

Introduction

In 2023, University of Limerick (UL) launched its vision of becoming a 'Sustainable University'. This aspiration builds on decades of commitment to creating positive social and environmental impact. However, recognising the lack of a holistic definition of a sustainable university, [UL Centre for Sustainable Futures & Innovation \(CSFI\)](#) undertook a university-wide initiative to develop a systems-led vision of what sustainability means for Higher Education Institutions (HEIs). This effort produced a pioneering '[Mission-based Sustainability Framework](#)', set to guide

the university's strategic actions from 2023–2030. To action the sustainability framework, UL Executive Committee provided seed funding for the establishment of [Mission Lab](#): a campus-based innovation engine created to orchestrate and lead the delivery of UL Sustainability Framework for the coming decade.

Pioneering Approaches to Sustainability

UL Sustainability Framework is more than a strategic plan; it represents a fundamental shift in approach to sustainable development within HEIs. By adopting emerging best-practice in the field of systems innovation, the initiative localised the **UN Sustainable Development Goals (SDGs)** into a portfolio of actionable 'sustainability missions'.

This holistic approach acknowledges that **sustainability extends beyond environmental concerns**, leading our sustainability missions to encompass governance, economic, social, and planetary dimensions – resulting in a portfolio of **twenty-one sustainability missions**.

UL Sustainability Framework was the result of an **extensive co-creation process** that engaged over seventy members of the university community, encompassing a wide range of disciplines and perspectives. This process was led by CSFI and [UL Sustainability Working Group \(SWG\)](#), ensuring that the framework was comprehensive in its scope, and shaped by diverse stakeholders and expertise.

Actioning Sustainability Missions

By taking a broader view of sustainability, we are empowered to reimagine both the tangible and intangible elements of our institution. We now view our university as a **living lab**: a platform for systems-led experimentation and transformation.

This approach to innovation goes beyond traditional siloed sustainability initiatives, with Mission Lab fostering a coordinated and united effort to **catalyse collective action** across all areas of the university.

Through this ambitious framework, UL is not only committing to a sustainable future, but also discovering what it means to be a Sustainable University in the 21st century. It's a vision that extends beyond the confines of the campus, seeking to influence and inspire broader collective action through **role-modelling place-based systems-change**.

Leadership and Strategic Integration

UL Sustainability Framework is firmly endorsed by UL Governing Authority and Executive Committee. This endorsement enabled sustainability to be officially integrated within the **university's overarching strategic plan**.

Recognising the scope of transformation implied by our sustainability missions, Mission Lab received a substantial **five-year seed fund** to establish momentum and immediately begin learning through real-world action on campus.

These commitments made by senior leadership have created awareness and **inspired distributed action** across the broader community.

As a result, Mission Lab has already shown its effectiveness, **delivering impact in 2023** through multiple mission-led projects. These early-stage projects, pivotal to our broader sustainability journey, will be discussed in more detail in subsequent sections.



Sustainability through Systems Innovation

In the past year, UL has advanced its sustainability vision through the **systems innovation processes** developed by Mission Lab.

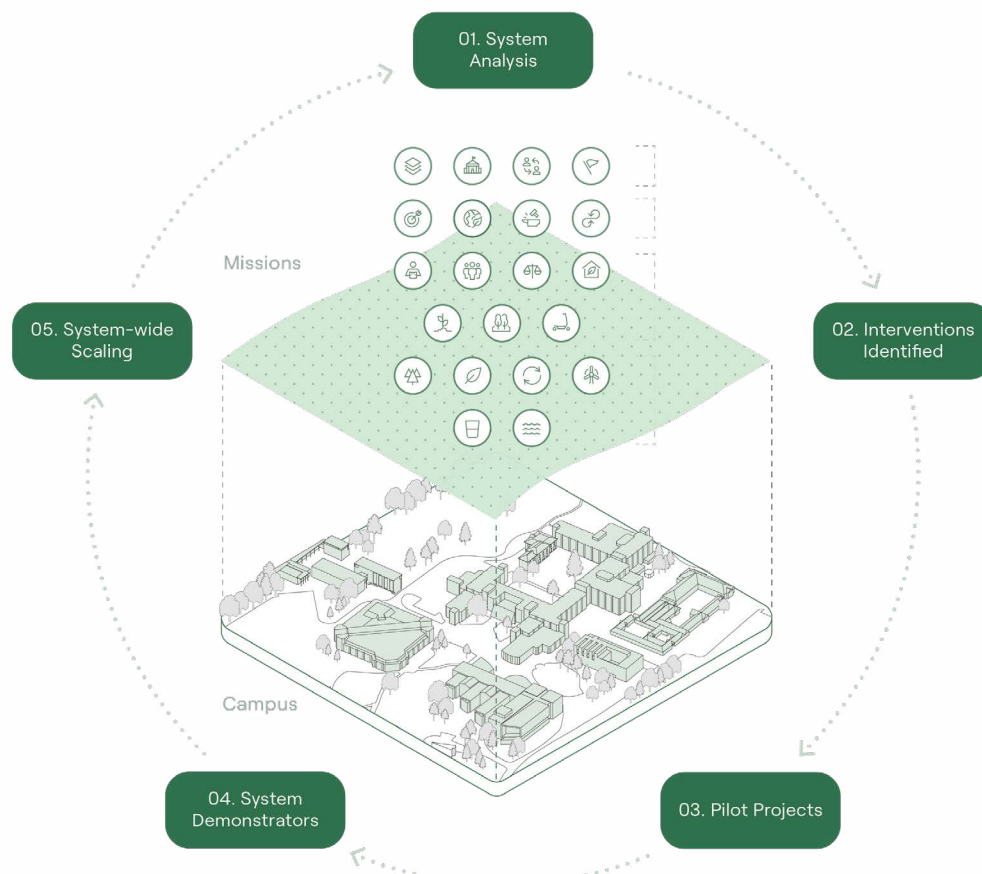
This hub of creativity and collaboration is built upon four pillars: **systems thinking, strategic foresight, multidisciplinary design, and participatory engagement**. These pillars guide an integrated approach to complex sustainability challenges – ensuring interventions are impactful in the present and in service of a long-term future.

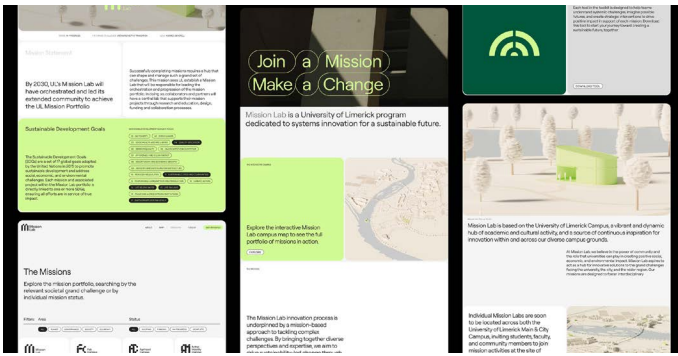
Our approach is systematic yet flexible, transitioning from **small-scale pilots and prototypes, to full-scale system demonstrators**. This experimental method ensures that we validate the impact of our sustainability interventions early in their development, enabling project teams to learn-by-doing and adjust plans as needed.

To ensure sustainability-led action is not limited within the walls of Mission Lab, an open-source **'Mission Toolkit'** was created to empower teams across the university to begin addressing the complex sustainability challenges faced within their own domain areas, fostering a **culture of distributed collaboration**.

Many sustainability pilots and initiatives were carried out this year, with exemplars listed:

Sustainability Mission	Exemplar Sustainability Initiatives & Pilots
Mission 04: Digital Campus Commons	A University Digital Twin pilot was completed to explore the feasibility of capturing real-time data relating to carbon neutral metrics.
Mission 15: Egalitarian University	The Human Rights Equality, Diversity & Inclusion Strategy was created to provide a holistic view of sustainable development through the lens of equity, diversity, and inclusion.
Mission 12: Biophilic Campus	A Biophilic Library Pilot was started to explore the integration of biophilic design elements within spaces across campus to improve biodiversity, health and wellbeing.
Mission 02: Transition Governance Framework	The creation of a Food Philosophy Guide to articulate sustainable principles to inform a university-wide Food Policy refresh process, impacting procurement and infrastructure.
Mission 18: Carbon Neutral Campus	Campus Building Retrofits initiatives were completed to upgrade the ratings of existing buildings, resulting in extensive reductions in carbon footprint, aligning with UL Climate Action Roadmap.
Mission 19: Biodiverse Campus	Campus Biodiversity Interventions across campus improved biodiversity levels through tree and pollinator planting, rooftop gardens, and allotments, with arboretum status in process.
Mission 14: Mission-Driven Learning	The EULab programme was piloted, with the goal to empower universities to collaborate on grand social and environmental challenges.

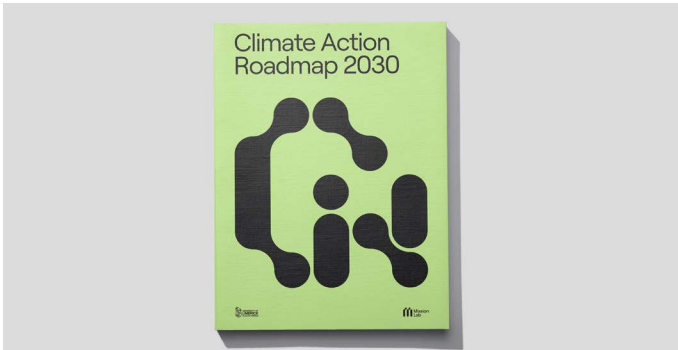




UL Mission Lab



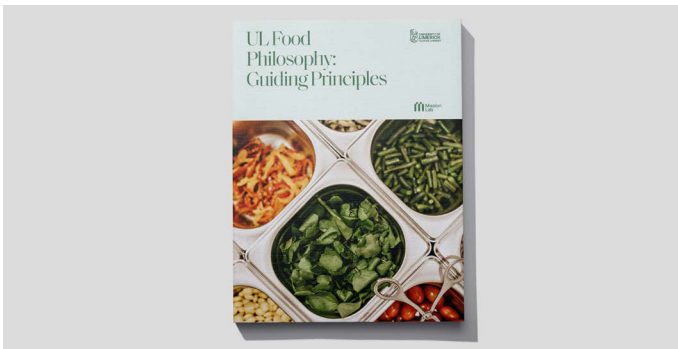
EULab



Climate Action Roadmap



Digital Twin



Sustainable Food Philosophy Guide



EDI Equalitarian University

Mission-led Learning

Mission Lab is integral to advancing UL's novel approach of **'mission-driven learning'**, where traditional sustainability training is elevated through project-based learning experiences.

This model bridges the gap between theoretical knowledge and practical application, offering students and staff the opportunity to engage with the latest developments and practices in the field.

Mission Lab acts as a platform for experiential learning and up-skilling for all those who engage with its portfolio of sustainability missions.

Importantly, the breadth of UL Sustainability Framework creates an opportunity for the university community to go beyond siloed disciplines and reap the benefits of cross-domain learning.

Knowledge transfer and cross-institutional learning plays an essential role in sustainability training. This year, EULab was piloted as an exemplar of collaborative mission-driven learning between UL and a network of universities across the EU.

Additional Sustainability Training Initiatives

Staff Sustainability Training:

- Senior management undergoes Climate Literacy training as mandated by PSCAM, involving 338 staff members.
- Climate FRESK training, focusing on the systemic nature of climate change and how individuals can take action in their professional and personal lives.

Student Sustainability Training:

- Set up of Student Sustainability Mission Hub with seminars, on-campus actions, and the delivery of Global Leadership for Sustainable Development course.
- Inaugural Student Sustainability Challenge winner announced in 2023.

Broader Sustainability Training:

- An open access Sustainability Literacy Collection launched at Glucksman Library.
- Futures & Foresight Workshop for UL Executive Committee, emphasising the importance of long-term thinking when leading sustainable development.
- YERUN Sustainable Futures workshop hosting 23 EU university presidents to explore the role of foresight in long-term sustainability within higher education.

Addressing Interconnected Challenges

There were significant challenges that had to be overcome this year for Mission Lab to begin actioning UL Sustainability Framework:

Orchestrating Collective Action

Local Challenge: Coordinating the delivery of UL Sustainability Framework's extensive portfolio of sustainability missions has presented a unique challenge for our university, requiring the overcoming of barriers to engagement, risk-aversion and the fragmentation of our distributed sustainability efforts.

UL Solution: Mission Lab's role in facilitating this process has been instrumental, fostering a culture of collective action and creative problem-solving. Novel roles have been established within Mission Lab to ensure essential functions such as mission orchestration and community engagement are fulfilled across campus.

Funding the Sustainability Transition

National Challenge: The sizeable sustainability funding gap is broadly considered one of the most pressing challenges faced by all HEIs in Ireland in relation to sustainable development. Funding the breadth and scope of investment required in UL to deliver the ambitious portfolio of sustainability missions poses a significant and ongoing challenge.

UL Solution: A seed fund was established to support initial mission pilots, with an additional funding gap analysis completed to understand the order of magnitude of investment needed for organisation wide roll out. A dedicated sustainability funding officer within Mission Lab was appointed to explore new funding mechanisms and sources, ensuring the continuity and actioning of UL Sustainability Framework.

Measuring and Validating Impact

Global Challenge: Generating baseline data for sustainability indicators is a global HEI challenge. Traditional measures are insufficient for our mission-based approach, thus requiring the adoption of innovative data capture and analysis methods.

UL Solution: Mission Lab pioneered the first 'University Digital Twin', with a pilot completed this year. This project involves creating a virtual model of the campus to simulate and optimise sustainability interventions and track progress with real-time data – building a platform for measuring the impact of all future sustainability efforts across campus.

While UL remains early on its journey toward sustainability, the success of our mission-based approach can be found in the numerous tangible results and outcomes achieved in 2023.

UL invest
€1,050,000

Mission Lab Seed Fund to drive collective action.



By 2023, ~3,265,000 water dispenses across network of 27 water bottle refill stations with 510,013 in 2023 alone.

Sustainability Literacy Guide receives approx. 1,000 views in first academic semester (2023)

Climate Literacy training as mandated by PSCAM - 338 staff members



12 student-led panel discussions and ideation sessions

51 workshops ran by students and staff focusing on reuse and repair

140 staff engage with ISCycle e-Bike Student Sustainability Programme



83% overall campus footprint is carbon retentive (2023)

37% energy efficiency increase by 2022 (published 2023)

6% increase in journal publications supporting sustainable development

UL Green Metric

2022

● 23rd out of 1,050

2023

● 22nd out of 1,183

QS Ranking

2022

● 301-320 for Sustainability

2023

● 175th for Sustainability

● 21st for Equality

● 55th for Environmental Sustainability

● 38th for Governance



Green-Campus Accreditation

70+

individuals co-design UL Sustainability Framework

Athena Swan Award:



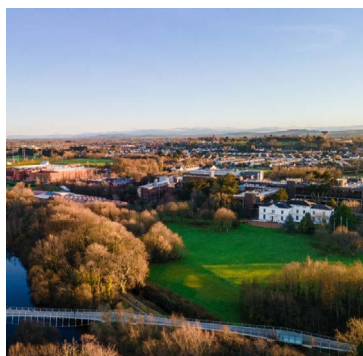
1 Silver Institutional Award
3 Silver Department Awards
All academic departments now awarded

"As President of University of Limerick, I am proud of our unwavering commitment to becoming a Sustainable University, which is intricately woven into our strategic vision and guided by our UL Sustainability Framework. The university aims to serve as a dynamic platform for sustainable experimentation, with the Mission Lab driving our ambitions. Together, we are investing in and demonstrating systems change, aspiring to lead by example for all HEIs on our shared journey toward a sustainable future."
– Kerstin Mey, UL President.



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UL President.

"The UL Sustainability Framework, a product of the combined effort of the UL Sustainable Working Group, has flourished under the exceptional support and visionary guidance of the UL Executive Committee and President Kerstin Mey. The passion and drive of our community have been instrumental in shaping this ambitious framework. We take collective pride in its potential and are enthusiastic about bringing it to life."
– Ann MacPhail, Chair of UL Sustainability Working Group.



The UL Sustainability Working Group comprises of +70 individuals representing the diversity of groups within the university.

"As a student leader in the sustainability group, I've witnessed firsthand the invaluable education and experience gained from working on real-world sustainability projects through the Mission Lab. This unique integration of student contributions within the Mission Lab process has made our educational experience invaluable – deepening our personal connection to sustainability and empowering us to make tangible contributions to a more sustainable future."
– Jack O'Connor, UL Student Sustainability Officer.



Inaugural Student Sustainability Challenge winner announced in 2023.

"We were honored to host the YERUN 2023 General Assembly at the University of Limerick, focusing on using foresight for long-term sustainability leadership within the EU. Our time at UL was a source of profound inspiration, showcasing the power of university collaboration in driving real change. UL's approach, leveraging its campus as a space for experimentation and collaboration, exemplifies the impactful role universities can play not only in education and research but in shaping a sustainable future through practical, shared initiatives."
–Silvia G. Recio, Secretary General, YERUN.



23 EU university presidents visit UL for YERUN 2023 General Assembly 2023 to explore the role of foresight to guide HEIs sustainability transition.

"Our visit to the University of Limerick in September 2023 was driven by a mutual desire to exchange insights on driving sustainable change within our respective universities. We left UL deeply inspired by their bold vision and the practical examples of sustainable initiatives already underway. This experience has equipped us with valuable learnings that we eagerly anticipate implementing within our own university, enhancing our journey towards sustainability."
– Pia Cecilie Bing-Jonsson, Rector, University of South-Eastern Norway.



USN senior executive team visit UL September 2023 to exchange insights on driving sustainable change within universities.