



Co-UDlabs

Building Collaborative Urban Drainage
research Labs communities

D4.3. Mid-term report on dissemination and communication activities, including KPIs report

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TABLE OF CONTENTS

LIST OF TABLES.....	3
LIST OF FIGURES.....	3
BACKGROUND: ABOUT THE CO-UDLABS PROJECT	5
LIST OF ACRONYMS	6
EXECUTIVE SUMMARY	7
1. DISSEMINATION AND COMMUNICATION STRATEGY	8
1.1. Dissemination and communication activities	8
1.1.1. Visual identity.....	9
1.1.2. Communication materials.....	9
1.1.2.1. Flyer, brochure and factsheet.....	10
1.1.2.2. Poster and roll-up banner	11
1.1.2.3. Press releases and articles	11
1.1.2.4. Newsletter	12
1.1.2.5. Videos and other communication material.....	12
1.1.3. Co-UDlabs website.....	13
1.1.4. Social networks and online presence	16
1.1.5. Press relations	17
1.1.6. Scientific and technical publications	18
1.1.7. Events.....	19
1.1.7.1. Events planned to be organised by the project (as listed in the GA)	19
1.1.7.2. Events organised at mid-term.....	19
1.1.7.3. Events planned to be organised in the next months	20
1.1.7.4. Participation in external events.....	20
1.2. Impact assessment.....	22
1.2.1. Tracking and monitoring of actions	23
ANNEX 1. LIST OF EVENTS TO TARGET IN THE NEXT MONTHS	24
ANNEX 2. KPI REPORT (AT M24).....	25

List of tables

Table 1. Press articles published by Co-UDlabs partners.....	18
Table A.1: List of events to target.....	24

List of figures

Figure 1. Co-UDlabs templates: PowerPoint presentation, deliverable, agenda and minutes	9
Figure 2. Co-UDlabs flyer	10
Figure 3. Brochure on TA access.....	10
Figure 4. Co-UDlabs poster and roll-up banner	11
Figure 5. Co-UDlabs newsletters	12
Figure 6. Screenshot of the Co-UDlabs motion design video produced at M20	12
Figure 7. Co-UDlabs YouTube channel.....	13
Figure 8. Co-UDlabs website landing page	13

Figure 9. Overview of the Co-UDlabs website page views over time14

Figure 10. Co-UDlabs website visitors by country15

Figure 11. Mostly visited pages of the Co-UDlabs website15

Figure 12. Co-UDlabs LinkedIn page and Twitter account16

Figure 13. Co-UDlabs LinkedIn users’ profiles17

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, flood risks and environmental challenges.

Bringing together 17 unique research facilities, Co-UDlabs offers training and free 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 a urban drainage large-scale facilities network to provide opportunities for monitoring water quality, UDS performance and 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.

List of acronyms

Acronym / Abbreviation	Meaning / Full text
CA	Consortium Agreement
GA	Grant Agreement
IAB	Innovation Advisory Board
IP	Intellectual Property
JRA	Joint Research Activity
KER	Key Exploitable Result
KPI	Key Performance Indicator
PEDR	Plan for Exploitation and dissemination of Results
RI	Research Infrastructure
TA	Transnational Access
UDS	Urban Drainage System
WP	Work Package

Executive summary

This document is a deliverable of the Co-UDlabs project, funded under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008626.

Deliverable 4.3 is the mid-term report of all dissemination and communication activities that have been achieved since the beginning of the project (Month 1) and until Month 24, as part of Work Package (WP) 4 and in alignment with the Plan for Dissemination and Exploitation of Results (PEDR) that was issued at Month 6 as Deliverable 4.2 and already revised once at the end of the Reporting Period 1 (M18).

Deliverable 4.3 provides an overview of the strategy for communicating and disseminating Co-UDlabs actions and results and then provides a detailed and exhaustive list of all communication and dissemination activities performed since the beginning of the project, including the evaluation of the Key Performance Indicators set for these actions.

In summary, the dissemination and communication activities are on track, with most of the KPIs for the period achieved, overstepping in some cases the expectations (see Annex 2 for details). Some KPIs related to dissemination are not yet achieved because these first 2 years were mainly dedicated to raise awareness on the project and its activities (communication). The next reporting periods will be much more dedicated to dissemination activities since we will have much more results resulting from JRA activities and transnational access to research infrastructures so we are very confident that we will reach the expected targets in all KPIs.

1. Dissemination and Communication Strategy

This deliverable falls within WP4 on dissemination and exploitation, whose objectives are the following.

Co-UDlabs will integrate along the project many activities to enhance the dissemination and exploitation strategy, maximize the expected impact and boost the project sustainability for the continuation of the project after the EU-funding. The considerable geographic coverage of the project provides a strong foundation for a much broader engagement, and ultimately for the basis upon which to work towards long term sustainability for the UDS community. In the framework of the dissemination and communication strategy, we have three main objectives:

- **Dissemination for Awareness:** to ensure the project is known to relevant stakeholders in the field of urban drainage, municipalities and public authorities' planners, and the public in general.
- **Dissemination for Understanding:** to encourage a better understanding of the project results leading to greater engagement of external stakeholders and a better future uptake of the project outcomes. To do so, we will not only disseminate project results but also success stories related to the technological development within the project and the use of RIs by external groups in the framework of the Transnational access.
- **Dissemination for Action:** to make the scientific community, stakeholders and decision makers aware of the potential uses of the technologies developed in the project and to ensure adoption of technologies, processes and services being developed by the project partners.

1.1. Dissemination and communication activities

The communication activities that are part of the dissemination plan of the project are tailored to ensure that important messages are widespread to the adequate targeted audience and that the public at large gets connected with Co-UDlabs RI. Such activities complement the dissemination as they “translate” the sometimes-complex results into easy-to-understand resources focusing more on the impacts and added value for the end-users of Co-UDlabs and the society in general.

The main purposes of the communication and dissemination activities of the project have been defined as follow:

- To show how European collaboration has achieved more than would have otherwise been possible, notably in achieving scientific excellence, contributing to competitiveness, and solving societal challenges.
- To show how the outcomes are relevant to people's everyday lives, by creating jobs, introducing novel technologies, or enhancing the quality of life of EU citizens and better protecting the environment, making people's lives more comfortable in other ways.
- To better use of the results, by making sure they are taken up by decision-makers to influence policy-making and by industry and the scientific community to ensure a follow-up of the development of technology.

The different dissemination and communication activities and tools created and implemented in the first half of the project are presented below.

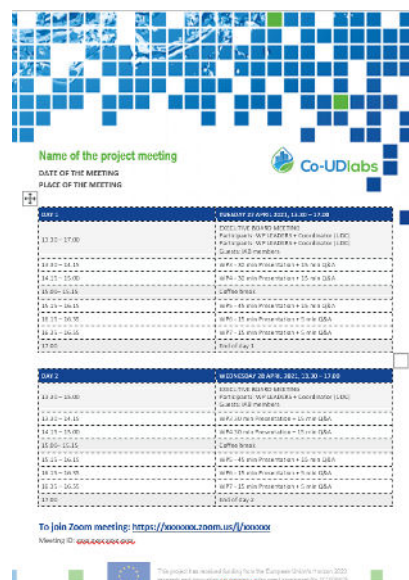
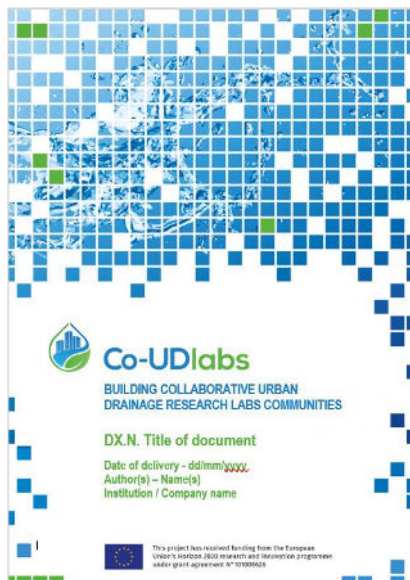
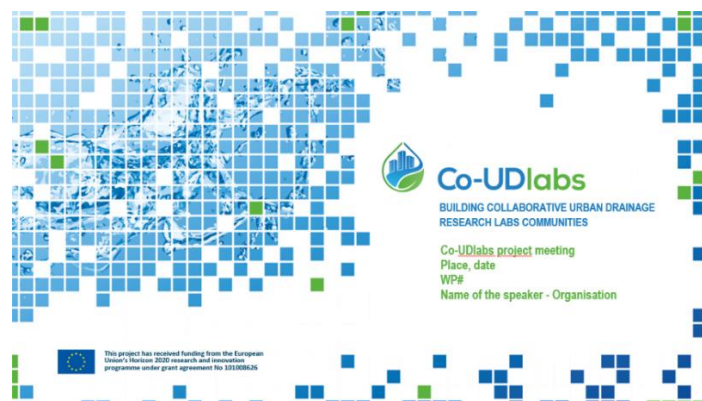
1.1.1. Visual identity

The project branding was developed at the start of the project to help all partners to communicate about it in a uniform, consistent, and professional manner. It includes the project logo, project identity and style guide, templates for Word and PowerPoint documents.



The pictograph of the **logo** is a stylistic representation of a urban background (three buildings) and an element representing the green infrastructures (a leaf). The logo is being used in all communication materials, with or without the baseline “Collaborative Urban Drainage Research Lab Communities”. The project’s graphical identity includes fonts, colors and texts directly derived from the project logotype. Such visual identity is defined by the project logo and is being used in all dissemination tools and printed materials.

Templates for the project deliverables, meeting agenda and minutes have also been produced during the first months of the project, together with a PowerPoint template used by the partners to present Co-UDlabs both in internal and external events.



1.1.2.1. Flyer, brochure and factsheet

A project **flyer** with general information on the project and the research infrastructures available in the framework of the transnational access was created in October 2021. The flyer has been distributed to partners who print it and distribute it when organizing or attending external events. The flyer is available in English, Spanish and French.



Figure 2. Co-UDlabs flyer

A **16-pages brochure** focused on Transnational Access, with information on the upcoming TA call (to be launched in July 2023), a description of the RIs available within Co-UDlabs, modalities of access, and a short summary of projects selected during the first TA call, is currently in preparation. It will be made available online on the Co-UDlabs website and printed for distribution at national and international conferences with the aim of reaching potential users of our research infrastructures (academia, industry, and water operators) and encourage them to apply for the next call for transnational access, to be launched in July 2023 at a Co-UDlabs workshop within the Novatech 2023 conference, which will take place in Lyon (France). The brochure was finalised and presented to the consortium for communication use by M24.



Figure 3. Brochure on TA access

In addition, a **factsheet** focused on the first Co-UDlabs Transnational Access call is in preparation and is expected to be published at M25. It will feature a description of the 13 projects selected during the 1st Co-UDlabs TA campaign, with pictures and testimonials from RI users. The objective is to showcase the type of experiments conducted at the Co-UDlabs RIs in order to attract new users for the next TA call. The factsheet will be made available online on the project website and printed for distribution at next events, including at the Novatech 2023 conference in July 2023.

1.1.2.2. Poster and roll-up banner

A project **poster** and a **roll-up banner** have been created in the first months of the project to be printed and used during external conferences and events attended by the consortium to promote and present the results arising from the project. The roll-up banner is also available in Spanish and French.



Figure 4. Co-UDlabs poster and roll-up banner

1.1.2.3. Press releases and articles

A **press release** was drafted in July 2021 to summarize the most important information related to the project (scope, objectives, messages) to help the consortium to communicate the right information about the project. This press release was translated into French and Spanish and distributed by the project partners to their contact networks. It is available for download in the project website: https://co-udlabs.eu/wp-content/uploads/2021/09/CO-UDLABS_press-release-website.pdf.

Another press release is planned at the end of the project.

In addition, **2 articles in specialized magazines** are also planned to be published before the end of the project.

1.1.2.4. Newsletter

Another essential tool to keep in touch with the stakeholders is the edition of a project **newsletter**. 8 Co-UDlabs newsletters (twice a year) are planned to be sent out to the newsletter subscribers and will also be made available on the project website. The newsletter is also sent by e-mail to relevant networks of project partners.

The first 3 issues of the newsletter have been created in November 2021, May 2022 and March 2023 and were sent out to the project mailing list (155 persons) and disseminated through social media and the contact networks of the project partners to maximize its dissemination. Newsletters are available for download at <https://co-udlabs.eu/dissemination/newsletter/>.

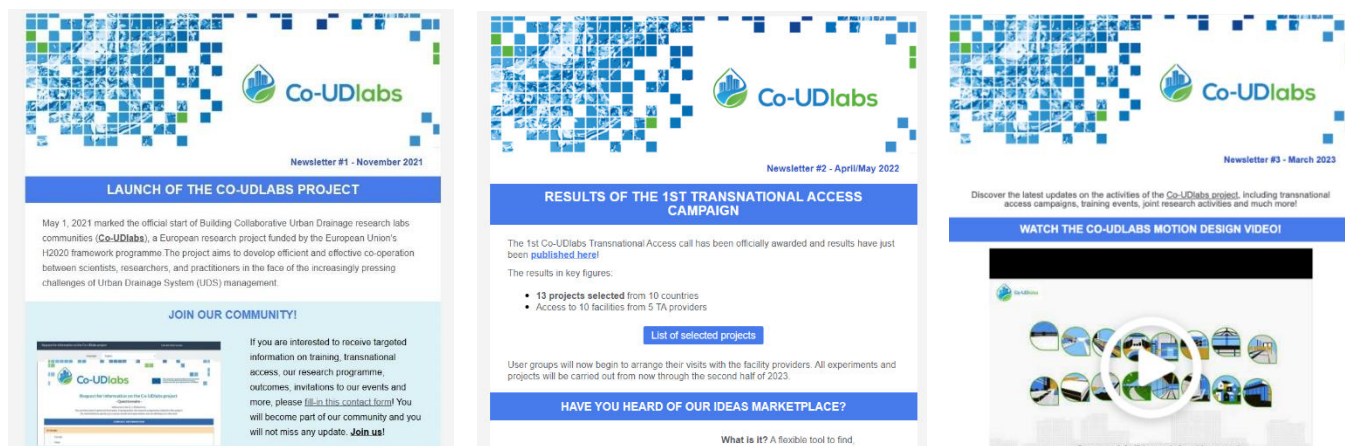


Figure 5. Co-UDlabs newsletters

1.1.2.5. Videos and other communication material

A **motion design video** has been created at M20 (December 2022) to present Co-UDlabs objectives, activities and expected impacts in an attractive and dynamic way. The video is available on the Co-UDlabs website as well as in the project **YouTube channel** (<https://www.youtube.com/watch?v=KjgBKppROVvk>) especially created by the project.

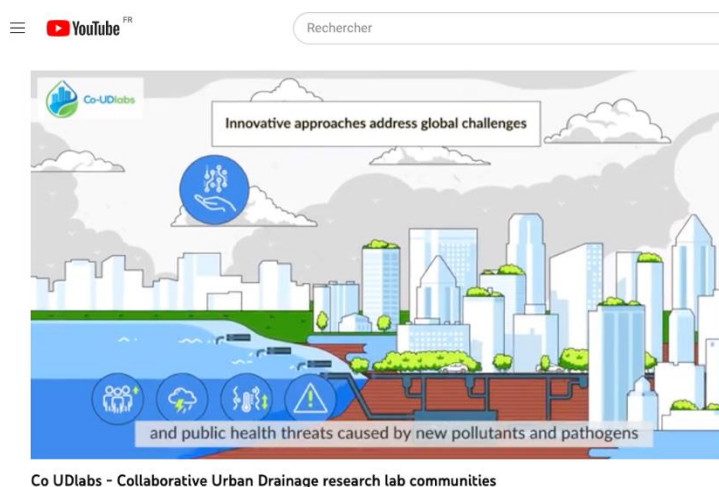


Figure 6. Screenshot of the Co-UDlabs motion design video produced at M20

A **YouTube channel** was created at M12 (www.shorturl.at/emp23) to gather all project videos. At M24, this YouTube channel contains 10 videos (recordings of the project webinars, of Deltares courses and a motion design video presenting Co-UDlabs) obtaining 502 views. This YouTube channel will be fed with additional videos throughout the project lifetime, including the recordings of the project training activities and the **interviews of partners**.

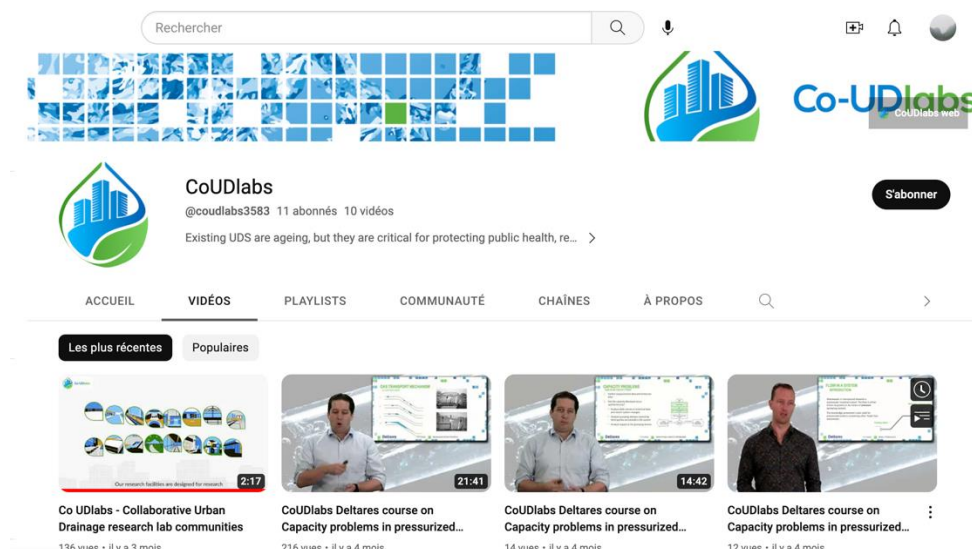


Figure 7. Co-UDlabs YouTube channel

1.1.3. Co-UDlabs website

The project website (<https://www.co-udlabs.eu/>) is of crucial importance to enhance the visibility of Co-UDlabs as it will serve as the main communication tool for the wide dissemination of the project activities, deliverables and outcomes. This is the central place where we want to build the Co-UDlabs community together with water operators, companies, students, policy makers and advocacy groups interested in urban drainage.

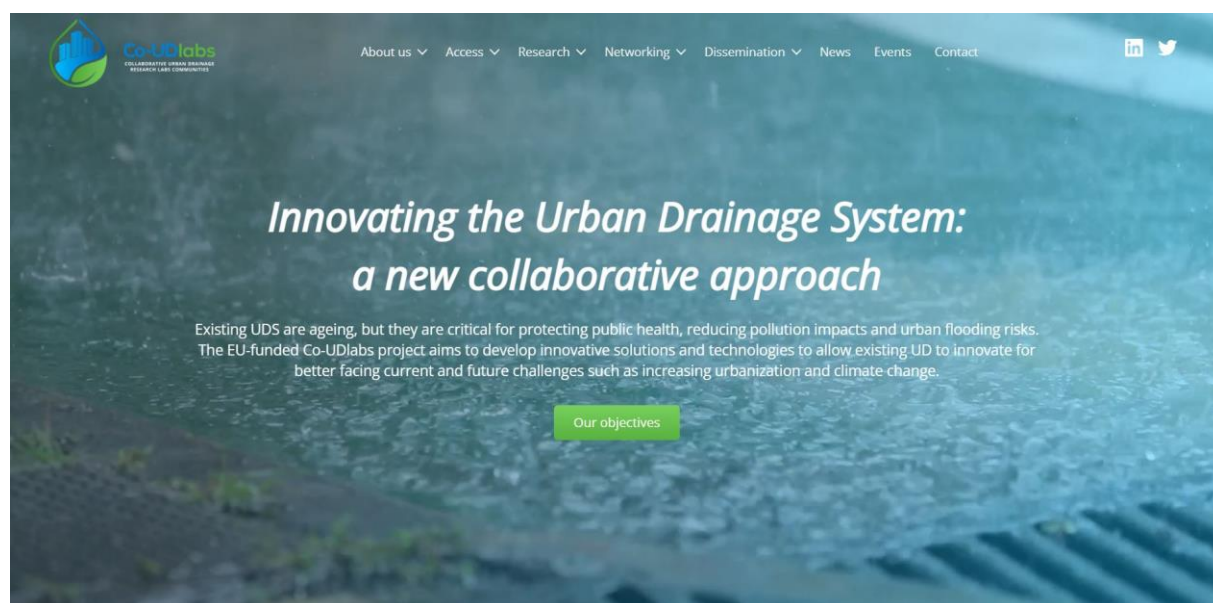


Figure 8. Co-UDlabs website landing page

The website includes information on the project scope, objectives and activities, partners, research infrastructures and information on the dissemination activities and project documents. A specific section of the website is dedicated to the Transnational Access (TA), with useful information on the calls for proposals and related launching events.

Created in October 2021, the Co-UDlabs website is being frequently updated with new content, as the project develops. The website currently includes the following sections:

- The **homepage** provides an overview of the project scope and concept and a selection of latest news;
- **About us:** it provides information on the objectives, workplan, expected impacts and the partners involved in the project;
- **Access:** this section includes information on transnational access and a complete description of the research facilities available within the consortium, as well as a section dedicate to the TA call;
- **Research:** it includes information on the Joint Research Activities and, in the future, links to scientific publications;
- **Networking:** a section with information on the different networking activities, trainings offered by the consortium and a section with a list of EU projects with which we are planning to create synergies;
- **Dissemination:** provides information on the project communication material, deliverables, publications, events and newsletter;
- **News:** a page including the list of news published by the consortium;
- **Events:** it includes information on future and past events organised by the project partners within the project;
- **Contact:** it includes the email address to reach us with specific questions as well as the link to the contact form created on Limesurvey to become part of the project community;
- **Links to social media** (Co-UDlabs LinkedIn and Twitter accounts)

The impact of the website is monitored using Google Analytics. In the period from October 2021 to March 2023, the website was visited by 1038 unique visitors, with 12 044 page views and an average visit duration of 4:00 minutes.

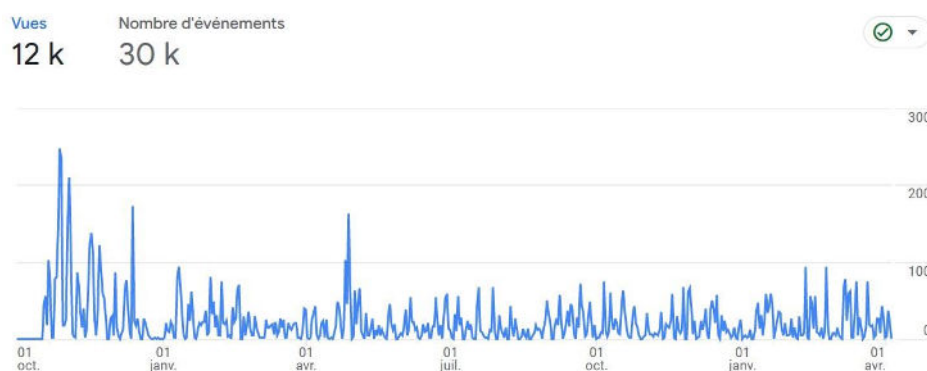


Figure 9. Overview of the Co-UDlabs website page views over time

The website received an excellent worldwide coverage, with visitors spread over all continents (74 countries mapped), demonstrating a worldwide interest in the project. The top-10 countries of origin of the website's visitors are: Spain, France, UK, Netherlands, Germany, Colombia, Denmark, Switzerland, Italy and United States.



Figure 10. Co-UDlabs website visitors by country

The most visited pages, after the homepage, are the general news (with 46 news published over the period), the page with information on the TA call and the description of the research facilities, demonstrating the high interest of visitors for this particular activity of the project.

		12 044 100 % du total	1 038 100 % du total
1	Home - Co-UDlabs	2 755	563
2	General news - Co-UDlabs	684	114
3	TA Call - Co-UDlabs	476	147
4	Research Facilities - Co-UDlabs	462	174
5	Events - Co-UDlabs	458	96
6	Training - Co-UDlabs	414	93
7	About Transnational Access - Co-UDlabs	352	147
8	TA call - Co-UDlabs	312	74
9	Objectives - Co-UDlabs	303	158
10	Co-UDlabs Ideas Marketplace - Co-UDlabs	276	73

Figure 11. Mostly visited pages of the Co-UDlabs website

1.1.4. Social networks and online presence

Social media are being used to inform and stay connected with the professionals, policy makers and scientific community as well as reach out to an interested general public.

A **LinkedIn page** and a **Twitter account** have been created in the first months of the project to develop a community of people interested in the project, to raise awareness on the project launch and objectives and to allow for more interaction with related initiatives:

- LinkedIn page: <https://www.linkedin.com/company/co-udlabs-project/>
- Twitter account: <https://twitter.com/CoUDlabs>

LinkedIn and Twitter users are very active, web-savvy and heavy internet users, thereby improving the visibility of the Co-UDlabs messages. These are proved to be very useful channels to enhance the visibility of publications, newsletters, project members participation in conferences/events (improving networking) and the dissemination of any important activities related to the project. Partners are encouraged by UDC and Euronovia to actively participate by sharing news, articles about their work and regular information on the project developments, to initiate discussions and provoke debates. Such peer-to-peer insights delivered to personal professional contacts can be very effective in creating awareness and impact on the project.

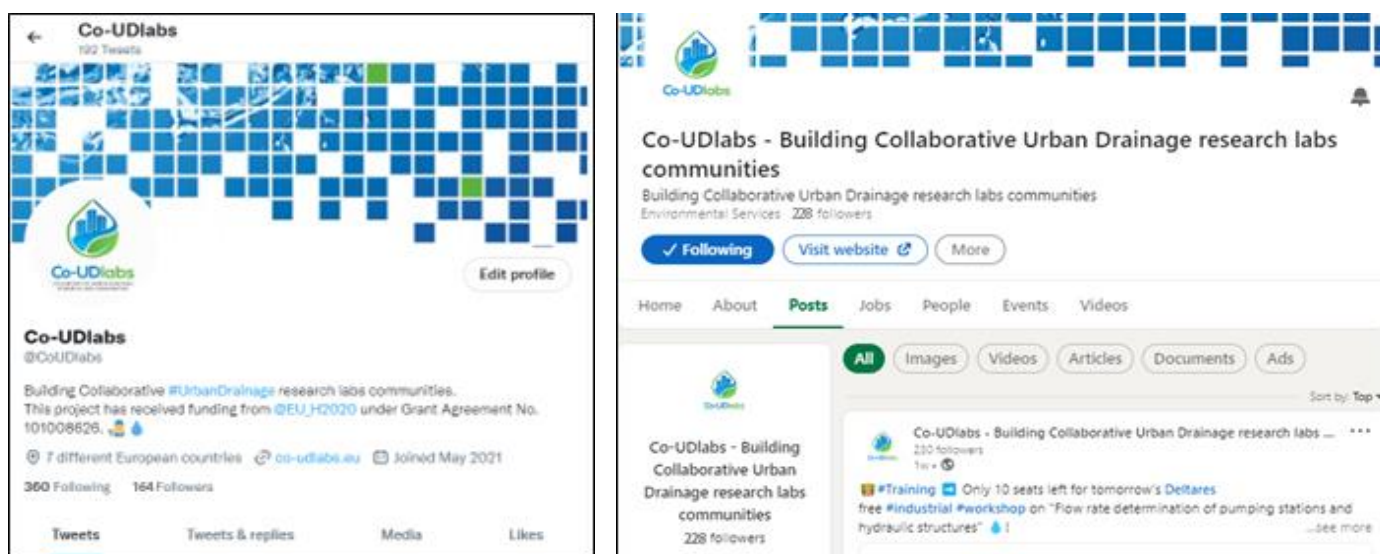


Figure 12. Co-UDlabs LinkedIn page and Twitter account

The impact of using Twitter is analysed through Twitter Analytics while the impact of the LinkedIn page is accessible by the group administrators:

- At M24, the project **LinkedIn group** hits 263 subscribers with 56 posts posted. Below are some interesting analytics data concerning LinkedIn visitors.

Industry	Total views	Job function	Total views	Visitors location	Total views
Research Services	80	Research	92	A Coruña Area, Spain	61
Higher Education	73	Education	41	Cologne Area, Germany	36
Business Consulting and Services	40	Consulting	38	Paris Area, France	31
Environmental Services	27	Engineering	28	Lyon Area, France	29
Utilities	19	Administrative	21	The Hague Area, Netherlands	13
Civil Engineering	9	Business Development	15	Ahmedabad Area, India	11
Renewable Energy Semiconductor Manufacturing	9	Program and Project Management	10	Bristol, United Kingdom	10
Education Administration Programs	7	Information Technology	9	Gijón Area, Spain	10
		Media and Communication	9	Austria area	7
				Greater Pittsburgh Area	6

Figure 13. Co-UDlabs LinkedIn users' profiles

- The project **Twitter account** has 177 followers, with 204 published tweets. In addition, several partners used their institutional LinkedIn and Twitter accounts to communicate about the project, some of them being very active on social media and with an important number of followers. More analytics data can be provided upon request.

With a constantly evolving social media landscape, Co-UDlabs will remain open to using any appropriate social media network or tool to meet the right target audience.

1.1.5. Press relations

Co-UDlabs will publish several articles to inspire and engage the citizens and to reach a higher level of the importance of innovating urban drainage systems. Different types of press relations and media coverage are planned to take place during the lifetime of the project:

- 2 media press kits** to be done during the project lifetime, including at the end of the project, for dissemination to the press, to show project and TA programme results.
- Media coverage:** at least 15 external articles in the press/media (national/international press, communication to citizens and authorities).

At mid-term, **15 external articles** have been published about Co-UDlabs in regional and national online and print media.

Articles	Published in	Date of publication	Dissemination level
Investigadores de la UDC lideran un proyecto europeo de estudio de sistemas de saneamiento urbano	www.iAgua.es	April 2021	National
El saneamiento urbano, a revisión	www.laopinioncoruña.es	April 2021	National
Temos que ir cara sistemas máis sostíbeis e intelixentes	OSIL newspaper	June 2021	Regional
IKT in EU-Laborforschungsverbund: Forschung und Innovationskraft für städtische Entwässerungssysteme	https://jrf.nrw/	June 29, 2021	Regional
Le laboratoire DEEP participe au projet européen Co-UDlabs	https://www.insavalor.fr/	August 2021	National
Le Graie prend part au projet européen Co-UDlabs	www.constructioncayola.com	August 27, 2021	National
Eaux pluviales urbaines : le Graie engagé dans un programme européen	www.enviscope.com	September 29, 2021	National
Infraestructura coruñesa al servicio del saneamiento	www.laopinioncoruña.es	October 2021	Regional
Co-UDlabs: Forschung und Innovationskraft stärken	BI Umweltbau	June 2021	National
La Universidade, sede de la primera asamblea del proyecto europeo sobre drenaje	www.laopinioncoruña.es	June 2022	Regional

<u>A Universidade da Coruña acollerá tres equipos de investigación internacionais que realizarán ensaios punteiros sobre inundacións en contornas urbanas</u>	<u>www.21noticias.com</u>	July 2022	Local
<u>La UDC acogerá a tres equipos internacionales que investigarán sobre inundaciones urbanas</u>	<u>www.elespanol.com/quincemil</u>	July 2022	Regional
<u>L'ambition est de sortir les résultats de recherche des cartons pour améliorer la gestion de l'eau urbaine</u>	<u>www.actu-environnement.com</u>	July 19, 2022	National
<u>Städtische Entwässerungssysteme – Treffen des europäischen Forschungskonsortiums in A Coruña</u>	<u>https://irf.nrw/</u>	August 8, 2022	Regional
<u>Digitalisierung in der Abwasserentsorgung – ein wichtiger Baustein zur Lösung der globalen Wasserkrise</u>	<u>https://irf.nrw/</u>	September 19, 2022	Regional

Table 1. Press articles published by Co-UDlabs partners

In addition, the project coordinator presented Co-UDlabs during a radio interview on a Spanish regional radio in April 2021: <https://www.crtvg.es/rg/destacados/a-tarde-a-tarde-do-dia-29-04-2021-5012510>. Elodie Brelot from GRAIE presented the Co-UDlabs project during a filmed interview by Actu Environment in June 29, 2022: <https://youtu.be/vjD8WLFpZL4>.

1.1.6. Scientific and technical publications

In the course of the project, we will actively publish in both scientific (for academic) and technical (for practitioners) journals and trade magazines to widely disseminate the project outcomes and support its results. The partners are confident to publish at least **15 conference papers**, **10 scientific publications** in peer-reviewed journals and **8 technical papers** in national (e.g. TSM – Techniques Sciences Méthodes - FR; Korrespondenz Abwasser - D; BI Umweltbau - D; Revista Ingeniería del Agua - SP; Water Management - UK; Water and Environment Journal - UK; Aqua und Gas - CH) and international journals (e.g. Water Research; Hydrology and Earth System; Science; Journal of Hydrology; Urban Water Journal; Blue and Green Infrastructure; Water21 IWA magazine).

At M24, partners have published 1 journal paper and 8 conference papers:

- “Towards urban drainage sediment accumulation monitoring using temperature sensors”, M. Regueiro-Picalo, J. Anta, A. Naves, A.Figueroa, J. Rieckermann (2023). <https://doi.org/10.1039/D2EW00820C>;
- “Co-UDlabs: Una red europea de infraestructuras de investigación en saneamiento y drenaje urbano”, Jose Anta, Jerónimo Puertas, Luis Cea, Joaquín Suárez, Juan Naves, Manuel Regueiro, Andrea Ciambra, XIV Seminario de la Red de Laboratorios de Hidráulica de España, RLHE;
- “Permeable pavement clogging laboratory experiments using rainfall simulators”, Jose Anta, Joaquín Suárez, Proceedings of the 39th IAHR World Congress;
- “Monitoring Sewer Sediment Deposits with Passive Temperature Sensors”, Jose Anta, Jörg Rieckermann, Proceedings of the 39th IAHR World Congress. “Improving sediment monitoring strategies based on analysing heat transfer processes in sewer pipes”, Jörg Rieckermann, Proceedings of the 10th International Conference on Sewer Processes and Networks;
- “How reusable are your data? - Towards truly FAIR open data for urban drainage”, J. Rieckermann, P. Lechevallier, J. Agustsson, L. Rossi, S. Tait, Proceedings of the 10th International Conference on Sewer Processes and Networks;

- “Machine learning to improve understanding of sewer pipe failures”, Ehsan Kazemi, Will Shepherd, Simon Tait, Proceedings of the 10th International Conference on Sewer Processes and Networks;
- “Towards non-contact pollution monitoring in sewers with hyperspectral imaging”, P. Lechevallier, C. Felsheim, J. Rieckermann, Proceedings of the 10th International Conference on Sewer Processes and Networks;
- “Co-Udlabs: Construyendo una red europea de grandes instalaciones de investigación en saneamiento y drenaje urbano”, Jose Anta, Jerónimo Puertas, Luis Cea, Joaquín Suárez, Juan Naves, Manuel Regueiro, Andrea Ciambra, XXXVI CONGRESO. Asociación Española de Abastecimientos de Agua y Saneamiento.

These papers are all available in open access, except the proceedings of the 39th IAHR World Congress that are only accessible to IAHR members. However, the coordinator has asked and received the permission from IAHR to publish these 2 papers in open access within the Co-UDlabs community in Zenodo during the embargo period. The Permission letter from IAHR can be forwarded on request.

In addition, at M24, one pre-print journal article has been published and is under peer review:

- Lechevallier, P., Villez, K., Felsheim, C., & Rieckermann, J. (2023, January 27). Towards non-contact pollution monitoring in sewers with hyperspectral imaging. <https://doi.org/10.31219/osf.io/h7tzb>

1.1.7. Events

The Co-UDlabs project partners are organizing and participating in several public events to promote the project and disseminate the results.

1.1.7.1. Events planned to be organised by the project (as listed in the GA)

- 2 seminars or special sessions associated with the 2022 SPN conference and 2023 Novatech international conference to create and consolidate a group of ‘early adopters’ users (WP1);
- 2 dissemination workshops on smart governance in urban water sector as side-events in national or international conferences (WP2)
- Internal 2 early-stage research seminars comprising PhDs and early-stage researchers from partners of Co-UDlabs (WP3)
- 1 open workshop and 1 PhD course for the UD European junior research community in 2022 and 2023 (WP3)
- 5 industrial workshops targeting UD industry professionals and practitioners (WP3)
- Public webinars and online lectures for specific and emerging monitoring techniques in UD (WP3)
- 3 workshops to disseminate the project results achieved in WP6, WP7 and WP8 (WP4);
- 2 webinars and 2 hackathons to promote the TA calls (WP5);
- 1 final infoday targeted at the general public and other non-experts (WP4)

1.1.7.2. Events organised at mid-term

At M24, the following 10 events have been organised by the Co-UDlabs project, with 500 people reached:

- Co-UDlabs Introductory Webinar on Transnational Access, organised by UDC on October 13, 2021 (online);

- Co-UDlabs Online Workshop on UD Practice and Research Needs, organised by IKT on November 3-4, 2021 (online);
- Co-UDlabs Hackathon on Transnational Access to RIs, organised by Deltares on November 23 and 25, 2021 (online);
- Co-UDlabs 25th EJSW - European Junior Scientists Workshop on "Monitoring urban drainage systems and rivers", organized by INSA and DELTAIRES on May 15-21, 2022, in St-Maurice-en-Valgaudemar (France);
- Co-UDlabs live workshop on “Strengthening the links between scientists and practitioners to accelerate the transition towards smart and sustainable urban stormwater management – the Co-UDlabs project” organised by GRAIE at the CGLE Carrefour des gestions locales de l’eau on June 29-30, 2022, Rennes (France);
- Co-UDlabs 1st Early-Stage Researchers Seminar, organized by UDC on June 27-July 1, 2022, in A Coruña (Spain);
- Co-UDlabs Workshop on “Urban Drainage Metrology Toolbox”, organised as a side-event to the International Conference on Sewer Processes and Networks (SPN) by INSA on August 23, 2022, in Graz (Austria);
- Co-UDlabs session on “Tapping the value of urban drainage systems (UDS) Data” organised as part of the IWA World Water Congress by UDC on September 13, 2022, in Copenhagen (Denmark);
- Co-UDlabs Webinar on “Fourier transform infrared spectroscopy (FTIR) chemical mapping”, organized by AAU on September 21, 2022 (online).
- Co-UDlabs Workshop on “Capacity problems and flow rate determination in pressurized systems”, organized by Deltares on November 17, 2022 (online)

1.1.7.3. *Events planned to be organised in the next months*

Several events are planned to be organised by the consortium in the next months:

- A webinar on “Routine Uncertainty Assessment”, to be organized by INSA on May 11, 2023;
- A webinar to present the 2nd Co-UDlabs call on Transnational Access in May 2023 (date TBA soon);
- A workshop to launch the 2nd TA call during the Novatech 2023 conference taking place in June 2023 in Lyon (France);
- A hackathon for participants in the 2nd TA call to connect, team up, share ideas and discuss early proposals, in September 2023.

1.1.7.4. *Participation in external events*

Co-UDlabs will be represented in a series of different national and international events. Partners attending these events are expected to engage with specialist groups of stakeholders and be confident ambassadors of the project.

- **Scientific conferences** where the project results will be presented either via oral/poster presentations, which could lead to the publication of conference proceedings (WP4);
- **National technical events** with practitioners, water utilities and regulators to disseminate Co-UDlabs products and services in the non-scientific UD community minimizing language barriers bottlenecks (WP4)

- **Exhibition booths** in fairs in innovation and technology related events (WP4);
- **Open-science events** to raise awareness of the project among the public and non-specialist audience in general (WP4)

So far (M24), the consortium participated in **23 external events** for promotion and scientific dissemination where partners presented the work done within the project with an oral or poster presentation:

- **10 scientific conferences**, including:
 - A poster presentation by EAWAG at Aqua Urbanica 2021 "Schwammstadt" - German speaking Urban Drainage community on 13-15 September 2021, Innsbruck (Austria);
 - An oral presentation by INSA at the POLLUTEC conference on October 12-15, 2021, Lyon (France).
 - An oral presentation by UDC during the IAHR Institute Meetings (part of the 39th World Congress of IAHR) on June 19-25, 2022, in Grenada (Spain), and two oral presentations by UDC and UDC-EAWAG;
 - An oral presentation by UDC at the Water Innovation Europe 2022 (NBS working group event) on June 23, 2022;
 - Oral presentations by USFD and EAWAG at the 10th International Conference on Sewer Processes and Networks (SPN) on August 23-25, 2022, in Graz (Austria);
 - An oral presentation by UFSD, UDC and IKT and discussion on future research directions at the Symposium on Urban Flooding Experiments on September 1-2, 2022, in Lyon (France);
 - An oral presentation by IKT at the Water Networking Event "Water in an international context 2022" on November 8, 2022, Mülheim (Germany)
 - A poster presentation by Eawag at the Aqua Urbanica 2022 "Grün statt Grau" - German speaking Urban Drainage community on November 13-15, 2022, Glattfelden (Switzerland)
 - An oral presentation by USFD at the 3rd IAHR Young Water Professionals Conference 2022 on November 29, 2022, online.
 - Two presentations by IKT at the EUR-SAM (Sewer Assest Management Workshop held at Lulea University (Sweden) on 15-16th February 2023, (i) A deep learning based framework for automated detection of in-pipe defects in CCTV sewer survey, (ii) Machine learning for prediction of failures in sewer networks.
- **9 national technical events**, including:
 - An oral presentation by UDC at the Galicia Innovation Days – Towards Horizon Europe on October 25-29, 2021 (online);
 - An oral presentation by IKT at the StarkRegen Congress 2021 (Heavy Rain Congress) on December 2-3, 2021, in Gelsenkirchen (Germany);
 - An oral presentation by IKT at the Göttinger Abwassertage (Goettinger Wastewater Days) on February 15-16, 2022 (online);
 - A poster presentation by GRAIE at the Webinar France-Québec “Ville Perméable” on 17 March 2022.

- An oral presentation by UDC at the 14th Annual Seminar of the Spanish Network of Hydraulics Laboratories on March 29, 2022, in Barcelona (Spain);
- Oral presentation by GRAIE at Carrefour des gestions locales de l'eau - June 29, 2022 in Rennes (France) & online (hybrid)
- A poster presentation by UDC at the Jornadas de la AEAS on September 28-30, 2022 in Córdoba (Spain)
- An oral presentation by INSA and GRAIE at the Journée d'échanges Autosurveillance des systèmes d'assainissement on October 13, 2022 in Lyon (France);
- Participation of IKT with a small exhibition stand at the Oldenburg Pipeline Forum on March 30-31, 2023 in Oldenburg (Germany), where Co-UDlabs flyers were distributed to visitors.
- **1 exhibition trade:**
 - Online booth organised at the ICRI 2022 conference on 19-21 October 19-21, 2022, in Brno (Czech Republic) – hybrid event.
- **1 Open science event:**
 - Poster presentation by UDC at the Galician Night of Researchers taking place at A Coruña (Spain) on September 24, 2021.
- **2 other events:**
 - Oral presentation by UDC at the LIFE DRAINRAIN project final event on October 20, 2022, in Ferrol (Spain).
 - One panel discussion by Deltares at the Blue planet Online conference "Artificial Intelligence: Reshaping the Water Industry" on November 22, 2022, Berlin (Germany) and online.

The estimated number of people reached during these events is over 3600.

Co-UDlabs partners have identified a list of relevant events and conferences to which a participation could be envisaged in the next months. This have been included in the PEDR submitted at M18. It is to be noted that, depending on the timing of these events, the type of results to be disseminated and budget constraints, only a limited number of events from this list will be selected. This will be discussed by the consortium in due time. This list is available in the Annex 1.

1.2. Impact assessment

Monitoring the impact of the different dissemination activities involves a systematic collection of data and reporting of information from all partners. This information serves to deliver the final verdict on the success of the dissemination process undertaken by the project.

In order to measure the success of the implemented communication and dissemination activities, a detailed communication and dissemination plan was created at M6 in order to check that all activities are planned and are effectively taking place, integrating **Key Performance Indicators (KPIs)** to measure the impact of each dissemination and communication activity. KPI's are a measuring factor for the performance and progress of an activity, message, task, etc. towards its expected impact. Several KPIs have been defined for each communication activity. They will be used to assess the performance of the dissemination activities all along the project duration and re-orientate the dissemination plan, if necessary, when KPIs are not matched, and the expected impact not reached.

The **project communication and dissemination plan including the detailed list of communication and dissemination activities planned within the project, related KPIs and responsible partners**, is available in Annex 2. This document has been updated with the performance indicators at the end of the first reporting period (M24).

In addition to quantitative KPIs, some **qualitative indicators** are taken into consideration to understand the impact of the actions carried out, for example:

- Individual feedbacks obtained through satisfaction questionnaires sent to participants after project events: we have sent out questionnaires to participants in the hackathon and the workshop organised in November 2021 and we received 9 responses and 4 responses respectively, both with very good feedback on the content and utility of these events for the participants. Responses to these questionnaires can be provided to the EC upon request.
- Feedback obtained from users of the RIs: a questionnaire was sent to TA users to collect feedback on the quality and process of the Co-UDlabs Transnational Access programme. 8 answers were collected, providing a very positive feedback and useful information on how every aspect of the process was perceived. These feedbacks will be considered when planning the 2nd call for Transnational Access. In addition, we are currently collecting testimonials from RIs users from the first TA call, that will be gathered into a dedicated factsheet.

1.2.1. Tracking and monitoring of actions

The partner in charge of communication (Euronovia) is overseeing the task of tracking all the communication activities of the partners. By performing regular monitoring of the activities, it is possible to assess if the action plan is being carried out properly and on time. It will also be possible to see which activities had the biggest impact on the stakeholders (both in quantitative and qualitative terms) and to improve communication actions, if necessary.

At this scope, an Excel table composed of 3 different spreadsheets was created in June 2021 to gather information related to the activities implemented by each partner, namely: communication actions, scientific dissemination activities, scientific publications.

This document has been uploaded to the project SharePoint platform and all partners are being reminded to update it as soon as they are involved in a communication or dissemination action to keep track of all the activities implemented.

This document allows us to evaluate the impact of the actions, the type and number of people reached and to check if KPIs planned have been met. If not, corrective measures will be undertaken. This document is available upon request to Euronovia, the WP4 leader.

Annex 1. List of events to target in the next months

Table A.1: List of events to target

SCIENTIFIC CONFERENCES			
Name	Date	Venue	Partner planning to attend
Novatech	3-7 July 2023	Lyon, France	ALL
StormWater Poland	September 27-28, 2023	Katowice, Poland	TBC
Urban Rain Conference	29 Nov – 2 Dec. 2023	Pontresina, Switzerland	EAWAG, AAU
International Conference on Urban Drainage (ICUD)	2024	Delft, The Netherlands	UDC, INSA, AAU
Aqua Urbanica conference	2024, 2025	Germany	TBC
NATIONAL TECHNICAL EVENTS			
Name	Date	Venue	Partner planning to attend
redSUDS	27-28 April	A Coruña, Spain	UDC
ASTEE Annual Congress	June 6-8, 2023	Nice, France	INSA
Jornadas de Ingeniería del Agua	October 18-19, 2023	Cartagena, Spain	UDC
German Water Association Rainwater Congress (DWAReggenwassertage)	TBA	Germany	TBC
EXHIBITIONS AND TRADE FAIRS OR OTHER INDUSTRY EVENTS			
Name	Date	Venue	Partner planning to attend
RO-KA-TECH 2023	May 9 - 12, 2023	Kassel, Germany	IKT
WaterEurope Innovation Week	June 20-22, 2023	Brussels, Belgium	TBC
Chartered Institute of Water and Environmental Management Urban Drainage Group Annual Conference	TBA	UK	TBC
Water Environment Federation's Technical Exhibition and Conference	September 30 - October 4, 2023	Chicago, USA	TBC
OPEN SCIENCE EVENTS			
Name	Date	Venue	Partner planning to attend
Pint of Science Festival	May 22-24, 2023	Several cities	TBC
European Researchers' night	Every year, September	Several countries	Several partners
Día da ciencia na rúa	Every year, May	A Coruña, Spain	UDC
Fête de la Science	Every year, October	Several cities in France	Euronovia / GRAIE / INSA
ESOF	2024	Leiden, Netherlands	TBC

Annex 2. KPI report (at M24)

Dissemination or communication channel	Tool	When (and where, if relevant)	Target audiences						KPI	Target (by the end of the project)	M24 (April 2023)	Partner(s) in charge
			Academics and researchers	Industry / Practitioners	Government / Policy-makers	EU and international networks	National technology networks	EU projects				
Events to be organised by the project partners	2 Early-stage researchers seminars	June 27-28, 2022 and 2024	X						Number of participants	20	33	UDC, USFD
	25th European Junior Scientists Workshop (EJSW) on UD monitoring	May 15-21, 2022	X						Number of participants	22	20	INSA
	PhD course on Sewer Processes	2023	X						Number of participants	40	-	AAU
	Industrial workshop on flow rate determination of pumping stations and hydraulic structures (1 day)	November 17, 2022		X			X		Number of participants	20	45	DEL
	Uncertainty assessment in UD monitoring data (2 days)	2023		X			X		Number of participants	minimum 12	-	INSA
	Applied course on UD metrology (4 days)	2024		X			X		Number of participants	12	-	UDC
	2 IKT-association practice workshops (2 days)	November 3-4, 2021 and 2024	X	X			X		Number of participants	20	59	IKT
	Webinars and online lectures	2022 to 2025 1) September 21, 2022	X	X		X	X	X	Number of webinars	6	1	IKT / all research institutions
									Number of attendees	30	1st webinar: 18	
	Side event at the Sewer Processes and Networks (SPN) conference	August 23, 2022 (Graz, Austria)		X		X	X		Number of participants	30	18	GRAIE
	Side event at the NOVATECH conference	July 2023 (Lyon, France)		X		X	X		Number of participants	30	-	GRAIE
	2 webinars and 2 hackathons	Before the calls the access to the research infrastructures	X	X		X	X		Number of attendees	60	1st webinar: 100 1st hackathon: 61	UDC
	2 dissemination workshops on smart governance	Side events of IWA specialized working groups conferences or meetings 1) September 13, 2022		X	X	X	X	X	Number of participants	30	1st workshop: 40	EAWAG
	3 Workshops related with results of JRAs	Side events of IWA specialized working groups conferences or meetings	X	X		X	X	X	Number of participants	40	-	INSA, USFD, UDC
	Final Info Day	At the end of the project	X	X	X	X	X	X	Number of attendees	50	-	Euronovia, UDC

Participation in external events and conferences	Scientific conferences	2022, 2023, 2024, 2025	X	X	X	X	X			Number of conferences	15	11	All research partners
	National technical events	2022, 2023, 2024, 2025		X			X			Number of events	10	9	All partners
	Fairs in innovation and technology related events	2022, 2023, 2024, 2025		X		X	X	X		Number of exhibitions	3	1	All partners
	Open-science events	2022, 2023, 2024, 2025						X	X	Number of events	10	1	All partners
Communication/dissemination material and activities	Project branding (logo, visual identity, communication templates, project leaflet, etc.)	At the beginning of the project	X	X	X	X	X	X	X	1	1	1	Euronovia
	Communication package	M6	X	X	X	X	X	X	X	1	1	1	Euronovia
	Flyer	M6	X	X	X	X	X	X	X	Number of flyers distributed	2000	200	Euronovia
	Brochure	M24	X	X	X	X	X	X	X	Number of brochures distributed	2000	-	Euronovia
	Newsletter	Every 6 months, starting M6	X	X	X	X	X	X	X	Number of issues	8	3	Euronovia
										Number of subscribers	100/newsletter	155	Euronovia
	Press release	At the start and at the end of the project	X	X	X	X	X	X	X	Number of press releases	2	1	Euronovia
	Articles in specialized magazines	Whole project duration	X	X		X	X			Number of articles	2	0	All partners
	Timeline infography	At the end of the project	X	X	X	X	X	X	X	Number of infography	1	-	Euronovia
	1 Motion design video	September 2022	X	X	X	X	X	X	X	Number of views on Youtube	500	145	Euronovia
	Website	Whole project duration	X	X	X	X	X	X	X	Number of visits	100/month	80/month	Euronovia
										Number of news	1 news/month = 48	46	
	LinkedIn page	Whole project duration	X	X	X	X	X	X	X	Number of members	200	263	All (leader: Euronovia)
										Number of posts	1/month = 48	56	
	Twitter account	Whole project duration	X	X	X	X	X	X	X	Number of followers	200	177	All (leader: Euronovia)
										Number of tweets	1/week= 208	204	
	Youtube channel with videos and interviews	from M12	X	X	X	X	X	X	X	Number of videos	15	10	IKT/all research institutions
										Number of views /videos	500/video	50/video	
	Media press kit	M24 and M48	X	X	X	X	X	X	X	Number of press kit	2	-	Euronovia
	Public relations and media coverage	Whole project duration			X	X	X	X	X	Number of external articles in the media	15	13	All partners
Publications	Scientific publications (peer-reviewed research papers) and related datasets	From 2022	X	X						Nber of scientific papers	10	1	All research partners
										Nber of datasets	20	1	
										Number of visits / downloads of data-sets on Zenodo	3000	162	
	Technical articles (international and national journals)	From 2022		X		X	X			Nber of technical papers	8	0	All research partners
	Conference proceedings	From 2022	X	X		X	X			Nber of conference papers	15	8	All research partners