

# Bringing DWC to your city: Roadshows

Deliverable 6.4

Deliverable N° 6.4	Bringing DWC to your city: Roadshows
Related Work Package	6
Deliverable lead	Arctik
Author(s)	Carla Mauricio-Planas (Arctik), Mareen Hieronymus (KWB), Barbara Greenhill (BIOFOS), Sofia Housni (SIAAP), Marco Bernardi (Gruppo CAP) and Galya Kumanova (Sofyiska Voda).
Contact for queries	<a href="mailto:carla.mauricio@arctik.eu">carla.mauricio@arctik.eu</a>
Grant Agreement Number	n° 820954
Instrument	HORIZON 2020
Start date of the project	01 June 2019
Duration of the project	42 months
Website	<a href="http://www.digital-water.city">www.digital-water.city</a>
License	 <p>This work is licensed under a Creative Commons Attribution 4.0 International License</p>
Abstract	The present report describes the organisation of five roadshows in each demonstration city of digital-water.city (Berlin, Copenhagen, Milan, Paris and Sofia), as part of the deliverable 6.4. Each roadshow consisted of different types of events aimed at engaging with citizens and stakeholders around digital water issues and showcasing the apps developed to foster public involvement.

#### Dissemination level of the document

<input checked="" type="checkbox"/>	PU	Public
<input type="checkbox"/>	PP	Restricted to other programme participants
<input type="checkbox"/>	RE	Restricted to a group specified by the consortium
<input type="checkbox"/>	CO	Confidential, only for members of the consortium

### Versioning and contribution history

Version*	Date	Modified by	Modification reasons
D1	2022-11-25	Carla Mauricio-Planas	First draft
R1	2022-11-28	Nicolas Caradot	Feedback on draft
D2	2022-11-29	Carla Mauricio-Planas	Feedback implementation
S	2022-11-30	Nicolas Caradot	Report submission
V	2023-01-31	Carla Mauricio-Planas	Final version considering reviewers comment

\* The version convention of the deliverables is described in the Project Management Handbook (D7.1). D for draft, R for draft following internal review, S for submitted to the EC (under external review) and V for approved by the EC. Note that previous version to V are draft since they are not yet approved by the EC.

## Table of content

1.	Executive summary .....	5
2.	Introduction .....	6
3.	Five roadshows .....	7
3.1.	Berlin.....	7
3.1.1.	Workshop “Making groundwater visible” .....	7
3.1.2.	IFAT Munich .....	7
3.2.	Copenhagen.....	8
3.2.1.	BIOFOS “Kloaklab” .....	8
3.2.2.	Miljø- og Planchef forum .....	8
3.2.3.	DHI Days 2022.....	9
3.3.	Milan.....	9
3.4.	The Paris Region .....	9
3.4.1.	Triathlon Paris.....	9
3.4.2.	Fête de la Lavande .....	10
3.4.3.	Big Jump.....	10
3.5.	Sofia .....	10
3.5.1.	“The (In)visible Water Beneath Us: A Digital Walk” – Day 1 .....	10
3.5.1.	“The (In)visible Water Beneath Us: A Digital Walk” – Day 2 .....	10
4.	Conclusion.....	11
	ANNEX .....	13

## 1. Executive summary

Public involvement is one of the main goals of digital-water.city. The general objective of Work Package 6 (Communication and dissemination) and, specifically, of the deliverable 6.4, is the organisation of a series of roadshows to raise awareness of citizens about the benefits of digital solutions for urban water management.

This document provides a detailed explanation of the five roadshows organised in each demonstration city of digital-water.city: Berlin, Copenhagen, Milan, Paris and Sofia. The roadshows brought digital solutions, mainly applications, closer to the public through a series of events.

These events were targeted at citizens and national or regional stakeholders that could interactively discover the digital solutions created in the city of the event, and learn about the solutions developed in the other cities of the project. In some cases, dissemination workshops were organised to create synergies between DWC digital solutions and local policies or initiatives.

The main solutions presented at the roadshows were:

- [Augmented reality mobile application for groundwater visualisation](#)
- [Mobile application for asset management of drinking water wells](#)
- [Serious game on water reuse, carbon, energy, food and climatic nexus](#)
- [ALERT System, a sensor for real-time bacterial measurements](#)
- [Early warning system for bathing water quality](#)
- [Early warning system for safe reuse of treated wastewater for agricultural irrigation](#)

This report presents detailed information about each roadshow such as the type of event that was organised, audiences, supporting materials, attendance, media coverage, tools, the digital solutions presented and main takeaways.

This deliverable was coordinated by Arctik and developed together with the partners in each demonstration city. Arctik steered the organisation of the roadshows and provided the help needed in order to promote the chosen digital solutions in the different cities, adapting the content and the tone to each audience. Arctik also provided support in the promotion and dissemination of each event through DWC's online channels.

## 2. Introduction

One of the best communication tools to engage with citizens and stakeholders are events. Events allow to interact with your audience and build relationships that otherwise might not happen or could take a long time to develop. That is why, in order to bring the digital solutions developed within digital-water.city closer to the public, Arctik created a series of interactive events, under the name of “Roadshows” (D 6.4) in each demonstration city of the project.

The concept behind the roadshows was to create a showroom where citizens could test the applications and learn about the benefits of digitalisation for a variety of water management issues such as water reuse, drinking water production or sewer management. In some cities this took the form of a stand in a conference in which one could discover the DWC applications on an iPad or a screen, and in other cities the showroom concept was turned into a visit for students to discover and test the solutions.

Additionally, Arctik encouraged the organisation of dissemination workshops to create synergies between DWC digital solutions and local policies or initiatives and provide a learning space for stakeholders. Some of the workshops organised were fully online due to Covid reasons and are available online.

The roadshows were organised together with DWC’s local partners to ensure that they met the needs and challenges of each demonstration city. Flexibility in terms of the “event” format was given to the cities so that they could adapt to their target audience and make their knowledge as accessible as possible. Additionally, the detailed focus of the showrooms and workshops was tailored by city according to the needs of each partner.

All roadshows were timed with relevant existing events in each city or region in order to increase the reach of the events. For example, the cities of Berlin and Sofia, took the International Day of Water, 22 March, as an opportunity to organise online workshops and attract the attention of their audience.

Finally, to achieve a more effective communication and better engage with the public, all events were organised in the local language.

### 3. Five roadshows

Arctik together with the DWC partner in each demonstration city organised five roadshows, one per city. Most roadshows consisted of two or more events in different formats and targeted two main audiences: citizens and regional or local stakeholders. Additionally, the roadshows were mostly organised on different dates to avoid overlapping and to increase their reach individually.

Below there is a detailed description of the activities carried out for each city.

#### 3.1. Berlin

The city of Berlin organised two types of events as part of the DWC roadshow, the online workshop “Making groundwater visible” and a stand at IFAT Munich.

##### 3.1.1. Workshop “Making groundwater visible”

On 22 March 2022, the World Water Day, the Kompetenzzentrum Wasser Berlin (KWB) and Ecologic organised a webinar targeted at citizens to present the mobile application for groundwater visualisation developed within digital-water.city. The Berliner Wasserbetriebe (BWB) and Vragments contributed to the organisation of this 1-hour workshop.

Four speakers, Christoph Sprenger (KWB), Alexander Sperlich (BWB), Stephan Gensch (Vragments) and Ulf Stein (Ecologic), presented the augmented reality application to the 15 registered potential users. At the end of the workshop, there was an assessment of the potential of the application and other results from DWC were presented.

The workshop is available in German [here](#).

##### 3.1.2. IFAT Munich

IFAT is the world’s leading trade fair for environmental technologies providing solutions for the use of water, recycling and secondary raw materials. As they put it on their website, IFAT “...is the largest platform for water, sewage, waste and raw materials management that gathers the industry from all over the world”. That is why the second part of the Berlin roadshow took place at IFAT, to reach stakeholders from the water sector.

From 30 May to 1 June 2022, the Berliner Wasserbetriebe (BWB) had an 80m<sup>2</sup> stand (B2 – 329) at the Trade Fair Center Messe München. Seven digital-water.city solutions were shown at IFAT:

- Augmented reality application for groundwater visualisation
- Mobile application for asset management of drinking water wells
- ALERT System, a sensor for real-time bacterial measurements
- Early warning system for bathing water quality
- Serious game on water reuse
- Sensors and smart analytics for tracking illicit sewer connections hotspots

- Distributed temperature sensing sensors for tracking illicit sewer connections

Taking into account that IFAT receives around 119.000 visitors, BWB calculates that around 500 visitors visited the BWB stand and about 1500 DWC's area.

## 3.2. Copenhagen

The Copenhagen partners, BIOFOS, organised three initiatives as part of their roadshow. An event dedicated to students, a meeting with policymakers and participated to the DHI days.

### 3.2.1. BIOFOS "Kloaklab"

From 10 to 13 October 2022, 8<sup>th</sup> grade Danish students visited the facilities of BIOFOS in context of the "[Kloaklab](#)". The Kloaklab is an initiative that brings students closer to the world of wastewater. For three days, 45 students learned about the wastewater treatment processes and the DWC's solutions. On each day, there was a municipality representative contributing to bridging the gap between the students and the business sector.

The students were challenged with exercises in which they had to calculate the concentration of treated wastewater, compare it with untreated water, and assess when to change from dry to wet weather operation mode at the wastewater treatment plant. They also had to read graphs and use the inflow forecast to evaluate when the plant should change operations. The exercises were a good pretext to bring into discussion the consequences of water pollution, learn about the EU Water Directive and how households can help reduce rainwater discharge and contamination with the right building materials.

The DWC solutions presented during the visits were the early warning system for bathing water quality, which also exists in Copenhagen, and the early warning system for safe reuse of treated wastewater for agricultural irrigation.

### 3.2.2. Miljø- og Planchef forum

On 24 October 2022, the heads of department for environment and planning from 15 municipalities in Copenhagen met at the Miljø- og Planchef forum. This meeting takes place every three months, and it is aimed at discussing common challenges in the catchment and inform the municipalities about BIOFOS activities.

During the meeting, the results of DWC were presented to environmental managers, with special focus on the machine learning possibilities and its benefits. The sewer flow forecast toolbox and the web platform for integrated sewer and wastewater treatment plant control developed in Copenhagen were presented as well as the reuse of treated wastewater for agricultural irrigation.

### 3.2.3. DHI Days 2022

On 26 October 2022, BIOFOS participated at the [DHI days](#) in Malmö, Sweden. The DHI days are a get together of the Nordic water utilities (Sweden, Norway, Denmark) aimed at sharing best practices and the latest innovation projects on water management.

BIOFOS presented the digital solutions developed together with DHI in Copenhagen, during the conference “Mike Urban Modelling and Future City Flow – Techniques and methods, exchange on experience and use of FCF (visualisation platform used in the solution developed within DWC) and shared the experience and challenges from the machine learning, the hi-fi modelling, the forecasts, KPI reports and visualisation. Out of the 85 people that attended the session, 66 were mainly researchers and 19 policymakers.

### 3.3. Milan

The city of Milan organised the roadshow event during the green technology expo [Ecomondo](#), which takes place every year in Rimini, Italy. DWC took part in the stand of Gruppo CAP at the conference, with a workshop called “Il caso studio italiano del progetto H2020 digital-water.city” (The Italian case of the H2020 project digital-water.city) on 9 of November 2022. The session presented the case of DWC Milan and the solutions developed in this city and attracted around 20 attendees, most of them researchers. However, it should be noted that on that day there was an earthquake in the region which affected the number of participants attending the event on that day.

Besides the presentation, our partners from Gruppo CAP displayed two banners about DWC during the day of the presentation. Additionally, DWC leaflets that showcase all the solutions developed within the project and the [video](#) about the city of Milan were also showcased throughout the whole duration of the conference, from 8 to 11 November.

### 3.4. The Paris Region

The Paris region participated in three different events with SIAAP (Greater Paris Sanitation Authority) in order to reach a wide and varied audience. DWC had a stand at the Triathlon of Paris, at the Fête de la Lavande and at the Big Jump and showcased the digital solutions below:

- Applications to communicate on bathing site with the public and future bathing site managers
- ALERT system – Sensors for real-time bacterial measurements
- Serious game on the water reuse, carbon, energy, food and climatic nexus
- Sensors and smart analytics for tracking illicit sewer connections hotspots

#### 3.4.1. Triathlon Paris

The [Triathlon of Paris](#) took place on 25 June 2022. SIAAP, DWC’s partners in Paris, and partners of the French federation at the Triathlon, had a stand in Parc de la Villette, Paris. The stand of SIAAP was aimed at showing the work the organisation is doing to improve the quality of the water in the Marne and Seine rivers. DWC took this opportunity to showcase the various

digital solutions developed within the project. Citizens and participants of the Triathlon could learn about the solutions in a computer and could watch the video about the solutions created in Berlin. Also, a big banner was created for the occasion with key facts about the project and DWC flyers were handed out.

#### 3.4.2. Fête de la Lavande

Every year, SIAAP organises the [Fête de la Lavande](#) in the fields of lavender that surround the biggest wastewater treatment plant in Europe, located in Achères. On 2 July 2022, DWC had a stand at this public event that proposes multiple activities such as lavender harvesting or a short cruise along the river Seine.

#### 3.4.3. Big Jump

On 10 July 2022, DWC participated at the [Big Jump](#) organised by the Syndicat Marne Vive in Saint Maur des Fossés. This event is aimed at promoting and highlighting the importance of rivers and lakes in Europe. At the event, there were stands with different utilities, activities for kids, etc.

### 3.5. Sofia

In context of the World Water Day 2022, the city of Sofia organised a two-day event. The event offered an online visit to the “unknown waters” of Sofia to show the importance of sewers in the city and how those are managed with the help of new digital tools.

#### 3.5.1. “The (In)visible Water Beneath Us: A Digital Walk” – Day 1

On 22 March, Sofiyska Voda JSC organised the online event “[The \(In\)visible Water Beneath Our Feet](#)” to showcase the digital transformation in Sofia’s sewage system and the new technologies that are being implemented in the city. The two DWC solutions tested in Sofia were presented on the first day of the event: a smart sewer cleaning system with HD camera and wireless communication and the low-cost temperature sensors for real-time combined sewer overflows and flood monitoring.

The two videos below were created to be displayed at the event:

<https://youtu.be/9EVN1j7l8UM>

<https://youtu.be/NtMRI-Cqxlo>

135 people attended the first part of the event.

#### 3.5.1. “The (In)visible Water Beneath Us: A Digital Walk” – Day 2

The second day of the event, other DWC digital solutions were presented to the wider audience: the augmented reality mobile application for groundwater visualisation, the early warning system for bathing water quality and the serious game on the water reuse, carbon, energy, food and climatic nexus. 68 people attended the second part of the event, which can be watched [here](#) in Bulgarian.

Both events gathered water specialists, workers at Sofiyska Voda, and citizens, and were largely covered by the national media:

- [OFFNews](#)
- [FROGNEWS](#)
- [19 minutes](#)
- [Glasove](#)
- [Blitz](#)

Records of the two-day event were spread via all social company's profiles – Facebook, YouTube and LinkedIn partially (by topics) over the next few months.

#### 4. Conclusion

- As it has been shown in this report, the five roadshows organised in the demonstration cities were very different in terms of format and target audience. After asking the co-organising partners, multiple and varied conclusions were drawn from each event. However, below we have grouped the main takeaways from all their experiences: Small works better. In most cases, the local partners concluded that a small event format works better to engage with the target audience. A good example of that is the Copenhagen school visit to the Kloaklab in groups of 15 students. The Danish partners reported that the 13-year-old students were very much interested in the subject and understood the relevance of innovation and digitalization for the environment and to assess bathing water quality. They recommend further developing the roadshow concept to involve high-school kids through one-day workshops.

On the other hand, the co-organisers of the Milan roadshow highlighted that participating in a big event touching upon a wider topic, such as Ecomondo, made the stakeholder engagement slightly more difficult. At the event, the DWC Milan partners realized that for example farmers were more concerned about the possible introduction of a tax for the reused wastewater, whereas regulatory bodies were interested in a general commitment from the water utility on developing water reuse on a more general basis. However, the Berlin partners that participated at IFAT (one of the biggest events for environmental technologies) said that thanks to the fact that it was a big event they could more easily reach their target group.

From that we can conclude that organising a small event and adapting it to your target audience, be it in context of a wider event or not, is probably the best recipe for reaching your audience and engaging with them.

- When possible, include the solution developers at the event. It has been mentioned a few times that having the creators or promoters of the digital solutions would be an added value. This was the case of the Berlin partners that counted with Dan Angelescu,

CEO of Fluidion, who attended IFAT and the DWC roadshow. Dan could answer all kinds of questions from the participants and discuss with them at the event.

Along the same lines, our partners from BIOFOS, Denmark, highlighted that for their stakeholder event it would have been useful to include representatives of the solutions presented. This would have contributed to an active discussion and could have increased the engagement with developers from other cities. For example, Copenhagen got interested in the bathing water quality solution and the Fluidion system.

Thus, having someone in person or online that has a good knowledge of the solution could have contributed positively to the overall experience of the roadshows.

- Make it an “new” or interactive experience. Specifically, when addressing citizens and students, it is a must. Both the students visit at the Kloaklab and the Paris events at the Fête de la lavande or the Big Jump, were aimed at engaging with the public and getting them to participate in the activities. In the case of the Big Jump, kids would visit the stand attracted by the mobile application, they would ask questions and show interest on it. Therefore, presenting tools that can be used by the audience is a smart way to engage with them and raise awareness about a topic that is relevant for everyone.

In person experiences win. Overall, the roadshows that were organised as in person events were more popular than the online ones because could attract visitors and participants that were at the event venue discovering other activities. The roadshow in Sofia was fully online due to the pandemic measures and despite making all the events interactive and reaching a wide audience, we believe the digital walk in the sewers of Sofia could have provided a more vivid and impactful experience with a physical visit.

## ANNEX

Pictures of the Roadshow in Copenhagen. BIOFOS “Kloaklab”, 10-13 October 2022.



Pictures of the Roadshow events in the “Paris Region”. Materials used in the 3 events.



Pictures of the Roadshow in Milan. ECOMONDO 2022, 9 November.







Leading urban water management to its digital future

