  - Fun

- **Validity:** no formal analysis
Conclusion & Future Work

- Repeat
- Copy
- Improve
- Report

Join in!