



**Title:**  
**Shared R+D+I Agenda**

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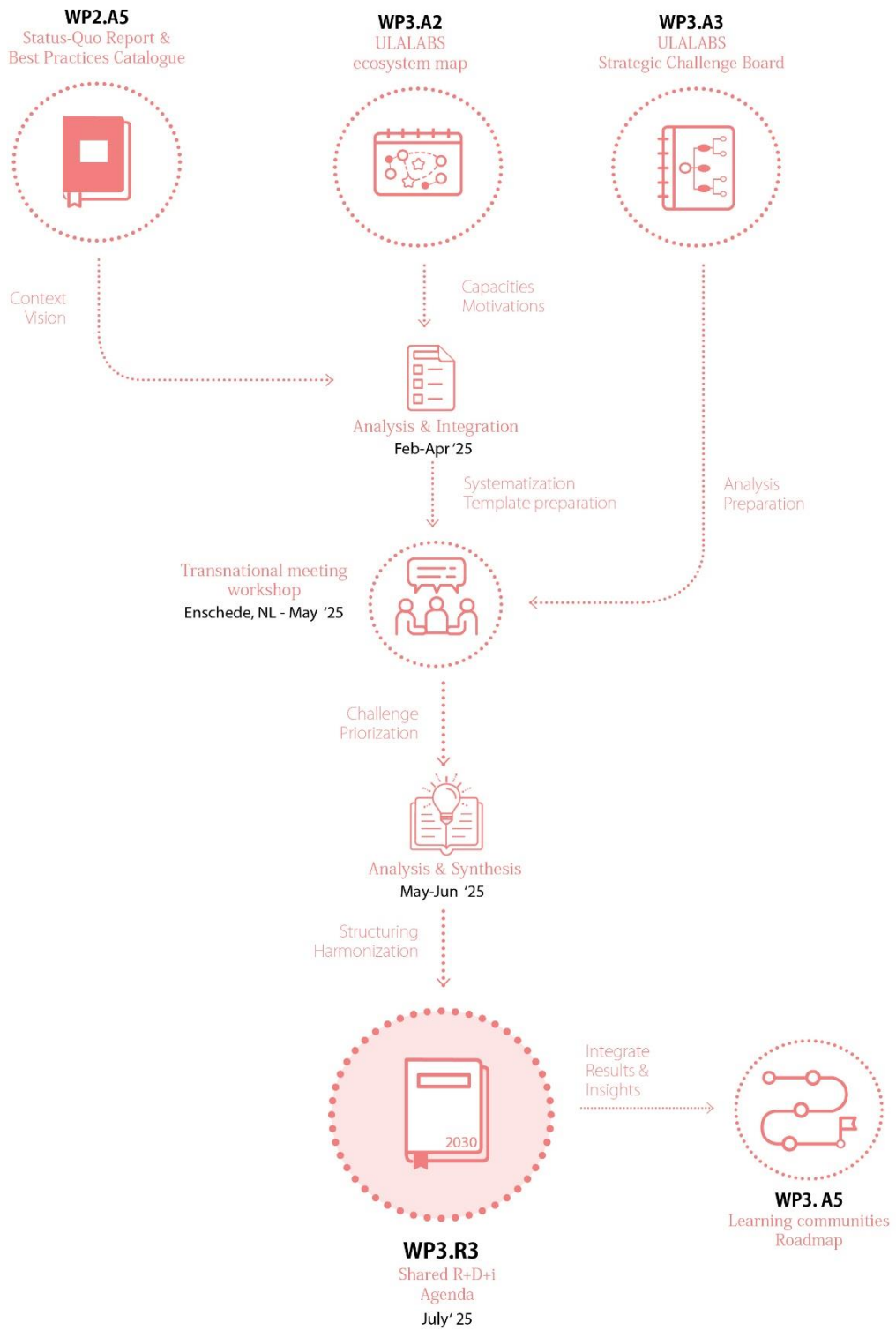
## About This Deliverable

The ECIU Consortium is a research-driven network with over 27,000 academics and nearly 500 research groups. ULALABS is a collaboration among four ECIU members aimed at sharing expertise and regional connections to address climate change and urban challenges through innovative, citizen-engaged solutions. The aim is to define common urban challenges related to climate change and urban sustainability transformations across four regions, creating a shared understanding that forms the basis of the R+D+I agenda and unites the distributed learning community. This document describes the procedure implemented to generate a shared R+D+I agenda for the ULALABS. The project is integrated within the ECIU University framework and aligned with the ECIU SMART-ER Co-created R+I agenda. Thus, the aims of the ULALABS project are to produce quality and meaningful outputs to the ECIU Community.

The development of the Shared R+D+I Agenda was based on the following methodology. We used the strategic challenges that were identified across all partners (WP3.A3) and categorized these challenges into overarching themes to guide discussions at the transnational meeting held in May 2025 at the University of Twente. The workshop then validated and refined shared challenges, ensuring strategic prioritization for implementation. A review of existing strategic frameworks analysed the R+D+I agendas of ULALABS partners to align innovation efforts with broader institutional and governmental strategies. Finally, based on the results from the workshop, a draft document outlining the Shared R+D+I Agenda was sent out to all partners for an internal review process and finalization of the draft.

ULALABS' short-term vision developed in WP3.A4 revolves around three overarching shared challenges: climate-neutral and resilient cities, circular economy and resource use, and transformative learning and engagement. This vision aligns with ECIU University's collaborative, challenge-driven research agenda and applies a "meta-lab" approach to foster co-creation and shared learning across urban experimentation spaces. The long-term vision in this work builds on the long-term vision from WP2.A4 and narrowed into i) strengthening networks of connected campuses and Living Labs to foster collaborative experimentation, ii) developing indicators to systematically track progress and impact, iii) creating frameworks for continuous learning aligned with challenge-based methodologies, and iv) ensuring citizen-driven and stakeholder-inclusive processes in innovation.

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**Figure 1 - Project evolution related to the activity WP3.A4**

## Connection with other WPs and Activities

Activity 4 (Drafting of Shared R+D+I Agenda) and the current report connect to other activities and reports in the following way:

### *WP2.R1 - Status Quo Report & Best Practices Catalogue*

The regional status-quo analysed for the four partners regions provided important information with respect to the context, conditions and policy frameworks that the respective ecosystems operate under, and the role of the university in each case. Another important element that was taken into consideration was the co-created Future Vision, produced in WP2.A4.

### *WP3.A2: Mapping local Ecosystems & Communities report*

The mapping exercise and the resulting ecosystem map helped to identify the individual and collective capacities of the emerging Lab of Labs and its Learning Community. These elements were taken into consideration when drafting the Shared Agenda.

### *WP3.A3: Strategic challenges and identification*

Activity 3 produced two challenge boards (thematic and operational) that served as the basis for the Shared Agenda and related activities.

### *WP3.A5 - Learning communities Roadmap*

The experience and insights from this report will be integrated into the final report and publication of WP3 the Learning Communities Roadmap.

### *WP5 A3 - Transnational Event - Pilot Launch*

The prioritized challenges in the Shared Agenda will be tackled in the Pilot phase of the project in WP5.

# Introduction

The ECIU Consortium is a research-intensive network with more than 27.000 academic staff members and researchers and nearly 500 research groups. ULALABS project emerges from an innovative collaboration among four ECIU members, each bringing a robust research profile and extensive experience in public participation and engagement. With well-established connections to municipalities, as well as public and private entities within their regions, these research teams leverage existing ecosystems as a foundation. The initiative focuses on the urgent need to address climate change and tackle complex urban challenges. The three objectives of ULALABS:

1. The ULALABS project aims to define a theoretical and practical framework for the implementation and operation of a European Distributed Living Lab focused on urban challenges and tackling climate change.
2. Creation of a “Lab of Labs” perceived as a shared and interconnected R+D+I infrastructure among HEI partners to promote transformative innovation policies within and among European regions through the articulation of open and collaborative Learning Communities and shared Agendas.
3. ULALABS will centre its activities around the development of the Learning Communities as key elements of the distributed Living Lab model, offering support and learning opportunities during the project.

ULALABS supports the Erasmus+ programme’s horizontal priority on environment and climate action by developing infrastructures that address both societal and individual learning needs, empowering learners with the skills and mindset to lead meaningful change. By fostering open and collaborative Learning Communities, ULALABS promotes transdisciplinary knowledge exchange and co-creation across scientific, educational, and civic sectors. These infrastructures integrate innovative pedagogical approaches, such as experiential learning, digital simulations, and project-based methodologies, to cultivate sustainability competences among educators and learners.

## Scope and Strategic Vision of ULALABS

The Distributed Living Lab will integrate the efforts of four Higher Education Institutions (HEIs) and their local ecosystems. This collaboration will be guided by a Shared R+D+I Agenda (WP3.A4), which aims to:

- Identify common urban challenges related to climate change across the four participating regions and develop a jointly agreed upon definition. This shared understanding will serve as a foundation for the R+D+I agenda and a unifying element of the distributed learning community.
- Outline a shared agenda for both the short term (2026) and long term (2030).

The identification of the shared challenges among all identified stakeholders in the four regions, combined with the co-definition of the shared Vision from WP2.A4, will permit the articulation of a common R+D+I agenda to guide the activities and potential impact of the Distributed Living Lab.

This report outlines both the process of developing the Shared R+D+I Agenda and provides a detailed description of the resulting agenda itself. Additionally, it offers an overview of the existing R+D+I agendas - that is, the strategic plans currently guiding the efforts of ULALABS partners in advancing knowledge, fostering innovation, and developing new technologies across institutions, governments, and organizations.

## Methodological approach

The development of the Shared R+D+I Agenda followed a structured, five-step methodology including a participative workshop:

- 1. Point of departure.** We used the results from the collaborative mapping of strategic challenges involving all partners (WP3.A3). These were collected in a shared visual representation of key strategic challenges, captured on a joint Miro board. The aim of WP3.A3 was to identify the urban challenges shared among the distinct communities in the four regions in relation to climate change and proceed to create a common definition that can form the basis for the Shared R+D+I agenda and one of the articulating elements of the distributed Learning Community.
- 2. Workshop preparation.** Prior to the thematic workshop, the Linköping University (LiU) Team performed an initial categorization of the strategic challenges, with specific focus on those that were linked to several specific challenges identified in the WP3.A3 process. These challenges were grouped into three potential overarching shared challenges, forming a foundation for further discussion and analysis. This effort informed the design of the WP3.A4 workshop that was held as part of the transnational meeting at University of Twente on May 15, 2025, involving stakeholders and partners from all four partner institutes and regions.
- 3. Thematic Workshop.** The WP3.A4 Shared agenda workshop focused on two main areas:
  - i) Understanding and validating the proposed shared challenges and elaborate on further areas if needed
  - ii) Provide a strategic framing and prioritization of actions for the pilot phase.
    - a. The mapping of local challenges collected by each of the four partners as part of the regional workshops in WP3.A2 provided the background for the workshop. The challenge boards for both strategic challenges and operational challenges were printed and available for the participants to review and validate (Appendix Fig. 1 and 2). These challenges were then analysed to identify overlapping or common issues across regions, forming the basis for shared challenges. Formation of Shared Challenges: The identified challenges were clustered into thematic categories, which served as a foundation for further discussion during the workshop. In this setting, participants explored the implications of these themes in more detail and refined the definition of shared challenges collaboratively.
    - b. The identified shared challenges were assessed based on needs and opportunities within each partner's ecosystem. The workshop served as a key

forum for discussing and validating these priorities, allowing participants to explore which challenges were most urgent and actionable.

**4. Review of Existing Strategic Frameworks.** As part of the methodology, the process included an analysis of the existing R+D+I agendas of ULALABS partners and alignment with the ECIU strategic agenda and other relevant key documents. These agendas, comprising strategic plans from ULALABS universities, governments, and organizations were examined to understand how they currently guide efforts in advancing research, fostering innovation, and developing new technologies.

a. As part of the methodological approach, each partner region was tasked with identifying and analyzing relevant R+D+I agendas i.e. strategic plans that guide the efforts of organizations, governments, and institutions in advancing knowledge, fostering innovation, and developing new technologies in areas aligned with ULALABS' mission. This step included two key components:

i. **Compilation of R+D+I Agendas.** Each partner provided a curated list of relevant R+D+I agendas, including direct links to the original reports or policy documents. These agendas reflect the strategic priorities and innovation frameworks within each regional ecosystem.

ii. **Content Summarization and Relevance Mapping.** For each agenda, partners submitted a concise summary highlighting its main objectives, thematic focus, and relevance to ULALABS activities. These summaries consisted of: Strategic priorities, Key thematic areas, Stakeholders involved, Timeframes (short-term vs. long-term goals), and Unique regional strengths.

b. Related to the analysis of the key ECIU documents:

- i. ECIU Vision 2030
- ii. ECIU (2022), Co-Created R&I Agenda, SMART-ER
- iii. ECIU Long-term joint research strategy: Unified plan for enhanced research cooperation across the ECIU University member institutions

**5. Co-creation of the Shared agenda.** Based on the results from the workshop a draft document outlining the Shared R+D+I Agenda was sent out to all partners for review process and finalization of the draft.

## Strategic R+D+I Initiatives: A Cross-Institutional Overview

With rapid technological advancement and pressing global challenges, collaborative research, development, and innovation (RDI) have become essential for shaping resilient, inclusive, and sustainable societies. Table 1 presents a summary of key R+D+I agendas and strategic initiatives among the regional ecosystems of ULALABS partner Institutes, including the University of Twente (UT), Universitat Autònoma de Barcelona (UAB), Linköping University (LiU), and the University of Stavanger (UiS). Despite their diverse contexts, these partners share a common commitment to interdisciplinary collaboration, societal impact, and transformative innovation. Together, these initiatives form a dynamic ecosystem of shared agendas that foster synergies across regions and sectors.

<i>Partner Institute</i>	<i>Key R+D+I Initiatives related to ULALABS</i>
<b>UT</b>	<p><b>Twente Board Strategic Plan.</b> Aims to transform Twente into a green technological leader by 2050. Focuses on sustainability, innovation, and enhancing quality of life through collaboration among businesses, knowledge institutions, and governments. Key projects include Circular Value Chains, MedTech Twente 2030, and ChipTech Twente.</p> <ul style="list-style-type: none"><li>- Website: <a href="#">Twente Board Strategic Plan</a></li><li>- Document: <a href="#">Strategic Plan PDF</a></li></ul> <p><b>Shaping2030 (University of Twente).</b> The University of Twente's strategic vision to foster ownership, talent, and societal engagement through interdisciplinary collaboration, addressing global challenges with a 'High Tech Human Touch' approach.</p> <ul style="list-style-type: none"><li>- Website: <a href="#">Shaping2030</a></li><li>- Document: <a href="#">Strategic Plan PDF</a></li></ul> <p><b>Citizen Science Hub Twente.</b> Promotes citizen-researcher collaboration to tackle societal challenges, especially in health, sustainability, and digital safety. Encourages co-creation and inclusivity in scientific innovation.</p> <ul style="list-style-type: none"><li>- Website: <a href="#">Citizen Science Hub Twente</a></li><li>- Document: <a href="#">Overview of Activities</a></li></ul> <p><b>MedTech Twente 2030.</b> Strategic initiative to make Twente a leader in medical technology by 2030. Integrates research, education, and healthcare practice to drive health innovation.</p> <ul style="list-style-type: none"><li>- Website: <a href="#">MedTech Twente</a></li><li>- Document: <a href="#">MedTech 2030</a></li></ul> <p><b>Novel-T Grow Program.</b> Supports the growth of startups and scale-ups in Twente. Provides coaching, resources, and connections to help tech entrepreneurs thrive sustainably.</p> <ul style="list-style-type: none"><li>- Website: <a href="#">Novel-T</a></li><li>- Document: <a href="#">Background Info</a></li></ul>

**RIS3CAT 2030 Strategy for the Smart Specialisation of Catalonia 2030.** The RIS3CAT strategy (Research and Innovation Strategy for Smart Specialisation in Catalonia) is a regional policy framework designed to promote sustainable and inclusive economic growth through innovation. It aligns public and private R&D efforts with Catalonia's competitive advantages and societal challenges. RIS3CAT 2030 focuses on mission-oriented innovation, emphasizing cross-sector collaboration, digital transformation, green transition, and social impact. It supports experimental initiatives like Transformative Innovation Labs to co-create solutions that address complex problems, aiming to make Catalonia a more resilient, fair, and knowledge-driven society.

- Website: [RIS3CAT](#)
- Document: [RIS3CAT 2030 Strategy for the Smart Specialisation of Catalonia 2030](#)

**Guidelines for designing shared agendas *RIS3CAT Monitoring Collection, no. 20.*** This guide outlines the methodology for creating Shared Agendas within the RIS3CAT 2030 framework, aiming to foster collaborative innovation that addresses complex societal challenges in Catalonia. Shared Agendas are strategic, mission-driven roadmaps co-developed by diverse stakeholders including public institutions, businesses, academia, and civil society, to align efforts and resources toward common goals. The document emphasizes participatory governance, systemic change, and long-term impact, providing tools and criteria for designing, implementing, and evaluating these agendas. It supports a shift from isolated innovation projects to coordinated, transformative action across sectors and territories.

- Website: [RIS3CAT](#)
- Document: [RIS3CAT Monitoring Collection, no. 20](#)

**Transformative innovation labs and shared agendas *RIS3CAT Monitoring Collection, no 18.*** The policy document outlines the role of Transformative Innovation Labs (TILs) as experimental spaces designed to address complex societal challenges through collaborative, mission-oriented innovation approaches. These labs bring together diverse stakeholders; public institutions, businesses, academia, and civil society to co-create and test systemic solutions aligned with the RIS3CAT strategy (Catalonia's Research and Innovation Smart Specialisation Strategy). Key highlights include their focus on sustainability, social inclusion, and digital transformation, as well as their emphasis on learning-by-doing, participatory governance, and long-term impact measurement.

- Website: [RIS3CAT](#)
- Document: [RIS3CAT Monitoring Collection, no. 18](#)

**Towards a Zero Waste B30 Territory – Preparatory base document to promote a Shared Agenda (*Cap a una B30 territori Residu Zero Document de preparació de la base per promoure una Agenda Compartida*).** This preparatory document outlines the strategic framework for transforming the B30 territory into a zero-waste, circular economy hub through a participatory, multi-actor governance model. It synthesizes diagnostics, shared visions, and strategic challenges co-developed by stakeholders from public administration, academia, industry, and civil society. The agenda also identifies eight key challenges ranging from improving multi-agent collaboration to fostering cultural change and territorial rebalancing and proposes actionable sub-challenges aligned with the Sustainable Development Goals (SDGs). This initiative is deeply connected to the RIS3CAT strategy (Research and Innovation Strategy for Smart Specialisation in Catalonia), as it promotes responsible research and innovation (RRI),

leverages regional strengths, and fosters systemic change through transformative innovation laboratories and collaborative innovation ecosystems.

- Website: [PRUAB](#)

**Regions of Knowledge Program.** The Knowledge Regions program promotes knowledge and research agents to collaborate with territorial entities (public administrations, companies and associations) to develop innovative solutions to the social, environmental and economic challenges of their area of influence. These solutions have a direct and lasting impact favouring territorial cohesion. Transformative research and innovation address complex challenges linked to green and just transitions in a region, are oriented towards systemic change and support alternative practices and solutions. Transformative research and innovation actions respond to challenges or needs identified within the framework of [transformative innovation initiatives](#) or [shared agendas](#) and promote social, environmental and economic development.

- Website: [Regions of Knowledge](#)

## LiU

**Climate Neutral Linköping 2030/Viable Cities.** Climate Neutral Linköping 2030 is part of the national initiative Viable Cities, where Linköping joins 22 other Swedish cities in a mission to become climate-neutral by 2030. The initiative promotes innovative collaboration between municipalities, businesses, academia, and citizens to create sustainable, livable cities within planetary boundaries. It focuses on systemic change, climate-smart mobility, digital tools, and inclusive governance to accelerate the green transition.

- Website: [Climate neutral Linköping 2030 | Viable Cities](#)
- Documents: [Linköping Climate Contract \(in Swedish\)](#); [KTH ViableCities Climate transition in Cities.pdf](#)

**Linköping Science Park.** A municipality owned leading innovation hub in Sweden and home to tech companies. Located near Linköping University, it fosters collaboration between academia, startups, and global enterprises in fields like software, telecommunications, electronics, and vehicle safety. The park plays a vital role in driving regional and international technological advancement.

Website: [Linköping Science Park Gathers Visionaries to Shape Strategy for 2030 - Linköping Science Park; Supporting the brilliant minds of the future - Brilliant minds with big hearts](#)

**Linköping university.** Linköping University (LiU) is one of Sweden's largest academic institutions, known for its innovative education and interdisciplinary research. LiU fosters close collaboration with industry and society to tackle global challenges.

- Website: [Linköping University - Vision and strategy - Linköping University](#)

**Norrköping Municipality.** Norrköping works both strategically with climate adaptation and climate mitigation/energy. A climate action plan to achieve the Paris Agreement is currently in process. This action plan will outline the current climate impact and related challenges of the municipality and suggest mitigation measures. The climate mapping (linked below) from 2019 was updated in 2025. Norrköping is also a front-runner city in climate adaptation. Already in 2020, the city council adopted the city's climate adaptation guidelines (see link below). Climate adaptation efforts are taking place across municipal offices, municipal companies and the Regional Rescue Services

Räddningstjänsten Östra Götaland (RTÖG). The municipality has also a long collaboration with focus on climate research with Linköping university (Centre for Climate Science and Policy Research) and the Swedish Meteorological and Hydrological Institute (SMHI).

- Website: <https://norrkoping.se/organisation/hallbar-utveckling/ekologisk-hallbarhet/energi-och-klimat>
- Documents: [Norrköping Climate Adaptation Guidelines](#); [Norrköping Climate Mapping \(2025\)](#)

**Region of Östergötland.** Region Östergötland is a self-governing administrative entity responsible for key public services at the regional level corresponding geographically to the county of Östergötland where Linköping is the capital. It is a politically governed organization with a broad mandate, including healthcare and dental care, public transport, regional development, urban and rural planning, skills and workforce development, business and tourism promotion, cultural initiatives, public health, and education. The region is funded through local taxes and government grants, and it is governed by an elected regional council. Region Östergötland has an important role in supporting innovativeness by gathering business, public sector, academia and civil society across the region.

- Website: [Region Östergötland Innovation](#)
- Document: [Näringslivs- och innovationsstrategi för Östergötland; Handlingsplan för Östergötlands näringslivs- och innovationsstrategi](#)

## UiS

**The municipality of Stavanger.** Stavanger aims to reduce greenhouse gas emissions by 80% by 2030 (compared to 2015 levels) and becoming climate neutral by 2040. To achieve this, the municipality is implementing actions across key sectors: promoting sustainable transport through electric mobility and public transit; enhancing energy efficiency in buildings and increasing the use of renewables; advancing waste reduction and circular economy practices; improving air quality; protecting biodiversity and green spaces; and strengthening climate adaptation measures such as flood management and resilience to extreme weather.

- Document: [Stavanger Climate and Environmental Plan 2018-2030](#)

**University of Stavanger.** UiS is positioning itself as a forward-thinking university addressing major global challenges through sustainability, inclusivity, and innovation.

- Website: [Strategy for the University of Stavanger: Driving Force 2030 | University of Stavanger](#)
- Documents: [The UiS Strategy 2030](#)[The Faculty of Science and Technology Strategy 2030](#)

**Stavanger Smart City** program plays a key role in the municipality's sustainability agenda by driving innovation, digital transformation, and collaboration across sectors. Guided by the city's Smart City Roadmap, it focuses on reducing greenhouse gas emissions, improving public services, and fostering green business development. Through open data, citizen engagement, and technology-driven solutions, Stavanger Smart City supports sustainable urban development, helping the municipality address climate and demographic challenges while enhancing the quality of life.

Stavanger Smart City Principles: People-centered, climate-focused, inclusive, data-driven, globally aware, and adaptive to change and future business needs.

	<ul style="list-style-type: none"> <li>- Website: <a href="#">Stavanger Smart City   City of Stavanger</a></li> <li>- Document: <a href="#">Roadmap for the smart city Stavanger; Strategy for the University of Stavanger: Driving Force 2030   University of Stavanger</a></li> </ul>
<p><b>ECIU</b></p>	<p><b>ECIU Vision 2030.</b> The ECIU University Vision 2030 outlines a bold transformation of European higher education and research through a challenge-based, learner-centred, and impact-driven model. It envisions a European university ecosystem that is agile, inclusive, and capable of addressing complex societal challenges through transdisciplinary collaboration, flexible learning pathways, and strong regional engagement. The vision emphasizes the integration of education, research, and innovation to co-create solutions aligned with the Sustainable Development Goals (SDGs).</p> <ul style="list-style-type: none"> <li>- Document: <a href="#">ECIU University Vision 2030</a></li> </ul> <p><b>ECIU University’s Smarter Co-created R&amp;I Agenda.</b> This agenda, developed under the SMART-ER project, defines four strategic research areas; Resilient Communities, Mobility and Transportation, Energy, and Circular Economy aligned with SDG 11. It was co-created through participatory processes involving researchers from all ECIU partner institutions. The agenda promotes interdisciplinary collaboration, stakeholder engagement, and mission-oriented research to address urban and regional challenges.</p> <ul style="list-style-type: none"> <li>- Website: <a href="#">SMART-ER</a></li> <li>- Document: <a href="#">D1.2 Co-created R&amp;I Agenda (2022)</a></li> </ul> <p><b>ECIU University’s Long-term Joint Research Strategy.</b> This document outlines a unified strategy for enhanced research cooperation across ECIU University member institutions. It focuses on implementing challenge-based research (CBR) through regional and European Smart Ecosystems, aligning multi-project programmes with societal challenges, especially those related to SDG 11. The strategy promotes interdisciplinary collaboration, stakeholder engagement, open science, and policy advocacy, laying the groundwork for a resilient, impact-driven research ecosystem by 2030.</p> <ul style="list-style-type: none"> <li>- Document: <a href="#">Long-term Joint Research Strategy</a></li> </ul>

**Table 1.** A summary of strategic agendas related to/aligned with ULALAB Higher education (University of Twente, UT, Universitat Autònoma de Barcelona, UAB, Linköping University, LiU, and the University of Stavanger, UiS) and partner institutes.

## R+D+I Agendas of the partner Universities and their regional networks - relevance and alignment to ULALABS

In this following section, a series of relevant R+D+I agendas and documents have been identified in each region and presented in continuation:

### *University of Twente and their regional network*

The Twente region in the eastern Netherlands stands out as a dynamic hub for research, development, and innovation (R+D+I), with a strategic emphasis on technological advancement, sustainability, and societal well-being. Anchored by the University of Twente and bolstered by a collaborative ecosystem of public institutions, knowledge centres, and industry partners, Twente's R+D+I agenda aims to foster a resilient and forward-looking regional economy. The region actively promotes interdisciplinary collaboration, startup incubation, and citizen participation in innovation processes. Strategic plans and initiatives are designed to position Twente as a leading technological region in Europe by 2050, aligning with national and EU priorities such as the energy transition, digitalisation, and inclusive innovation. This agenda is implemented through several key programmes and platforms, each contributing to the region's ambition to grow through knowledge and innovation.

The Twente region's R+D+I agenda aligns closely with the objectives of the ULALABS project, which aims to strengthen the role of urban living labs in facilitating just, inclusive, and green transitions. Twente's emphasis on interdisciplinary collaboration, citizen engagement, and sustainable innovation provides a conducive environment for implementing and studying living lab methodologies. Initiatives like the Citizen Science Hub Twente exemplify the region's commitment to co-creating solutions that address societal challenges, resonating with ULALABS' focus on participatory governance and inclusive innovation. The region's investment in digital and technological advancements, as seen in Novel-T and various citizen science projects, offers robust infrastructure for data-driven experimentation and urban innovation. The collaborative framework among government, academia, and industry in Twente presents a mature ecosystem that ULALABS can both learn from and contribute to, making the region a strategic partner for knowledge exchange and potential case development.

### *Universitat Autònoma de Barcelona and their regional network*

The Universitat Autònoma de Barcelona (UAB) plays a pivotal role in advancing the RIS3CAT 2030 strategy within the B30 territory, a dynamic industrial and innovation corridor in Catalonia. UAB collaborates closely with local stakeholders; municipalities, companies, research centres, and civil society; to co-design and implement shared agendas that address regional challenges such as sustainability, digital transformation, and social inclusion. Through its involvement in 'Transformative Innovation Labs' and the upcoming 'Knowledge Regions program', UAB fosters participatory governance and systemic innovation, aligning its academic and research activities with the mission-oriented goals of RIS3CAT 2030. This territorial engagement exemplifies how universities can act as anchor institutions in regional innovation ecosystems, driving inclusive and place-based development.

The ULALABS project, which fosters collaborative, transformative innovation to address urban and environmental challenges, aligns strongly with the Universitat Autònoma de Barcelona's (UAB) strategic role in the B30 territory and its contributions to the RIS3CAT strategy. UAB's work in this industrial and innovation corridor exemplifies the principles of ULALABS by promoting systemic, mission-oriented innovation through initiatives like Shared Agendas, Transformative Innovation Labs, and active participation in the Knowledge Regions with their respective learning communities. These efforts bring together local governments, businesses, research institutions, and civil society to co-create solutions tailored to regional needs. UAB's approach not only supports the decentralization and democratization of innovation but also demonstrates how universities can act as territorial anchors, translating European-level innovation visions like ULALABS into concrete, impactful actions that strengthen regional resilience and sustainability.

### *Linköping University and their regional network*

The selection of relevant strategic agendas of cities and actors of the Linköping and Norrköping region encompass the Climate Neutral Linköping 2030 initiative, Linköping Science Park, Norrköping Municipality, the Region of Östergötland, and Linköping University. These form a cohesive ecosystem aimed at accelerating transformative change towards climate neutrality and climate resilience through innovation and collaboration. As part of the national Viable Cities program, Climate Neutral Linköping 2030 brings together municipalities, academia, businesses, and citizens to co-create sustainable urban solutions on e.g. mobility. In addition, Linköping Science Park acts as a regional innovation hub, fostering collaboration between startups, global tech companies, and academic institutions, contributing to the business sector and regional development. Norrköping Municipality is currently developing an action plan for climate mitigation and is a frontrunner city with regards to climate adaptation efforts. The strategic plan for Linköping University has a focus on interdisciplinary research and strong industry partnerships, focusing on solving global challenges through innovation and education. Region Östergötland's Business and Innovation Strategy aims to create a more sustainable, inclusive, and resilient economy. It focuses on green transformation, digital innovation, and circular solutions to reach the global goals of the 2030 Agenda. The strategy promotes equal opportunities in entrepreneurship and employment, ensuring that people of all backgrounds can participate. Initiatives such as the East Sweden Business Region serve as hubs for cooperation, bringing together various actors to support business development and innovation. The strategy encourages co-creation between businesses, academia, public institutions, and civil society to tackle complex challenges and drive long-term regional development.

These strategic agendas are well aligned with ULALABS and support its objectives. Climate Neutral Linköping 2030, Norrköping Municipality, Linköping Science Park, and Linköping University collectively foster innovation and collaboration to accelerate transformations towards climate neutrality and resilience. Through interdisciplinary research, strong industry partnerships, and regional innovation hubs, these initiatives drive sustainable urban solutions, mobility advancements, and knowledge co-creation. Similarly, Region Östergötland's Business and Innovation Strategy reinforces ULALABS' goals by promoting green transformation, digital innovation, and circular solutions. Its emphasis on inclusivity and entrepreneurship ensures equal opportunities, enabling diverse communities to contribute to sustainable development. Initiatives like East Sweden Business Region serve as collaborative platforms where businesses, academia, public institutions, and civil society work together to tackle complex challenges and drive long-term regional growth.

### *University of Stavanger and their regional network*

The University of Stavanger is aligning its efforts toward addressing major global challenges like the green and digital transitions, energy restructuring, health and welfare innovation, and lifelong learning. The focus on interdisciplinary collaboration, sustainability, and inclusivity creates an ambitious and holistic approach to education, research, and societal engagement. These strategic priorities are designed to ensure that UiS remains at the forefront of addressing the complex issues of the future while fostering an inclusive, innovative, and dynamic academic environment. UiS's 2030 strategy outlines six priorities focused on sustainability, innovation, and societal impact: Green transition, Energy, Health and welfare, Lifelong learning, Open university, and Learning and Work Environment. The municipality of Stavanger has eight principles for the national smart city strategy: 1) Place people in the center, 2) Consider the bigger picture, 3) Prioritise climate and environment, 4) Promote inclusion and co-creation, 5) Focus on next generation business, 6) Share and use open data, 7) Develop competencies and embrace change, and 8) Act local, think global.

The ULALABS project aligns closely with both the University of Stavanger's (UiS) strategic goals and the municipality's vision for sustainable urban development. UiS contributes with strong academic expertise in areas such as the green transition, energy, health, and lifelong learning that underpin ULALABS. The university's emphasis on interdisciplinary collaboration, innovation, and student engagement supports the project's mission to co-create and test sustainable solutions in real-world settings. At the same time, the municipality plays a key role by providing the urban context, infrastructure, and policy support needed to implement and scale these solutions. Together, UiS and the municipality form a powerful partnership that ensures ULALABS is both research-driven and practically grounded.

### *ECIU*

The ULALABS project is deeply aligned with the ECIU University's Vision 2030, which envisions a European-wide, challenge-based ecosystem that connects learners, researchers, and societal stakeholders to co-create solutions for complex societal challenges. In particular, ULALABS embodies this vision by fostering collaborative, challenge-oriented innovation across European regions, focusing on climate-neutral cities, circular resource use, and transformative learning. These thematic priorities mirror ECIU's commitment to Sustainable Development Goals (SDGs), particularly SDG 11, and reflect its emphasis on interdisciplinary, challenge-based research, innovation and education. By envisioning and testing a distributed living lab and engaging diverse actors in co-creation processes, ULALABS contributes to the operationalisation of the ECIU's model of an open, agile, and inclusive university ecosystem. It can support ECIU's ambition to integrate education, research, and innovation through flexible, personalized learning pathways and stakeholder-driven research agendas.

A key pillar of both the ECIU R&I Agenda and ULALABS is the emphasis on interdisciplinary collaboration and stakeholder co-creation. This alignment reinforces the commitment to inclusive innovation, where academic, civic, and industry actors jointly define research priorities and co-develop solutions. ULALABS thus serves as a living example of how ECIU's principles of Responsible Research and Innovation (RRI) can be operationalized at the regional level.

## Towards “defining” shared challenges.

In preparation for the workshop the WP3.A4 team assessed the results from WP3.A3 (Figure 1 and 2; presented as two Miro boards) and clustered these into three suggested shared challenges to be discussed at the workshop. The three suggested overarching shared challenges were: Climate-neutral and resilient cities, Circular economy and resource use management, and Transformative education and engagement.

During the transnational event on May 15, 2025, in Enschede, the ULALABS team conducted a workshop consisting of two rounds of world café settings with active participants from all four partner regions. In more detail:

The **first round** aimed at deepening our understanding of the strategic and operational challenges identified in WP3.A3, validating the challenge boards, and complementing the challenge boards with any potentially missing challenges or aspects. The session was structured around three thematic tables, each focusing on one of the shared challenges: Climate-neutral and resilient cities, Circular economy and resource use management, and Transformative education and engagement. Each table was equipped with printed Miro boards and note sheets to support discussion and documentation. Participants began by reading and discussing the strategic and specific challenges associated with each theme. This phase focused on clarification, ensuring that everyone had a shared understanding of the scope and relevance of the challenges across different territories. The conversations helped align perspectives and highlighted how the challenges interrelated with the overarching shared challenge. Following the clarification phase, participants took part in a prioritization exercise. Each person received a set number of stickers (three per person and table), which were used to vote directly on the Miro board printouts. These votes reflected which strategic or specific challenges that were considered most important to prioritize in the next stages of the project.

For the **second-round**, participants selected themselves one of the tables that aligned most with their interests or expertise. The session focused on refining and prioritizing actions in response to the shared challenges identified during the first round. Building on the outcomes of the first session such as insights into impact, innovation potential, and research relevance, participants worked together to discuss each challenge area. Each table featured printed Miro boards displaying the final prioritization results from the first round, which served as a visual foundation for discussion. Participants used post-its to contribute ideas and insights while exploring key guiding questions. These included identifying suitable R+D+I activities for each challenge, discussing criteria for prioritizing these activities such as feasibility, impact, scalability, and learning potential, and clarifying the roles that different partners and territories should play in the shared R+D+I agenda.

## Prioritizing the focus of the overarching shared challenges

The participants revised the Strategic challenge board with adding partners to the strategic challenges. Below is a list of strategic challenges that were prioritized by the participants for Climate-neutral and resilient cities, Circular economy and resource use management, and

Transformative education and engagement. All challenges that got a vote are listed in no particular order. See Table 1 and 2 and Figure 3-5 in appendix for the Miro board results at the workshop.



Figure 2 – Photos from the participative workshop on challenge prioritization.

## Strategic vision – Short-term and Long-term

### Short-term (2026)

The short-term vision developed in WP3.A4 for ULALABS is focused on three overarching shared challenges, which include the prioritized strategic and specific challenges as presented above.

The three overarching shared challenge categories are:

- i. Towards climate-neutral and resilient cities
- ii. Towards circular economy and resource use management
- iii. Towards transformative education and engagement.

These three overarching shared challenge categories provide a conceptual umbrella for most of the specific and strategic challenges that were collected during the co-creation processes within the ULALABS ecosystem (see Figure 1 and 2 in appendix) and aim to provide sufficient flexibility to further explore joint initiatives across the ULALABS learning community within a short-term scope.

The ULALABS short-term vision developed in WP3.A4 is closely aligned with the ECIU University's Smarter Co-created R&I Agenda, which emphasizes collaborative, challenge-driven research focused on societal impact. By addressing three overarching shared challenges; Towards climate-neutral and resilient cities, Towards circular economy and resource use management, and Towards education and engagement, ULALABS directly contributes to ECIU's mission to co-create solutions for complex urban and environmental issues. ULALABS reinforces the ECIU strategy by embedding co-creation, stakeholder engagement, and flexible learning pathways into its approach, thereby strengthening ECIU's capacity to deliver on its joint research priorities and long-term societal goals. The synergy with ECIU ensures that ULALABS is not only regionally grounded but also strategically positioned within a broader European innovation ecosystem.

The short term-vision presented here is aligned with the broader conceptual foundation developed in WP2.A3. In that earlier work, the project emphasized the need of a more coordinated and learning-oriented approach to urban innovation "... to articulate the diverse urban experimentation spaces emerging in the different ECIU partner regions into a Distributed Living Lab which is centered around a vibrant learning community, focusing on sustainable urban transformations...". This resulted in using the concept of a "meta-lab approach" as a framework for knowledge exchange and co-creation.<sup>1</sup>

By identifying overarching shared challenges, ULALABS puts the meta-lab concept into practice, creating shared entry points for joint learning across the ECIU ecosystem. This aligns with WP3.A1 call for coordinated learning-driven labs rather than isolated pilots. The emphasis on transformative teaching and learning reinforces the shift toward living labs as educational and capacity-building infrastructures, making the short-term vision a concrete step toward long-term impact.

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<sup>1</sup> A meta-lab can be defined as a transurban multi-actor network to connect and where possible align the learning processes across thematically related ULLs in different urban contexts through a central learning agenda. Scholl et al (2022)

The focus on climate-neutral and resilient cities directly supports SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action), while the emphasis on circular economy and resource use management contributes to SDG 12 (Responsible Consumption and Production) and SDG 6 (Clean Water and Sanitation). The commitment to transformative education and engagement aligns with SDG 4 (Quality Education) and SDG 17 (Partnerships for the Goals). By embedding these priorities into a distributed, learning-oriented innovation framework, ULALABS advances a systemic and collaborative approach to achieving the 2030 Agenda.

### ***Towards Climate-Neutral and Resilient Cities***

Urban areas are facing a broad spectrum of complex and interconnected challenges, as they are simultaneously key actors in climate mitigation and experiencing the effects of climate change, that demand systemic, inclusive, and innovative responses. This shared strategic challenge aims to encourage the transformation of urban environments into climate-neutral and resilient ecosystems, while prioritizing sustainability, inclusiveness, equity, and well-being.

Urban Experimentation spaces can play a pivotal role in the exploration of innovative solutions both for climate mitigation and adaptation. We also emphasize the role of university campuses to act as testbeds or living labs to support cities in developing and testing novel solutions, and to foster partnerships across academic, public, business, and societal organisations.

This first overarching shared challenges comprises aspects such as (i) urban greening strategies to combat urban heat and increase mental and physical health, (ii) water scarcity and extreme weather events, which emphasize the need for sustainable and resilient water management; (iii) a just and inclusive transition towards renewable energy, (iv) urban mobility, such as the 15-minute city to enhance well-being while reducing emissions, and (v) inclusive urban design.

Part of this shared agenda is furthermore the increase of digital competence in the public sector, which has been highlighted as vital for urban transformations towards sustainability by facilitating e.g. data-driven decision-making and stakeholder collaboration. Pathways towards climate neutrality and resilience require sustainable approaches, that align environmental targets with justice, equity, inclusivity, economic viability, and democratic governance principles.

### ***Towards Circular Economy and Resource Use Management***

Cities are dynamic ecosystems of consumption, production, and waste generation. As urban populations grow and environmental pressures intensify, there is an urgent need to transition from linear models of resource use to circular systems. This shared strategic challenge aims to focus on the adoption of circular economy principles across urban and campus environments, fostering sustainable, inclusive, and resilient communities.

Circular economy approaches emphasize the reuse, recycling, and revalorization of materials and resources transforming waste into value and reducing dependency on finite resources. Urban experimentation spaces, including university campuses, can serve as vital testbeds for piloting circular solutions and innovation including engaging diverse stakeholders.

This overarching shared challenge includes a wide range of interconnected issues, such as: (i) the sustainable use and management of water resources in both natural and built environments, (ii) the recirculation of organic materials - for local production and value creation/the development of sustainable food systems based on local products, (iii) the reuse and upcycling of construction materials and textiles to reduce environmental impact, (iv) digital competence in the public sector to support data-driven circular strategies, and (v) empowerment of citizens to actively participate in sustainability and circular economy initiatives.

### ***Towards Transformative Education and Engagement***

Achieving sustainable and inclusive urban transitions requires more than technological innovation it demands a fundamental transformation of how we learn, collaborate, and engage with one another. This shared strategic challenge focuses on education, research, and civic participation to foster transdisciplinary knowledge, inclusive decision-making, and empowering communities. Central to this transformation is the use of challenge-based learning methodologies, which engage learners and stakeholders in addressing real-world sustainability challenges through collaborative, solution-oriented processes.

Transformative education can include experimentation, reflection, and co-creation adapting research methods and learning processes in response to real-world settings and future challenges. This overarching shared challenge emphasizes: (i) the integration of Living Labs and experimentation spaces into curricula and research frameworks, (ii) inclusive engagement strategies including citizens and local communities, (iii) citizen-led agendas that reflect local needs and knowledge, (iv) recognition of informal and experiential learning through micro-credentials and other flexible formats.

By embedding these principles into higher education and urban governance, we can cultivate a culture of shared responsibility, creativity, and resilience but also for just and adaptive urban futures.

## Long-term (2030)

Drawing on the [long-term vision for ULALABS](#) as developed in WP2.A4 (Figure 3), as part of a co-creation process engaging the project partners as well as stakeholders of the regional ecosystem of each of the four Higher Education Institutes, we propose four distinct goals for the Research, Development and Innovation activities of the Lab of Labs.

The long-term vision of the ULALABS project envisions the creation of a (hybrid) Distributed Living Lab, a Lab of Labs, aligned with the ECIU vision and philosophy, focusing on urban sustainability transformations. Transformative learning will be pursued through non-traditional, challenge-based methodologies, with this Distributed Living Lab fulfilling a role of translation between a diversity of skills, backgrounds and contexts of learning and knowledge generation and contributing to a shared knowledge agenda. It will play a pivotal role in creating interconnections between existing labs and other types of experimentation spaces and their respective communities based on their distinctive focus, challenges, methods, and target groups, into an articulated open and collaborative learning community. The Distributed Living Lab will reflect a stakeholder-driven (citizen centric) approach to innovation, where solutions emerge from the needs and insights of those directly impacted and involved. This aligns with the concept of citizen science, where the citizens contribute to the generation of knowledge, making it more inclusive, democratic. The Distributed Living Lab, connecting the diverse labs and experimentation spaces within the ECIU, can be created through the strategic use of technology and virtual spaces that can facilitate interaction across physical and digital boundaries. This type of meta-lab will enable European, international and transnational collaboration while maintaining a focus on local contexts and needs and will place a strong emphasis on socio-technical innovation and collective problem-solving, applying tools, technologies and methods that emphasize the need for responsible and ethical collaboration, co-creation and engagement, to tackle existing and upcoming shared challenges.

*Figure 3. Future Vision of ULALABS from WP2.A4 ([LINK](#))*

The following long-term goals are intended to be further elaborated throughout the project activities and are intended to have a guiding function for the future pathways of the “Lab of Labs”. In a long-term perspective leading up to 2030, ULALABS has the goal to:

- Expand the number of “connected” campuses and other urban experimentation spaces to strengthen the vision of a “Lab of Labs”. This directly supports the collaborative learning community and testbeds for future experimentation (i.e. expand the “Lab of Labs”) as well as be part of the ECIU structures and support the R&I at the ECIU.
- Develop indicators to track progress, facilitating a systematic approach to monitoring and evaluation, ensuring that transformative education and citizen-driven innovation remain effective, inclusive and sustainable.
- Create structures for continuous learning and adaptation that aligns with the challenge-based methodologies emphasized in the vision. By developing micro-credentials for

challenge-based learning environments and aligning them with societal and labour market needs, the initiative will support lifelong learners especially in reskilling and upskilling contexts. As a result, learners will be better equipped to continuously adapt to the evolving demands of green and digital transitions.

- Ensure inclusive and citizen-driven participatory processes that reinforce the stakeholder-driven approach.

## Conclusions and future steps

The development of the Shared R+D+I Agenda, drawing on the co-created and subsequently validated and refined strategic challenges and alignment with innovation strategies among the different regional partner institutes and organisations, resulted in a vision for the ULALABS ecosystems for the short- and long-term.

ULALABS' short-term vision focuses on addressing overarching shared challenges; climate-neutral cities and resilient cities, circular economy and resource use management, and transformative education and engagement through a collaborative, challenge-driven “meta-lab” approach aligned with ECIU University. Building on this, the long-term vision aims to strengthen networks of connected campuses, develop impact indicators, foster continuous learning, and ensure inclusive, citizen-driven innovation.

The future steps of the ULALABS consortium include the elaboration of three overarching shared challenge categories as identified in the short-term goals, to align with upcoming initiatives and interventions across the partner regions. We further envision the long-term visions developed in this document to spur future dialogues across the regional ecosystems to engage with an ever-evolving learning community and anchor the visions of the “Lab of Labs” in concrete and tangible outcomes for urban sustainability transformations.

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# Appendix

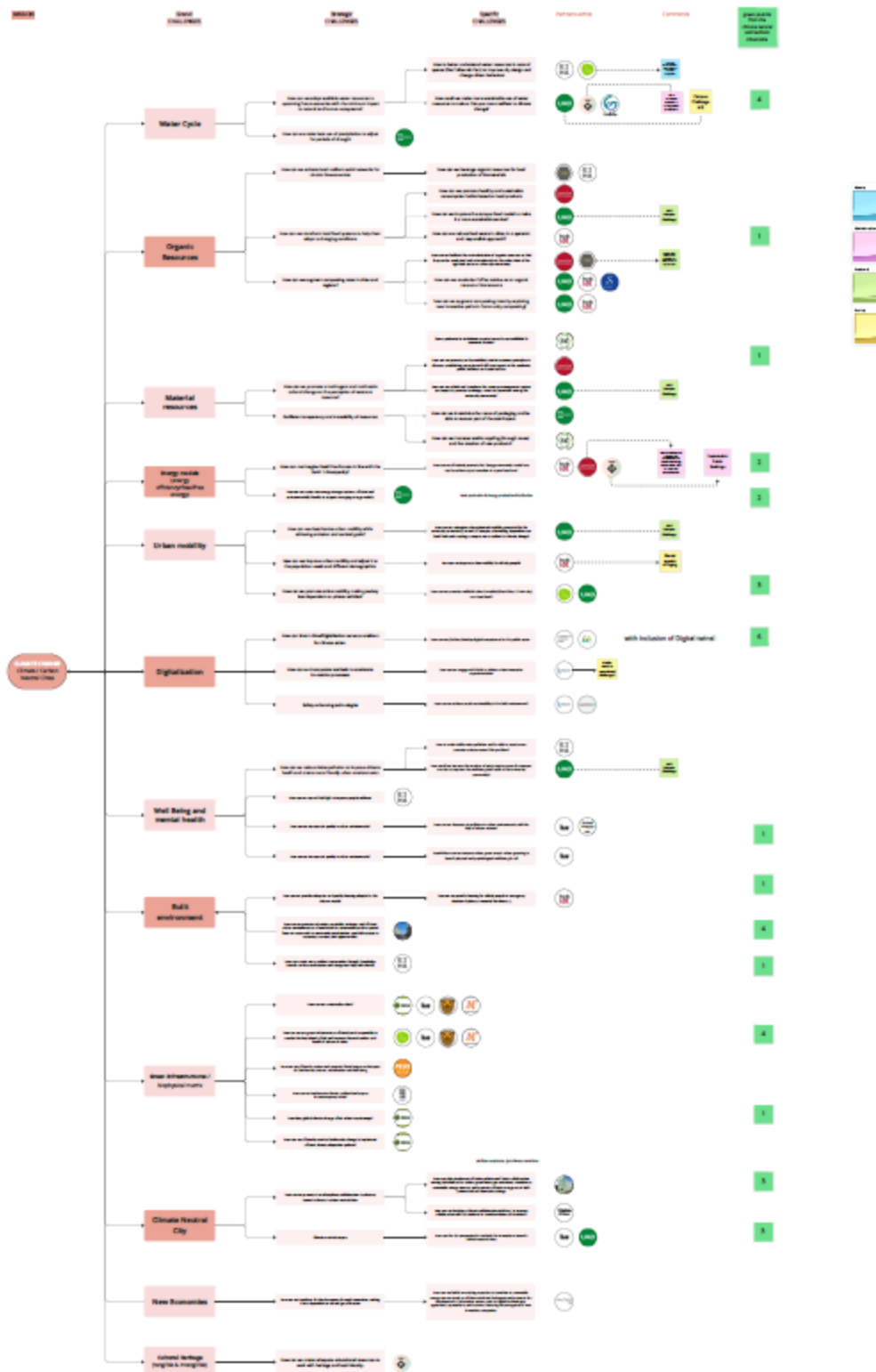


Figure 1. Final thematic Challenge board to be used in the workshop.

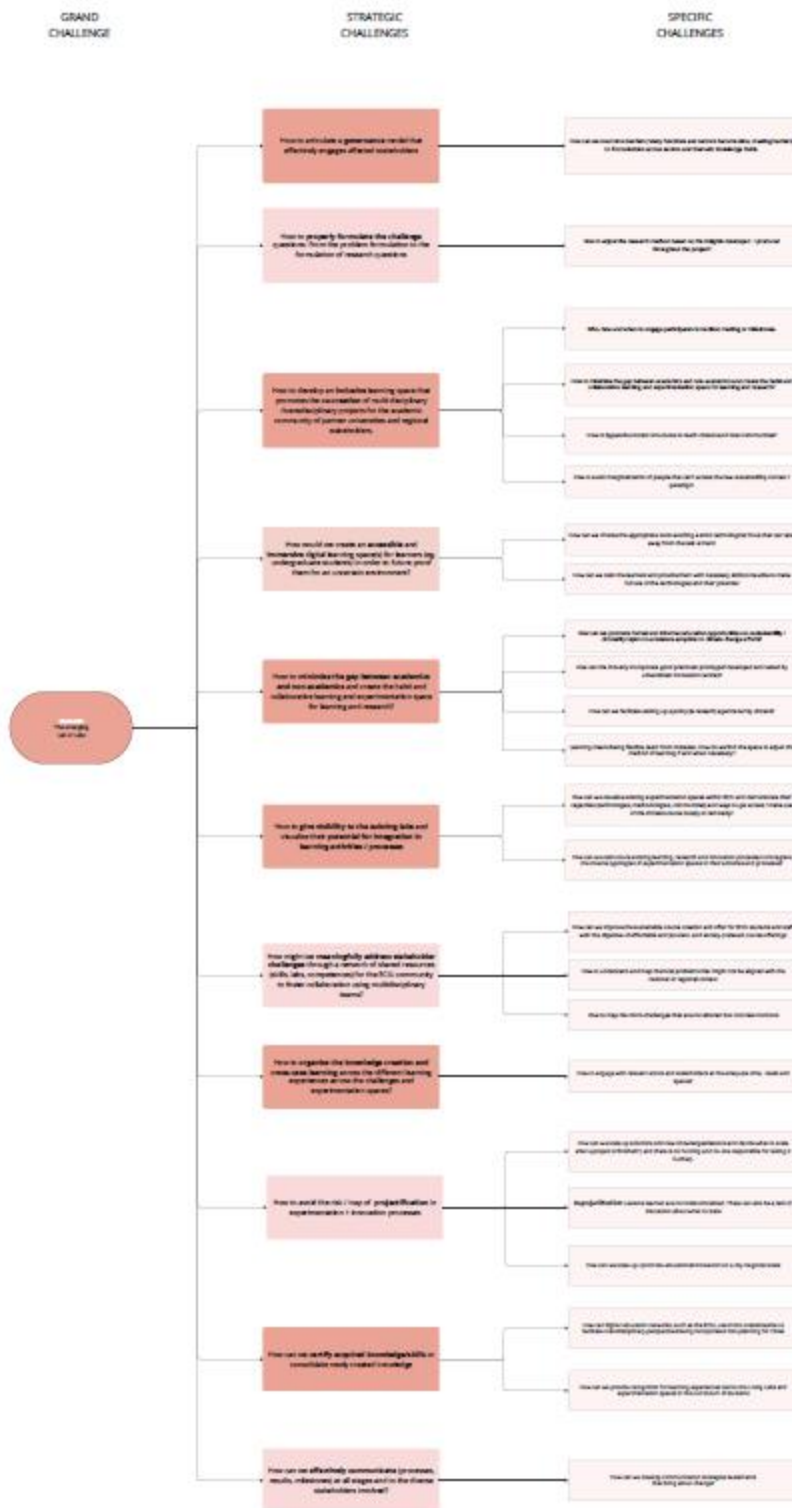


Figure 2. Final operational Challenge board used in the workshop.

**Table 2.** Selected specific challenges (from the Miro board) for theme 1: Climate Neutral & Resilient Cities, and 2: Circular economy and resource use management.

Specific challenge	Active partners	Theme
How to better understand water resources in natural spaces (like Coliserola Parc) to improve city design and change citizen behaviours	Replantegem, EINA	1
How could we make more sustainable use of water resources to make campus more resilient to climate change?	UAB, Palau-solita i Plegamans Municipality, Enschede city	1, 2
How can we leverage organic resources for local production of biomaterials?	CREIS, EINA	2
How can we promote healthy and sustainable consumption habits based on local products?	Consell Comarcal Vallès Occidental	2
How can we improve the campus food model to make a more sustainable service?	UAB	2
How can we reduce food waste in cities, in a systematic and responsible approach?	HubB30	2
How can we facilitate the recircularization of organic resources so that they can be revalorized and reintroduced into the value chain of the agri-food sector or others (Construction)	Consell Comarcal Vallès Occidental, CREIS	2
How can we revalorize Coffee residue as an organic resource / bioresource	UAB, HubB30	2
How can we reduce food waste in cities, in a systematic and responsible approach?	HubB30	2
How to empower the citizens about sustainability and circular economy issues	XC2	2
How can we promote, and consolidate circular economy principles in all areas, establishing synergies with different agents in the academic, public, business and social sectors	Consell Comarcal Vallès Occidental	1,2
How can we increase textile recycling (through reuse) and the creation of new products?	XC?	2
How can we effectively promote the 'Energy community' model as a tool to achieve a just transition in a post-fossil era?	HubB30, Consell Comarcal Vallès Occidental, Palau-solita i Plegamans Municipality	1
Cycling cites (Stavanger municipality, UiS)	UiS, Nordic Edge	1
How can we improve urban mobility for elderly people	HubB30	2
How can we promote walkable cities & models (Slow Cities, 15 min city) on a local level?	Replantegem, UaB, UT	2
Food production and energy production distribution		1
How can we make better systems for circulating building materials		2
How can we (further) develop digital competence for the public sector?	Linköping Science park, IoT World Lab, UT	1.2
How/Where can we increase urban green areas / urban greening to benefit physical and psychological well-being for all	LiU, UT	1
How can we provide housing for elderly people in emergency situations? (abuse, unwanted loneliness...)	HubB30, UT	1
How can we generate attractive, equitable, inclusive and efficient urban environments as a foundation for sustainability with a special focus on areas such as community participation, equitable access to resources, services and opportunities.	UT	1
How can create more resilient communities through knowledge transfer on how architecture and design can help with climate adaptation	EINA, UT	1
How can we use green infrastructure efficiently and responsibly to combat the heat island effect and improve thermal comfort and health of citizens in cities.	Replantegem, LiU, Linköping municipality, Norrköping municipality, UT	1
How can cities implement effective policies and foster collaboration among stakeholders to reduce greenhouse gas emissions, transition to renewable energy sources, and promote efficient energy use in both commercial and domestic settings	MyBox Smart Energy+ Living Lab, UT	1
Accelerate just climate transition		1
How to foster better private/public for climate neutrality?	MyBox Smart Energy+ Living Lab	2
How can the campus(es) be testbeds for innovations towards climate neutral cities	LiU, UaB, UT	2
How can cities implement effective policies and foster collaboration among stakeholders to reduce greenhouse gas emissions, transition to renewable energy sources, and promote efficient energy use in both commercial and domestic settings	Viable Cities, liU, UaB	2
Making campus green	UiS	1

**Table 2.** Selected specific challenges (from the Miro board) for Operational challenges/Transformative **education**.

Specific challenges
How can we overcome barriers (Many functions and sectors become silos, creating barriers) to find solutions across sectors and thematic knowledge fields.
How to adjust the research method based on the insights developed / produced throughout the project?
Who, how and when to engage participants in decision making or milestones. COMBINED WITH How to bypass bureaucratic structures to reach citizens and local communities? COMBINED WITH How to avoid marginalization of people that can't access the new sustainability context / paradigm
How can we facilitate setting up a policy (& research) agenda led by citizens?
How can we visualize existing experimentation spaces within ECIU and demonstrate their capacities (technologies, methodologies, communities) and ways to get access / make use of the infrastructures locally or remotely?
How can we restructure existing learning, research and innovation processes to integrate the diverse typologies of experimentation spaces in their activities and processes?
How to understand and map the local problems that might not be aligned with the national or regional context
How to engage with relevant actors and stakeholders at the adequate time, levels and spaces?
How can higher education networks, such as the ECIU, use micro-credentials to facilitate transdisciplinary perspectives being incorporated into planning for Cities
How can we provide recognition for learning experiences tied to the Living Labs and experimentation spaces in the curriculum of students
How can we develop communication strategies & elements that bring about change?



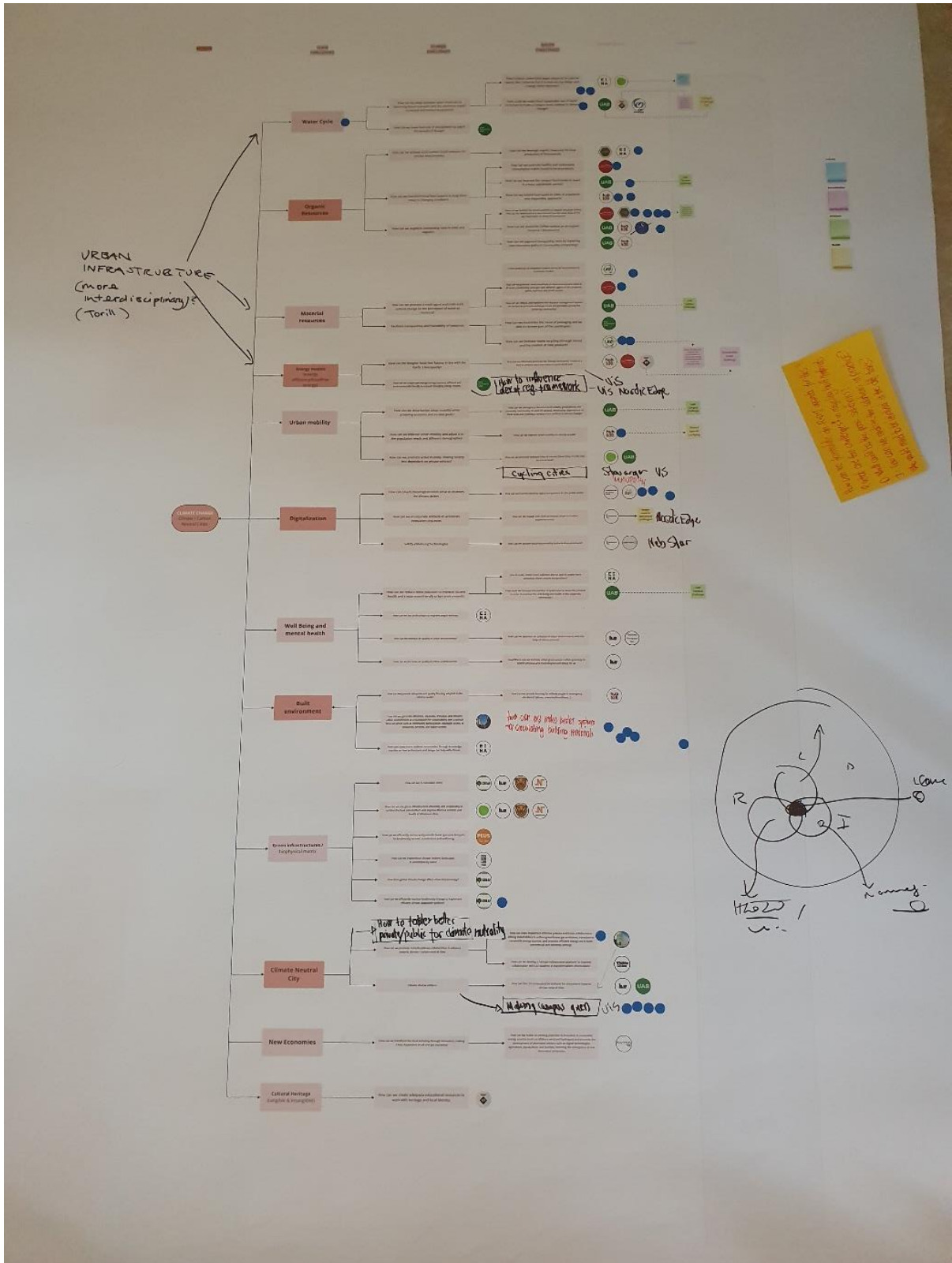


Figure 4. The Miro board at the workshop on the overarching challenge: Towards resource management and circular economy.

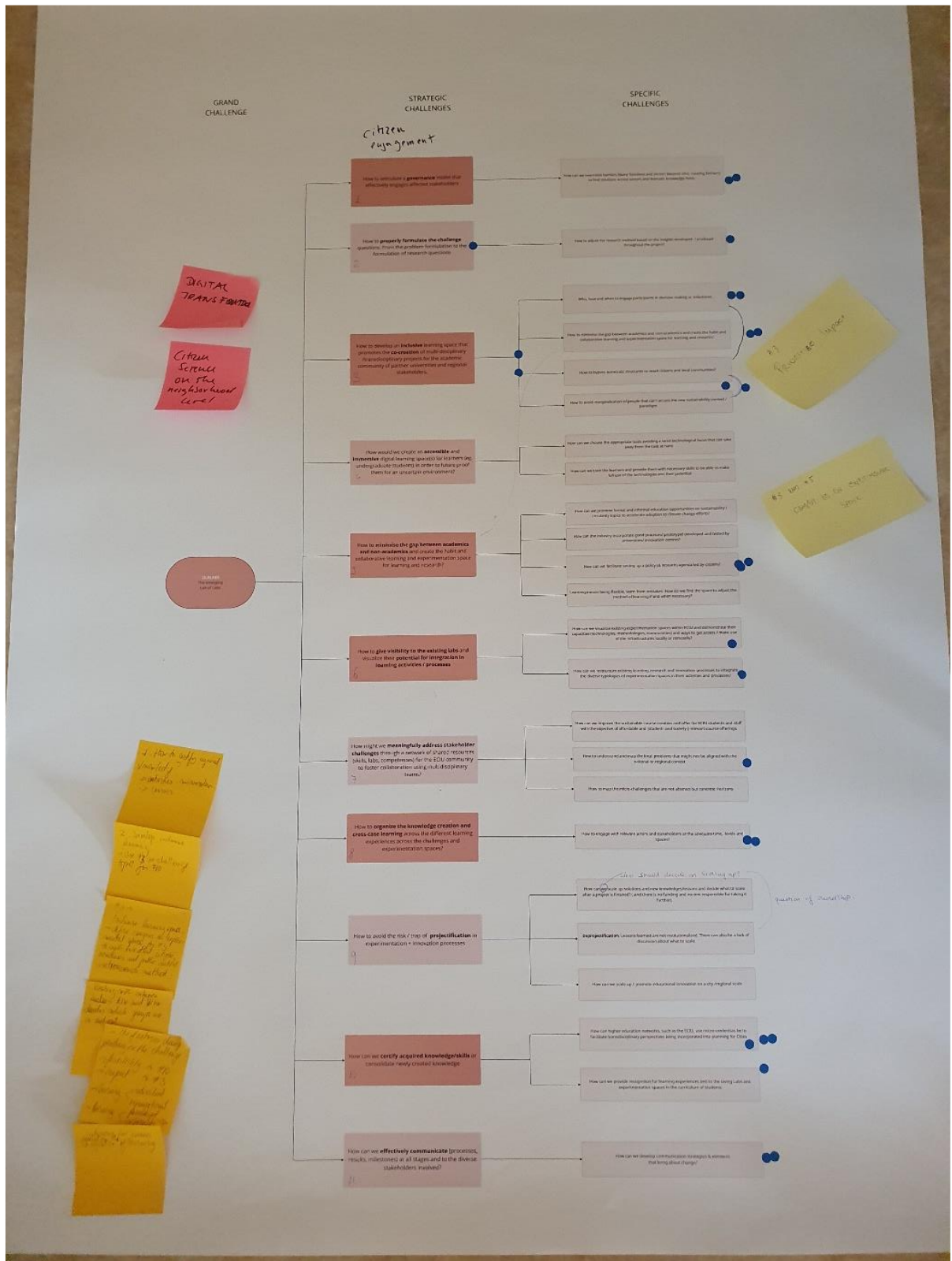


Figure 5. The Miro board at the workshop on the overarching challenge: Towards transformative education and engagement.

