EU LAB

SUSTAINABILITY CHALLENGE

Toolkit

Funded by: Erasmus+ Programme Key Action 226 Partnerships for Digital Education Readiness
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FUTURE CITIES

What will the future of our cities look like?

EULAB SUSTAINABILITY CHALLENGE TOOLKIT

The aim of this toolkit is to support higher education faculty and staff looking to embrace a mission-led approach to Education for Sustainable Development and create an engaging and student-centric learning environment. It is our belief that by sharing our experiences and insights, we can inspire a collective effort to transform education for the better.

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THE GREEN TRANSITION

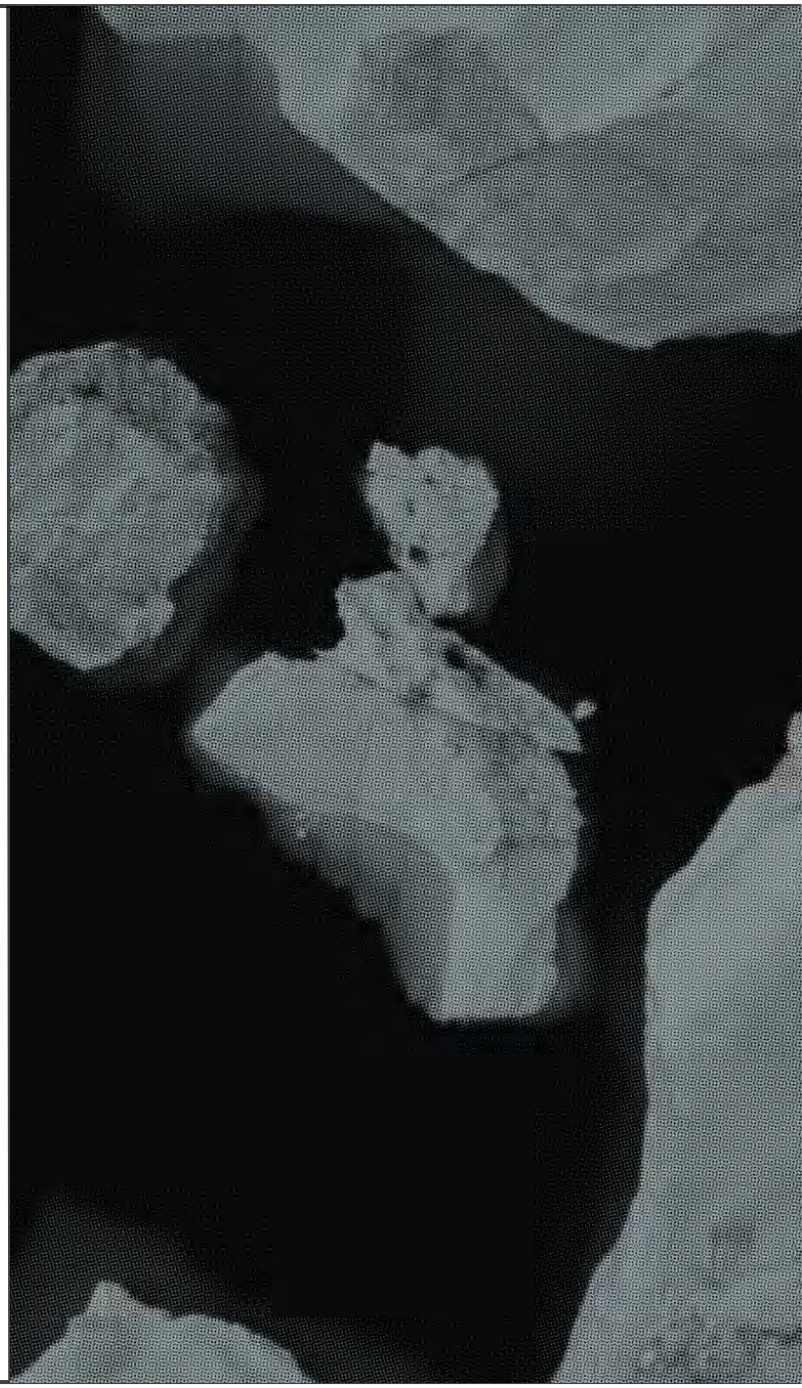
How might we enable more green corridors in our cities?

Preface

Welcome to the EU Lab Toolkit, a resource designed to introduce higher education faculty to the innovative concept of Mission-Led Learning. Supported by Erasmus Plus funding, the EU Lab project has brought together four esteemed higher education institutions to pioneer and refine a studio-based Sustainability Challenge program rooted in a mission-led approach to education.

Throughout the EU Lab project, we collaborated closely with faculty members, embarking on a journey to identify the necessary shifts in educational practices required to embrace this mission-led philosophy. We were deeply impressed by the commitment of the faculty involved, both within our partnership and the pilot train-the-trainer program, in prioritising student-centred education. They had already made significant efforts to create an environment that fosters student autonomy. However, it was apparent that the ambitious goals of the EU Lab Sustainability Challenge demanded an even greater dedication to realise the vision of Mission-Led Learning.

We do not expect that by engaging with this toolkit, every teacher will instantly be prepared to conduct their own EU Lab Sustainability Challenge. Instead, we aim to elucidate the opportunities offered by this teaching and learning method and the efforts required to seize these opportunities. Our objective is also to share our findings so that we can cultivate a broader community of faculty members exploring similar approaches in diverse contexts, fostering greater collective impact.



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NO POVERTY

How might we take on the challenge of large scale poverty and its effect on people and their environment?

EULAB ERASMUS+ STRATEGIC PARTNERSHIP

EULab is an Erasmus+ funded project, led by the University of Limerick (IRE), in partnership with Audencia Business School (FRA), Oulu Business School, University of Oulu (FIN) and Universidad de Leon (SPA). Its aim is to transform the role of the University's ability to make impact on real challenges. EULab has enabled the partner universities to experiment and grow a novel education modality developed in University of Limerick, the Digital Futures Lab, toward the realisation of a European programme where student and faculty co-create Mission Led, Place Based, studio learning environments to imagine and model sustainable futures. The education and exchange programme developed equips active citizenship toward regenerative futures using a heutagogical blended exchange model.

EULab Objectives:

- Enable meaningful change and empower Higher Education (HE) students and faculty to tackle complex SDG related challenges.
- Create mission-led, place-based 'pop up' studio learning environments.
- Foster interdisciplinary collaboration and intercultural interaction.

EULab Project Highlights

- ·Primary Research undertaken on the on readiness of HE institutions for heutagogical teaching and learning (Oulu University)
- ·Piloted two modalities of the EU Futures Lab (UL and Audencia)
- ·Virtual Program: Based on the 12 ECTS credit Digital Futures Lab module at the University of Limerick.
- ·Hybrid Program: Designed and tested in EULab, featuring a 1-week immersive place-based lab and 4-week online interaction. Led by Audencia Business School.
- ·Developed an intercultural interaction module led by Universidad de Leon to enhance virtual and hybrid teams' collaboration across institutions and cultures.
- ·Developed integrated digital learning environment and online studio mobilising available tools including MSTeams or Slack and miro.com.
- ·Train the trainer programme, developed with the partner team to prepare for the Nantes Lab pilot and then full pilot of the programme running over 3 weeks in May-June 2023
- ·Development of a community of practice through extensive engagement with faculty and university professions in our social media channels, and through deep engagement with participants in our pilot train the trainer programme.
- ·Policy recommendations shared at the EULab Brussels multiplier event which took place on 21st September 2023 with a keynote from a Julie Anderson, policy officer Directorate General for Education, Youth, Sport and Culture

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CLIMATE ACTION

What can we do to make real change in the fight against climate change?

PROGRAMME OVERVIEW

Welcome to the EULab Sustainability Challenge Programme – an innovative model of Mission-Led Learning. This program takes a fresh approach to education by combining challenge-based learning (CBL) with heutagogy, a student-centric teaching method. In EULab, we guide your students' learning journey with prompts and toolkits, encouraging them to: Understand current systems, Imagine future systems and Identify ways to influence and design interventions to bring these future systems to life. EULab is designed to inspire and capacitate your students to envision and design solutions for a sustainable future in a specific location. In addition to honing digital skills, the EULab program has a strong focus on developing sustainability competences. This means empowering your students to embody sustainability values, navigate intricate systems, and take action to restore ecosystems, promote justice, and create visions for a sustainable future. Our approach is centred on challenge-based learning, enriched by heutagogy, all within a design-led studio learning environment. We invite you to explore how EULab can transform your teaching and empower your students to make a positive impact on the world.

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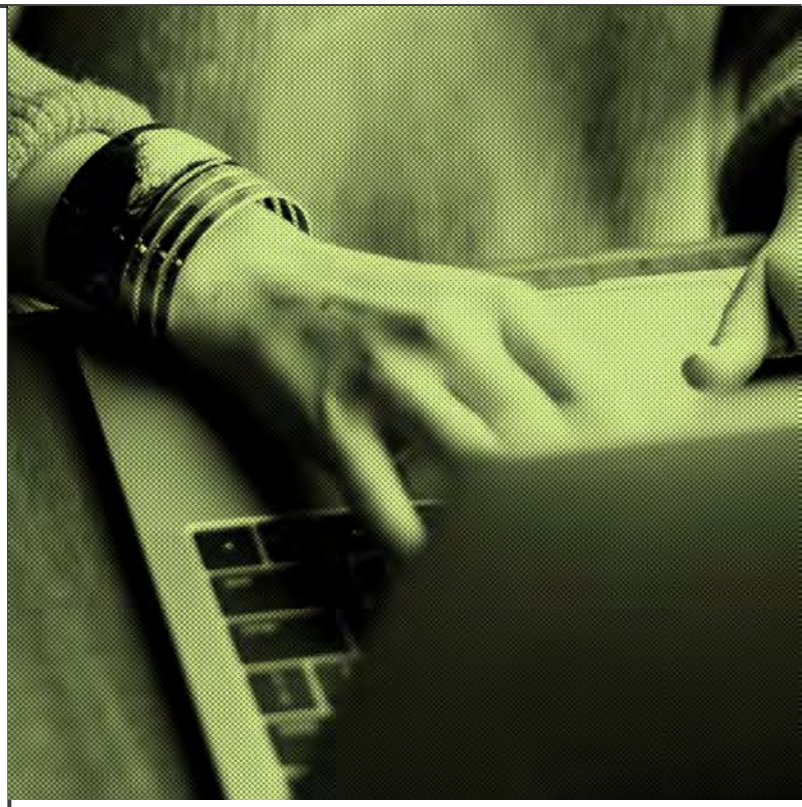
FUTURE OF HIGHER EDUCATION

How can students change the system for the future?

PEDAGOGICAL UNDERPINNINGS

Challenge-Based Learning (CBL) is an innovative teaching methodology that engages students to resolve real-world challenges while applying the knowledge they acquired during their professional training (Portuguez Castro and Gomez Zermeno, 2020). EULab programmes go further to enable new learning beyond existing capabilities as learners are prompted and supported in deep, immersive and accelerated Mission Led and place-based learning experiences. For example, both pilots undertaken as part of the EULab Erasmus+ funded strategic partnership were founded on notions of circular economy (CE) and food systems. The students undertaking the labs came from either business analytics or more general business/marketing or responsible business disciplinary backgrounds. Learners therefore have the opportunity to learn about sustainability challenges and solution models (e.g Circular Economy), but at the same time, learn to localise or translate these ideas and models in a specific local context or situation. To support this EULab employs heutagogy as an underpinning pedagogical approach.



Heutagogy is a student-centered instructional strategy that emphasises the development of autonomy, capacity, and capability to self-determine learning, where learners are regarded as problem finders; they know how to find and set their destination and become increasingly independent (Hase & Kenyon, 2013). This approach affords a level of freedom and flexibility where learners do not rely on the instructor as the only or primary source of knowledge on the challenge at hand. Instead, learners engage in deep dive research alongside, using their own and peer learning and supported by stakeholder engagement. Stakeholders in EULab programmes are categorised as either 'problem owners' or experts or both.

Portuguez Castro, May, and Marcela Georgina Gomez Zermeno. "Challenge based learning: Innovative pedagogy for sustainability through e-learning in higher education." Sustainability 12, no. 10 (2020): 4063.

Hase, S. and Kenyon, C. (2013). The nature of learning in S. Hase & C. Kenyon (eds.) Selfdetermined learning: Heutagogy in action, London: Bloomsbury, 19-3

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EULAB VERTICALS

SYSTEMS THINKING AND FUTURES PERSPSECTIVE

Systems thinking is essential for grasping complex sustainability challenges and helps learners understand reality in various contexts and fields, fostering better decision-making for sustainability (Bianchi, 2022). In EULab, the focus on systems thinking is to develop the learner's capacity to apprehend interdependencies but also the distributed nature of agency and action in contemporary economic and market systems. The emphasis is to 'go upstream' of the problems as experienced, which are often symptomatic of deeper, systemic or structural dimensions.

While systems thinking is a vital aspect of the EULab education programme, we view this as only a starting point. To this we add specific futures or strategic foresight perspectives and equip learners to methodically imagine and map multiple possible futures. This opens up the learners' imagination and supports in the development of their sense of agency to create change. According to Bianchi et al., (2022) creativity, imagination and being aware of our emotions and intuitions can inform our ability to envision alternative futures.

Bianchi, G., Pisiotis, U. and Cabrera Giraldez, M., (2022) "GreenComp The European sustainability competence framework", Punie, Y. and Bacigalupo, M. editor(s), EUR 30955 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-53201-9, doi:10.2760/821058, JRC128040.

Jane McDonigal on re-imagining learning, IFTF 10 years forecast 2023: https://www.youtube.com/watch?v=OiO7-Grfl8A

At EULab we have explored a range of visual tools and frameworks to support and guide learner imagination. For example, we have turned an exercise taught by futurist Jane McGonigle "100 facts" into a visual canvas, whereby learners (or EULab participants with stakeholders), firstly brainstorm current reality (in relation to a specific issue, e.g. current facts on food production), secondly, they flip these facts, and finally, reflect on a future where those flipped facts might be a reality. The canvas approach enables a group of participants to work "together but alone" each armed with post-it notes, everyone's ideas literally have a place on the canvas. Following this individual work the team is better placed to discuss the emerging common themes.

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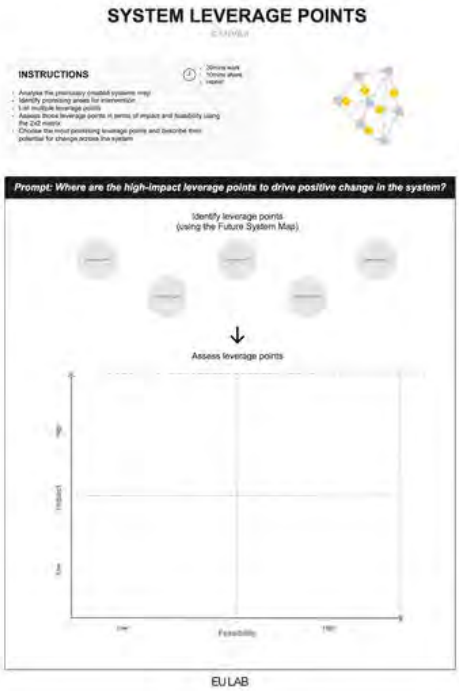
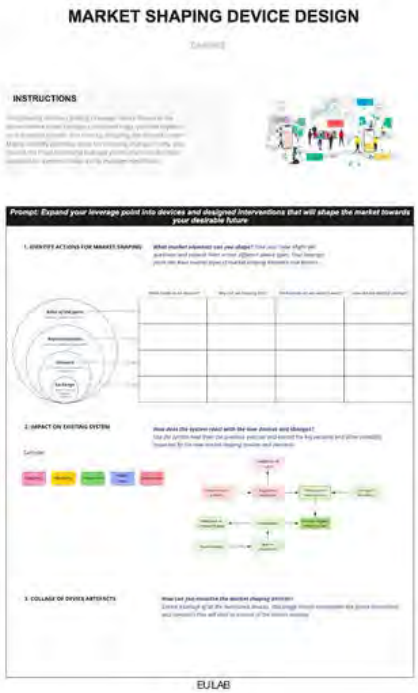
MARKET SYSTEM SHAPING

Central to the development of the EUlab Sustainability Challenge programme has been an appreciation of the constructed nature of (market) systems, which are considered mutable and therefore subject to shaping and reshaping by actors/stakeholders. Theoretically, the programme draws on Market Studies, an interdisciplinary theoretical approach that views market systems as collectives of distributed, heterogeneous sets of expertise made and shaped by market actors of all kinds: entrepreneurs, business managers, policymakers, community and activist groups, and public and third sector workers. Drawing on Actor Network Theory (e.g., Latour, 2005), and the work of Michel Callon (1999) this approach recognises that technologies, devices, and inscriptions are also important actors in the making and maintaining of markets and systems of economic organising.

Latour, B. (2005). Reassembling the social: An introduction to actor–network theory. Oxford, UK: Oxford University Press.
Callon, M. (1999), Actor-network theory—the market test. The Sociological Review, 47: 181-195.

In the context of our program hosted within the Business School, it is imperative to acknowledge that our journey towards sustainability must extend beyond individual business-level initiatives. We firmly believe that future sustainable market and economic systems should be intentionally crafted and nurtured to pave the way for genuinely regenerative futures. One of the key elements that distinguishes our program is the incorporation of market system shaping canvases, a result of the extensive research and testing conducted in the EUlab partnership. These canvases play a pivotal role in enhancing the learning experience for our students. Their primary objective is to equip learners with the necessary design skills and the ability to act as agents of change. Our goal is to empower our students not only to effect change within existing systems but, more significantly, to be catalysts for broader systemic transformations.





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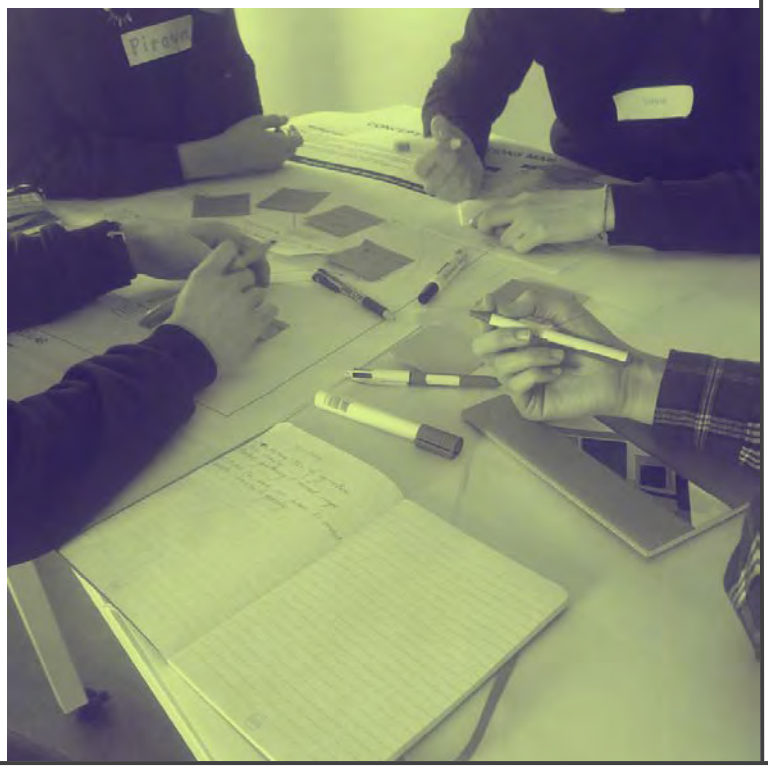
STUDIO LEARNING ENVIRONMENT

STUDIO IN THE BUSINESS SCHOOL

The studio based learning environment is an example of heutagogical approach in practice

The EULab education programme adopts a studio-based learning environment. A studio is a context for collective learning and offers a highly dynamic learning environment. Barry and Meisiek (2015) note that numerous business schools around the world have started experimenting with studio-based inquiry drawing inspiration from design but also visual or performing art schools. According to the authors, what sets studio work apart from other problem-based or experiential practices in management is 'the strong emphasis on participant-led inquiry through hands-on, creative engagement (...)' (2015:156). To them, the studio is a place of creative enquiry that differs from the more dominant scientific posture adopted by business schools in many notable ways: students engage in 'problem finding' and don't start working on a problem that needs solving; studios keep bringing the context in the room and attach importance to the local dimension of an issue; creative and inspiring accidents are welcome; learning comes through making.



Studies highlight the need for a more 'holistic' perspective to address the dilemma of today's organisations and see studio-based teaching as a well-suited method for developing the relevant skills needed by future business graduates.

The EULab education programme adopts 4 key stages of studio based teaching and learning:

1. The teaching team in collaboration with stakeholders or 'problem owners' set the brief for a future focused real life challenge area. Students work in teams to 1. Understand the current problem area using systems thinking, 2. Methodically imagine future possible system elements and 3. Design system level interventions for change, involving stakeholders/ users/system actors in the process. The process also involves meetings with other stakeholders and clients along with pitches and co-creation sessions.
2. Students under the supervision of the teaching team work collectively answering the question/challenge set in an iterative way using bespoke visual canvases or creative tools (e.g. LEGO® SERIOUS PLAY®).
3. Students in the process are supported by reflection sessions which take place at regular intervals during the challenge/lab and during which they display and explain their work in progress. They receive feedback from their peers and the teaching team in critiques or 'crit' sessions.
4. On reaching the deadline, students are required to display and explain their final work to the audience. They will take the audience through their process and explain the final output.

Barry, Daved, and Stefan Meisiek. "Discovering the business studio." Journal of Management Education 39, no. 1 (2015): 153-175.

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VISUAL TOOLS

In EULab we offer a ‘starter kit’ of visual canvases across the 3 part scaffold: understand, imagine, and design future systems.

Problem Framing: Canvases help designers define and understand the problem they are trying to solve. They provide a clear structure to analyse and break down complex issues into manageable components.

Ideation: Canvases stimulate idea generation by providing a visual framework to brainstorm and explore different concepts and solutions. Designers can sketch, write, or map out ideas within the canvas.

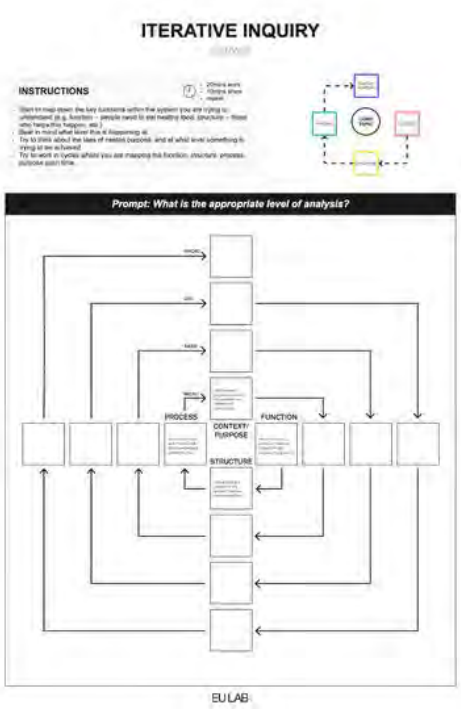
Collaboration: Templates encourage collaboration among team members or stakeholders. They offer a shared language and format, making it easier for different people to contribute their perspectives and ideas cohesively.

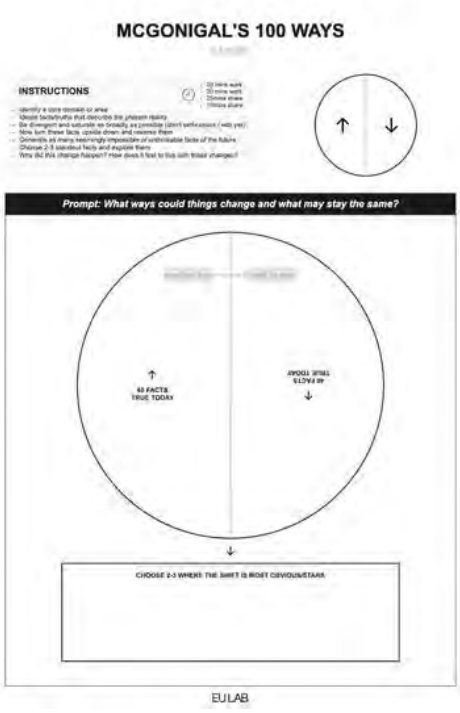
Visualisation: Visual templates make abstract concepts or strategies more tangible. Designers can use them to create visual representations of ideas, helping to communicate and share concepts effectively.

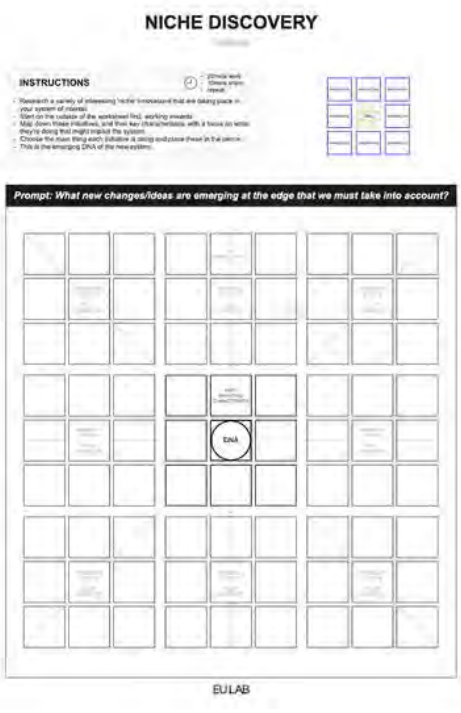
Iteration: Canvases support an iterative design process. Designers can revise and refine their ideas by making adjustments within the canvas, helping to evolve and improve their solutions over time.

User-Centered Design: Templates often include sections dedicated to understanding user needs and experiences. This user-centric approach ensures that designs are grounded in empathy and user research.

E**fficiency:** Canvases save time and resources by providing a structured starting point. They prevent designers from starting from scratch each time they approach a new project, making the design process more efficient







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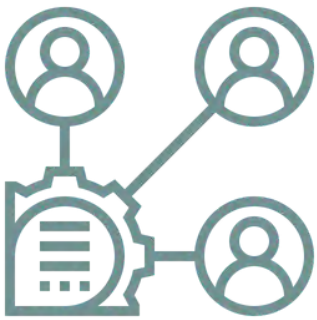
STEPS IN RUNNING EULAB SUSTAINABILITY CHALLENGE

Steps in Running a EULab Sustainability Challenge

After conducting successful trials in virtual and blended modes, integrating insights from these pilots and years of experience, this toolkit aims to guide institutions interested in hosting the EU Lab Sustainability Challenge.



Step 1: Setting the Mission

Aligning Focus: Aprox 6 months before start of the Lab host an event or discussion involving problem owners and stakeholders to align the lab's focus with institutional research or partnership agendas. This aligns the challenge with existing school activities and expertise, driving engagement. Mission should be future facing, giving space to partners to re-imagine the problem space and possible futures.

Step 2: Enrolling Stakeholders

Early Engagement: Early communication with stakeholders, including problem owners, is essential. Engage them as speakers, interaction facilitators, or even co-participants in the lab, ensuring their understanding and commitment to the process.

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Steps in Running a EULab Sustainability Challenge

Step 3: Institutional Preparation

Necessary Modules: Identify modules or programs that would facilitate the EULab's implementation within the institution. For both virtual exchange and blended intensive modes, arrange learning agreements and conduct teacher training to ensure preparedness.

Step 4: Preparing Students

Unique Learning Experience: Focus on preparing students for the distinct learning journey offered by the EULab. Offer training on self-determined learning, collaboration, and visual sense making, and thinking through use of tools or canvases specific to the challenge.

Step 5: Publicising the Sustainability Challenge

Continuous Engagement: Engage stakeholders and the public continually, leveraging social media and institutional platforms for publicity. This creates awareness and fosters interest within the local community.

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Steps in Running a EULab Sustainability Challenge

Step 6: Welcoming Students and Forming Teams:

Cross-cultural Team Formation: Form diverse teams, ensuring a blend of cultural backgrounds and institutional affiliations. Define clear roles and responsibilities within teams and implement agile methodologies for effective teamwork.

Step 7 Running the Studio

Core Principles Maintenance: Maintain core principles such as systems thinking and visual sense-making. Offer tailored immersive experiences catering to different learning formats to ensure engagement and effective learning.

Step 8: Evaluation and Monitoring

Assessment Procedures: Develop robust assessment procedures to evaluate educational impacts and solution creation. Share generated data and insights for continuous improvement and future refinements of the challenge.

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FOCUS ON ASSESSMENT

The assessment approach in the EULab programme embodies a transformative ethos, prioritising behaviorus and competencies crucial for future leaders rather than solely focusing on outputs. Grades are used strategically to encourage desired behaviours, emphasising processes and collaboration over final outcomes.A key aspect is the emphasis on studio-based learning, where grading incentivises behaviours aligned with the program's goals. MSTeams (or Slack) channels play a pivotal role in monitoring progress, encouraging teams to document their meetings and evidence their ongoing work through Miro boards. For instance, teams showcasing support through feedback or research on the MSTeams channel utilise #teamxsupport, enabling easy tracking by the teaching team of team engagement within their pod or cohort.

The assessment strategy extends beyond traditional grading systems, aligning with the EUlab Sustainability Challenge. It integrates a holistic grading rubric inspired by the Nesta competency framework, which extends beyond subject competence to encompass attributes essential for change architects, instigators, and innovators (see https://states-of-change.org/assets/downloads/05.2018-Competency-Framework-1.pdf). These competencies include:

- Subject Competence: Evaluates engagement with core disciplinary materials, assessing the meaningful synthesis and application of theories.
- Action Competence: Assesses the ability to materialise ideas, collaborate within the team, take corrective action, and iterate work effectively.
- Relationship Competence: Focuses on identifying and utilising mentor and stakeholder networks, evaluating engagement quality and intra-team interaction.
- Change Competence: Evaluates independent learning ability, the capacity to navigate ambiguity, and act effectively in uncertain situations.

This comprehensive grading rubric reflects the multifaceted skills and attitudes necessary for individuals to drive impactful change, innovate, and shape the future in a dynamic and evolving landscape. The approach acknowledges that mastery of these competencies is essential for tomorrow's leaders to become effective change agents.

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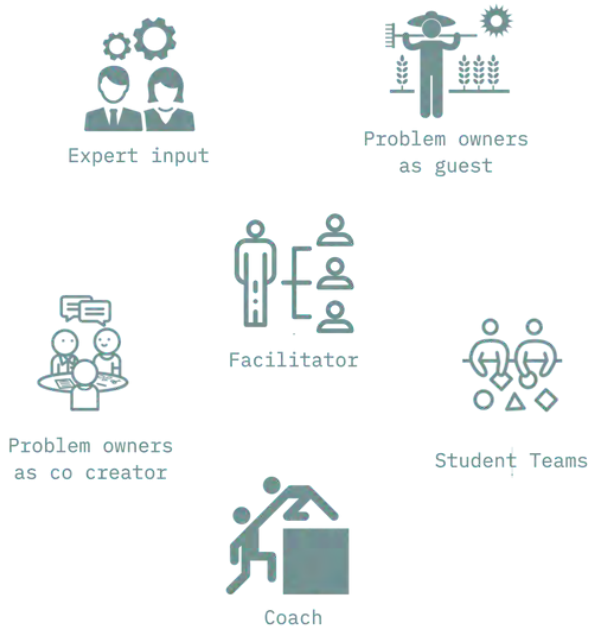
ROLES AND RESPONSIBILITIES

There are two levels of roles to be played in in the EULab Sustainability Challenge

The Lab Level



The Team Level

Team Leader	Overall responsibility for the team's success, deliverables and engagement
Project Lead	Responsible for setting up the Kanban and managing the workflow
Product Lead	Responsible for the development of the visualisations or other technical elements to the deliverables.
Process Lead	Responsible for setting up and managing the check-in & check- outs, and Wednesday Team Mentor check-point, and the Miro Board.
Team Liaison Officer	Responsible for building bridges to other teams, external stakeholders and managing Teams and Video Conferencing
Communications lead	Responsible for external communications, engaging with stakeholders and sharing the team journey via social media

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FURTHER RESOURCES

Virtual and Blended Exchange

- COIL (Collaborative Online International Learning): COIL offers extensive resources, case studies, and professional development opportunities focused on internationalising the curriculum through online collaboration. https://tlu.cit.ie/coil-collaborative-online-international-learning
- UNICollaboration: This organisation focuses on telecollaboration and virtual exchange in higher education. Its website offers research, training, and practical guides for educators. (unicollaboration.org)
- European Association for International Education (EAIE): The EAIE website provides a wealth of information on international education, including resources and publications that touch upon virtual exchange and its implementation in higher education. (eaie.org)
- Erasmus+ Project Results Platform: This platform hosts a variety of projects funded by the Erasmus+ program, including resources, reports, and publications related to virtual exchange and blended learning. (ec.europa.eu/programmes/erasmus-plus/projects)

Related articles/books

- Helm, Francesca, and Robert O'Dowd. "Virtual exchange and its role in blended mobility initiatives." UNICollaboration Position Paper (2020).
- O'Dowd, Robert. "Virtual exchange: Moving forward into the next decade." Computer Assisted Language Learning 34, no. 3 (2021): 209-224.
- O'Dowd, Robert. "Virtual Exchange and internationalising the classroom." Training language and culture 1, no. 4 (2017): 8-24.
- O'Dowd, Robert. Internationalising higher education and the role of virtual exchange. Taylor & Francis, 2022.

Design

- The Service Design Network (SDN), https://www.service-design-network.org/
- European Network of Living Labs: Tools for co-creation: https://unalab.enoll.org/

Heutagogy and studio based education

- Blaschke, Lisa Marie. "Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning." The International Review of Research in Open and Distributed Learning 13, no. 1 (2012): 56-71.
- Hase, Stewart, and Chris Kenyon, eds. Self-determined learning: Heutagogy in action. A&C Black, 2013.
- Barry, Daved, and Stefan Meisiek. "Discovering the business studio." Journal of Management Education 39, no. 1 (2015): 153-175.

Education for Sustainable Development and Sustainability Competences

- Bianchi, G., Pisiotis, U. and Cabrera Giraldez, M., GreenComp The European sustainability competence framework, Punie, Y. and Bacigalupo, M. editor(s), EUR 30955 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-53201-9, doi:10.2760/821058, JRC128040.

Systems/Futures/Market Shaping

- Windahl, Charlotta, Ingo O. Karpen, and Mark R. Wright. "Strategic design: orchestrating and leveraging market-shaping capabilities." Journal of Business & Industrial Marketing 35, no. 9 (2020): 1413-1424.
- Mapping the new possible: https://www.iftf.org/ten-year-forecast/
- Accelerating Systemic Change Network (ASCN), How to be an agent of change? https://ascnhighered.org/ASCN/start_change.html
- European Commission, Directorate-General for Research and Innovation, Mazzucato, M., Mission-oriented research & innovation in the European Union – A problem-solving approach to fuel innovation-led growth, Publications Office, 2018, https://data.europa.eu/doi/10.2777/360325
- United Nations' Changing Mindsets to Realize the 2030 Agenda for Sustainable Development: https://unpan.un.org/sites/default/files/Toolkits/Toolkit%20Ch/Report%20on%20Changing%20Mindsets.pdf

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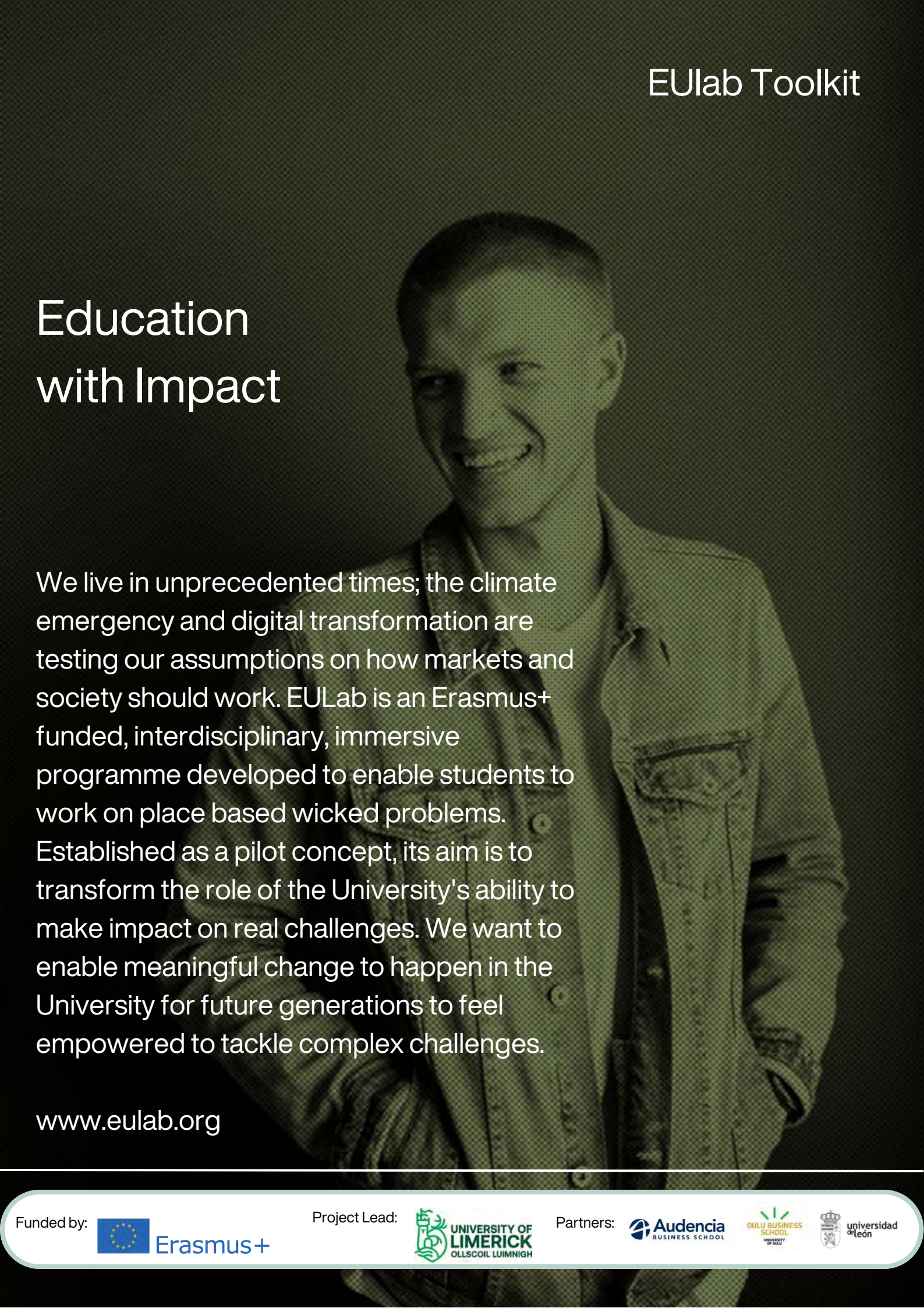

Education with Impact

We live in unprecedented times; the climate emergency and digital transformation are testing our assumptions on how markets and society should work. EULab is an Erasmus+ funded, interdisciplinary, immersive programme developed to enable students to work on place based wicked problems. Established as a pilot concept, its aim is to transform the role of the University's ability to make impact on real challenges. We want to enable meaningful change to happen in the University for future generations to feel empowered to tackle complex challenges.

www.eulab.org

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