Interested in conducting research and innovation projects on shared urban drainage experimental facilities in Europe?

Co-UDlabs - Building Collaborative Urban Drainage research labs communities. H2020 INFRAIA 2020-02-Starting Community.

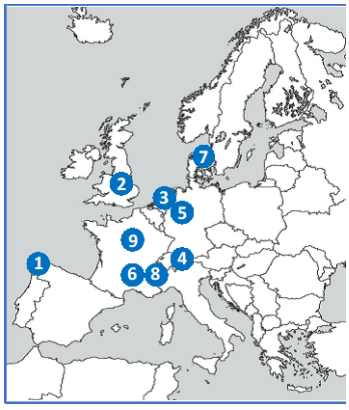
WHY CO-UDLABS?

The EU's Urban Drainage Systems (UDS) have been valued at €2.5 trillion. They are essential infrastructure providing safe sanitation and drainage and environmental protection by collecting and then returning securely to the natural water bodies. Many UDS are at risk, their economic life is coming to an end and it is unclear how limited knowledge on their state and processes, population growth, climate emergency, untreated stormwater and public health threats caused by emerging pollutants and pathogens can be addressed, and how knowledge innovation and best practice is effectively shared.

Innovative approaches are urgently needed to tackle these challenges, and large-scale laboratory facilities are essential to investigate and validate new approaches and provide confidence in their effectiveness and safety before implementation in existing UDS. CO-UDlabs aims to integrate 17 key large scale research facilities at a European scale into an ambitious project aiming to offer the R&D community, water infrastructure operators and their supply chain high quality laboratory and field facilities, human resources, high level training opportunities and improved data sharing platforms in order to meet major UDS related societal, environmental, and economic sustainability challenges of the 21st Century.

WHO ARE WE?

1. University of A Coruña (UDC)
2. University of Sheffield (UoS)
3. Stichting Deltares (DEL)
4. Swiss Federal Institute of Aquatic Science and Technology (EAWAG)
5. Institute for Underground Infrastructure (IKT)
6. INSA - Lyon (INSA)
7. Aalborg University (AaU)
8. Group of research, technical coordination and water information (GRAIE)
9. Euronovia (EURO)



Co-UDlabs consortium comprises 4 Universities (University of A Coruña (Spain), University of Sheffield (UK), INSA Lyon (France) and Aalborg University (Denmark), all with world-class urban water research groups, combined with 3 leading national research institutes (Deltares (Netherlands), EAWAG (Switzerland) and IKT (Germany). The consortium also includes GRAIE, a non-profit organization with proven abilities in creating partnerships between industry, water utilities, policy-makers and the researchers from public institutions, and the specialized multi-sectorial SME EURONOVIA.

WHAT DO WE PROPOSE TO THE UD COMMUNITY?

Providing Transnational Access, opening unique research facilities to European researchers and innovators

Co-UDlabs has been designed to offer a range of complementary research infrastructures to cover the entire range of UDS processes: rainfall-runoff, surface wash-off, wastewater collection systems and their interactions with urban surfaces and soils, and the operation of ancillary assets such as pumping stations CSO infrastructures and Sustainable urban Drainage Systems (SuDS). The project will close a current innovation gap by providing access to full-scale field and large-scale research laboratories to investigate different catchment surface and sewer network processes, CSO management approaches and SuDS techniques in a program of open calls planned for October 2021 and 2023. The calls will support scientific researchers and water utility and supply chain innovators to access Co-UDlabs research facilities, providing free of charge supported access to the research infrastructure (physical and knowledge-based) to undertake breakthrough engineering and scientific research and innovation using multi-institutional and multi-sectorial teams.

The first call for access to Co-UDlabs will be launched on October 2021!

Interconnecting our large-scale urban infrastructure testing facilities, and actively create multi-sectorial teams will make it possible to support the take up of novel innovations, mitigating development risk and promoting transition to full scale living labs and urban systems.

Developing Networking Activities

A program of collaborative activities will engage the EU urban drainage sector to exchange knowledge, collaboratively generate and encourage innovation and enable multiple avenues of research:

- The role of RI to support a more rapid transition to smart and sustainable UDS management will be addressed with data collection and analysis performed with groups of policy makers, water utilities, scientists and water innovators needs. Open multi-sectorial groups will be launched in Special workshops at key Urban Drainage conferences and meetings, such as NOVATECH 2023.
- An efficient, harmonised and curated means of access to the data collected under the project will be created. Data standardization, validation and interoperation protocols, will be available for Co-UDlabs users Urban Drainage community. Smart governance practices, public access to data and training and empowering of project users and beneficiaries will be boosted during the project lifetime.
- Co-UDlabs outcomes will be disseminated to a wide range of relevant stakeholders and to society through a series of dissemination activities.

Developing Research Activities

A combination of interconnected Joint Research Activities will allow to improve the understanding of asset deterioration, and secure the long-term resilience and sustainability of urban drainage systems with the help of more robust, autonomous and interconnected smart monitoring techniques, and digital water data analysis tools.

- Co-UDlabs will provide new services to projects users and to the UDS community, such as a catalogue of new technologies, validated methods for system monitoring, and open source tools for reliable and robust data acquisition.
- Co-UDlabs will contribute to network renewal, renovation and repair options intelligently selected to ensure sustainable, high-level performance regarding sanitation and flood safety.
- Co-UDlabs will allow development of standardized methods to measure the hydraulic and water quality performance of UD technologies, to quantify their resilience and recovery, and to improve their long-term sustainability.

CONTACT DETAILS

Coordinator: Jose Anta - Universidade da Coruña

co-udlabs@geama.org

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