



EELISA

European University

EELISA

**EELISA Communities
at BME**

EELISA DAYS

17.11.2022 Budapest



Co-funded by the
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 Let's play

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ELISSO

European University

ELISSO

ELISSO
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ΕΕΙΣΟ

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ΕΕΙΣΟ

Introduction

László Gergely Vigh,
PhD.

Department of
International
Academic Affairs

November 2022



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We are

**EUROPEAN
UNIVERSITY**



The European
Universities Alliance that
will transform engineering
education and society



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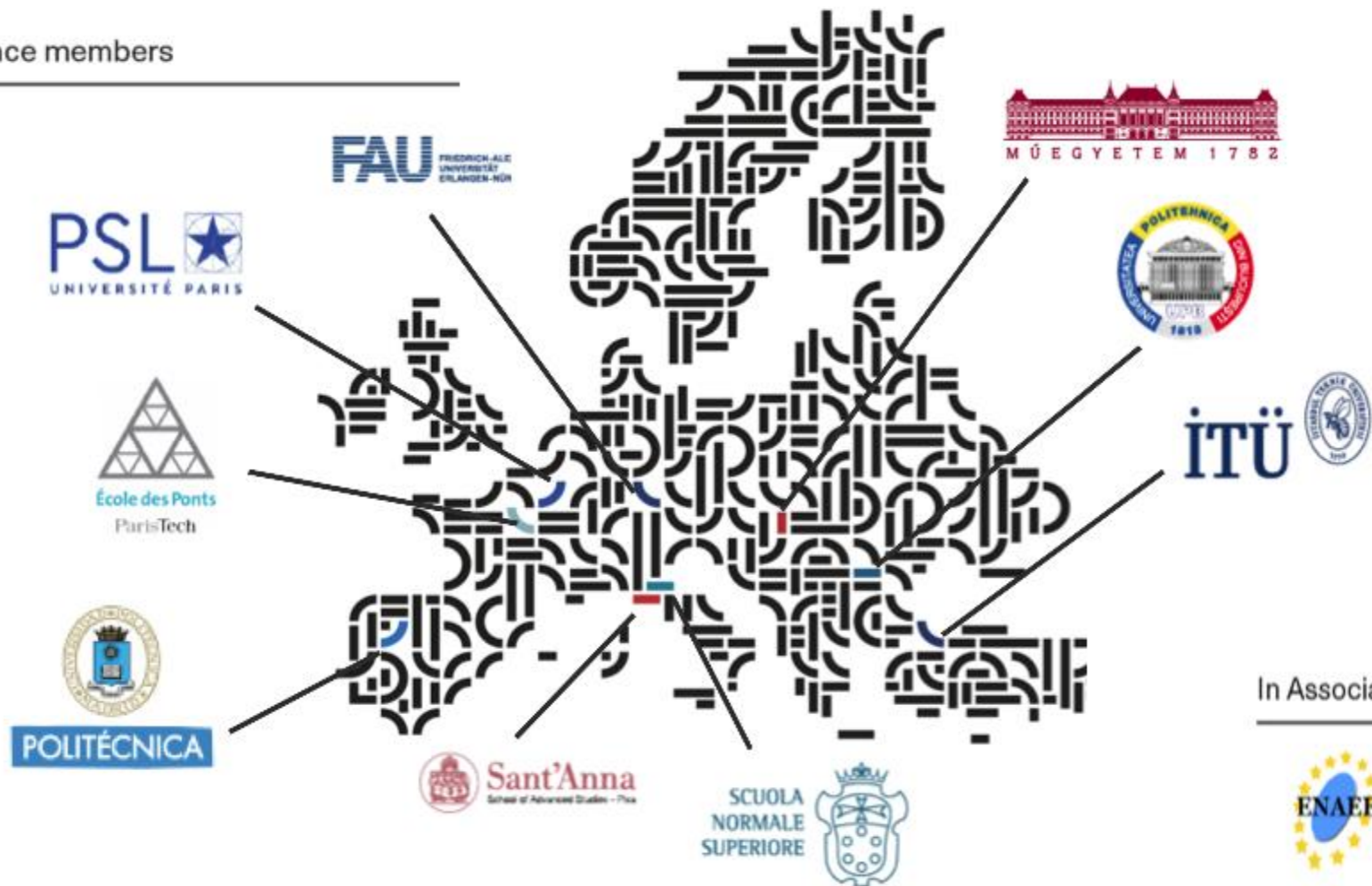
what is EELISA ?

C The **European Engineering Learning Innovation and Science Alliance (EELISA)** is the first alliance of Higher Education Institutions from different countries in Europe meant to define and implement a **common model of *European engineer*** rooted in society.

C EELISA' s acronym also pays tribute to women engineers through the memory of **Elisa Leonida Zambirescu** (1887-1973), one of the very first women to obtain an engineering degree in the world.

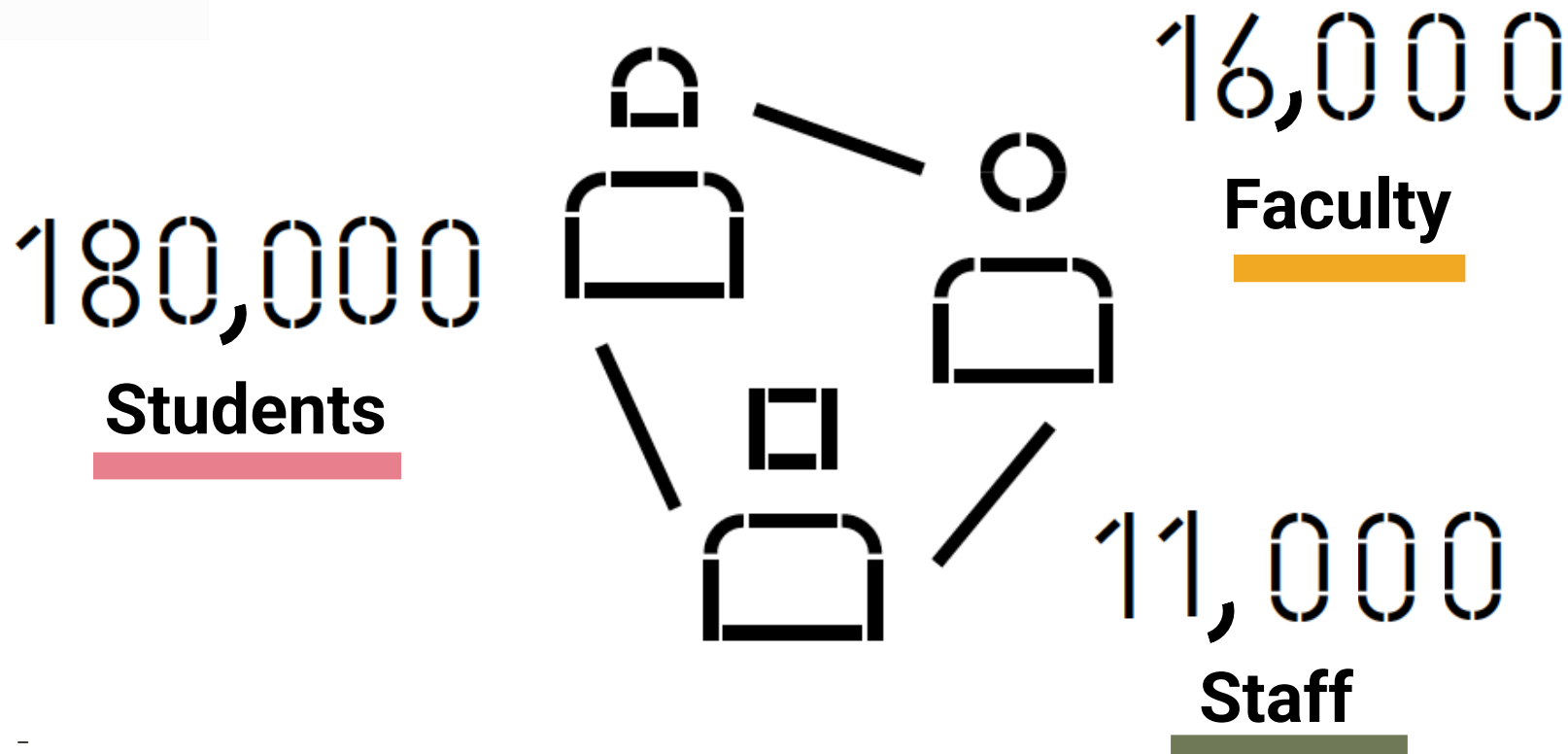


Alliance members





EEISA's network





elisol's mission

“To transform **European higher education** into the **seed for a future** in which **society masters global challenges** with smart and sustainable solutions enabled by engineering.

FEISSQ's mission



We envision a higher education system that **enable student citizenship** participation and **employability** by:

◌ Evolving **interdisciplinary** engineering **learning** ◌

◌ Fostering **knowledge and technology transfer** ◌

◌ Stimulating **inclusiveness and diversity** ◌

◌ Connecting **academic excellence to social impact** and commitment ◌

EEISSO's mission into practice

1

Interdisciplinary learning, multi-actor collaboration and sustainable solutions to real-world challenges.



EEISSO communities

2

Joint R & I strategies, actions, mobility, shared facilities and structures.



EEISSO innovat

3

European Engineer model based on a single cross-border accreditation.



EEISSO Products

1

ELISSA communities

**Mission – driven collaboration
platforms that foster
knowledge, research and
innovation needed to solve
social and environmental
problems framed in Agenda
2030.**



MAGNET

1. Mission

Where one or several social challenges are present and technological components are part of the solution.

INCUBATOR

5. Evaluation

Criteria to recognise student's engagement (attitude, implication) as much as effective results.

EELISA
COMMUNITY

2. Challenges

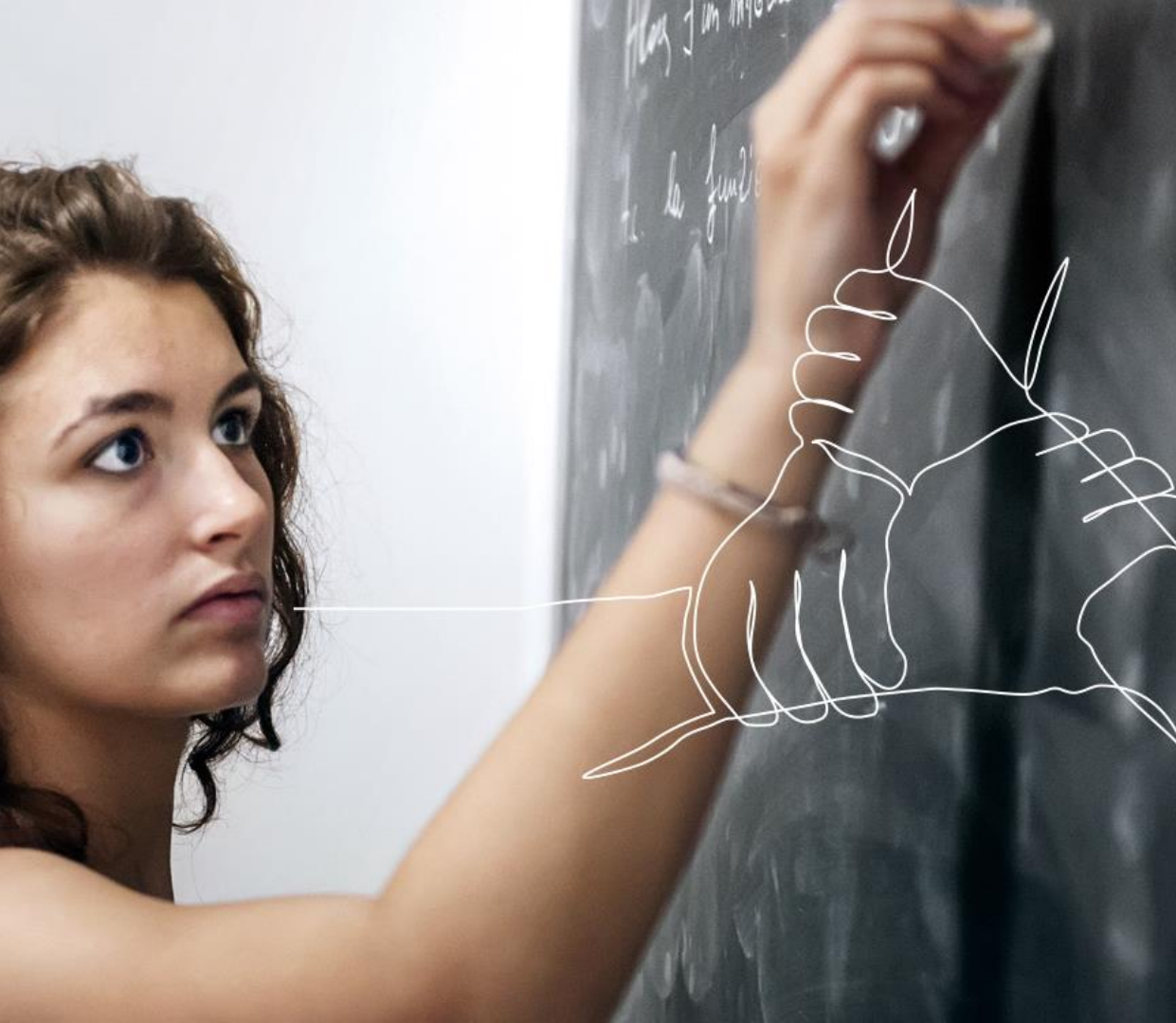
Based on real-world needs and SDGs. Brought to the community by teachers, external partners or problem owners.

4. Activities

Courses linked to diploma and non-academic events involving staff, problem owners and students, etc.

3. People

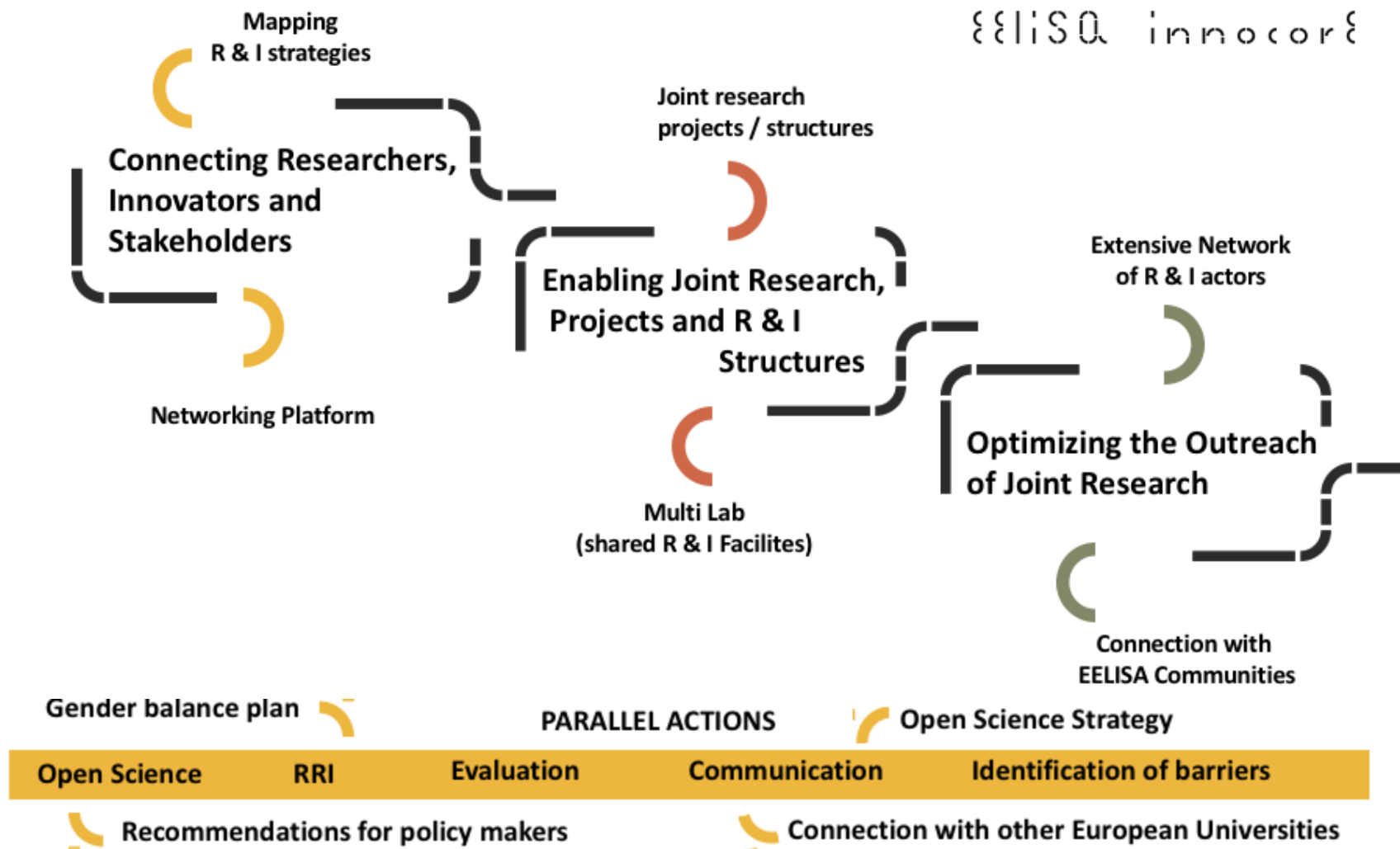
Interdisciplinary and diverse working groups (teachers, students, NGOs, experts, public institutions, etc) chaired by an EELISA board.



2 EELISA
innocor

**EELISA
INNOvation and
COMmon
REsearch Strategy
brings a new level
of cooperation
that will transform
the R&I dimension
of the alliance.**

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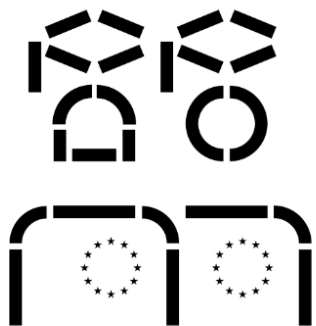


3 EELISSO products

**Will recognize European Engineers
ready to work within multidisciplinary
multilingual and diverse environments.**

**STEM professionals who are able to
understand social challenges and align
smart technologies with sustainable
needs.**





EELISA degree

Multisite degrees based on a **common internal quality assurance mechanism for EELISA activities** that will set the mark for demonstrating what a new **European engineer** is.

EELISA credential

Acknowledges **students' engagement within a EELISA** community and his/her contribution to social-challenge solving process.

EELISA diploma

Supplement that contributes to the **European commitment of the students through mobility** abroad, EELISA courses, involvement in communities, etc.

get involved

As an EELISA student

Learn how to become a real-world problem solving player.

Learn and research with full mobility between partner institutions.

Get a multiple degree of the Alliance.
Be recognized as a new "European Engineer".

Tackle socio-technological challenges through innovative and creative processes.

Go for EELISA Internship or EELISA Apprenticeship.

Boost your contacts network within multidisciplinary and international teams.

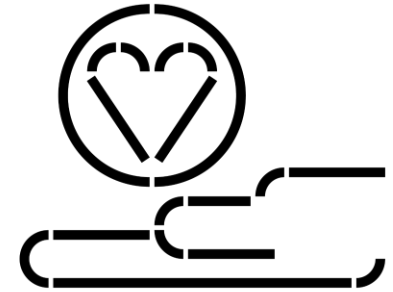
Get the skills for highly qualified jobs in a pan-European environment

thank

you

www.eelisa.eu

Aims of the Communities



- boost transnational mobility
- foster cross-sectional networking within EELISA
- organize activities regarding their aims
- cooperation between students-researchers-lecturers-external partners
- increase the visibility of EELISA



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**EELISA Community
at BME**

Future of Work

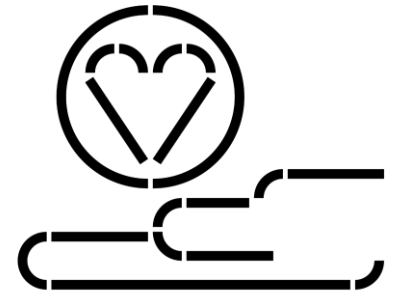
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Aims of our Community



1. to gain knowledge of the future of office work
2. to develop practical solutions for the current challenges of the world of office work

Which:

3. consider the personal needs and preferences of the employees
4. support employee's well-being
5. support the managerial decisions on work schedules and office functions

Goals and objectives

SUSTAINABLE DEVELOPMENT AND/ OR HORIZON 2020 GOALS

SDGs:

- Good Health and Well-being
- Quality education
- Decent Work and Economic Growth

Horizon Europe Global Goals:

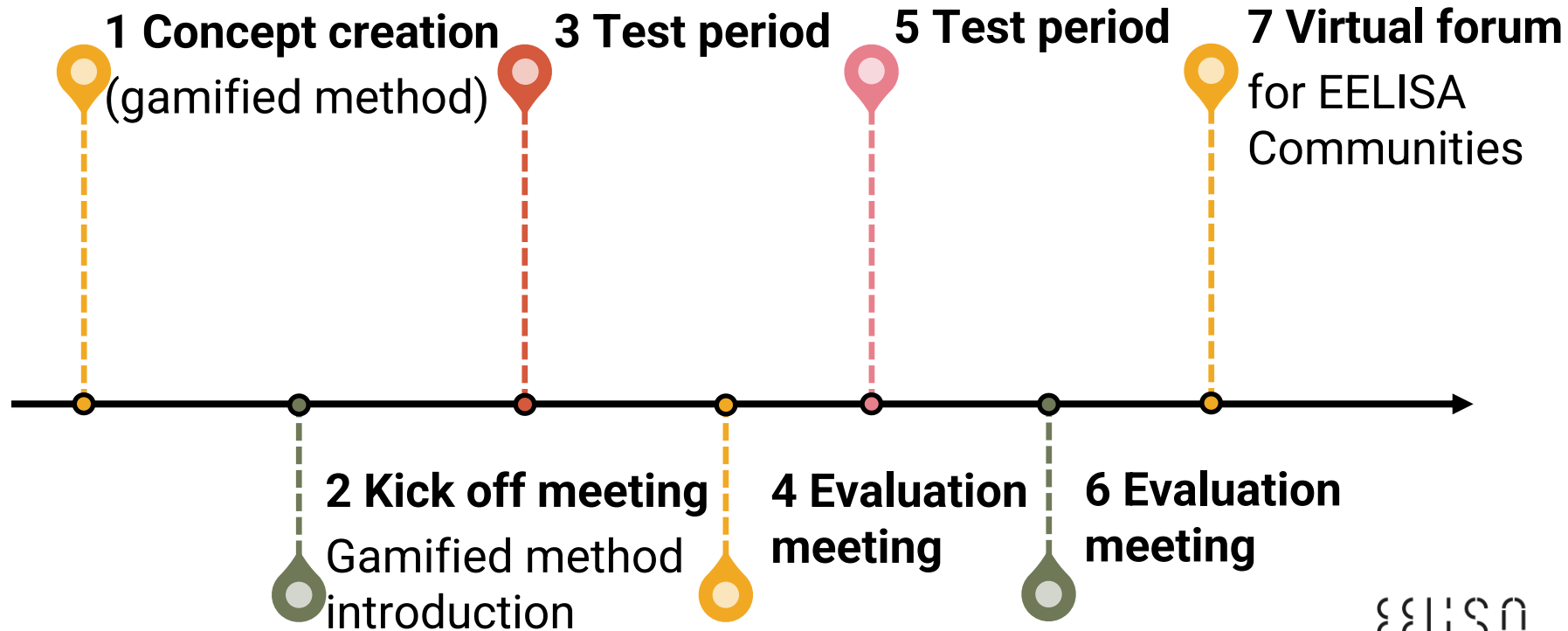
- Health (*Mental Health, Well-being*)
- Culture, **Creativity**, and Inclusive Society



MEMBERSHIP (EELISA UNIVERSITY)

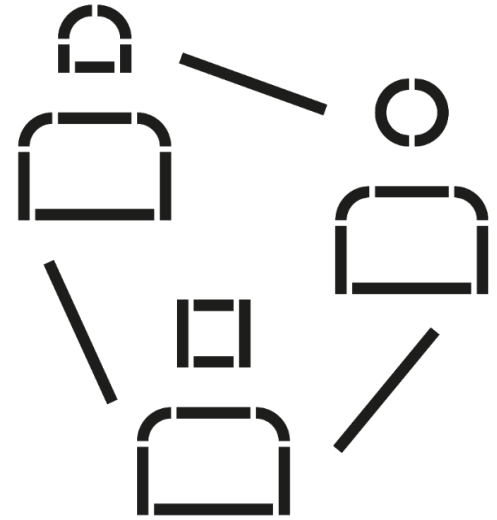
- Department of Ergonomics and Psychology (BUTE)
- Istanbul Technical University, Management Engineering Department

Planned activities (Oct 2023)



What activities can you get involved in as a student?

1. Concept creation: MSc students of psychology and manager and doctoral studies (group of 4)



2. Test phase and evaluation phase: students from BME and ITÜ will held the workshops and take part on the evaluation meetings to develop the method further (groups of 2-3 students)

Get in touch

<https://community.eelisa.eu/communities/future-of-work/>

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**LIVE,
WORK,
CREATE.**

thank

you

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**EELISA Community
at BME**

**Sustainable
Competences**

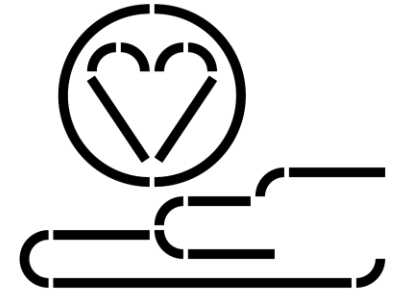
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Aims of our Community



SusCo = Sustainable Competences

Interdisciplinarity for Sustainable Competences in Engineering Education

- Sustainability and transversal skill development
- Enhancing interdisciplinary education in the engineering curricula
- Develop a set of recommendations for EELISA Universities
- Upskill engineering students

Goals and objectives



SUSTAINABLE DEVELOPMENT AND/ OR HORIZON 2020 GOALS



MEMBERSHIP (EELISA UNIVERSITY)



Planned activities (Oct 2023)

Desktop Research

- Identify sustainable skills
- Identify sustainable skills for engineers
- Teaching sustainable skills
- Role of interdisciplinarity in education

In-House Research

- Collecting good practices
- Focus groups, interviews – students, lecturers

Stakeholder Involvement

Engineering Companies
Employment Agencies

Workshop
Project meeting

Synthesizing the results

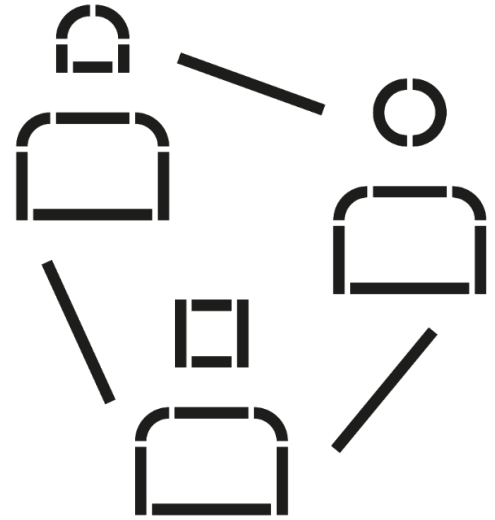
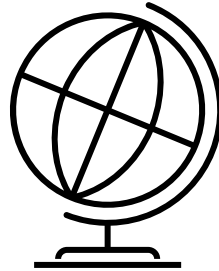
Summarizing results

Creating Recommendations

What activities can you get involved in as a student?

In every activity! It is about **YOUR** future!

- ✓ Desktop Research
- ✓ In-House Research
- ✓ Stakeholder Involvement
- ✓ Synthetizing the results
- ✓ Creating Recommendations



Benefits: ✓ participating in project meetings – travel to participating countries
✓ meet like-minded students

Get in touch

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thank

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at BME

Vision & Engineering
Community

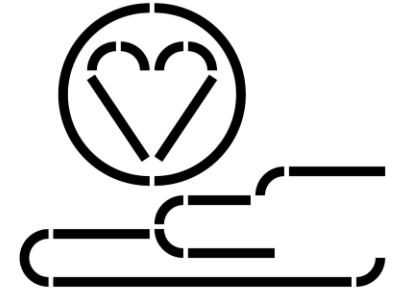
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Aims of our Community



The community aims **to emphasize the importance of visual aspects of human-centric design** and **to build an international network to educate future engineers** to design products and systems **considering the fundamentals and the newest scientific results of visual sciences.**

Humans are the users of products and systems designed by engineers. **Understanding the mechanisms and fundamentals of our visual system** should be an essential element of engineering design, measuring and optimization.

We aim for **interdisciplinary collaborative approach** from numerous fields, such as lighting engineering, colorimetry, ophthalmology, visual ergonomics, industrial design, architecture, arts, among others.

Goals and objectives



SUSTAINABLE DEVELOPMENT AND HORIZON 2020 GOALS

- ✓ Good Health and Well-being
- ✓ Quality Education
- ✓ Sustainable cities and Communities
- ✓ Life on land
- ✓ Partnerships to achieve the Goal
- ✓ Culture, Creativity, and Inclusive Society

MEMBERSHIP (EELISA UNIVERSITY)

Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany)

Planned activities (Oct 2023)

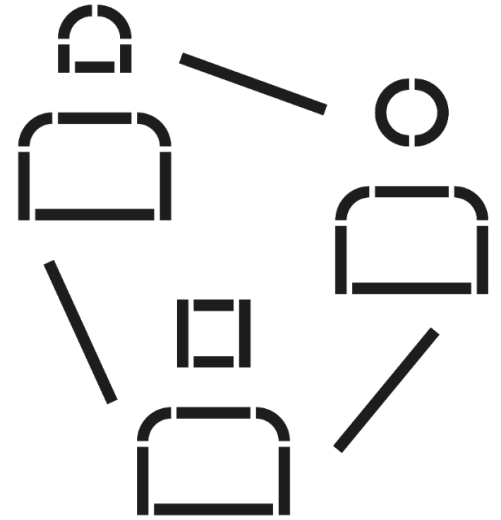
One-day workshops, aiming to strengthen the network and specify the plan of the community's first year.



Department and lab visits, or participation in public scientific events (such as the International Day of Light), aiming to promote our community and to find and show possibilities to join the community.

What activities can you get involved in as a student?

1. Study the fundamentals and the newest scientific results of visual sciences.
2. Participate in interdisciplinary projects, considering visual aspects of human-centric design.
3. Prepare programs and participate in public scientific events such as the International Day of Light (16th of May), and the European Researchers' Night (last Friday of September).
4. Get insight into CIE activities, clinical, and industrial relations.





Get in touch

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Faculty of Mechanical Engineering
Budapest University of Technology and
Economics



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**EELISA Community at
BME**

**Young Researchers for
Interdisciplinary
Sustainability Science**

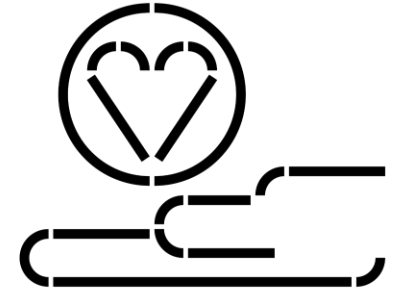
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Aims of our Community



Young **R**esearchers for **I**nterdisciplinary **S**ustainability Science

„to support young scholars – both Ph.D.-students and young post-doctoral researchers – along their path to top quality research and publication. The target group includes all young researchers of the EELISA universities with various backgrounds (including, but not limited to the engineering, management, economic and natural sciences) who carry out or are open to implement research at the intersection of the environmental, social, and economic domains of sustainable development”

Goals and objectives

SUSTAINABLE DEVELOPMENT AND/ OR HORIZON 2020 GOALS



MEMBERSHIP (EELISA UNIVERSITY)



Polytechnic University of
Bucharest

Universidad Politécnica de
Madrid



Budapest University of
Technology and
Economics

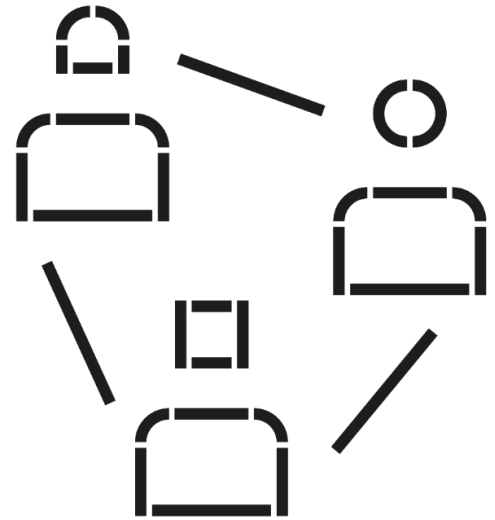
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Planned activities (Oct 2023)



What activities can you get involved in as a student?

1. Study trip to partner institutions
2. International Ph.D. conference
3. Guideline development
4. Workshop on potential joint research activities



Get in touch

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Department of Environmental
Economics and Sustainability
Budapest University of
Technology and Economics



thank

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**EELISA Community
at BME**

**Sustainable
Buildings, Cities
and Communities**

17 November 2022



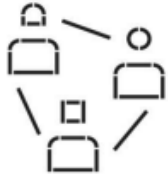
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Aims of our Community

TECHNICAL AND SOCIAL CHALLENGES FOR SUSTAINABLE BUILDINGS, CITIES AND COMMUNITIES. SUSTAINABLE BCC



With **BOTTOM-UP** initiatives

NOT studying BUT..... Imagining, creating, solving, doing, exploring, participating....



With **TOP-DOWN** projects

Solar Decathlon: SDE23 +

Shared Solar Decathlon - SUSBCC infrastructure

IUR-LAB Integrated Urban Regeneration Living-Lab

GESLAB Global Energy & Sustainable Laboratory in Building



To support more efficient and sustainable buildings, cities and communities





About our Community



- Around **120 professors & Researchers and 27 Departments**
 - BME, Budapest – 10 prof. 2 Departments
 - ITU, Istanbul – 7 prof. 4 Departments
 - ENPC, Paris – 9 prof. 4 Departments
 - PSL, Paris - 5 prof. 2 Departments
 - SNS, Pisa – 2 prof. 1 Department
 - SS ST'ANNA, Pisa – 2 (5-6) prof. 2 Departments
 - UPM, Madrid – 80 prof. 8 schools. 13 Departments
- 5 Big Professional associations
- 2 Foundations (EEF+ Miguel Aguiló)
- 2 Research Centres
- 10 companies + 10 professionals
- 1 Non profit Organization
- + ITÜ ARI Teknoken – 400 companies
- 11 Activities developed in 2021
- 29 Activities scheduled for 2022
- 155 Badgets issued in 2021
- 252 Badgets 1st semester 2022



About our Community

Our community expertises. People from:



UPM
8 Schools & Faculties
(Architecture + Engineering)
13 Departments

- Construcción y tecnología arquitectónicas
- Matemáticas aplicadas
- Urbanismo y ordenación del territorio
- Estructuras y física de la edificación
- Composición arquitectónica
- Proyectos arquitectónicos
- Ingeniería de organización, administración de empresas y estadística
- Construcciones arquitectónicas y su control
- Ingeniería civil: hidráulica, energía y medio ambiente
- Sistemas y recursos naturales
- Ingeniería energética
- Ingeniería Agroforestal
- Inteligencia Artificial



SNS
1 Department
• Political Science



SS St'Anna
2 Research Institutes
• Istituto di Management
• Istituto di Intelligenza Meccanica



BME
2 Departments
• Building materials & Civil Engineering
• Building Services and Process Engineering



İTÜ
4 Departments
• Architecture
• Mechanical Engineering
• Urban and Regional Planning
• Landscape Architecture



PSL
MINES ParisTech
2 Departments
• Centre Efficacité Énergétique des Systèmes - Center for Energy
• Centre de Sociologie de l'Innovation



ENPC
3 Departments
• Laboratoire Ville Mobilité Transport
• Department of Civil and Structural Engineering
• NAVIER Laboratory

Aims of our Community



EELISA SUSTAINABLE BCC

TOP-DOWN ACTIVITIES AND PROJECTS: Participate in SDE-2025 or any other SD Competition



UPM Magic Box, US SD2005



UPM Casa Solar, US SD 2007



UPM Casa Black&White, US SD 2009



Solar Decathlon Europe 2010 - Madrid



Solar Decathlon Europe 2012 - Madrid



Solar Decathlon Europe 2014 - Versailles

Upcoming Activity



EELISA SUSTAINABLE BCC

THINK TANK EUROPEAN SPACE AGENCY – SUSTAINABLE BCC COMMUNITY (ESA-ESAC-SUSBCC)



1. an educational activity to promote innovation and generate fresh ideas to launch a comprehensive sustainable refurbishment of the European Space Agency (ESA) building “A” in Spain
2. hybrid format in the last week of January 2023
3. scope of development will cover the entire 2022-2023 academic year
4. flipped classroom activities



Upcoming Activity

THINK TANK EUROPEAN SPACE AGENCY – SUSTAINABLE BCC COMMUNITY (ESA-ESAC-SUSBCC)

1. **Health and Wellbeing** (social aspects of sustainability, health and well-being of workers improving their comfort conditions)
2. **Energy Efficiency** (passive strategies, active strategies, renewables sources, building-environment interrelation, demand levelling)
3. **Environmental Sustainability** (circular economy, water management, waste management, materials management, ecology, biodiversity, zero carbon, sustainable mobility)
4. **Efficient Facility Management** (how to improve employee productivity and creativity, or how to improve employee engagement with the organisation)
5. **Digitalisation** (how to improve the operation of the building for a best facility management. In this think tank will participate students of the three topics related to comfort conditions, energy management, and building operation)
6. **New European Bauhaus** (how sustainable intervention should be undertaken from the spirit of the New European Bauhaus)



Planned activities (-Oct 2022)

THINK TANK EUROPEAN SPACE AGENCY – SUSTAINABLE BCC COMMUNITY (ESA-ESAC-SUSBCC)

PHASE I – PREPARATION:

- Building documentation
- Building exploration
- Learning material for flipped classroom



PHASE II – THINK TANK:

- 23-27 January
- Hybrid Event at ESA-ESAC
 - 20+30 presential studens
 - 100-200 virtual ?
- 15-20 professors&professionals



PHASE III – ELLABORATION:

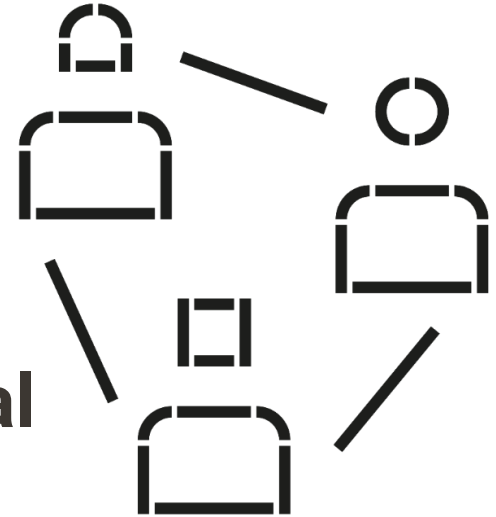
- 2nd Semester
- Project development – 60 students (UPM-ITÜ)
- NEB Competition?

Phase	Number students			Estimated number of professors, Researchers, professionals (UPM-Eelisa)	
	Activity	Presential (estim. UPM/Eelisa)	Virtual		
PHASE I - PREPARATION (1st Semester)					
	Building exploration	2		4	
	Support for MOOCs, teaching material	3		6	2
	MUCTA's group for conservation study	10			
PHASE II - THE THINK TANK (January)					
	Participating Students	20	30	100-200?	15 9
PHASE III - PROPOSAL ELLABORATION					
	NEB Integration & ellaboration				
	Students group at UPM	40		4	
	Students group at ITÜ		30		2
	Students group at BME		10		2
	</				



What activities can you get involved in as a student:

1. Participation from all BME Faculties
2. Tasks related to Think Tank groups
3. Meetings in online format, active participation with fellow international students, professors
4. BSc, MSc thesis topics should be built on the activities



Get in touch

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Faculty of Mechanical Engineering
(BUTE)

<https://community.eelisa.eu/communities/sustainable-buildings-cities-and-communities/>



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**EELISA Community
at BME**

**Tech Diplomacy &
International
Cooperation**

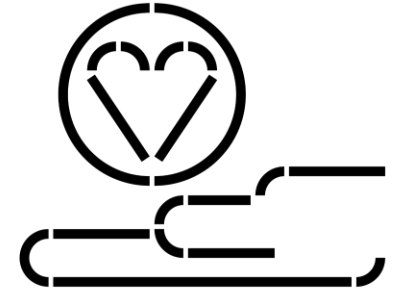
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Aims of our Community



To make EELISA a key mover of EU **technoscience diplomacy** and international cooperation and build an ecosystem to enhance the role of our **universities as agents** of social change and technological progress in international policy action on a global level.

Goals and objectives



SUSTAINABLE DEVELOPMENT AND/ OR HORIZON 2020 GOALS

SDG4 – Quality Education

SDG5 – Gender Equality

SDG8 – Decent Work & Economic Growth

SDG 9 – Industry, Innovation & Infrastructure SDG10 – Reduced Inequalities

SDG12 – Responsible Consumption & Production SDG13 – Climate Action

SDG16 – Peace, Justice & Strong Institutions

SDG17 – Partnerships for the Goals

MEMBERSHIP (EELISA UNIVERSITY)

✓ ALL

✓ Co-lead: FAU/UPM

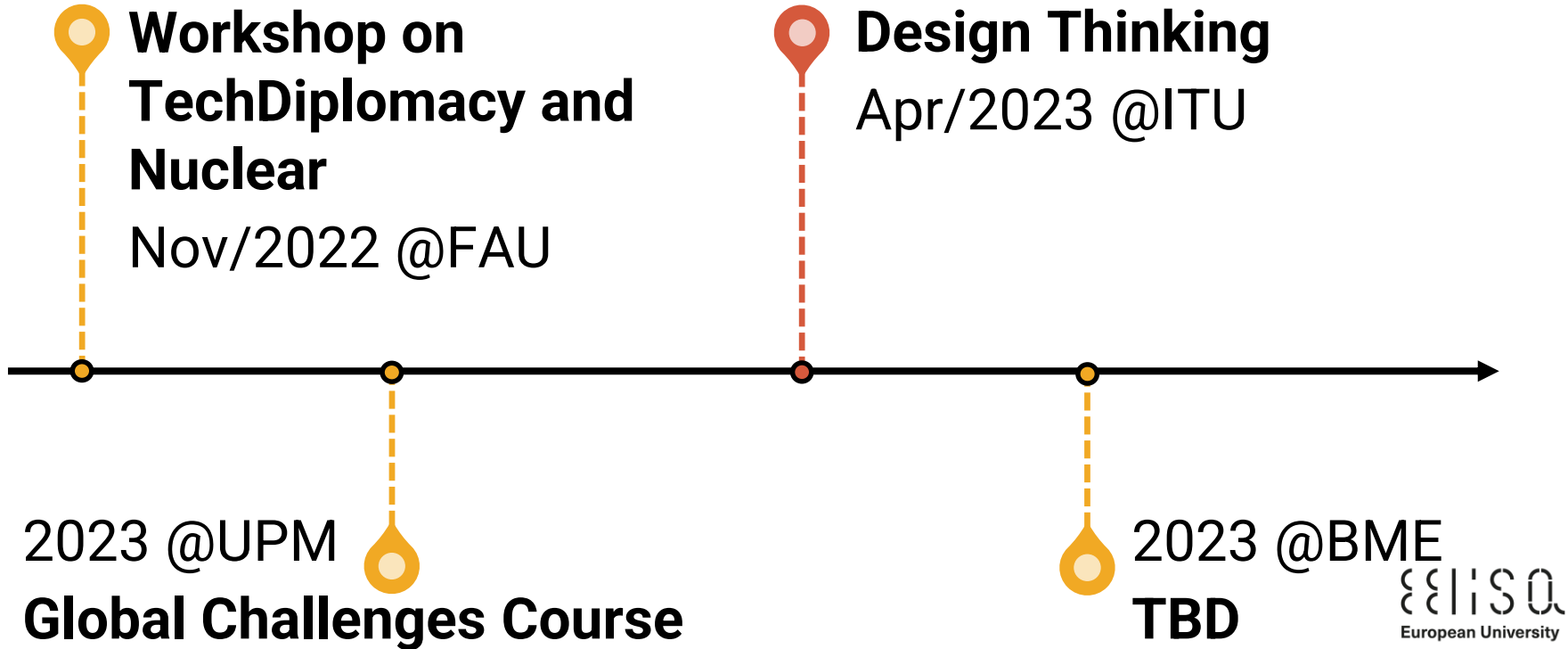
Goals and objectives



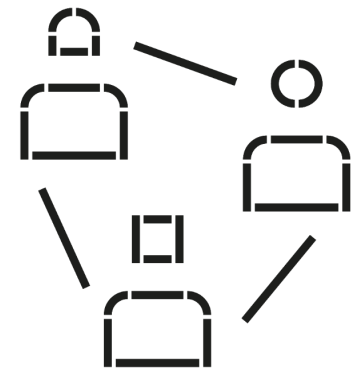
SUSTAINABLE DEVELOPMENT AND/ OR HORIZON 2020 GOALS

- 1) Promoting the growth of EELISA
- 2) Raising internal awareness of the importance of the geopolitics of technology and international cooperation
- 3) Developing an interdisciplinary ecosystem of research on tech diplomacy & international cooperation
- 4) Actively participating in EU programmes

Planned activities (Oct 2023)



What activities can you get involved in as a student?



+ Open for application

Global Challenge Formación

Course / Seminar Oct 2022 - May 2023

Global Challenge Formación offers different courses along the academic year with various topics that aim to make students ...



Essay competition for students on the topics of panel discussions of the Academic Forum on Crimea – 2022

Social event

Sep - Sep 2022

As part of the Academic Forum on Crimea - 2022, Taras Shevchenko Kyiv National University and its student ...



Seasonal School "CROSSROADS" – The Never Ending EU Crises and the COVID-19 Pandemic Outbreak

Summer / Winter / Seasonal schools

May - May 2022

The Seasonal School aims to offer a critical assessment of the current governance structure of the EU and ...



Science Diplomacy as an Intercultural Encounter – Open Conference at FAU Erlangen-Nürnberg

Conference

Nov - Nov 2021

InsSciDE's second Open Conference brings intercultural encounters and academic training in science diplomacy into the spotlight. An interdisciplinary ...



What activities can you get involved in as a student?

1. Insert

+ Open for application

Design thinking – Technology for elderly people

Workshop

Apr - Apr 2023

This activity will provide EELISA students with principles and applied concepts of Design Thinking. Students will have the ...



+ Open for application

Workshop on Technology and science diplomacy in an age of digital sovereignty and nuclear threats

Workshop

Nov - Nov 2022

Deep transformations of international relationships together with the rapid evolution of innovations are leading to renewed geopolitical rivalries ...



UNIVERSIDAD
POLITECNICA
DE MADRID

Science for Peace, Past and Present

Conference

Nov - Nov 2022

Next November 10th will take place at the Escuela Técnica Superior de Arquitectura de Madrid (UPM) the Opening ...



UNIVERSIDAD
POLITECNICA
DE MADRID

Innovation & Leadership

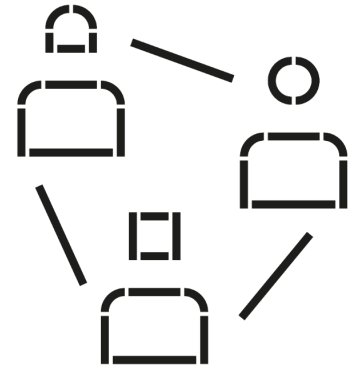
Course / Seminar

Oct 2022 - Feb 2023

In this course, students will solve real-life challenges posed by the highest-tiers of our university or associated companies. ...



Friedrich-Alexander-Universität
Erlangen-Nürnberg



Get in touch

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nagy.balazs.vince@bme.hu



thank

you

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#7412 280



Scholarship



László Gergely Vigh, PhD.

Director of International Academic Affairs

Department of International Academic Affairs

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