



Co-UDlabs

**BUILDING COLLABORATIVE URBAN
DRAINAGE RESEARCH LABS COMMUNITIES**

D5.1. Manual with the Transnational Access call rules and procedures and the description of the facilities

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Author(s) – Jerónimo Puertas, Juan Naves



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BACKGROUND: ABOUT THE CO-UDLABS PROJECT

Co-UDlabs is an EU-funded project aiming to integrate research and innovation activities in the field of Urban Drainage Systems (UDS) to address pressing public health and flood risks and also environmental challenges.

Bringing together 17 large-scale European research facilities, Co-UDlabs offers training and access to a wide range of high-level scientific instruments, smart monitoring technologies and digital water analysis tools for advancing knowledge and innovation in Urban Drainage Systems.

Co-UDlabs aims to create an urban drainage large-scale facilities network to provide opportunities for monitoring water quantity and quality, measuring UDS performance and testing smart and open data approaches.

The main objective of the project is to provide a transnational multidisciplinary collaborative research infrastructure that will allow stakeholders, academic researchers, and innovators in the urban drainage water sector to come together, share ideas, co-produce project concepts and then benefit from access to top-class research infrastructures to develop, improve and demonstrate those concepts, thereby building a collaborative European urban drainage innovation community.

The initiative will facilitate the uptake of innovation in traditional buried pipe systems and newer green-blue infrastructure, with a focus on increasing the understanding of asset deterioration and improving system resilience.

EXECUTIVE SUMMARY

This document is Deliverable 5.1, “Manual with the Transnational Access (TA) call rules and procedures and the description of the facilities”, of the Co-UDlabs project, funded by the European Union’s Horizon 2020 research and innovation programme under Grant Agreement No 101008626. The Deliverable is included in Work Package 5, “Management of the Transnational Access”. The lead beneficiary of the Work Package is the University of A Coruña (Universidade da Coruña, UDC). UDC is the main author of this Deliverable.

The aim of this document is to provide a manual for potential users of the Co-UDlabs TA programme, including the call selection procedures with a description of the facilities and access provided, which will be public on the [Co-UDlabs website](#).

INTRODUCTION

The overall aim of the Co-UDlabs H2020 European project is to integrate research and innovation activities in the field of urban drainage systems allowing European stakeholders, academic researchers and innovators in the urban water sector to enhance their activity through a common research network that can provide coherence and access to high-quality large-scale research facilities, thereby building a more collaborative European Urban Drainage innovation community. In Co-UDlabs, 17 unique ‘field scale’ urban drainage research facilities hosted by seven research organisations are included, aiming to offer the urban drainage innovation community high quality laboratory and field facilities, experimental and technical expertise and improved data sharing platforms. This EU funded access allows diverse groups to collaboratively work on key challenges of the urban water sector, and aids wider, faster, and more effective uptake of innovative solutions in order to address pressing public health, flood risks and environmental challenges.

The Transnational Access (TA) Call for Proposals is an invitation to all eligible user groups to submit a proposal for research projects aiming to access Co-UDlabs unique facilities, with financial support from Co-UDlabs for their activities. Transnational Access will be provided to selected “user groups” (i.e., teams formed by different researchers and institutions) led by a “user group leader”. The facilities are based at 4 Universities (University of A Coruña (Spain), University of Sheffield (UK), INSA Lyon (France) and Aalborg University (Denmark)) with world-class urban water research groups, combined with 3 leading national research institutes: Deltares (Netherlands), EAWAG (Switzerland) and IKT (Germany). The experimental facilities are designed for research across a range of applications, including urban flooding, runoff pollution, physico-chemical and biological in-sewer process, sustainable urban drainage systems (SUDS), performance analysis of urban assets (including SUDS), real time control and asset deterioration. New digital water technologies and solutions for the monitoring and evaluation of these processes are also analysed in the framework of the project.

This document is a guide for TA users and aims to outline the following aspects concerning the TA procedure:

- The conditions of access.
- The application process.
- The 17 facilities in which to carry out a TA project.
- The rules and conditions during the TA project.
- The requirements for User Groups after the TA access.

1. BEFORE THE TRANSNATIONAL ACCESS PROJECT

Before applying for a TA project, the following should be considered: eligible costs, modalities of access, conditions for eligibility, support from facility providers and the application process.

1.1. Eligible costs

Full costs associated with Transnational Access (TA) to any of the research facilities are provided and include logistical, technological and scientific support as well as specific training (see below). Associated accommodation and travel costs of user groups are also covered and they will be reimbursed according to the internal rules and procedures of the facility provider, as long as the total costs do not exceed the total available budget. Information on estimated days of access and number of travels for each research facility can be obtained from www.co-udlabs.eu/access/research-facilities.

1.2. Modalities of access

Access will be provided according to either one of the following modalities:

- In-Person Access (hands-on).** This modality has been designed for the access to the main laboratory facilities. The presence of at least one member of the user group is required during the whole period of the access. The visit of approximately 5 additional researchers at different stages of the project is also expected (e.g., configuration, installation and/or operation of specific equipment, supervision). Access duration ranges from 15 to 60 working days.
- Partially Remote Access.** The presence of the user group is required at some stage of the access period (e.g., installing and un-installing user's equipment or configuring the facility). This modality of access is intended for mid- and long-term performance monitoring of processes, typically times of 2-9 months, which depends on external non-controlled factors (e.g., rainfall). During the development of these experiments, the facility owner will devote resources for maintenance and control of the experiment, and to transfer the gathered data to the user group. The visit of about 3 researchers is expected during the different stages of the project (configuration or deployment of equipment at the beginning of the project, during the experiment or at the end to uninstall or disassemble). The estimated in person access time is from 10 to 20 working days, depending on the facility.

1.3. Conditions for eligibility

Details on the conditions for eligibility can be consulted in the rules and conditions document available on <http://www.co-udlabs.eu/access/ta-call>. User groups must satisfy the following conditions:

- It is possible to apply from all over the world, but user groups where all or most users work in third countries (defined as not EU or Associated country according to EU H2020 rules) can be supported as far as the cumulative access provided to them is below 20% of the total amount of days of access provided under the grant.
- The total number of researchers from the Co-UDlabs partners may not exceed 1/3 of the total number of researchers in any eligible user group.
- Both the user group leader and the majority of the user group members must work in a country other than the country where the facility is located.
- Only user groups that are allowed to disseminate the results they have generated under the action may benefit from the access, unless the users are working for SMEs.
- The user group members should normally not have access to a similar facility.

1.4. Support from facility providers

Co-UDlabs is organizing specific supporting activities i) to introduce each Co-UDlabs call for TA, ii) to foster the creation of multidisciplinary user groups, and iii) to draft high quality proposals. These support activities are recommended for user groups so that projects meet Co-UDlabs requirements, but are not mandatory before submitting a proposal. Facility providers are also available through the Co-UDlabs contact form on www.co-udlabs.eu/facility-contact-form/ to advise users with respect to any technical constraints, feasibility or eligibility conditions, and to provide additional information about specific support that is available at a facility.

For the first call of proposals opened on 31st October 2021, an open webinar has featured a presentation of the Co-UDlabs project and a discussion between attendees and facility providers so that the project partners have given more

detailed information on the services and potential uses that can be carried out within the scope of Co-UDlabs. The recording of the webinar is available [online](#) to be consulted.

The main topics of Co-UDlabs project will be developed in more depth in the IKT Co-UDlabs Workshop on 3rd and 4th November 2021. The support activities will continue through a 2-days Hackathon (23rd and 25th November 2021) designed to help define ‘pre-project’ proposals and potentially build user groups. The deadline for requesting feedback from draft proposals in the first call will be the 31st December 2021 in order to ensure a timely response before the submission deadline on 31st January 2022.

Further information on supporting activities and dates and activities for the second call for TA projects scheduled for 2023 will be announced and available in advance on the project's website and via social networks and other dissemination pathways.

1.5. Available research facilities

Co-UDlabs has been designed to offer a range of complementary research infrastructures to cover the entire range of urban drainage systems 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. Co-UDlabs provides access to the following research infrastructures and facilities (further details can be consulted on www.co-udlabs.eu/access/research-facilities):

University of A Coruña

A Coruña (Spain)



1:1 scale street surface model (STREET)

In-Person Access



- Full scale model of a 36 m² street section (including buried drainage pipes) for studying rainfall processes, street flooding, pollutant runoff and in pipe pollutant transport.
- Controllable rainfall is generated. Measurement capabilities include: Large-scale Surface Particle Image Velocimetry (LSPIV), online monitoring and automated sampling for sediments and other pollutants. Surface and inlets can be re-configured.

Scientific platform for urban runoff tests (BLOCK)

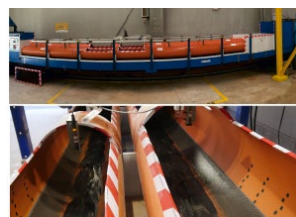
In-Person Access



- 100 m² rainfall simulator model with 1:4 scale model of an urban intersection for studying rainfall-runoff and the transport of pollutants on surface and in the drainage network. Controllable rainfall is generated.
- LSPIV system, online and automated monitoring and sampling procedures for sediments and other pollutants.
- Surface and inlets can be re-configured. 4 buildings models can be utilized to analyze different roof configurations, including green roofs.

Bens waste water flume facility (BENS FLUME)

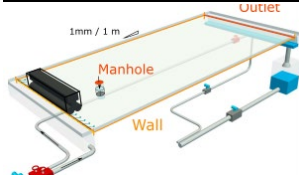
In-Person Access



- Hydraulic flume (10 m length and 0.8 m width flume), variable slope and adjustable downstream boundary condition, can be internally re-configured with pipe sections.
- Wastewater can be routed through and used in the facility, making the flume unique at the international level. Online probes (turbidity, absorbance), acoustic velocimetry, auto-samplers for collecting quality samples, with chemical and microbiological analysis capabilities.

University of Sheffield
Sheffield (UK)

Above/Below Ground Urban Drainage Facility (A/B FLUME)



- System comprises of a 75 mm diameter pipe below a 4 m x 8 m surface model to simulate/characterise interaction of underground drainage and surface flows. LSPIV and automated solute concentration measurement. Steady and unsteady events can be re-produced.
- Adaptable system, re-configurable to different street/building layouts.

In-Person Access

Temperature controlled Annular Flume (ANNULAR)



- The annular flume is a unique facility in that we are able to operate it with wastewater to study microbial and biochemical processes that would be found within a sewer, under different environmental (temperature and nutrient) conditions at pilot scale.
- Advanced chemical and molecular microbiological analysis is available.

In-Person Access

Full Scale Buried Water Infrastructure Test Facility (BURIED FACILITY)



- This is a facility to study buried urban drainage infrastructure. It consists of a 45m x 6m x 5m test tank, that can be split into sections in which different buried drainage infrastructure can be created at full scale and subject to surface/pressurized flows, groundwater flows, surface loadings and pollution.
- Full scale asset performance can then be studied and the interactions between different pressures on asset performance and deterioration can be determined.

In-Person Access

Real Time Control Testing Facility (RTC Rig)



- Full scale system with three linked manholes and a CSO chamber. Flow monitoring and control is installed.
- Allows planned, systematic testing of Real Time Control RTC strategies and control systems under different hydraulic regimes.

In-Person Access

Deltares

Delft (The Netherlands)



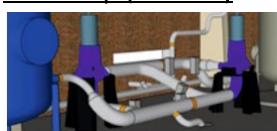
Alpha-loop (A-LOOP)



- Full scale three-phase capable pressurized pipeline. Combined with the measurement expertise at Deltares provides a unique observation platform for gas, water and sediment interaction and transient flow and thermal phenomena in a simulated pressurized sewerage transport network.

In-Person Access

Beta-loop (B-LOOP)



- Unique full-scale pipeline for the study of non-Newtonian slurry flows in pressurized networks.
- This facility can serve to control and investigate rheological conditions in concentrated domestic slurry transport systems.

In-Person Access

EAWAG

Dübendorf (Switzerland)



Experimental Hall–recirculating flume (HALL)



- The experimental hall is a 500 m² test facility for urban drainage and process engineering experiments. It has a fixed installation of flume facilities (4 m length), which allow for temperature-controlled experiments with live raw and (pre) treated wastewaters as well as surface waters.
- The facility is equipped with autosamplers and various flow and level meters, as well as online sensors to monitor water quality (temperature, pH or EC, acoustic turbidity).

In-Person Access

Urban Water Observatory – Digital Lab (UWO)*Partially Remote Access*

- The UWO digital lab is a unique field site because of the high density of quantity and quality sensors (+80) in a real sewer combined network.
- Calibrated hydrodynamic network model with historical rainfall data. Historical pesticide datasets from online LC-MS-Mass spectrometer.

IKT

Gelsenkirchen (Germany)

**IKT Large Test Facility (IKT LTF)***In-Person Access*

- Large Scale Test Facility is a large flume of 18 m x 6 m x 6 m designed to study urban drainage assets (pipes, manholes, gully pots) at full scale under replicable soil, groundwater and traffic load conditions.

IKT Hydraulic Test Stand (IKT TEST)*In-Person Access*

- Modular facility with a water transport/circulation system for testing hydraulic capacity of full-scale pumps, throttles, gullies, DIBt (<https://www.dibt.de/en/>) accredited test stand for decentralized stormwater treatment plants.

INSA

Lyon (France)

**Green ROOF experimental Facility (GROOF)***Partially Remote Access*

- GROOF is an experimental facility with 6 green roof platforms (3 m x 3 m). The platforms allow comparative mid- to long-term hydrological performance assessment of various green roof configurations. A complete weather monitoring station is installed. Specific outflow and evaporation measurements are also available.
- GROOF is highly flexible and adaptable (green roofs can be re-configured).

Django Reinhardt detention and settling basin (OTHU-DRB)*Partially Remote Access*

- The Django Reinhardt detention and settling basin is an “end of pipe” facility that enables to intercepts up to 80 % of stormwater particulate pollutants.
- LSPIV is available. Users can implement sensors for quantity and quality measurements at the inlet and outlet of the basin. Historical data collected during 15 years are available. It is also possible to investigate trace metal sediment contamination.

OTHU SuDS research facilities (OTHU SuDS)*Partially Remote Access*

- OTHU SuDS include a porous pavement car park (90 m²), a swale (290 m²) and an infiltration trench (240 m²). Event-based rainfall, flow rate and micropollutants data have been recorded during 4 years. The facility allows the installation of new sensors.

University of Aalborg

Aalborg (Denmark)

**Frejlev research station (FREJLEV)***Partially Remote Access*

- Frejlev research and monitoring station receives combined and separated sewage water from the urban city Frejlev. The city has around 2800 inhabitants and consists primarily of residential areas.
- Inline access to a continuous flow of sewage water and full list of water quality equipment allows conducting unique wastewater process research.

1.6. Application and Evaluation process

Project proposals should be uploaded via the website using the available templates on www.co-udlabs.eu/access/ta-call. This section includes a description of the documentation required to submit a project proposal, an explanation of the submission process, and the evaluation and selection procedure. The deadline for the first call is 31 January 2022 at 17:00 (CET).

Required documentation

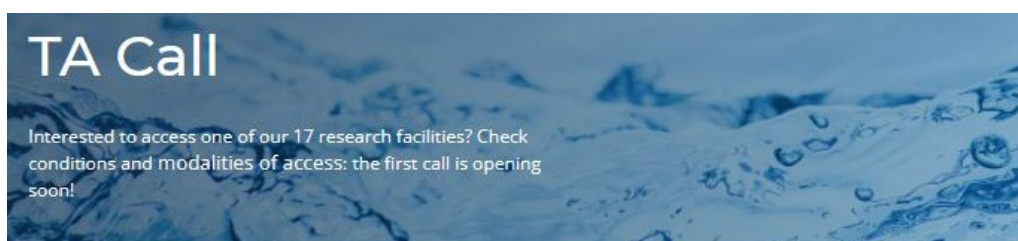
The following items are required. Please note that proposals exceeding the length requirements, not using provided templates or received after the deadline cannot be considered for evaluation.

- Application form** including title of the project, user group leader information, requested facility, number of access days and preferred dates for conducting the project.
- Project proposal** not exceeding 4 pages including text, references and figures, with the following sections:
 - o *Excellence of the proposal*, including a brief state of the art and general description of the project highlighting the effectiveness of the research approach and its fit with the main themes of Co-UDlabs, the quality of the proposal and its novelty in the field of urban drainage, and the suitability of the composition of the team to carry out the proposal.
 - o *Impact of the expected results* with an outline of project publications, workshops, conference to disseminate results and make it open available to the wider research and innovation community.
 - o *Potential for academic or industrial innovation* considering applications of the expected project results by others and the possible further development of the research line outside the facility once the Transnational Access is completed.
- Methodology and access plan** including required research facility and equipment, technical details and specifications of the planned experiments, necessary modifications or adaptations of the facility setup, the estimated number of access days, and the number and duration of visits should be included. The document should contain technical details and specifications to aid the facility providers in assessing the project's feasibility (2 page maximum).
- User group CV** including composition of the user group, 1 page CV of the user group leader and 1 page CV common to all members per institution involved.

Submission

Concerning the application process, four steps should be followed to prepare and submit a proposal, which are described below.

- Read/revise all the documentation and information about the call available on www.co-udlabs.eu/access/ta-call. This includes the description of the call, the rules and conditions of access, the evaluation and selection procedure, and the templates to be used to prepare the project proposal documentation.



TIMELINE: 1st TA Call



Co-UDlabs offers transnational access to selected project proposals to any of the partners' 17 research infrastructure facilities. Access to Co-UDlabs **research facilities** can be requested by submitting a proposal, which includes a description of the applicant team and the work that the applicants wish to carry out in the facility of their choice.

Transnational access will be provided to selected 'user groups' (i.e., teams formed by different researchers and institutions), led by 'user group leaders'. Interested applicants and user groups can access all the necessary information about the TA call, its principles, and guidelines in the **TA Call Reference Manual**. You can also refer to this **handy quick guide to the Call** and the main steps and deadlines.

In order to submit your proposal, please consider reading the background documentation of the Call and downloading the required template forms and documents for your proposal.

Guiding documentation:

- [Transnational Access Call](#)
- [TA Rules and Conditions](#)
- [Users Selection Procedure](#)
- [Download all documents \(.zip\)](#)

Required proposal templates:

- [Project Proposal](#)
- [User Group CV](#)
- [Methodology and Access Plan](#)
- [Download all templates \(.zip\)](#)

Before submitting your proposal, please consider the opportunity to contact directly the people in charge of the facility of your choice through the **Facility Contact Form** button.

[Facility Contact Form](#)

To submit your proposal, please proceed by clicking on the Submit Proposal button.

[Submit proposal](#)

Figure 1. TA call information on Co-UDlabs website (www.co-udlabs.eu/access/ta-call)

- Prepare the required documentation for the project proposal following the templates available on www.co-udlabs.eu/access/ta-call and respecting maximum lengths. Before submitting your proposal, please consider the opportunity to contact facility provider in charge of the facility of your choice through the [Facility Contact Form](#). Please fill in this contact form if any questions arise during proposal preparation or if you need support from facility providers regarding details of the facilities, experimental feasibility or dates and duration of the access.
- Complete the application form on the website (<https://co-udlabs.eu/proposal-form>) including title and facility requested, group leader information, dates and duration of the requested facility and instrumentation needs.

Proposal Form

Please fill in this form to submit your proposal for transnational access to the research infrastructure, installations, and facilities of the Co-UDlabs project partners. For any additional queries, information, or doubts, please contact contact@co-udlabs.eu at the earliest opportunity.

Title of the proposal *

Requested facility *

All information on Co-UDlabs facilities is available at this link: www.co-udlabs.eu/access/research-facilities/

Do members of the user group normally have access to a similar facility? *

- Yes
 No

Figure 2. Project proposal form. Project information (www.co-udlabs.eu/proposal-form)

Affiliation of User Group Leader *

Please specify full name and postal address of the institute, organisation, or company (including the department, if available) to which the User-group Leader is affiliated at the moment of proposal submission:

Name

Street address

City

ZIP / Postal Code

Country

User-group Leader gender *

This information is required for auditing reasons throughout the H2020 project evaluation process:

- Male
 Female
 Prefer not to say

User-group Leader contact e-mail address *

User-group Leader contact telephone number *

User-group or User-group Leader webpage

Estimated number of access days requested *

This includes the time needed for building the test setup, testing and calibrating when necessary, experiments, and removal of the test setup.

Estimated total number of the visiting person-days *

Sum of the days of presence at the installation of all the members of the visiting team. Expected visiting days for each facility can be consulted at www.coudlabs.eu/access/research-facilities/.

Most appropriate period for the experiments?

Requested start date and end date for the experiments. Final dates will be agreed with the facility provider after acceptance. Please, specify if there are any constraints for the period when you may or may not perform the experiments.

Start date *

End date *

Tentative list of instrumentation requested *

Specific instrumentation available can be consulted on www.coudlabs.eu/access/research-facilities/. If you plan to use your own instruments, please also give their characteristics.

Figure 3. Project proposal form. User group leader data and tentative access plan (www.co-udlabs.eu/proposal-form).

- Upload required files through the last section of the application form and submit the proposal. Only pdf format files with maximum size of 5 Mb per file are allowed.

Upload files *

The files should be uploaded in pdf format. Please note that proposals exceeding the size requirements, not using provided templates or received after the deadline cannot be considered by the Evaluation Panel.

Project proposal · Model setup feasibility · User group CV

Drop files here or

Accepted file types: pdf, Max. file size: 5 MB.

Consent

I agree to the [privacy policy](#).

Figure 4. Project proposal form. Uploading project proposal files (www.co-udlabs.eu/proposal-form).

Evaluation and selection procedure

Proposals for TA projects will be received by the Co-UDlabs Project Coordinator, who will check their eligibility in accordance with the rules and conditions of the present call. Please note that proposals exceeding the size requirements, not using provided templates or received after the deadline cannot be considered. The eligible proposals will be then reviewed by the requested facility provider to check their feasibility. After the feasibility check, the applications will be sent to an External Evaluation Panel (EEP), that will be composed of international independent scientists and end-users. Facility providers will have only an advisory role during the selection procedure. The EEP members will be responsible for independent evaluation of the access projects using the following selection criteria:

- Confirmation of Feasibility and Eligibility** (yes/no)
- Excellence of the proposal** (weak: 0 – outstanding: 10)
- Impact** (weak: 0 – outstanding: 5)
- Potential for academic or industrial innovation** (weak: 0 – outstanding: 5)

During the evaluation phase, user groups composed of members from a wide range of institutions, and different work countries, will be positively considered. Representation from the non-academic sector within user groups is also encouraged. If two proposals have the same overall rating, the number of new users (defined as those who have not been granted in previous Co-UDlabs Transnational Access calls and those who have not already had access to the requested facility beyond the scope of the project) and the number of female users will be considered when making the selection. The EEP reserves the option to reject proposals that it considers to be of insufficient scientific and/or technical quality to be considered for Transnational Access.

The EEP may also invite non-awarded user groups to re-submit a proposal, should their proposed project be viable in a facility similar to that of their original choice and that still has available access days. In case of non-acceptance, the applicants will be informed by mail with a summary of the comments made by the EEP and their rank. Where appropriate, the report will also include recommendations and suggestions for improvement and resubmission of a new proposal for the second call for projects scheduled for 2023. Resubmission for the second call will however not give any preference or priority in the user selection procedure. The user group leaders of the granted projects will be informed of the outcome and re-directed to facility providers to coordinate the access and sign the User Facility Agreement

2. DURING THE TRANSNATIONAL ACCESS PROJECT

The first call for proposals will be evaluated by April 2022. The projects of the first call are expected to be finished by July 2023.

2.1. Rules and condition of access

The User Facility Agreement will include the following common rules and conditions of access and other considerations specific from each facility provider such as working hours, specific rules of laboratories, conditions of reimbursement or health and safety procedures. The following is a summary of the rules, conditions and eligibility governing Transnational Access to the research facilities included in Co-UDlabs. However, in case of any conflicting articles with the Grant Agreement with the European Commission, the latter will prevail.

1. Access will be provided to the different research facilities in Co-UDlabs for eligible user groups ("Users").
2. Access to the installations is provided free of charge to the Users and includes all infrastructural, logistical, technical and scientific support (including training) that is normally provided to external users of the installations. The test setup will remain property of the provider, unless otherwise agreed upon.
3. Travel and subsistence expenses for all Users within an eligible team (see Article 4), irrespective of their nationality, will be reimbursed according to the normal internal rules and procedures of the facility providers, as long as the total costs do not exceed the total available budget. This funding covers national and/or international travels from the User's institution to the research facility for each period of occupancy, and daily subsistence for each day of occupancy of the research facility (including weekends and public holidays) according to facility providers rules. Exceptions to these rules need prior confirmation in writing by the facility provider. Travel and subsistence will also be reimbursed on the same basis to Users when they attend meetings with the prior written agreement of the facility provider.

Receipts of tickets for travels must be attached to claims, which will be made on the facility provider's standard Travel Claim forms. The claims for daily subsistence must be made on the provider's forms at the daily rate applicable at the time. Claims will be reimbursed in Euro (€) or the local currency of the facility provider.

4. It is possible to apply from all over the world, but user groups where all or most users work in third countries (defined as not EU or Associated country – see Appendix) can be supported as far as the cumulative access provided to them is below 20% of the total amount of days of access provided under the grant. The total number of user group members from Co-UDlabs partners may not exceed 1/3 of the total number of members in the user group. Both the user group leader and the majority of the user group members must work in a country other than the country where the facility is located. Only user groups that are allowed to disseminate the results they have generated under the action may benefit from the access under the grant agreement. Exceptions to this condition is foreseen when users work for SMEs. The user group members should normally not have access to a similar facility.
5. The EC-supported Transnational Access programme is intended to finance primarily short visits to the research facility (up to three months, unless the EC explicitly gives permission for a longer period).

Proposals are selected, primarily on the basis of scientific merit, through an independent peer review procedure by an international External Evaluation Panel (EEP). This selection panel is acting for all Co-UDlabs partners on the basis of jointly agreed common selection rules (see Co-UDlabs User Selection Procedure).

The selected proposals and the corresponding facility provider will coordinate the start of access.

6. Users and facility providers must sign a User Facility Agreement before the start of the access period. By signing this agreement Users declare that Co-UDlabs conditions for Transnational Access and facility provider rules have been read and completely understood.
7. The facility providers shall, on a royalty-free basis, grant to Users non-exclusive licences and user rights concerning Foreground Information to the extent necessary for the execution of their own research and development work. Foreground Information means all information generated by the research facility, or a third party working for it, during the performance of the Project.
8. Users must draft a Data Management Plan (according to H2020 rules) prior to the experiments. This plan will explain in detail how the data will be stored in such a way that researchers outside the Project can make use of it. The experiments can only start after the written approval of the Data Management Plan by the facility provider.
9. Meetings between users and facility providers will be organised if required prior to the access period to help making the access project a success. In exceptional cases such a meeting can be organised after the access period, if deemed necessary by the facility provider to fulfil the provider's obligations. A joint meeting of representatives of each access project of all Co-UDlabs partners with an access grant may be organised to encourage further scientific collaboration. A representative from User Groups must attend. Travel and subsistence of users attending these meetings will be reimbursed on the basis given in Article 3 above.
10. Users must abide by the normal working practices, working hours, and health and safety regulations of the facility provider while present at the research facility.
11. The facility provider shall incur no liability in respect of any claim that may arise from the use of its research facility under this contract. The presence of Users in the research facility occurs at their own risk. Neither the personnel of the facility provider nor the organization itself accept liability for the damage or loss of any instruments, apparatus and test equipment of the Users whether or not such damage or loss was caused directly or indirectly

by their negligence. Each visiting user will ensure he/she has appropriate insurance, including personal health, accident cover and personal liability.

12. All Users shall sign a record of presence at the research facility at the end of their occupancy.

2.2. Further information needed

Once project proposals have been awarded, facility providers will support visiting user groups with scientific and administrative issues that may arise during access such as logistical support for local travel, health and safety procedures, data collection and analysis or access to local laboratories for conventional or specific analytical determinations.

User groups will also be instructed to access a private SharePoint on the project intranet where further information about the Transnational Access will be provided. A general channel will include common useful information for all user groups such as the TA call documents to consult or instructions for required follow-up reports or to create the Data Management Plan of their project. Another private channel including user group members and facility responsible persons will provide further information about the research facility to which access has been granted (e.g., Health and Safety procedures or specific rules of the institution) and will also be used to archive the documentation, data and publications generated during the project

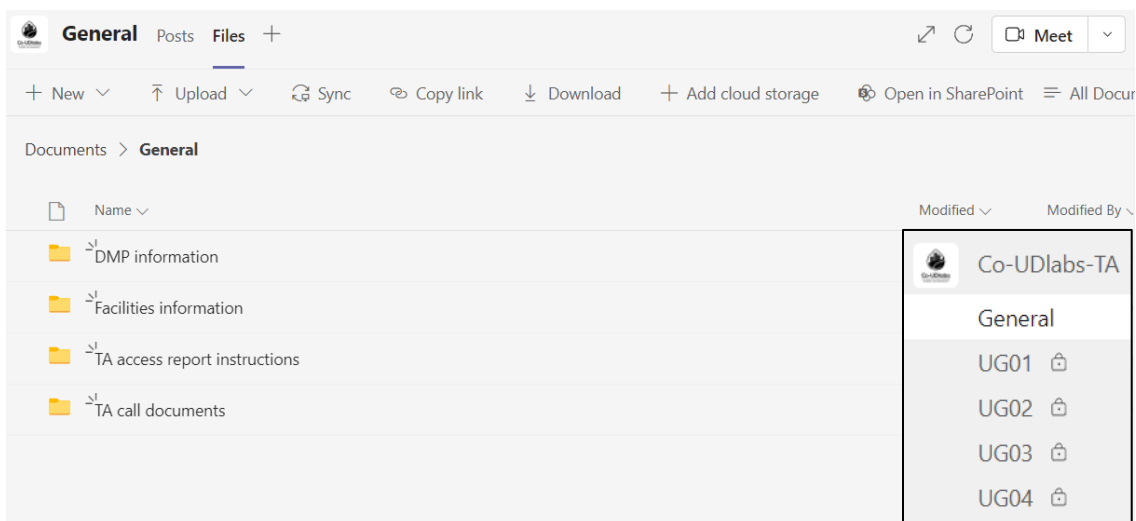


Figure 5. TA access SharePoint. General channel for all awarded user groups.

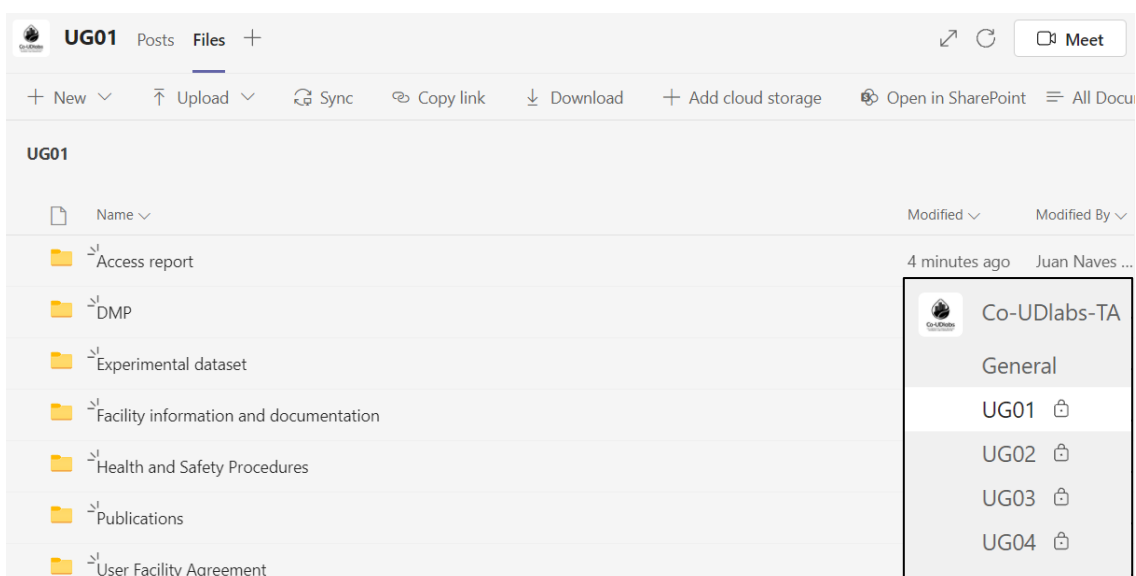


Figure 6. TA access SharePoint. Private channel for each awarded user group.

3. AFTER THE TRANSNATIONAL ACCESS PROJECT

3.1. Access report

Users must provide a written report not later than 3 months after the end of the access period including details of the experimental set-up, programme of experiments, the summary of the data collected (if appropriate) within the Project and detailed explanation of data management conforming to the rules specified by the EC. The analysis of the results of the research must be published on the Co-UDlabs webpage (executive summary) as well as in the open literature, which is subjected to a peer review. The last payment of travel and subsistence costs will only be completed after receipt of these reports by the facility provider.

3.2. Evaluation form

After having successfully completed the TA project, users must fill in an evaluation form indicating their degree of satisfaction with the development of their Transnational Access through the Co-UDlabs TA call. By evaluating the different aspects of the TA, the service provided by Co-UDlabs can constantly be improved. Consequently, a long-term and sustainable research infrastructure service can be developed. The evaluation form will be provided to user groups by Co-UDlabs once the TA project is completed. These evaluation results will be communicated to the European Commission. Therefore, no confidential information will be requested, and the form will address mainly the following topics:

- how users learned about Co-UDlabs and the TA call;
- supporting during the preparation of project proposals;
- submission of project proposals procedure and selection procedure;
- quality of research facilities;
- quality of support and assistance during the TA;
- scientific support.

3.3. Data property

The knowledge and all data resulting from the use of the research facilities under this programme is the property of the Users, with the following limitations on their property rights:

- all collected data, publications and reports must be send by the Users to the contact of the facility provider not later than 1 month after completion;
- all collected data should be made available to any European researcher on their request, but not before two years after the end of the access period;
- the co-operation of the Users is obligatory if the facility provider takes the initiative to prepare a joint publication.

The Users will have the first right of publication within a period of two years after the last experiment. If Users fail to publish the results within two years after the last experiment, the facility provider will ensure that the knowledge is disseminated in accordance with the Co-UDlabs Grant Agreement.

3.4. Publication

Users are strongly encouraged to publish data papers to disseminate the data sets generated under the Project and that will be available at the open repository Zenodo. These data paper(s) will be cited as many times as required in

subsequent publications. Manuscripts must be submitted to the facility provider for approval not later than 1 month before submission so that changes can be made prior to publication. Such changes will normally only be to address error/accuracy, acknowledgements, etc.

Users must acknowledge in their publications that their work was financially supported by the European Union's Horizon 2020 Research and Innovation Programme as follows: "The authors acknowledge financial support from the European Union under the Horizon 2020 program within a contract for Integrating Activities for Starting Communities (Ref. 101008626)".

CONCLUSIONS

This TA Charter points out the procedure of the Transnational Access of Co-UDlabs and functions as guide for TA users. The document includes important information to have into account before, during and after the TA access, including a detailed description of the TA call and the research facilities offered, the rules and conditions governing the process and the application procedure. All this information will be made public on the website of the project to be consulted (www.co-udlabs.eu).

ANNEX I. EUROPEAN COMMUNITY AND ASSOCIATED STATES


European This appendix is an orientative list of countries that have no restrictions on access to research facilities based on the Horizon 2020 Regulation¹. In case of any conflict with the H2020 Regulation, the latter shall prevail.

Albania	Germany	Norway
Armenia	Greece	Poland
Austria	Hungary	Portugal
Belgium	Iceland	Romania
Bosnia & Herzegovina	Ireland	Serbia
Bulgaria	Israel	Slovakia
Croatia	Italy	Slovenia
Cyprus	Latvia	Spain
Czech Republic	Lithuania	Sweden
Denmark	Luxembourg	Switzerland
Estonia	Malta	Tunisia
Faroe Islands	Moldova	Turkey
Finland	Montenegro	Ukraine
France	Netherlands	United Kingdom
Georgia	North Macedonia	

¹https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-a-countries-rules_en.pdf
https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf
https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/international-cooperation_en.htm#support-non-eu-countries

ANNEX II. EVALUATION FORM

The following Selection & Ranking and Feedback form is applied:

	Project title:	
	User group leader:	
	Research facility:	
To be completed by facility providers (before distributing this form to EEP members):		
1	User group is eligible, and project is feasible and fits within the logistics and dates of availability of the facility provider	Y/N
Remarks:		
2	Conformity with objectives of the EU	
Representation of non-academic sector		Y/N
Number of institutions in user group		
Number of work countries in user group		
Number of female users in user group		
Number of first time ² users in user group		
Remarks:		
3	The days of access required for the project are suitable	Y/N
Remarks, suggestions to adapt the dates and/or the number of required access days, etc.		
To be completed by EEP members:		
4	Excellence of the proposal	0-10
<ul style="list-style-type: none"> - Effectiveness of the research approach and fit to Co-UDlabs. - Quality and novelty in the field of urban drainage. - Composition and competence of the user group. 		
Remarks:		
5	Impact of the expected results	0-5
<ul style="list-style-type: none"> - Project publication and data storage plan. - Relevance of the expected datasets and publications. 		
Remarks:		

² New users are defined as those who have not been granted in previous Co-UDlabs Transnational Access call and those who have not already had access to the requested facility beyond the scope of the project.

6	Potential for academic or industrial innovation	0-5
<ul style="list-style-type: none">- Potential end-user applications.- Further development feasibility outside the facility.		
Remarks:		
7	Final score (4+5+6)	0-20
8	Does the EEP consider the proposal to be of sufficient scientific and/or technical quality to be granted?	Y/N

ANNEX III. PROJECT PROPOSAL TEMPLATE

Title of the proposal

Facility requested

Group leader name

Abstract

This template presents the instructions needed to prepare the proposal document for the first call for Transnational Access of Co-UDlabs. The maximum extend of the proposal is 4 page including figures, tables and references. Please use this document as template and maintain text styles, margins and spacing. Note that proposals exceeding the size requirements or not using provided templates will not be considered for evaluation. The abstract (200 words or less in one paragraph) should briefly state the purpose and novelty of the research project, the main expected results and their impact for academic or industrial innovation. References should be avoided in abstract. Project proposals must be written in English.

KEYWORDS | please list a maximum of 4 keywords, separated by commas and full stop at the end.

EXCELLENCE OF THE PROPOSAL

A brief state of the art and general description of the project is expected to be included. The aim of this section is to emphasize the effectiveness of the research approach included in the proposal and its fit with the main themes of Co-UDlabs, to highlight the quality of the proposal and its novelty in the field of urban drainage, and to demonstrate the suitability of the composition of the team to carry out the proposal. The excellence of the proposal will be evaluated by the Co-UDlabs External Evaluation Panel from 0 to 10, out of a maximum total score for the project proposal of 20 points. User group curriculum vitae will be also used in the evaluation of this criterion. User groups composed of members from a wide range of institutions, different eligible countries, and with the presence of non-academic sector will be positively considered according to the User Selection Procedure. If two proposals have the same rating, the number of first-time users and female users will be considered when making the final selection. The EEP reserves the option to reject proposals that it considers to be of insufficient scientific and/or technical quality to be considered for Transnational Access.

User groups are encouraged to contact and discuss with facility providers technical and scientific issues during the first stages of the preparation of the proposal. Facility providers will give support for draft proposals through the Co-UDlabs contact form (www.co-udlabs.eu) before 31th December 2021. Introducing Co-UDlabs webinar and workshop, and a 2-days hackathon will be held during the call to foster multi-institutional and multi-sectoral user groups and support the preparation of the proposals in feasibility and scientific terms. Dates and procedures can be consulted on www.co-udlabs.eu. TA call, Rules & Conditions and User Evaluation Procedure documents are available on the website for further information about the call.

IMPACT OF THE EXPECTED RESULTS

Outline the dissemination of the expected results with a description as to how the user group plans to disseminate the results, for example through publications, meetings and workshops and also explain how the results and data can be made open available to the wider research and innovation community. It would also be helpful if the user group could estimate the potential long term impact of the dissemination of their proposed work on the European Urban Drainage community. The relevance of the expected datasets, publications and other communications will be evaluated by the Co-UDlabs External Evaluation Panel from 0 to 5, out of a maximum total score for the project proposal of 20 points.

If the project is granted, users should draft a data management plan prior to the experiments. This plan will explain in detail how the data will be stored in such a way that researchers outside the Project can make use of it. The experiments can only start after the written approval of the Data Management Plan by the facility provider, once the proposal is selected. Users are strongly encouraged to publish data papers describing the data sets generated under the Project and that will be available at the open repository Zenodo. These data papers will be cited as many times as required in subsequent publications. Manuscripts must be submitted to the facility provider for approval not later than 1 month before submission so that changes can be made prior to

publication. Such changes will normally only be to the form of accuracy, acknowledgements, etc. Users must acknowledge in their publications that their work was financially supported by the European Union’s Horizon 2020 Research and Innovation Programme as follows: “The authors acknowledge financial support from the European Union under the Horizon 2020 program within a contract for Integrating Activities for Starting Communities (Ref. 101008626)”.

POTENTIAL FOR ACADEMIC OR INDUSTRIAL INNOVATION

The External Evaluation Panel will assess the relevance of the potential end-user applications of the project results and the possible further academic development of the research line outside the facility once the Transnational Access is completed. The maximum score assigned to this criterion is 5 points, out of a maximum total score for the project proposal of 20.

Subsection

Second level titles can be created within the text if required. Figures and tables can be included within the proposal and should be numbered consecutively. Tables should be designed to have a uniform style throughout the extended abstract, following the style shown in Table 1. Figure 1 is an example of figure. All references included should be listed at the end of the document within the limit of 4 pages. Please follow APA format for in-text citations and reference list.

Table 1 | Caption example.

	Flow discharge (L/s)		TSS (mg/L)	
	T1	T2	T1	T2
Test 1	0.75	2.7	60	80
Test 2	1.21	4.4	65	105



Figure 1 | Caption example.

REFERENCES

- Author1, X., Author2, X.X., ..., AuthorN, X. (2022). Title. *Journal*. 19(2), 6-10. <https://doi.org/0>
 Author1, X., Author2, X.X., ..., AuthorN, X. (2022). Title. *Journal*. 19(2), 6-10. <https://doi.org/00>

ANNEX IV. METHODOLOGY AND ACCESS PLAN TEMPLATE

Title of the proposal

Facility requested

Group leader name

METHODOLOGY AND ACCESS PLAN

It is expected that this document (2 pages maximum) includes a detailed description of the model set-up and additional technical details and specifications to aid the facility providers in assessing the project's feasibility. The research facility and equipment, technical details and specifications of the planned experiments, necessary modifications or adaptations of the facility setup, the estimated number of access days, and the number, dates, and duration of visits should be included here. It is important to justify the duration of the access requested and the need for the requested research facility. Please consider the modality of access of the facility requested and the estimation included in the description of the facilities on <https://co-udlabs.eu/access/research-facilities>. User groups are encouraged to contact and discuss with facility providers technical and scientific issues during the first stages of the preparation of the proposal. Facility providers will give support for draft proposals through the Co-UDlabs contact form (<https://co-udlabs.eu/facility-contact-form/>) before 31th December 2021.

In addition, an introducing webinar and a hackathon will be organised to foster multi-institutional and multi-sectoral user groups and support the preparation of the proposals in feasibility and scientific terms between facility providers and user groups. Further information of the call and the hackathon is available on www.co-udlabs.eu. Figure 1 is an example of the style for figures if required.



Figure 2 | Caption example.

Users shall abide by the normal working practices, working hours, and health and safety regulations of the facility provider while present at the research facility. The facility provider shall incur no liability in respect of any claim that may arise from the use of its research facility under this contract. The presence of users in the research facility occurs at their own risk. Neither the personnel of the facility provider nor the organization itself accept liability for the damage or loss of any instruments, apparatus and test equipment of the users whether or not such damage or loss was caused directly or indirectly by their negligence. Each visiting user will ensure he/she has appropriate insurance, including personal health, accident cover and personal liability. The facility provider may conclude an access contract with the user group leader.

ANNEX V. USER GROUP CV TEMPLATE

Title of the proposal

Facility requested

Group leader name

COMPOSITION OF THE USER GROUP

Please, fill the following table with information from user group members. Create as many rows as required.

#	Title	Family name	First name	Gender M/F/- ³	PhD student (Y/N)	Country of work	Home institution / Company name	Project role ⁴	E-mail	New User ⁵ (Y/N)
GL										
2										
3										
4										
5										
6										
7										
8										

The competence of the user group in terms of experience in other facilities or in field experiments, the composition of the user group, the involvement of non-academic members will be assessed during the evaluation of the proposals according to the User Selection Procedure. Additionally, if two proposals have the same rating, the number of new users and female users will be considered when making the final selection.

Next pages should include:

- 1) CV of the user group leader (1 page maximum).
- 2) CV of user group members grouped by institution (1 page maximum per institution).

³ Male/Female/'Prefer not to say' (-)

⁴ Include each member's project role and their intention to visit the facility (e.g. visiting supervisor, supervisor, main visiting researcher, non-visiting modeller, instrumentation technical support, etc.)

⁵ New users are defined as those who have not been granted in previous Co-UDlabs Transnational Access call and those who have not already had access to the requested facility beyond the scope of the project.

Curriculum vitae. Group Leader

User group leader name

Link to ORCID, Google scholar, webpage, LinkedIn or similar (if appropriate).

FREE SUMMARY OF THE CURRICULUM VITAE

Maximum length 300 words. Very brief description of the scientific trajectory and the main scientific-technical achievements obtained. It also includes general indicators of scientific production (e.g. h-index, number of reviewed papers...), general skills (laboratory, field, modelling and/or practitioner experience) and other information about specific parts of their professional path (milestones, hiatuses, etc.) that they deem relevant to the evaluation of their proposals.

MOST RELEVANT SCIENTIFIC PUBLICATIONS AND ACHIEVEMENTS

Please add most relevant publications (articles, conferences, chapters...), R&D projects, patents, software, and/or start-up companies authored by the user group leader, including permanent links (e.g. DOI) when available.

Author1, X., Author2, X.X., AuthorN, X. (2022). Title example 1. *Journal example 1*. 19(2), 6-10. <https://doi.org/00>

Author2, X., Author2, X.X., AuthorN, X. (2020). Title example 2. *Journal example 2*. 99, 1-10. <https://doi.org/00>

Curriculum vitae. User group members from (Institution 1 name)

User group member 1 belonging institution 1. Link to ORCID, Google scholar, webpage, LinkedIn or similar if appropriate.

User group member 2 belonging institution 1. Link to ORCID, Google scholar, webpage, LinkedIn or similar if appropriate.

User group member n belonging institution 1. Link to ORCID, Google scholar, webpage, LinkedIn or similar if appropriate.

FREE SUMMARY OF CAPABILITIES

Maximum length 400 words. Copy this page as many times as required for each institution. This free summary of capabilities should include a very brief description of Institution 1 and of the curriculum vitae of the user group members that belong to Institution 1. General skills provided to the project (laboratory, field, modelling and/or practitioner experience) and current research lines may be highlighted in this section, as well as the participation in R&D projects and other important aspects or relevant peculiarities to evaluate the competence of the user group to successfully reach the project proposal objectives.

MOST RELEVANT ACHIEVEMENTS

Please add most relevant publications (articles, conferences, chapters...), R&D projects, patents, software, and/or start-up companies authored by the user group members of the institution 1, including permanent links (e.g. DOI) when available.

Author1, X., Author2, X.X., AuthorN, X. (2022). Title example 1. *Journal example 1*. 19(2), 6-10. <https://doi.org/00>

Author2, X., Author2, X.X., AuthorN, X. (2020). Title example 2. *Journal example 2*. 99, 1-10. <https://doi.org/00>