

WORK PACKAGE 5: Real Life Problem Solving

Deliverable 5.1

Introduction of Real Life Problem Solving process

Horst Haberhauer



The European Commission support for the production of this publication does not constitute endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Contents:

5.1.1 Introduction

5.1.2 Process discription

5.1.3 Modified process description material for cooperation companies

Appendix: Concept of Real Life Problem solving process

5.1.1 Introduction

This task means to introduce the process to other project partners. This was happen on the **kick-off meeting in November 2013 in Esslingen**. All the partners have got an overview about the process and the HEI's from Esslingen and Jyväskylä explained some facts about the scheduled **pilot project** between HE and JAMK in spring 2014. This pilot project was the model for the coming two implementations in autumn 2014, on which all project partners are involved.

The aim of this work package is

- to demonstrate a real life problem solving process for a wider audience
- to implement the process into everyday practice of partner HEI's
- to open doors to new versatile cooperation between HEI's and companies
- to make it possible for companies to utilize HEI's in solving their business challenges

5.1.2 Process description

The process will be executed in following steps:

1. There are two intensive weeks during the complete process. In intensive weeks the students have the possibility to work together as a project group to reach the aim of task. In the first intensive week the students have a kick-off meeting at the involved company, they have tailored lectures, make plans on how to organize the work, also between the intensive weeks, have a lot of group work, meetings with supervisors, presentations, etc.
2. During independent working weeks at home universities students contact each other and have project meetings (videoconferences, server, skype, emails, etc.)
3. One week before the end of project both groups return their final reports to company and supervisors.
4. The project finishes with a final oral presentation in the country of involved company. Students from the other country take part by videoconference.

The pilot Project (JAMK – HE)

Duration: 10.03. – 23.05.2014

Participants: JAMK: 8 students, 2 supervisors
HE: 8 students, 2 supervisors

Study fields: Mechanical Engineering, Automation, Mechatronics,
Engineering Management

Company: FESTO AG & Co. KG, Esslingen/Germany

Task: "Find simple and cost-efficient alternative solutions to
pneumatic drives"

Process:	12.-14.03.2014:	1 st intensive week, Esslingen/Germany
	CW 12-18	Project work at home Universities
	05.-09.05.2014:	2 nd intensive week Jyväskylä/Finland
	CW 20-21:	Project work at home University:
	16.05.2014:	Deadline for final report
	23.05.2014:	Final presentation
Evaluation:	1 st feedback after 1 st intensive week	
	2 nd feedback after 2 nd intensive week	
	3 rd feedback after final presentation	

The 1st intensive week was filled with necessary tasks for students like: Get to know each other, kick-off meeting at FESTO, tailored lectures and project work.

At the beginning of the 1st intensive week the students have split in two project groups (4 German and 4 Finnish in each group) by themselves. These two project groups have worked till the end of project in a competition. Both groups have had the same task to handle and the company will choose the winner of both groups after the final presentation.

Between both intensive weeks (CW 12-18) the students have worked at their home universities and have stayed in contact over videoconferences, emails, meetings, etc.

The 2nd intensive week was filled with a lot of time for project work to bring it to a termination.

One week after 2nd intensive week the project groups had to submit their final report to the company and supervisors per email.

One week later the final presentation had taken part at "Hochschule Esslingen". The students from Esslingen and Jyväskylä presented together the final presentation by videoconference.

For this presentation six representatives of FESTO took part and had had the opportunity to listen to and discuss the solutions. In addition all supervisors from Esslingen and Jyväskylä attended the final presentation and the following discussion.

The detailed evaluation was carried out in this pilot project to improve the quality, to develop the project and to ensure a good implementation in context of ReCPI (WP5).

The students have had the opportunity to access both intensive weeks in the form of rating scale questions and open questions.

On average the assessment of the whole project were extremely good. In the summary the students have liked the agenda of intensive weeks, the task, working with other students, to work in an intercultural and interdisciplinary way, the social and cultural events and the experience in general, etc.

Anyway for the **1st intensive week** there has been some criticism of the dissemination of information, the clarity of requirements and in the monitoring by the supervisors. Consequently the supervisors had the possibility to think about that and to make changes for the next intensive week and accordingly for the next project.

After **2nd intensive week** there have been some criticism regarding the presence and readiness of some group members, to the feedback from supervisors and the organization during the intensive week.

The last and **final survey** showed that there are some different ways of working between Finnish and German students. The project was a great industrial experience for students with a real life problem solving process. Also the social events found great approval by students. The criticism was that the work load was too big.

5.1.3 Modified process description material for cooperation companies

The process will be executed in following steps:

- Definition of leader university (where the project starts)
- Selection of company (comes from the country where the project starts)
- Definition of project task (university and company together)
- Selection of students
- Organization of intensive weeks
- Supervision of students during the whole project
- Evaluation of project result
- Selection of the winning solution

The concept of a real life problem solving project is defined in **appendix 1**.

The first intensive week takes always part in the country, where the company partner comes from. The reason for that is the students will take part in a kick-off-meeting at the company partners place to get more and detailed information about the project task. This should be logically happen at the beginning of the project.

D5.1.3 Appendix 1

Concept of Real life problem solving process

- **Cooperation Partners:**

- Two universities (JAMK – HE; JAMK – ME; HE – TUCLUJ)
- Company (FESTO, BOSCH; Leon Group)

- **Task of project:**

- comes from industry
 - ↳ suitable tasks: all kind of predevelopment tasks

- **Proceeding:**

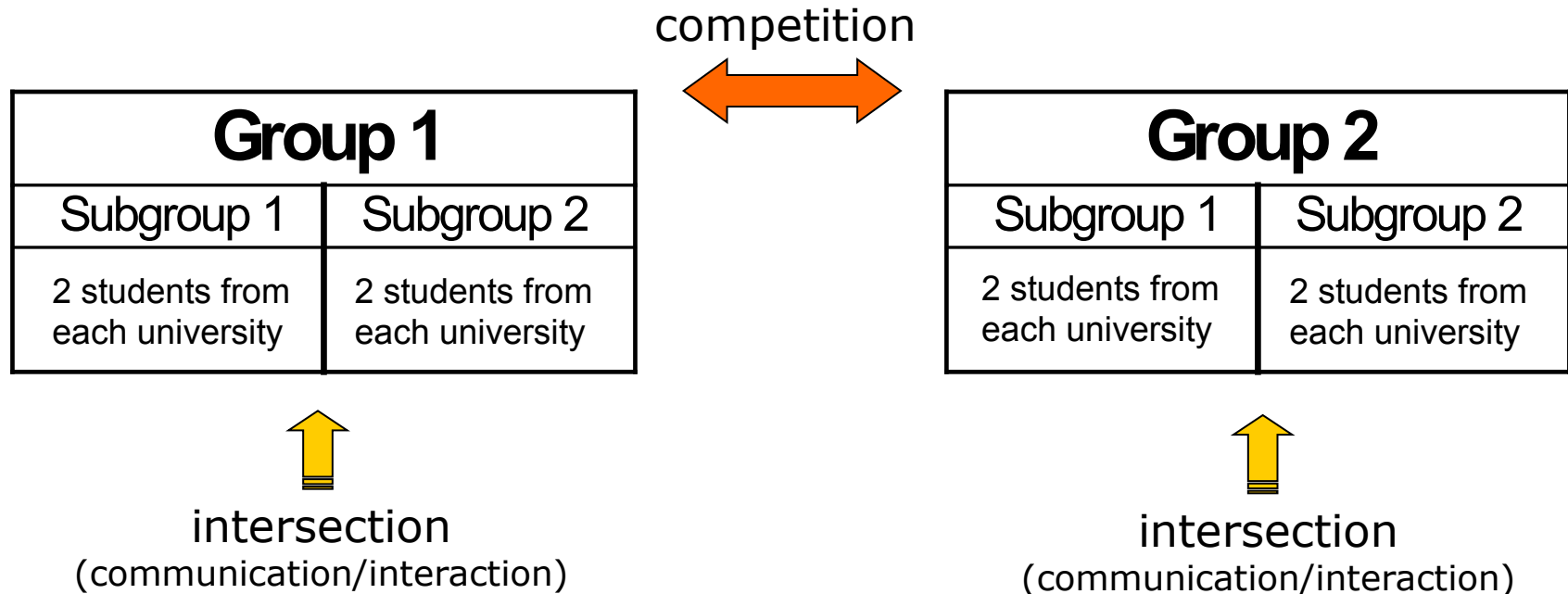
- 1st intensive week (in the country where the company is)
- students work at home (in their home universities)
- 2nd intensive week (in the country of partner university)
- final presentation

- **Supervision:**

- 2 teachers from each university
- contact person from company

• **Organization:**

- 8 students from each university
- 2 parallel groups – 2 subgroups



- **Intensive weeks**

- Meetings in company
- Lectures
- Project work
- Supervision
- Cultural and social events



- **Goal** ⇒ increase **International Competence**

- Learn cultural, social and language skills
- Work in intercultural and interdisciplinary environment
- Contact to foreign companies
- Work in a real industrial project
- Learn the way of working in companies