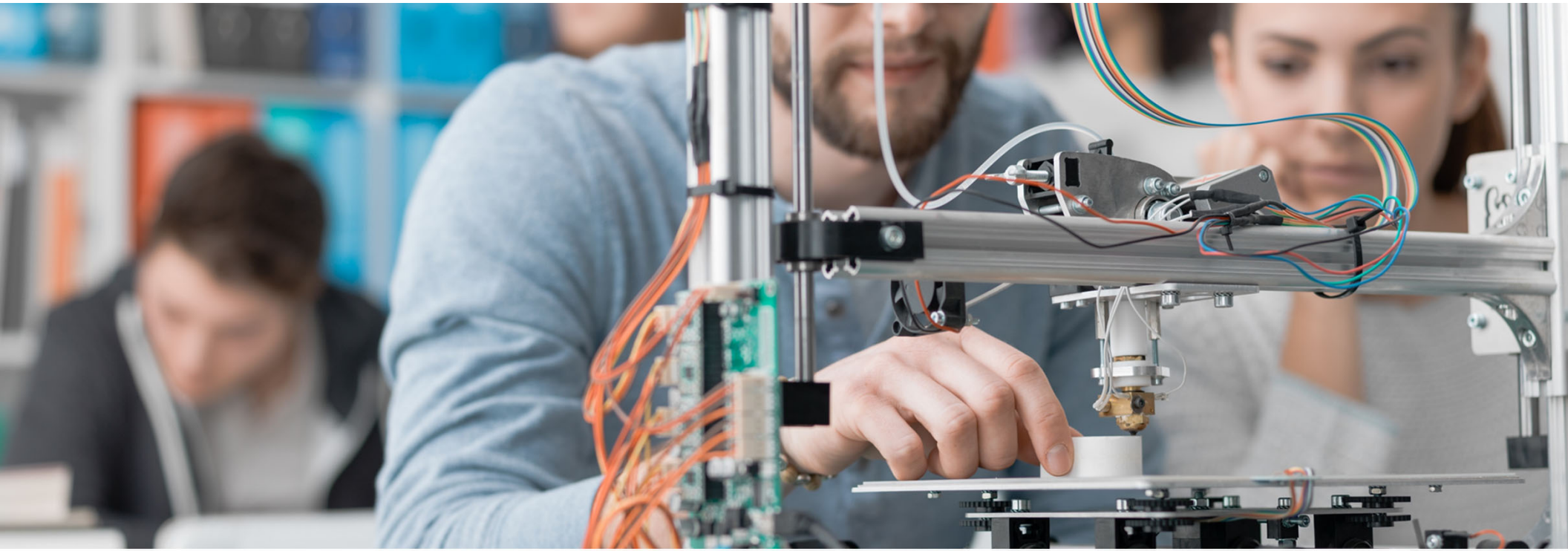


Joint virtual campus in a European University Alliance

European engineering education of the future

EuroTeQ Engineering University

Anneli Kalm (TalTech) and Janina van Hees (TU/e)

1 June 2022

European Universities Initiative

With its European Universities Initiative, the European Commission aims at fostering excellence, innovation and inclusion in higher education across Europe, accelerating the transformation of higher education institutions into the universities of the future with structural, systemic and sustainable impact.

41 alliances in total

A co-envisioned long-term strategy focused on sustainability, excellence and European values

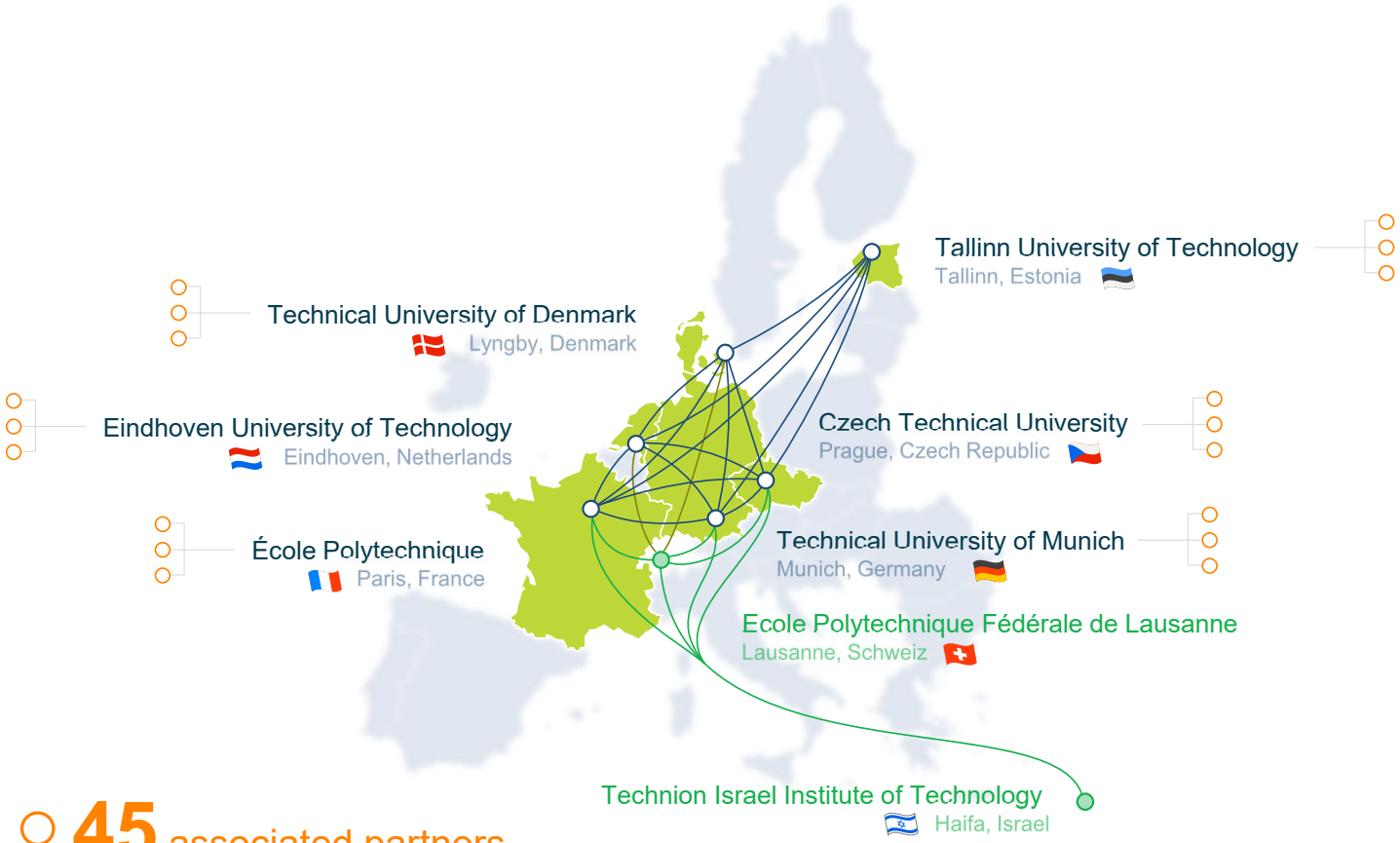
Innovative pedagogies with challenged based transdisciplinary approach to foster entrepreneurial mind sets and civic engagement

European Universities

Student-centred curricula jointly delivered across inter-university campuses, where diverse student bodies can build their own programmes and experience mobility at all levels

A challenge-based approach according to which students, academics and external partners can cooperate in inter-disciplinary teams to tackle the biggest issues facing Europe today

The EuroTeQ partners - project period nov 2020 – nov 2023



45 associated partners

Six strong Universities of Technology and 45 associated partners together form the EuroTeQ Engineering University.

Emerging from the EuroTech Universities Alliance, taking on board two excellent partners TalTech from Estonia and CTU from the Czech Republic.

Anchored in diverse geographical and cultural contexts, each partner with their corresponding eco-system provides added value and a competitive advantage to the EuroTeQ cooperation.

EPFL in Switzerland and Technion in Israel contribute to these efforts.

The goal is to ensure a strong integrative link with different cultures and traditions of engineering education across Europe.

Building the EuroTeQ Campus

A holistic approach to integrate the campuses and educational systems of the six academic project partners towards a platform for open education, delivering high-quality research-led teaching to a peer group of over

115.000 students.

Our graduates will have intercultural and multilingual competences, an entrepreneurial mindset, think and act responsibly and are ready to lead a competitive Europe into the future.

We will jointly develop a EuroTeQ Campus for engineering education by:

Establishing a joint course catalogue and joint course formats

Individual study paths including Micro-credentials, the label EuroTeQ Professional, and a EuroTeQ Honours Degree

Enhancing mobility for students and staff, in physical and virtual formats

Specifically tailored multilingual digital learning materials

Stakeholders from industry and the public sector integrated into the teaching formats at all locations

Demonstrable impulses for entrepreneurial spirit

The 50% percent mobility target:

"We will make sure that at least 50% of the students of the EuroTeQ Engineering Universities will have had an international experience upon their graduation."

Focus on virtual mobility: joint course catalogue

- Pilot version course catalogue
- Started in summer 2021, twice a year
- English language
- Virtual format (or blended/hybrid)
- Bachelor of Master

- http://www.euroteq.eu/courses
  - 1st run: 59 courses
  - 2nd run: 89 courses
  - 3rd run: 103 courses

- 550 students registering for participation in the first two runs

- In parallel: working on ICT-supported version
- Analogy to Project Student Mobility eduXchange
- To allow scale-up of course offerings and minimize manual work

Courses

On mobile devices, you might need to swipe to see the full table.

Search...

Title	University	Subject area	Level	Start date	End date	Format*
Entrepreneurship in food and bio engineering » download course description	DTU	Entrepreneurship course	MA all years	08/08/2022	26/08/2022	hybrid
Turbulence and Mixing » download course description	TalTech	Physics	MA all years; PhD	22/08/2022	22/01/2023	hybrid
Dynamics of Robots and Machines » download course description	TalTech	Mechanical Engineering	MA all years	28/08/2022	21/01/2023	hybrid
Transport system analysis - demand and planning » download course description	DTU	Other subject area	MA1; MA2	29/08/2022	02/12/2022	hybrid
Supply Chain Management » download course description	TalTech	Business/management	BA all years; MA all years	29/08/2022	22/01/2023	completely online
Prototyping » download course description	TalTech	Mechanical Engineering	MA2	29/08/2022	20/01/2023	hybrid
Microeconomics I » download course description	TalTech	Other subject area	BA1	29/08/2022	16/12/2022	hybrid
Mathematics for Computer Science » download course description	TalTech	Mathematics	MA1	29/08/2022	18/12/2022	hybrid
Introduction to Programming » download course description	TalTech	Computer Science/ICT	BA1; BA all years; MA1	29/08/2022	18/01/2023	completely online

EuroTeQ Engineering University

Started collecting courses bottom-up.

In future, focus on priority subject areas, incl pre-recognition:

- Mechanical Engineering
- Electrical Engineering
- Computer Science/Information Technology

Challenges & lessons learnt

- Administrative and organizational aspects
- Didactical and social aspects

EuroTeQ Engineering University

Administrative and organisational aspects

- Long term perspective:
  - Students can choose from a wide offering of different mobility formats
  - General idea of *Seamless mobility* of students between partners (both virtual and physical)
  - A common automated course catalogue, with courses from all institutions
  - Fully automatized enrolment and registration of students and recognition of credits

Administrative and organisational aspects

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  - Fully automatized enrolment and registration of students and recognition of credits

- **The challenge:**
- **What are necessary conditions for achieving ‘seamless mobility’?**

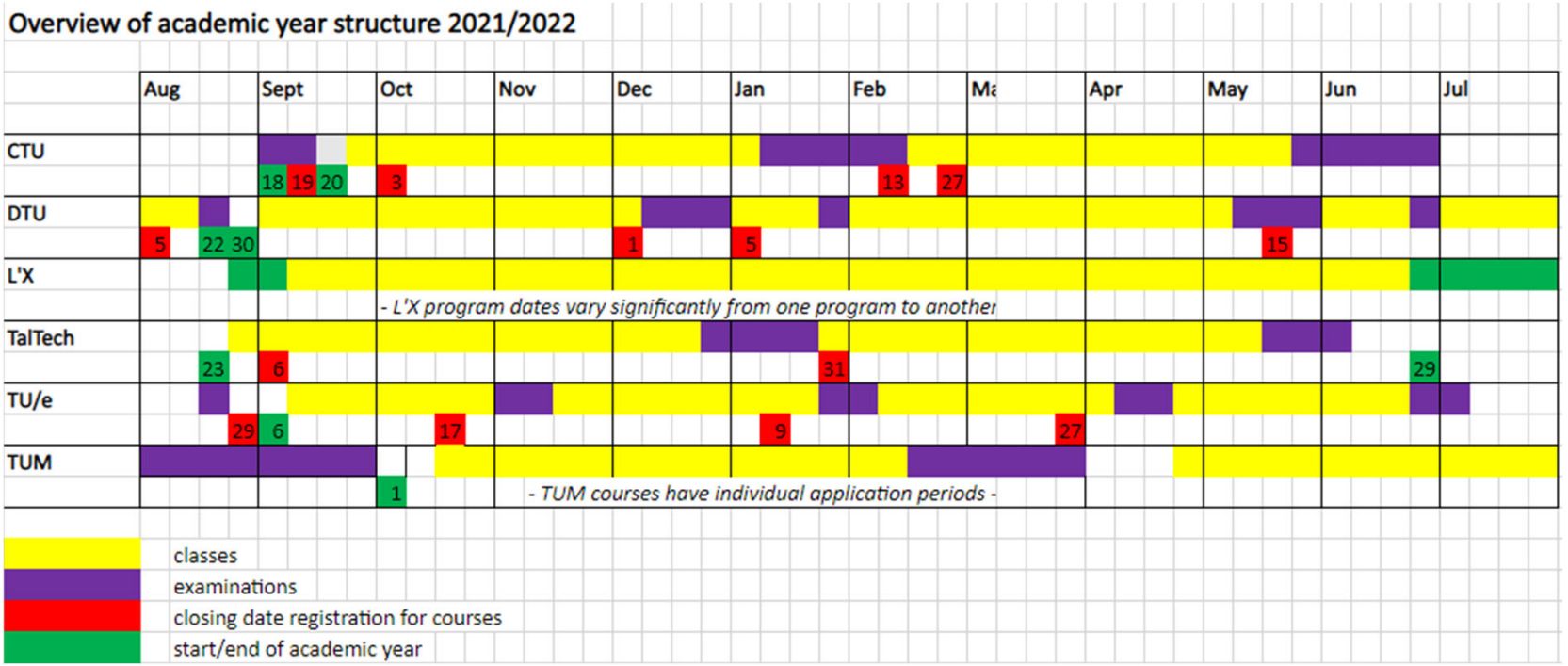
- **Please give us your input during the presentation by using menti.com code 2887 0382**

Administrative and organisational aspects

- Our learning points so far:
  - Work processes for physical (long-term) mobility and for virtual mobility are VERY different
  - Two-step process for accepting registration: student registers with home university, then nomination towards host univ.
  - Pre-recognition of credits is very labour-intensive. If not arranged, then everything in elective space
  - Students don't always read the information…. (especially pre-requisites)

- Challenges still remaining:
  - Hard to reach students, if info not integrated in regular information streams
  - Student guest status for virtual students is not legally possible in all countries (Germany)
  - Late availability of schedules and different timelines of academic years are very problematic
  - How to deal with overbooking/waiting list in the light of high drop-out?
  - Grade conversion can cause problems

Academic year



Creating an engaging learning offer

Our efforts so far

- 21 enhanced/developed courses offered to students through course catalogue – in online or hybrid format
- Bringing together teacher support staff to exchange best practices
- Developing approaches of Challenge-Based Learning that can be scaled
- Working on tools/toolbox to analyze the effectiveness of teaching

- Scale-up is intended – but what will that mean for engagement?

Didactical and social aspects of virtual courses

– The challenge:

– **How can we engage students and faculty?**

– Please give us your input during the presentation by using menti.com code 2887 0382

Didactical and social aspects of virtual courses

Our learning points so far

- Accept that drop-out rate will be high
- ‘welcome session’ to all incoming EuroTeQ students at the beginning can help
- Quality of classes can be an issue, especially in hybrid set-up
- To offer (individual) support to lecturers offering courses for EuroTeQ students

Challenges still remaining

- Arranging interaction between international ‘virtual’ student and teacher valued highly but difficult to arrange
- Arranging assessment in a situation of online/hybrid education that normally ends with on-campus exam
- Interest in participating in courses is a work in progress
- Interest in offering online formats is generally in progress
- How to measure effectiveness of learning and impact?

Joint virtual campuses in European University Alliances

Some conclusions

- De-central vs. central institutions
- Different traditions, different student populations = different interest in virtual mobility
- Needs to be a university wide strategy – not just a topic for central leadership
- A lot of resources are needed – a lot of “new ground” will need to be broken
- Really keeping a focus on “What is in it for the student?”
- Specific value proposition to all target groups
- Will interest of students in virtual mobility remain high? Or rather move to blended/short term physical mobility?

Your suggestions – Results Mentimeter

- **What are the conditions for ‘seamless mobility’?**
- Your suggestions

- **How can we engage students and faculty?**
- Your suggestions

- Live results:
- https://www.mentimeter.com/app/presentation/02e7fbd6d7e63fc39d9839ae49dedcac/04176b95d721

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Co-funded by the Erasmus+ Programme of the European Union

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