

RESEARCH THEME

XXXIX cycle – a.y. 2023/2024

Title of the doctoral research Creating a Lab and an integrated methodological approach to address research, education and consultancy on Design for Sustainability and the circular economy

Proponent professor Valentina Rognoli, Alessandro Deserti (co-proponent)

Abstract

The systemic nature of the ecological transition and the urgency of the related challenges require an investment in impact research that accelerates the needed changes. The "systemic design" approach can guide the ecological transition towards systems, products and services that meet circularity and sustainability requirements. Design – understood as systemic and not anthropocentric – can help guide the ecological transition towards the ecosystem's needs.

The project will focus on creating theoretical foundations and practical investigation to build a Lab for research support, education and consultancy in Design for sustainability and the circular economy. Methodologies, tools and processes for constructing circular economy supply chains will be developed and tested, responding to the growing national and international demand. The Lab will seek to experiment new solutions for the use of new materials and components, the extension of the life cycle of the products, the maintenance and servicing, the intersection between services and ecosystem services, the reduction and enhancement of waste (remanufacturing, urban mining), supporting the active participation of users.

The approach will be multidisciplinary, envisaging collaborations with other departments of the Politecnico. The international context will be investigated to study and analyse similar structures. The research methods will combine desk research and RtD. Outcome mapping and reflexive learning will be at the framework's core, offering the opportunity to achieve outcomes and feedback on theorisation to support the development of the new integrated methodological approach.

Keywords Systemic Design, Design for Sustainability, LCA