Erasmus+ Strategic Partnership
EPIC Project

EPIC
Improving Employability through Internationalisation and Collaboration

What EPIC is all about....

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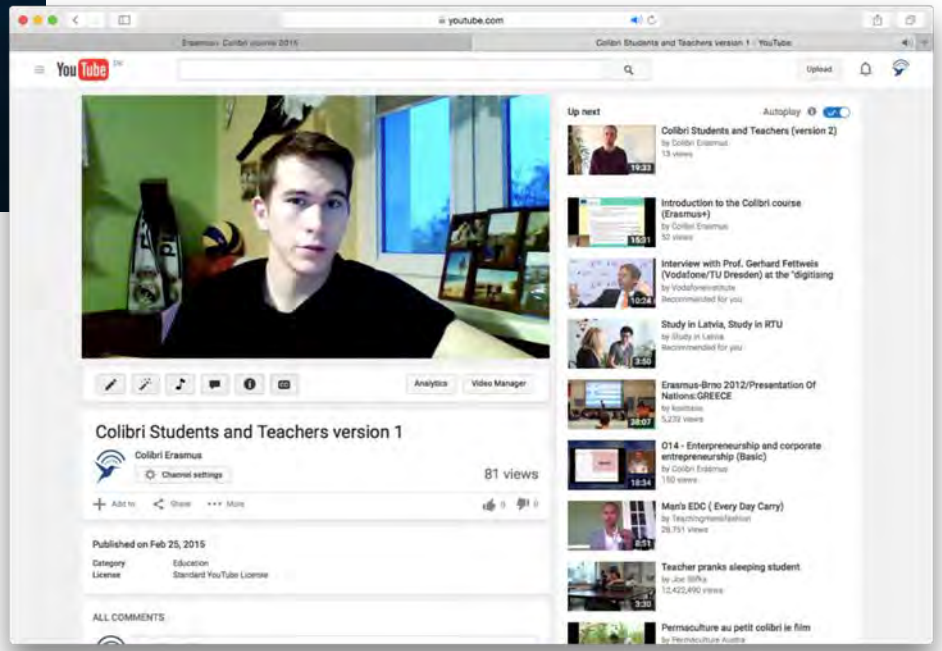

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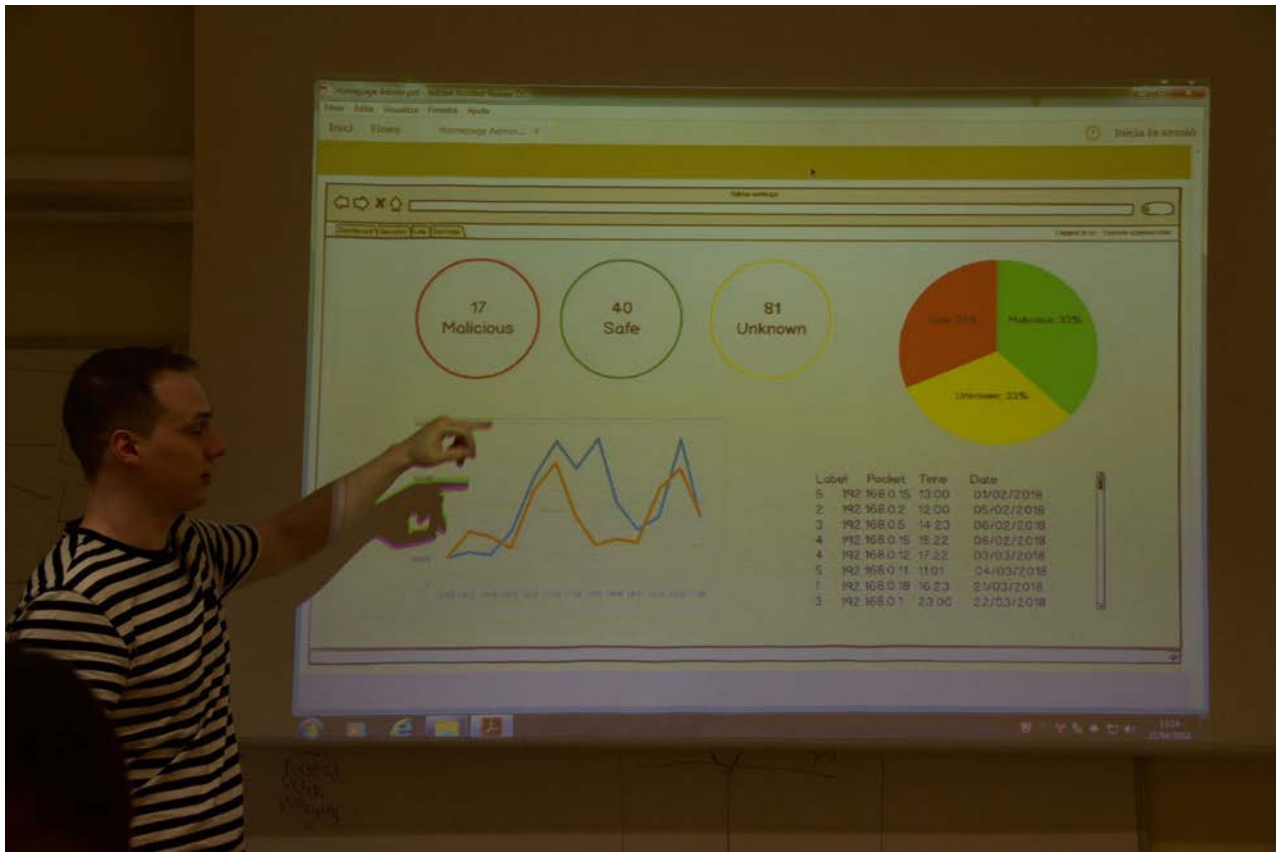


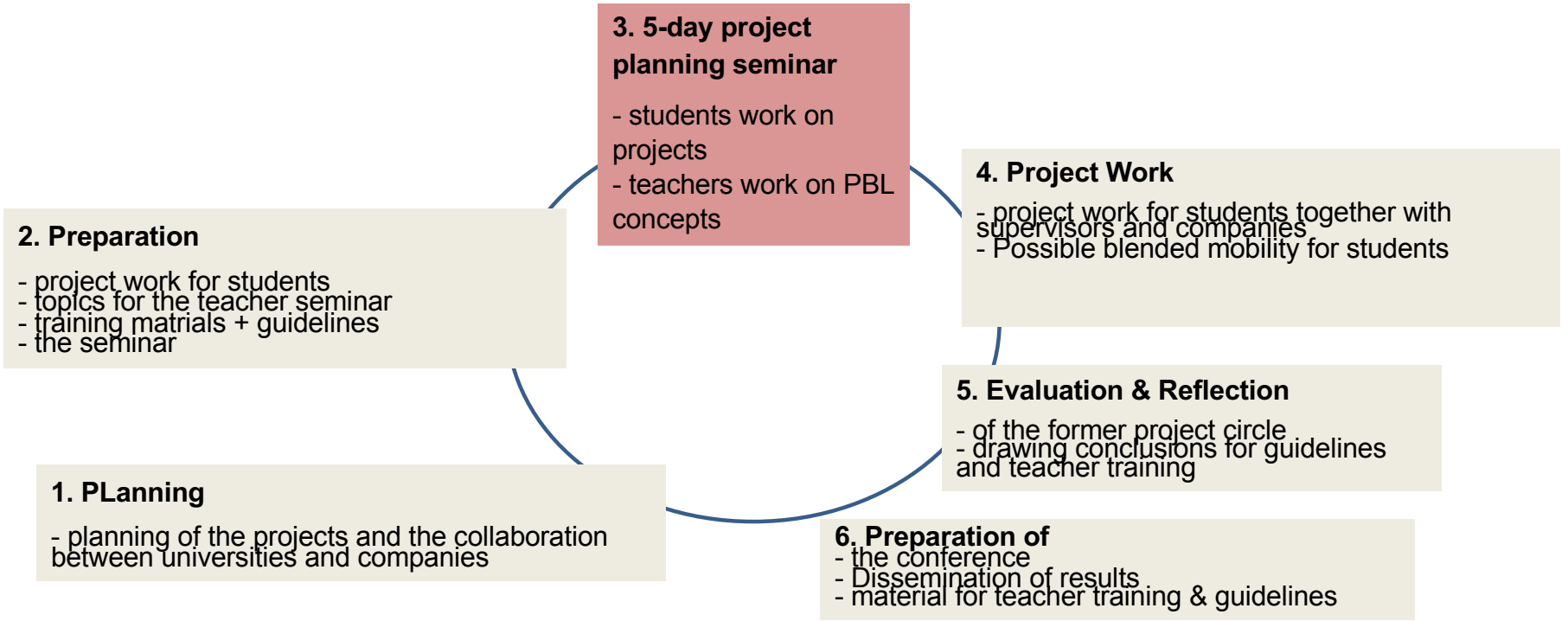
EPIC Objectives

- Increasing employability through closer collaboration between students and industry
- Promoting the cooperation between industry & academia
- Preparation for students for both national and international job market
- Improving the quality of teaching methods
- Enhancing the international collaboration more scalable and sustainable
  - Providing the students with transversal competencies, especially focusing on problem solving skills, collaboration skills, entrepreneurial skills and skills within creativity and innovation
- OBS: Highly experimental setup – and you are part of it ☺

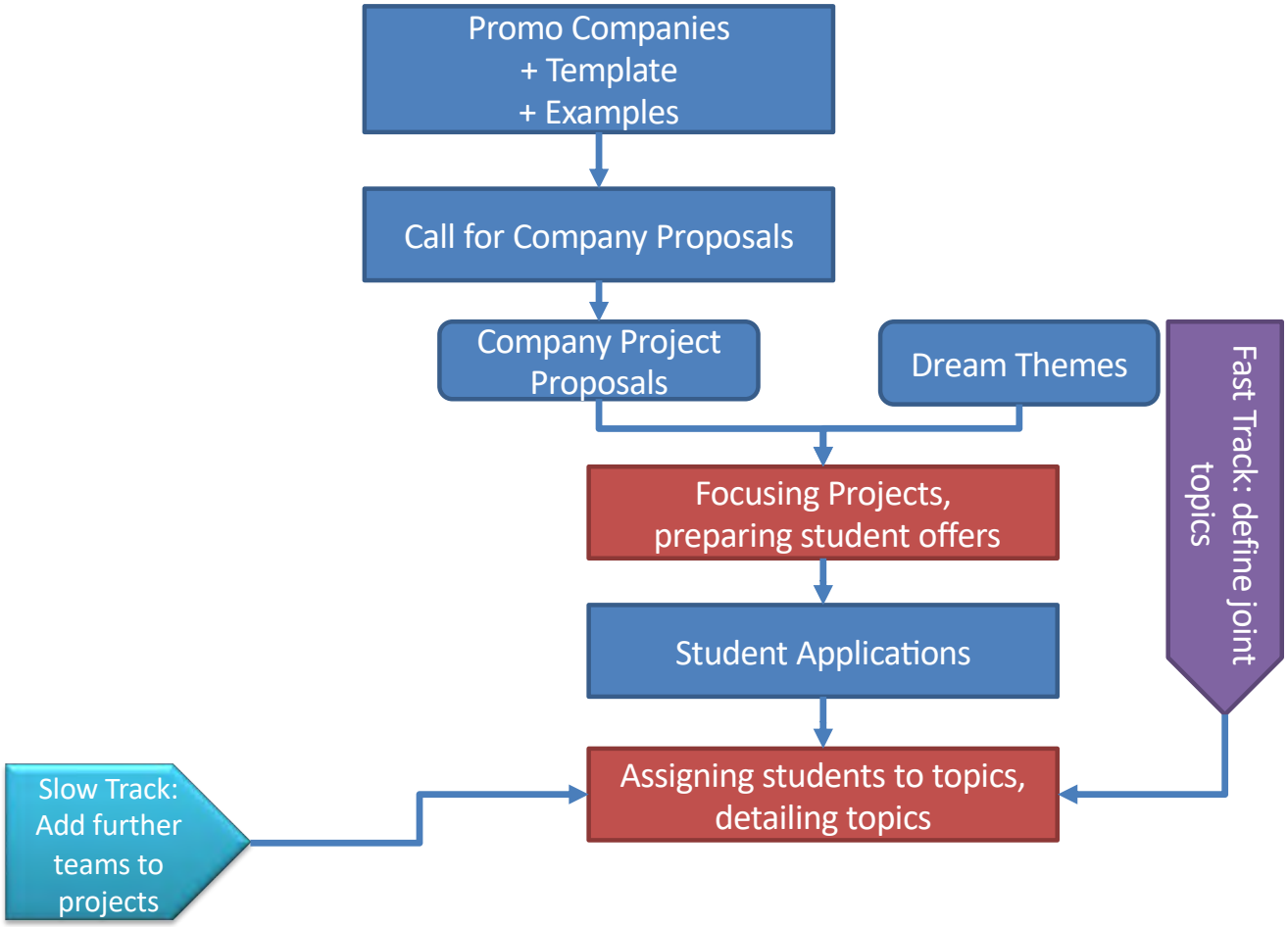
Project Partners

- Aalborg Universitet (AAU) - Denmark
- Rīgas Tehniskā universitāte (RTU) - Latvia
- Technische Universität Hamburg-Harburg (TUHH) - Germany
- Universitat Politècnica de Catalunya (UPC) - Spain
- Universitetet i Stavanger (UiS) - Norway
- Uniwersytet Technologiczno-Przyrodniczy (UTP) - Poland
- Saxion University of Applied Sciences (SAX) - Nederland
- Abdullah Gul University (AGU) - Turkey
- atene KOM - Germany

EPIC: Yearly Cycle

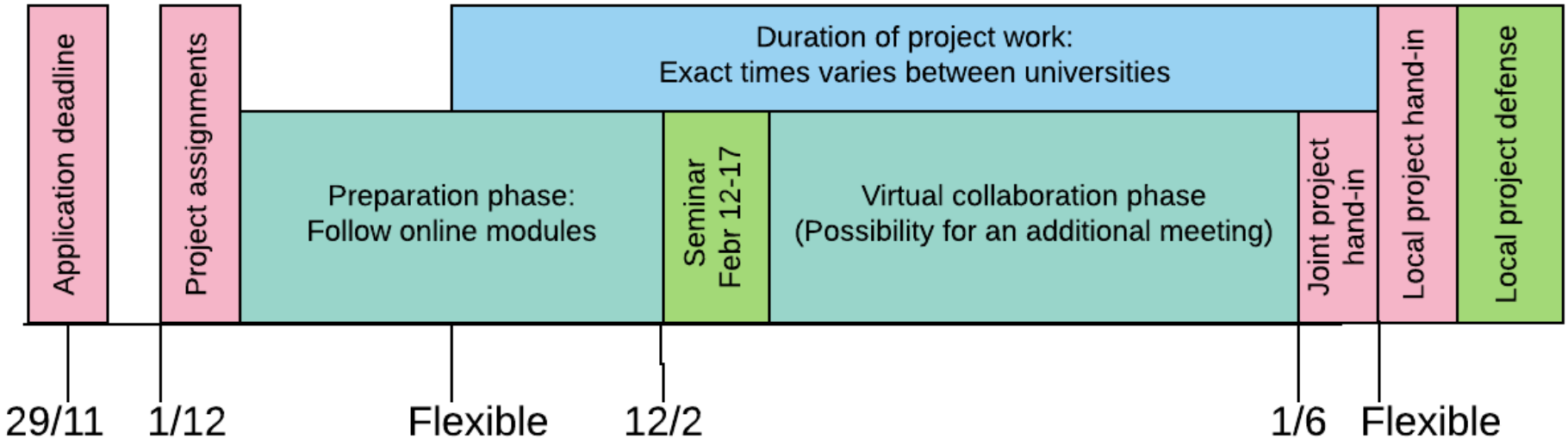


Joint student projects



Seminar in Riga – 12th to 16th of Feb, 2018

Joint student projects

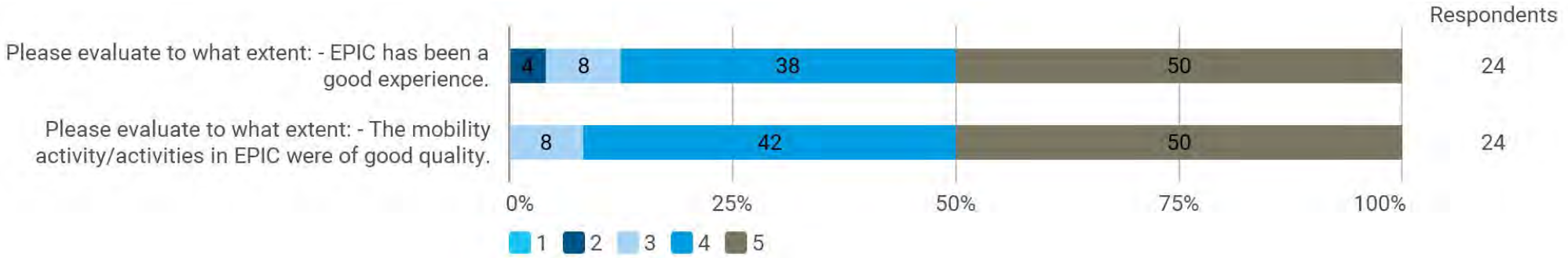


Student Projects – Year 1

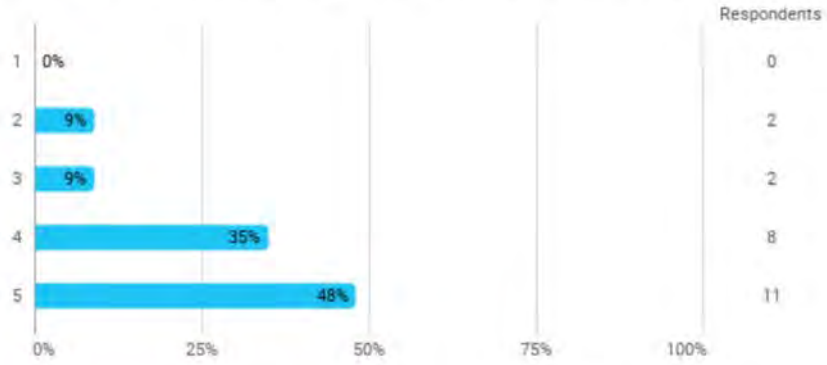
- Each project should involve **students from at least two different countries** and universities
- Students must submit their own project **documentation** to their **home university**, and the **examination and grading** takes place according to home university guidelines
- **EPIC certificate** is issued for joint work
- For each project, there is a **main/coordinating supervisor** as well as a **supervisor from each of the universities** with participating students

Research area	Leading University	Students involved
E-Commerse (food logistic)	UIS	3
Facility Management	UTP	3
Logistic	TUHH	2
Honeyjar (malware studies)	AAU	9
Mobile app for funding research	Atene	2
Security for IoTs	RTU	3
Energy Dash Board	Saxion	3

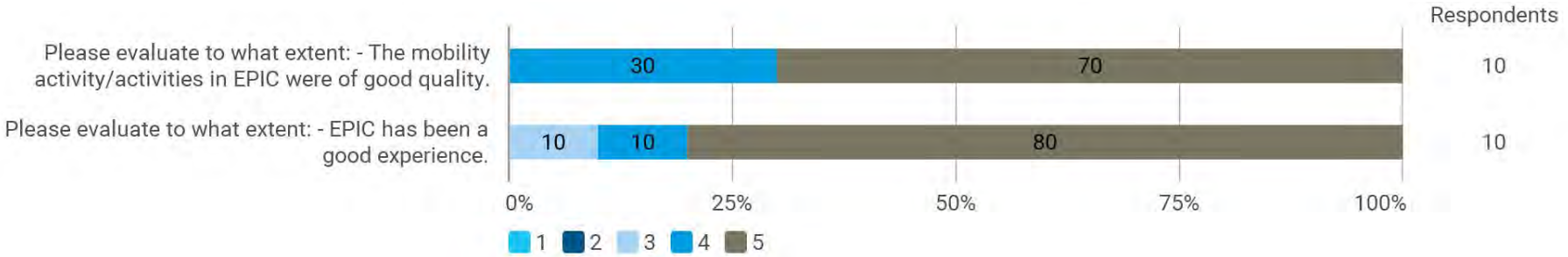
Results – overall (students)



Please evaluate to what extend the methods used in EPIC supports the following: - Provide the students problem solving skills, collaboration skills, entrepreneurial skills and skills within creativity and innovation.



Results – overall (teachers)



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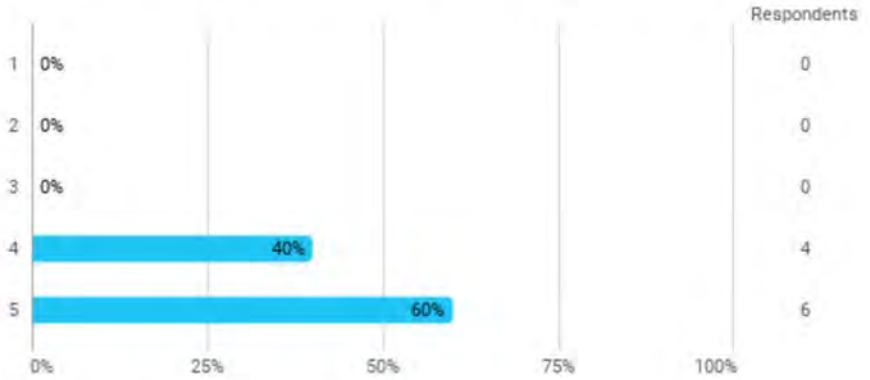
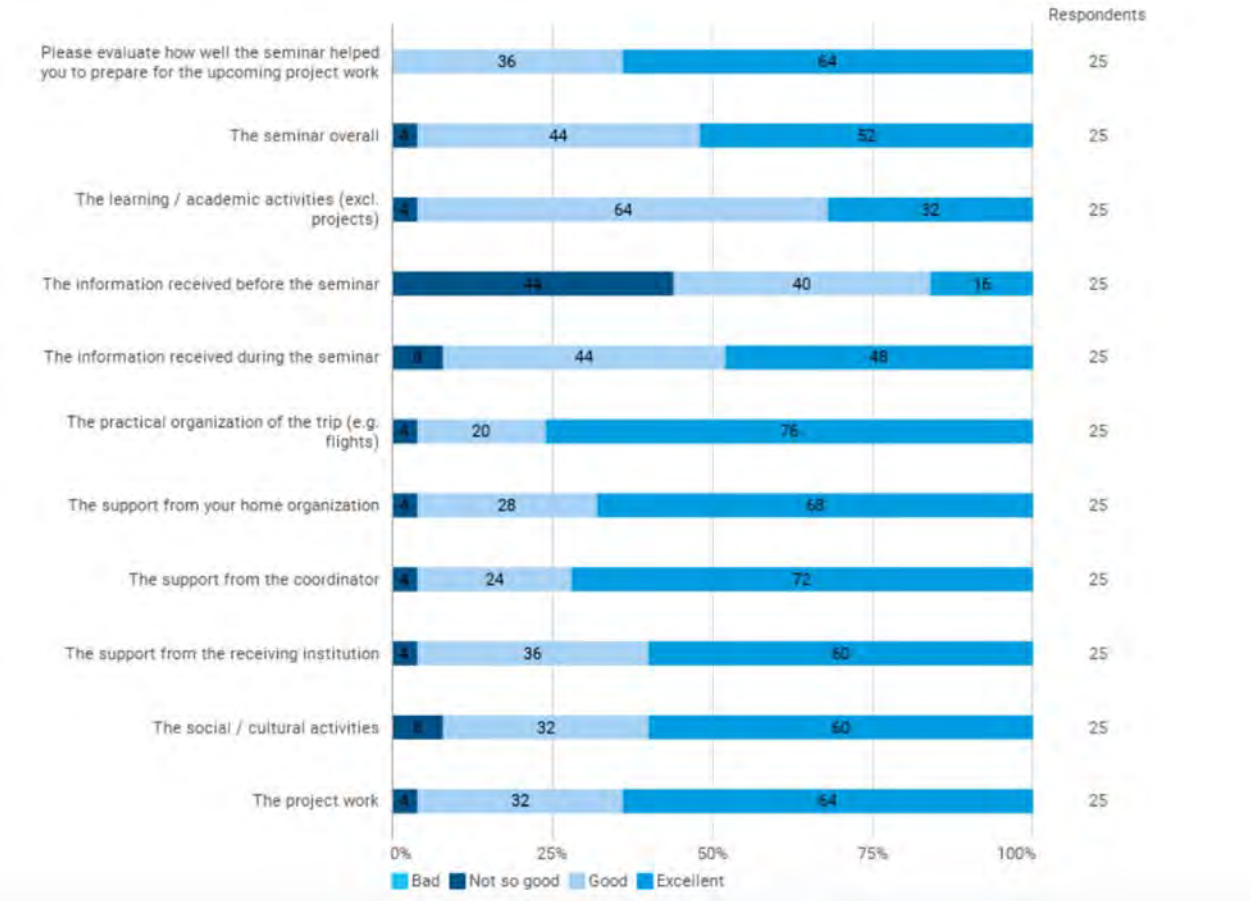


Seminar: Good, but...



What the students say….

- Initiates like this are a great way for students to explore different cultures and work with people you would've otherwise never worked with. Thank you.

- EPIC on a whole was a great experience, I had developed an eye for industrial problem solving. The only suggestion from my side is that, please make sure that the industry is willing to assist the project completely and also make sure a clear project proposal is identified before taking up the projects.

- I am happy to partake in this project, I had the exposure to finally apply what I learnt in school. This is the best experience since I started studying in Europe. However, there should be more commitment from organisation student works with , theses companies should provide as much as possible information to the students and the student should be added to the companies' in house research team.

Some challenges

- Highly experimental project – no one has ever done this before….
- Different formal requirements for work (different learning objectives)
- What's in it for me? What is the added value of collaboration
  - COLIBRI: Very high value in joint projects
- Different timing of different projects. And different extends.
- Different traditions for group work, collaboration, supervision, …
- Virtual collaboration is challenging (and we know the seminar is the key)

Points for year 2

- More ways of setting up student projects – especially more integrated projects.
- How can we involve the companies more actively? More structure?
- Better introduction from the beginning – to students and projects.
- Maybe more precise guidelines for supervisors?
- Use of peer evaluations – how to make it useful for the students in different settings?
- How to make the teacher training materials more useful? (videos?)
- The blended training seminars received excellent reviews!
- Should we require all supervisors to be present during the seminar?
- Group sizes?
- More focus on ICT tools?
- Keep on mixing “more and less experienced” teaching staff.
- Improving the design of the seminar (and maybe especially the framing?)

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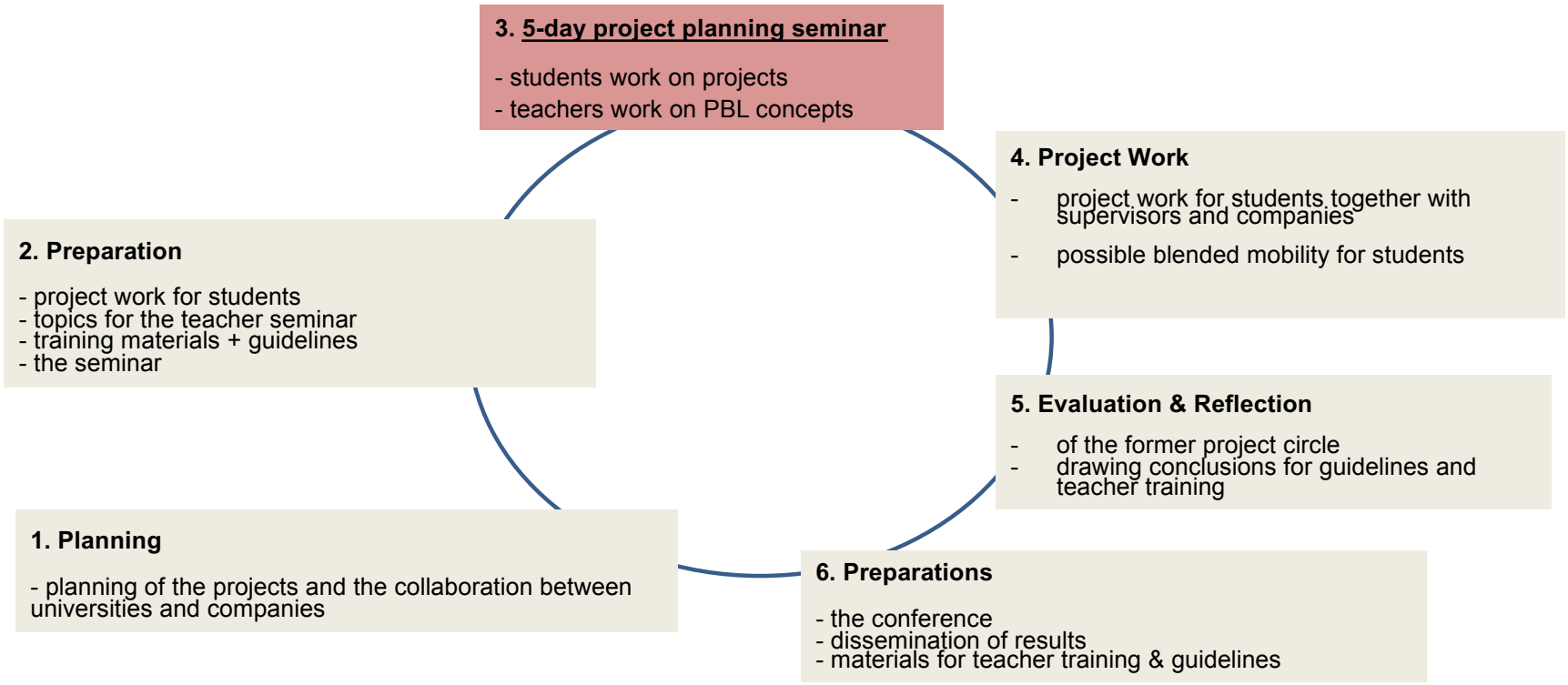
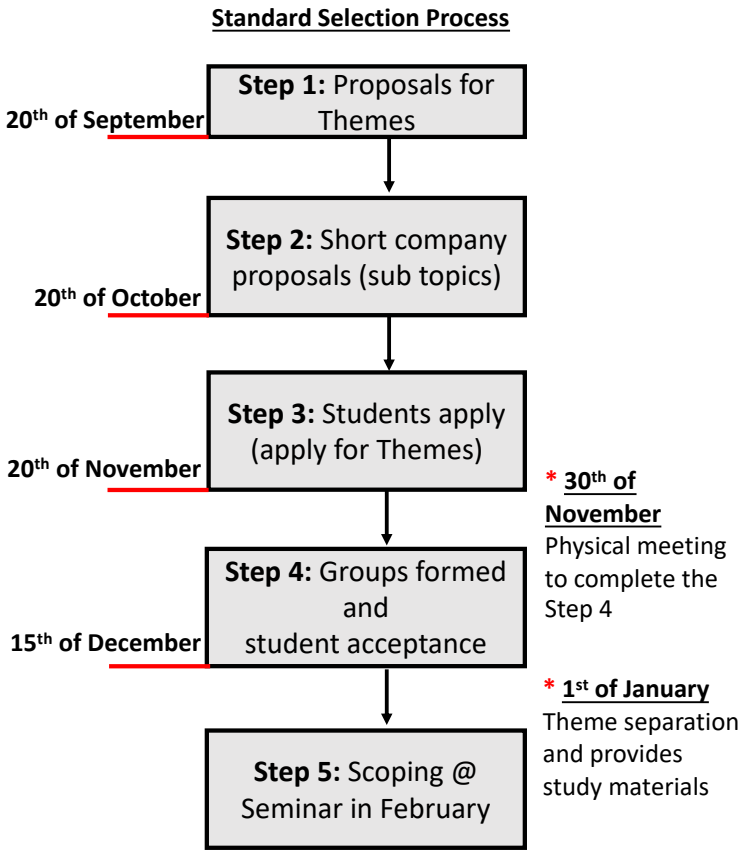
EPIC
Forming Students Projects

Koojana Kuladinithi

EPIC: Yearly Cycle



EPIC – Student Selection Process

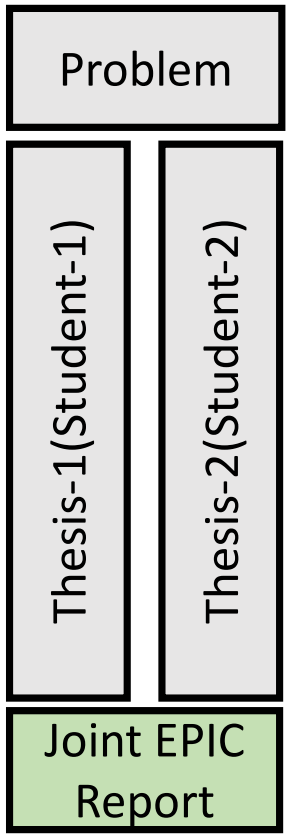


- **Themes**
  - **Autonomous Vehicles**
  - **E-commerce for food logistic**
  - **Cyber security**
  - **Smart city applications**
- **Sub topics : Autonomous Vehicles**
  - Modeling of reliable wireless communications
  - Analysis of security threats
  - Evaluations of Performances in different scenarios
  - Identify future market segments

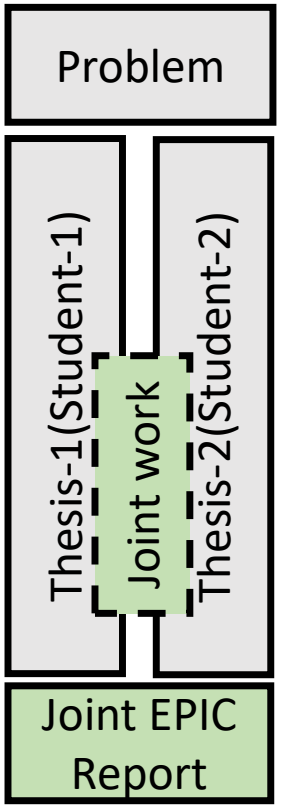
Forming Students Group

- Heterogeneous Requirements
  - Different students from different Universities
    - Focus: Technical/business
    - ECTS requirements
    - Local regulations – Thesis submission is not compulsory
    - Thesis: Individual / Joint / no submission
  - Different types of Theses
    - Bachelors / Masters
    - Duration
- Challenge
  - Dependability

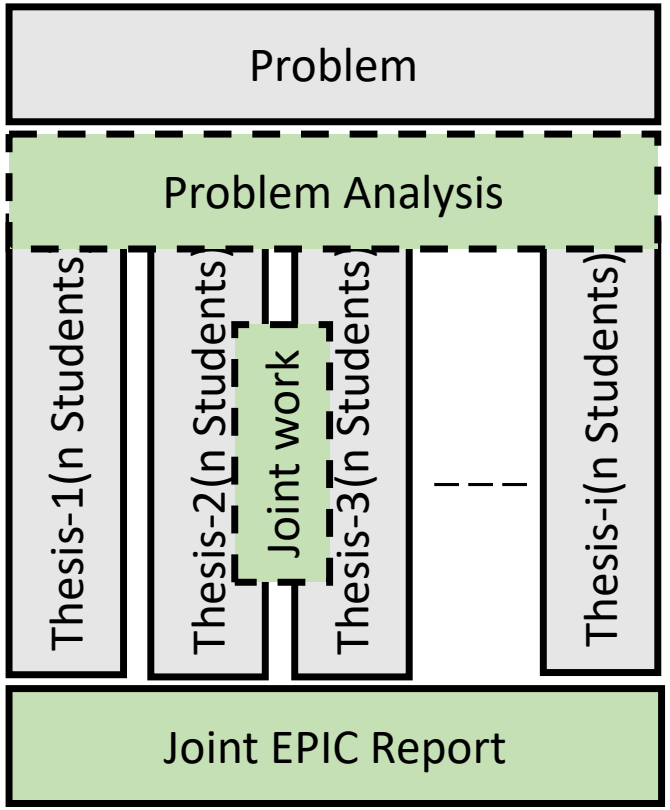
Different Models of Forming Groups



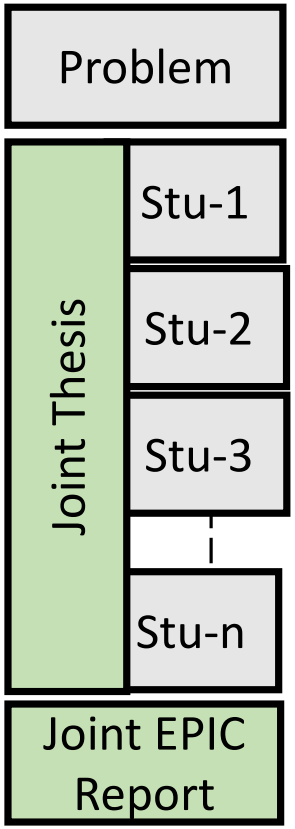
Model-1



Model-2



Model-3



Model-4

Comparison of Different Models

	ECTS + Type of Thesis		Duration		Heterogeneous focus (technical, business, etc)	Recommended number of students
	same	different	overlapping	Non-overlapping		
M1	+	++	+	++	++	<= 3
M2	++	+	++	-	+	<= 4
M3	++	+	++	-	+	<= 8
M4	++	-/+	++	-	+	<= 6

"-" model is not recommended to use,

"+" possible to use this model, but with very close supervision,

"++" indicates that this model should work very well in general

Supervisors

- EPIC supervisor – group / whole theme
- Local supervisor –

Challenges

- Matching company objectives and academic objectives
- Joint work
  - Conflict management

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Student experience

By Jacob Vejlin Jensen

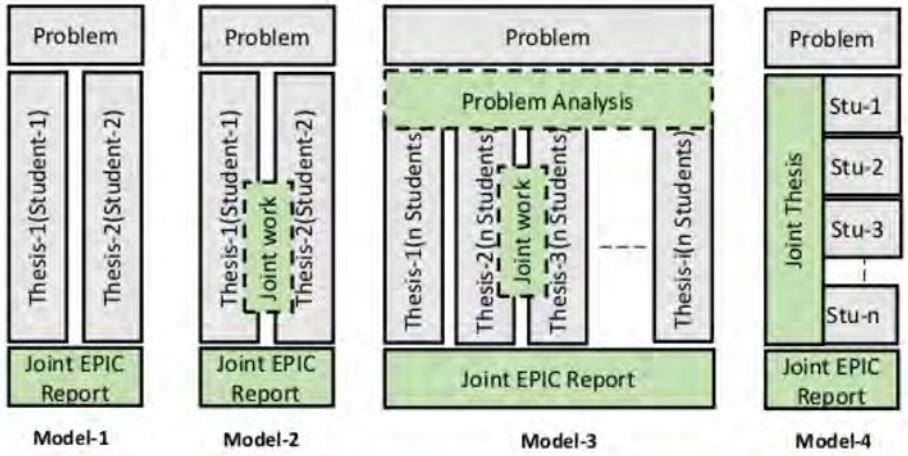
Introduction

- Focus: Redefining expertise in a cross-disciplinary world
- Who am I and why am I here?

- 2nd Year student of Computer Engineering at Aalborg University
- 2nd Semester project in collaboration with EPIC
- Cultural and Academic diversity of international labour market
- Group of 9 international students

My experience

- Presented issue: Cybersecurity
- Complex and diverse subject
- Ambition
- Multiple perspectives and cross-disciplinary work
- Limiting the scope of the project
- Multiple parallel directions of development



Online collaboration

- Complication, conflicts and resolution
- Frustration handled correctly => Knowledge and progress
- Online communication is key! (ICT tools)

GitHub  DISCORD

- Structure of workflow in international collaborations

Collaborating in diverse groups

- Academic backgrounds
- Cultural backgrounds
- Importance of educating in PBL and Group Management
- Resemblance to the labour-market
  - Diversity, Cross-academic disciplines, problem centred work, online communication, compromise…
- Industrial partner
  - Company from relevant field
  - Close collaboration and sparring across students and industry

Students and Industry

- Business and technology
- Product centred development
- Real life perspective for motivations
- Entrepreneurship and profitable ideas
- Business case development

- Engineers only working with engineers tend to forget the user in the other end…

Expertise

- Traditionally = excellence in a singular field
- Globalisation and digitisation
- Push towards an agenda of adaption and cross-disciplinary expertise

- How do we define modern expertise?..

Question for debate

- To comply with the still growing globalisation and digitisation, what actions are to be taken to continue cross-disciplinary development without removing the base for scientific immersion?

A few thoughts..

- Educate in understand of diversity and cross-disciplinary context…
- Remember the significance of the singular expertise…
- An expert must have a singular base…

Thank you!

- To comply with the still growing globalisation and digitisation, what actions are to be taken to continue cross-disciplinary development without removing the base for scientific immersion?

Thank you!

Jacob Vejlin Jensen
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