

Workstream 3.1: Sustainable Development and Sustainability Science

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This *Sustainable Development and Sustainability Science* work-stream aims to develop physical, institutional and virtual design ecosystem that will enable a living-lab style learning environment through collaborations within the aggregated current and new academic schools. The strategic relevance of this work-stream is articulated in the context of the global economy, which is increasingly focusing on sustainability in order to reduce costs in an environmentally and socially conscious manner.

Objectives	Key Achievements
Map the relevant attributes of academic courses to various aspects of sustainability.	<ul style="list-style-type: none">• 5,773 TU Dublin modules have been analysed, identifying 286 modules (~5%) as “sustainability-focused” and 769 modules (~13%) as “sustainability-inclusive”.• A computational technique based on NLP has been developed and validated, that maps module descriptors to the SDGs, providing TU Dublin with the capability to “badge” its sustainability focused modules in a university-wide offering. The technique has served as a guiding tool for programme teams to enhance sustainability embeddedness as per AASHE-STARS criteria and has been BETA test with several academic programmes for validation and review purposes. The technique is in the process of being published in <i>Frontiers of Sustainability</i> and is in the exploratory stages of being integrated in curriculum management software.• Formal Education for Sustainability CPD (5 ECTS NQF L9) was provided to circa. 100 staff, with training in enhancing sustainability components in their courses. Initially piloted with Food Science staff, this CPD has expanded across TU Dublin.• Based on expertise developed from Transform EDU, circa. €130K of SATLE funding was made available to support this initiative.

<p>Generate a pipeline of living lab projects to support learning both within discipline-specific programmes and as part of TL events;</p>	<ul style="list-style-type: none">• In collaboration with a SATLE funded project, the UN supported www.sulitest.org was introduced in 2019-2020. Circa. 3,000 students have since taken the test, with circa. 100 staff becoming Sulitest examiners. The scale of adoption was reported in a case-study to the UN’s high level political forum (HLPF).• Key Transform EDU staff have awarded “fellows” of the Sulitest international academic community and TU Dublin is now leading a collaboration with other Irish universities on developing a Sulitest module for Ireland. These staff are also contributing (with Sulitest) to the development of an international Certificate in Sustainability Literacy and (with other Irish universities) an Introduction to Education for Sustainability through the National Forum.• SDG Literacy www.sdgliteracy.ie has emerged as a vibrant community of practice, contributing the development of open education resources (OERs), TL events, and the definition of new projects and initiatives.• Transform EDU has also contributed capital application for HEA / TSSPF (full) funding to support a world-class €14m hydrogen generation and transport facility as a flagship living lab. MOU with ESB in development.• Transform EDU became the vehicle to apply for additional SATLE funding of circa. €30K to support this initiative.• Sustainability problems exhibit: no definitive formulation; few optimal solutions; and difficulty in achieving stakeholder consensus. Combined with policy failure, limited time to effect change, and lack of mechanisms to enforce solutions, sustainability poses super-wicked problems to which developing solutions requires transformative and transdisciplinary learning. Hence, TU Dublin created a Sustainability Summer School aimed at nurturing the required problem-solving skills. Circa. 45 students from TU Dublin, Bahrain Purdue, Coventry, Hochschule Lucerne and Hochschule Darmstadt participated in summer 2021. Additional SATLE funding of circa. €5K was used to support this initiative.
<p>Integrate sustainability into the organisational structure and business model of TU Dublin, as an area of strategic importance in the transformation of the legacy institutions to TU Dublin.</p>	<ul style="list-style-type: none">• The project team contributed to the writing of TU Dublin’s inaugural strategic plan: its strategic intent to 2030 was written through the lens of the UN Sustainable Development Goals (SDGs) and has a key KPI requiring all its programmes to include learning activities and outcomes related to sustainability.• Separately, to Transform-EDU the TU Dublin VP for Sustainability was appointed and a Sustainability Office is currently in the process of being resourced. Transform-EDU Project Director and WS3.1 Coordinator has been appointed into a key role within the new office.• Transform EDU has contributed to the Times Higher Education Impact Rankings positioning TU Dublin in the 101-200 bracket. These rankings of 1,406 universities are the only performance tables that assess universities against the UN SDGs.• Several case-studies of work completed by Transform EDU were highlighted to QQI in the inaugural CINNTE Institutional Review and QQI Annual Quality Review (AQR) reports.

Workstream Impact and Continuity

WS 3.3 has acted as a multiplier for Educating for Sustainability at TU Dublin, seeding a number of funded initiatives. The WS has led the application of circa. €30K of SATLE funding to the development of the SDG Literacy Community of Practice. Further support for the ongoing activities of this CoP to be channelled through TU Dublin’s Sustainability office, funded by SATLE III. This workstream has also led to the application of €120K of SATLE II funding to the scaling of Educating for Sustainability CPD. This activity is likely to continue under SATLE III. The initial piloting of the Educating for Sustainability has led to the

School of Food Science' participating in an [Erasmus+](#) project, aimed at developing sustainability competencies through service learning,

Transformative Student-Centred Learning Record (*Transform-EDU*) Project is supported by:

