

TWIST – Transnational Water Innovation Strategy

Summary

TWIST – Transnational Water Innovation Strategy is an Interreg Sudoe Project that aims to develop an open model of innovation in wastewater management by giving compliance with the Water Framework Directive and promoting a circular economy model.

The water sector lacks a supra-regional and national framework that promotes not only investment in R&D but also its transfer in the form of marketable solutions to the market, enhancing the attraction and retention of qualified human capital, and economic and social development based on knowledge and commitment to the circular economy. To face this challenge, TWIST project developed an innovative model of organization and transnational and transregional collaboration for the co-creation, experimentation, evaluation and entry into the water market of innovative processes, technologies and products.

The project is structured from the development of 3 specialized and complementary Living Labs (TWIST L-Labs). These L-Labs take advantage of existing R&D facilities, optimizing resources and increasing territorial synergies and the network between stakeholders, enhancing the value chain of the water sector. In addition, Innovative Public Procurement (CPI) will be promoted as a key tool for the public sector to act as a driver in the introduction of innovations in the market, leading to greater industrial competitiveness and efficient use of resources.

There are six SUDOE regions involved in the TWIST project: Andalusia (Es), Murcia (Es), Lisbon (Pt), Alentejo (Pt), Nouvelle-Aquitaine (Fr) and Occitanie (Fr).

TWIST's main products and beneficiaries are:

- TWIST strategy for mutual learning and capitalization of RIS3 (regional administrations);

- TWIST L-Labs (1) For the treatment and regeneration of waste water in Spain; (2) For wastewater treatment and infrastructure management in France; (3) For wastewater reuse and resource recovery in Portugal (involving research groups, regional water administration, Regional Innovation Administration, SMEs);
- Pilots for the implementation of Innovative Public Procurement in the water sector (administration, SMEs).

TWIST responds to the lack of a collaborative innovation ecosystem to encourage private investment in R+D+i in the water sector, which attracts and retains qualified human capital towards a development based on the efficient use and recovery of resources. TWIST creates an open innovation model through transnational and transregional partnerships between actors capable of mobilizing R+D+i processes, with a view complying with the Water Framework Directive through a circular economy model. TWIST offers physical and virtual spaces for co-creation, experimentation and evaluation of innovative products in the field of wastewater value creation with 3 complementary and specialized Living Laboratories, Innovative Public Procurement tools, a Transnational Business School and the TWIST Market Place, favoring mutual learning and capitalization of RIS3 in the regions of Andalusia, Murcia, Lisbon, Alentejo, Nouvelle-Aquitaine and Occitanie.

The Urban Lisbon Living Lab is jointly managed by IST, ISA and AdTA. Several projects involving multiple stakeholders have been developed, including the installation of a green wall for greywater treatment, a sustainable house and wastewater treatment and energy recovery using a microalgae-based process.



Project Reference

SOE2/P1/E0506

Leading Institution

CENTA – Fundación Pública Andaluza Centro de las Nuevas Tecnologías del Agua (Spain)

Partners

AAC – Agencia Andaluza del Conocimiento (Spain), ISA – Instituto Superior de Agronomia (Portugal), ADRAL –Agência de Desenvolvimento Regional do Alentejo (Portugal), AdTA – Águas do Tejo Atlântico (Portugal), IST – Instituto Superior Técnico (Portugal), IFTS – Institut de la Filtration et des Techniques Séparatives (France), OIEAU – Office International de l'Eau (France), PPA – Portuguese Water Partnership (Portugal), FUEM – Fundación Universidad Empresa de la Región de Murcia (Spain), UNILIM – Université de Limoges (France)

CERIS Principal Investigator

José Saldanha Matos (jose.saldanha.matos@tecnico.ulisboa.pt)

CERIS Research Team

Ana Galvão, Filipa Ferreira

Funding

Interreg Sudoe Program

Period

2018-2021

Total

1 198 500.00€

CERIS

75 000.00€

Project Website

<https://twistproject.eu/>



Figure 1. Urban Lisbon Living Lab logo and green wall for grey water treatment installed at IST.