SCOREwater

Smart City Observatories implement Resilient Water Management

DELIVERABLE 7.4
SHARE LESSONS LEARNED

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ABBREVIATIONS

Abbreviation	Definition
CKAN	Comprehensive Kerbal Archive Network
FIWARE	Future Internet WARE
ICT	Information and Communications Technology
IoT	Internet of Things
SDGs	Sustainable Development Goals
SME	Small and medium-sized enterprises
UNI	Universeum Science Centre Gothenburg

PROJECT ABSTRACT

SCOREwater focuses on enhancing the resilience of cities against climate change and urbanization by enabling a water smart society that fulfils SDGs 3, 6, 11, 12 and 13 and secures future ecosystem services. We introduce digital services to improve management of wastewater, stormwater and flooding events. These services are provided by an adaptive digital platform, developed and verified by relevant stakeholders (communities, municipalities, businesses, and civil society) in iterative collaboration with developers, thus tailoring to stakeholders' needs. Existing technical platforms and services (e.g. FIWARE, CKAN) are extended to the water domain by integrating relevant standards, ontologies and vocabularies, and provide an interoperable open-source platform for smart water management. Emerging digital technologies such as IoT, Artificial Intelligence, and Big Data is used to provide accurate real-time predictions and refined information.

We implement three large-scale, cross-cutting innovation demonstrators and enable transfer and upscale by providing harmonized data and services. We initiate a new domain "sewage sociology" mining biomarkers of community-wide lifestyle habits from sewage. We develop new water monitoring techniques and data-adaptive storm water treatment and apply to water resource protection and legal compliance for construction projects. We enhance resilience against flooding by sensing and hydrological modelling coupled to urban water engineering. We will identify best practices for developing and using the digital services, thus addressing water stakeholders beyond the project partners. The project will also develop technologies to increase public engagement in water management.

Moreover, SCOREwater will deliver an innovation ecosystem driven by the financial savings in both maintenance and operation of water systems that are offered using the SCOREwater digital services, providing new business opportunities for water and ICT SMEs.

EXECUTIVE SUMMARY

Deliverable 7.4 is about sharing the lessons learned within, roughly, the first 30 months of the project. It deals primarily with the 'how', how the knowledge is shared and not so much on the 'why' and 'what', which fall outside the scope of this deliverable. In other words, it is about the methods used to keep the audience engaged with the project. An important part of this, is ensuring that the same message is spread throughout each country, while simultaneously expanding the network of people that are interested in the project and to stakeholders, who have a stake in the outcomes.

This was achieved through the following actions, which will continue to take place until the end of the project: 1) Creating formats and presentations for (online) events. 2) Hosting online events, and lowering the barrier of entry to events. 3) Sharing results through the website and social media channels. The SCOREwater website contains, among other things, news, (academic) papers, videos and deliverables. This content is also shared through the project's Twitter and LinkedIn channels. 4) Creation of a yearly overview of the project's results, which is published every year, and aimed at reaching a broad audience. 5) Lastly, the public engagement via the Göteborg-based science center Universeum (UNI). UNI successfully launched the digital exhibit called *Water World*, and are on track in setting up a water purification lab (planned for November 2021). Furthermore, they are currently developing an activity about how sensors can be used to collect data on water quality. The *Water World* attracted less visitors than expected, so UNI is putting in extra resources into marketing campaigns to attract more visitors.

1. INTRODUCTION

This deliverable has two main goals. One, it aims to share the lessons learned within the SCOREwater project with the project's stakeholders, and to stimulate and activate public engagement. The second goal is to make sure that the same message is spread throughout each country, and to ensure that what is shared is coherent. The lessons learned are the preliminary outcomes of the project, and this deliverable deals primarily with how the knowledge is being shared.

This was achieved by:

1.   Creating formats and presentations for (online) events.
2.   Hosting online events.
3.   Sharing results through the SCOREwater-website and social media channels.
4.   Creating yearly overviews of the project's results.
5.   Public engagement via the Göteborg-based science center Universeum (UNI).

The five points mentioned above will be discussed in more detail below, in five separate chapters.

The timeframe of this deliverable covers the first 30 months of the project. The project went through the specification and prototyping phase, and is now in the implementing and testing phase. As can been seen from Figure 1, the first phases of the project were less about sharing the lessons learned, due to the simple fact that there were not many lessons learned yet, as the project was just starting. But with the passing of time more concrete lessons learned can be shared, like the creation of the *Water World* experience on the new digital platform by UNI called *Digital Universeum*.

Other communication and dissemination efforts, explained in other deliverable reports, preceded this deliverable. For one, the whole brand identity was created together with matching formats (D7.1), as well as a project website (D7.3). At an earlier phase of the project, there were also two other deliverables dealing with communication and dissemination. D7.7 'Sharing experiences and demonstration cases' where, among other things, the numbers on the reach of the project through the different channels can be found, and D7.8 'Organise events', where the events that were organised, up until the writing of this report, can be found. Communication and dissemination are ongoing activities that will continue throughout the project, and this deliverable builds on previous deliverables.

The reports on the above-mentioned deliverables are freely accessible through the project website, just like this report will be.[1]

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[1] https://www.scorewater.eu/deliverable
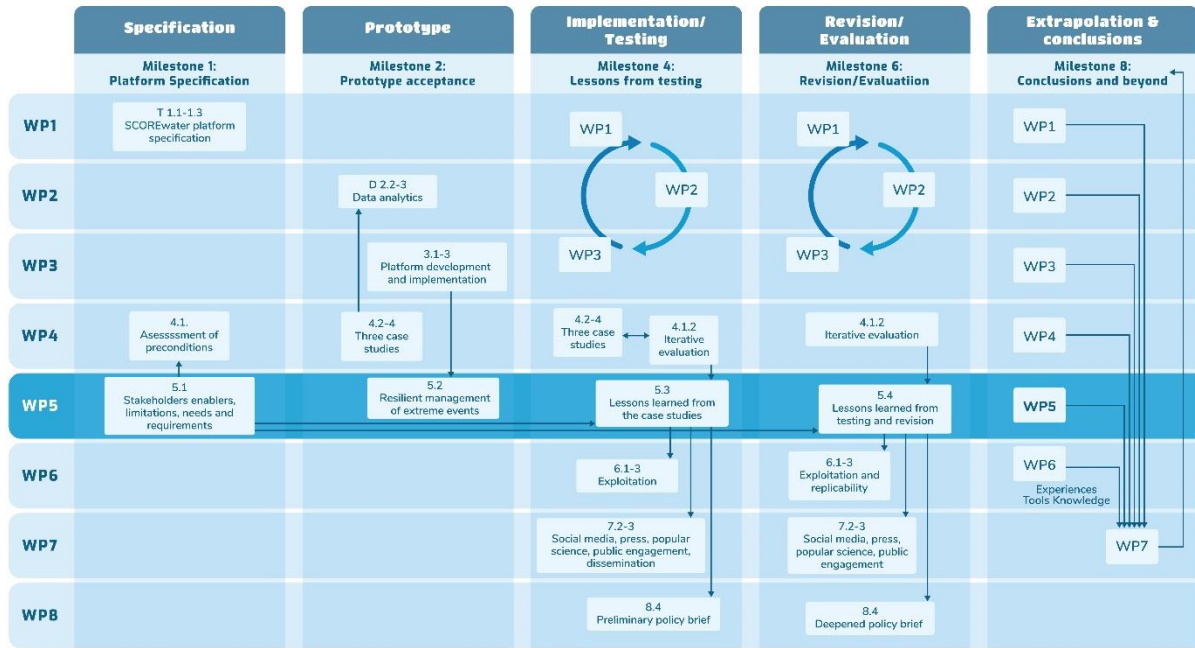
Figure 1 |Phases of the SCOREwater project

2. CREATING FORMATS AND PRESENTATIONS FOR (ONLINE) EVENTS

2.1. CROSS CASE STAKEHOLDER EVENTS

A challenging factor in communicating about the SCOREwater project, is that each of the three involved case studies (Barcelona, Gothenburg and Amersfoort) has a different focus. This different focus attracts a wide range of stakeholders, who are not bound to a certain region. For example, specialists from Barcelona may also be interested in solutions developed in Amersfoort or Göteborg. Consequently, this means from a communication point of view that the lessons learned within a certain city should be shared with other cities as well.

To address this, and simultaneously involve interested stakeholders from different cities, the 'cross-case stakeholder events' format was introduced by the communication team. Each of these events had their own theme and focus, connected to a specific case study. All these online events were free to participate, held in English, and with a maximum duration of one hour. Future City organised all technical aspects and the event registration while another project partner was responsible for the content of each session.

At the moment of writing this deliverable, one round of events is completed. One for each city. The aim is to use this format also for future events at a later phase of the project, when more interesting results are ready for dissemination. The aforementioned events were all organized before the summer of 2021.

Table 1. Overview of the cross-case stakeholder events

Date	Title of event	City involved	Views[2]
March 25, 2021	How to collaborate with citizens in creating climate resilient cities?	Amersfoort	239
May 10, 2021	Solving Stormwater pollution at construction sites	Gothenburg	111
June 1, 2021	Decrypting wastewater information	Barcelona	168

An impression of the style used for the invitations to the above-mentioned events can be found in ANNEX 1.

2.2. INTRO INTO SCOREWATER SLIDES

As members of the SCOREwater project regularly get the stage to tell something about the project, there was a need for a set of slides that showed an overview of the project in just a few minutes. This was created by the project management (IVL) in collaboration with the communication team, and was subsequently used in multiple online presentations. These slides are included in ANNEX 2.

3. HOSTING & PARTICIPATING IN ONLINE EVENTS

When hosting online events there are few essential components that were determined over the course of time:

- First of all, all online events should be accessible for everyone. At an earlier phase some people from the citizen science community in Amersfoort pointed out that not all the webinar software that is available, respects the rights of the visitors (e.g. privacy, transparency). Furthermore, making it mandatory to consent to a long list of terms and conditions before one is able to join an event. In other words, these companies are gathering (personal) data from visitors for their own financial benefits. That is why there is now a livestream for all the events organised by the SCOREwater project itself. This way there is no need for the viewers to login to, or register for, software used for the webinar.

- The livestream is hosted on Vimeo. In contrast to YouTube, Vimeo is an ad-free paid for service that enables high-definition video streaming.

- To ensure recognizability of the SCOREwater brand, an online viewing environment was created in the style of the SCOREwater project.[3] In this page [Figure 2] the latest video of the SCOREwater project is embedded, with on the top right the possibility to see the program and the bottom right the option to (anonymously) ask a question to the event moderator. All the logos of the partners are also present on this page.

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[2] These views are a sum of the people attending the event in real-time through the livestream + the people who watched back the stream in their own time.

[3] Link to the live event page of SCOREwater: https://tv.elba-rec.nl/uitzending/scorewater

Figure 2 | SCOREwater live event page

The SCOREwater project has been featured in numerous events. Some of these were organised by the project, some by organizations outside of the project. This is all described in deliverable 7.8.

Below an impression, containing a selection of the external events, where the SCOREwater-project was presented:

- FIWARE global summit (Berlin)
- FIWARE water day (online)
- IoT World Congress (Barcelona)
- Digital around the world even (online)
- Aquatech Amsterdam (Amsterdam)
- Smart City Expo (Barcelona)
- iAgua smart water summit (online)
- NORDIWA Digital conference & exhibition (online)

When speaking about SCOREwater during the above-mentioned events, the SCOREwater presentation templates & branding were consistently used by all presenters.

4. SHARING RESULTS THROUGH THE WEBSITE AND SOCIAL MEDIA CHANNELS

We are using multiple different online channels to communicate about the project: the website, the social media channels LinkedIn and Twitter and the video platform Vimeo.

4.1. WWW.SCOREWATER.EU

The SCOREwater project website[4] is the backbone of SCOREwater's communication. It serves as a solid base on which all communication material can be uploaded, and linked to by the other channels (LinkedIn and Twitter). Furthermore, it provides a platform to showcase what is going on within the project in a controlled way, and to track the reach over time. The website was created at the beginning of the project (D7.3) and has been online since September 24, 2019. The data on the number of pageviews it received since the start of the project can be found in ANNEX 3

The aim of this paragraph is to show how the website helps to promote the lessons learned. This is possible thanks to the following elements integrated into the website:

- The news section.
- The publication section.
- The deliverables section.

In the news section visitors find all the updates on the case studies, from events to updates on the progress of the cases. Looking at Figure 3, a screenshot showing six SCOREwater articles. The color used for each title represents a different city within the project, except for the blue titles, which indicate it is a general post of interest to the whole project. This visual touch is quite subtle, and although not everybody will consciously notice it, it does have implications for the findability of the content. In the backend of the website the articles are connected to the different cases. So, when a visitor arrives at the homepage of the website and clicks of one of the case studies displayed on the homepage (see Figure 4), they will also find the three most recent posts of that case study on the right side of their screen. These are the same posts as the ones posted under the news section.

This is one of the ways in which the communication team tries to keep the attention of the visitors, and to direct them to the most relevant recent updates, when they show an interest in a specific case study.
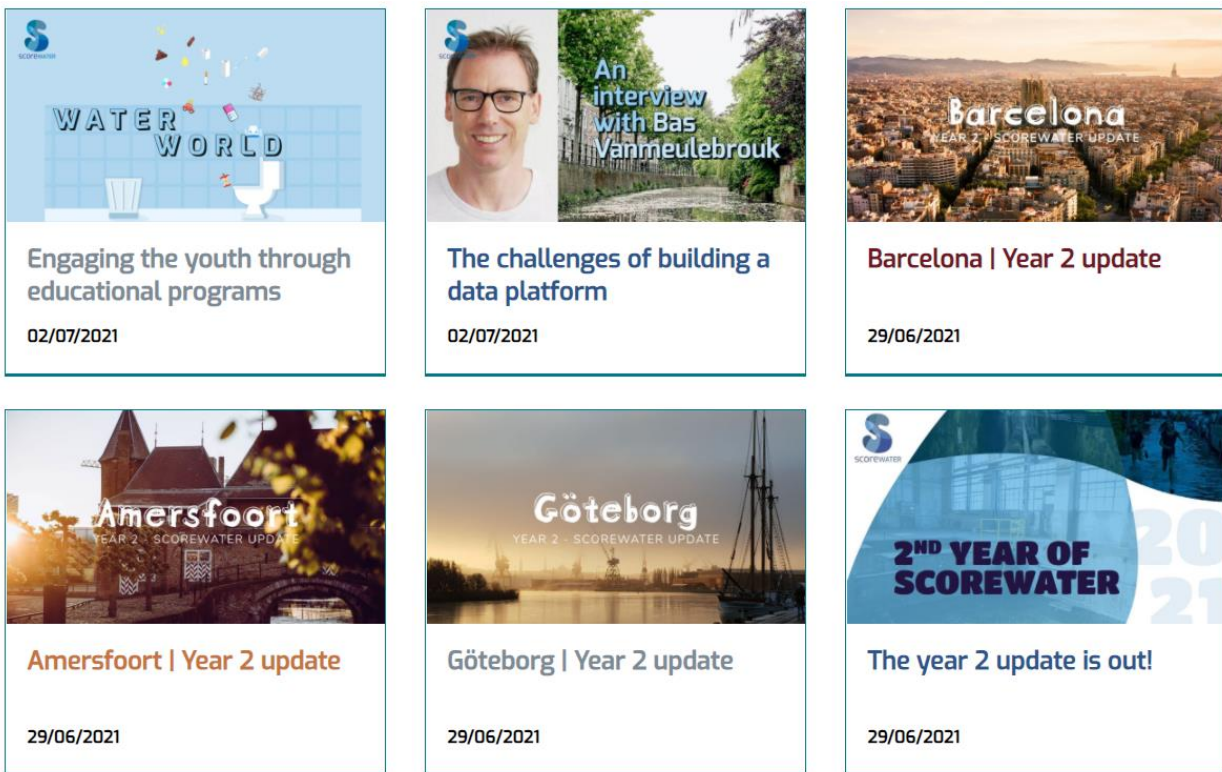
Figure 3 | screenshot part of the page of scorewater.eu/news

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[4] www.scorewater.eu

THREE CASES

AMERSFOORT
CASE 1 FLOODING

SCOREwater in Amersfoort will focus on improving the detection of flash floods while reducing environmental impacts through:

- Prediction models and early warning systems for flash floods;
- decision-tool (case-based reasoning) for reducing environmental impact considering risks, economic, operational and environmental information.

BARCELONA
CASE 2 SEWAGE

SCOREwater in Barcelona will focus on reducing wastewater management problems with the vision of improving public health:

- Predicting sewer clogging User behavior profiling and analysis;
- correlate behavior with water quality measurements, and subsequent actions to mitigate health risks and hazardous events.

GÖTEBORG
CASE 3 INDUSTRIAL

SCOREwater in Göteborg will focus on managing water pollution in the industrial sector by:

- The prediction of water pollution based on the combination of meteorological data and water quality sensors;
- predictive maintenance of local water treatment equipment.

Figure 4 | screenshot part of the page of scorewater.eu

The publication section contains a selection of the most interesting content that is created around the SCOREwater project. It contains a mixture of own work and external contributions, which all relate to the project. There are four separate categories: 'academic', 'video', 'news media' and 'online', all of which are regularly updated. This mixture of English, Catalan, Spanish, Swedish and Dutch content, is all accessible through hyperlinks which link to the original content. This makes it very easy for everyone interested in the project, to read up on the project without having to search extensively. Figure 5 gives an impression of what the page looks like. Attached, as ANNEX 4, is the full list of publications on which the currently selected publications for the website are highlighted in green.

Academic

05-2021	English	Barcelona	Journal entry: Showcasing the potential of wastewater-based epidemiology to track pharmaceuticals consumption in cities: Comparison against prescription data collected at fine spatial resolution
			Environment International, Volume 150 (Journal)
04-2021	English	Barcelona	Journal entry: Sediment Level Prediction of a Combined Sewer System Using Spatial Features
			Sustainability, volume 13 - issue 7 (Journal)
04-2021	English	Amersfoort	Master thesis: Predicting flooding due to extremeprecipitation in an urban environment using machine learning algorithms
			University of Twente, Raphaël Kilsdonk

Video

| 07-2021 | Spanish | Barcelona | La digitalización del alcantarillado en Barcelona generará beneficios para las necesidades de la ciudad |
| | | | CGTN |

Figure 5 | screenshot part of the page of scorewater.eu/pb

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4.2. TWITTER & LINKEDIN

The social media channels LinkedIn and Twitter refer to the content on the website, but also function as a means for building the SCOREwater community. Reaching more followers implies an expanding reach of the project's dissemination and communication efforts. Figure 6 shows how the numbers of followers on social media have evolved over time. For all the numbers regarding social media, such as the number of visitors each month, total likes, total retweets, average impressions a day, see ANNEX 3.
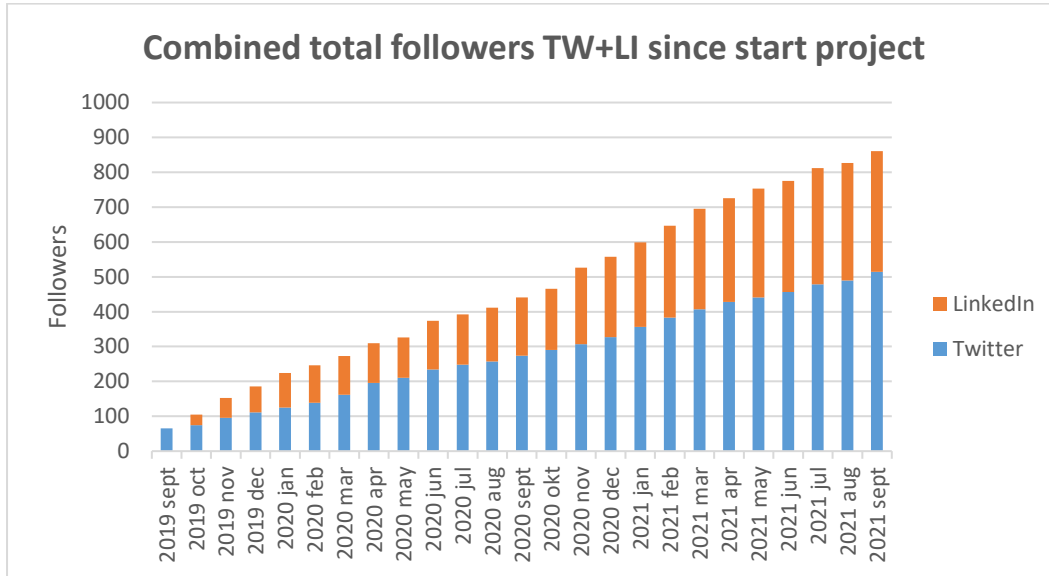
Figure 6 | Twitter and LinkedIn followers

5. CREATING A YEARLY OVERVIEW OF THE PROJECT'S RESULTS

At the end of each project year (around summertime) an overview is created detailing the progress that was achieved within the project during that past year. This publication is called the 'SCOREwater booklet', and is aimed at reaching a broad audience. It contains the work and input from all the project partners. Ranging from interviews with the developers of the SCOREwater platform to a contribution from the project officer, and including updates on specific milestones reached within the different case studies. The aim of the SCOREwater booklet is to bring all the different perspectives into one publication, and to provide people who are new to the project a comprehensive overview of the current status. The publications are easy to read, and aimed at a general audience.

In the summer of 2020, the first edition was published (33 pages). Click on the image to go to the SCOREwater booklet year 1, or go to: https://bit.ly/scorewateryear1

In the summer of 2021, the second edition was published (42 pages). Click on the image to go to the SCOREwater booklet year 2, or go to: https://bit.ly/Year2Update-internal

6. PUBLIC ENGAGEMENT VIA UNIVERSEUM

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About Universeum

Universeum is the national science centre of Sweden and a powerful arena for education and popular education in science, technology and sustainable development. Our large house in the middle of Gothenburg houses science and experiences about the whole world – from large world oceans and the Amazon rainforest to a chemistry lab, technology lab and space. We give children and adults the knowledge and power to make the earth a better and more sustainable place to live.

Source: www.universeum.se/en/

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An important part of this deliverable is stimulating and activating public engagement. Universeum, which is a science center in Göteborg (Sweden), reaches tens of thousands of children each year through their exhibitions. The goal for the SCOREwater project is to integrate lessons learned from the project into the exhibitions of Universeum, consequentially reaching a big audience. Universeum is in charge for producing products & activities, activities that create public awareness about city water management, and the smart technology that supports our societal sustainable development. The goal is to offer a fun but educational experience to the visiting children. This educational experience is modeled by Universeums educators, who are experts in making science comprehensible to all different target groups.

The main target group for the activities produced for the SCOREwater-project are children aged 6-14. This is a picky age-group, and in order to keep this group engaged and to encourage a more water friendly behavior, the activities produced interactive.

6.1. THE DIFFERENT STEPS

Universeum's roadmap/workplan consists of seven distinguishable steps, which are detailed below. Steps 1-4 leading up to the integration if the SCOREwater data into Universeum's programs, are completed. The project currently is at step 5, the launch of the different programs. Also included as Figure 7 is the timeline of the different steps and deliverables.

1. The first step in the project for Universeum was the creation of a platform of distribution. Digital Universeum was launched in September 2020 (M17) and offers science pass-members and schools a unique community for science center activities. The launch of the platform was an important event, an enabler for all future developments and communication. Thus, the platform will be the main forum for creating a more water friendly public.

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2. The next step was educating the educators. In order for them to start developing interactive, effective and enjoyable activities they needed to be fully equipped with knowledge. To ensure this they met with project partners and other water experts, to learn the essence of city water-systems, and the technology behind it.

3. To produce activities between M18 - M23, our educational developers needed a proper amount of input from the SCOREwater project. One time-consuming activity was collecting concrete examples, creating graphics and/or other tools and examining and transforming the data from Gothenburg SCOREwater case. 'Will it be understandable for a 13-year old?' and 'How can the data be visualized?' were important questions during this process. Simulations and connections are important. Hands-on activities likewise.

   Another important discussion was on the use of real data or generic date (artificially generated). Since using concrete examples is an important part of the activities begin developed by the educators, it was decided that actual data from the SCOREwater-results should be integrated in the programs of Universeum.

4. Packaging the program content was the last step in the production process (M23-M30). The activities were digitized and poured into the digital platform and made available to the various target groups. It is packaged into the digital exhibit called *Water World*. More on this in the next paragraph.

The following points lie in the future or are currently taking place.

5. Once the activities are produced, assessed, adjusted and digitally packaged they will be made accessible for Universeum's visitors. There are two major events connected to this step: the launch of the activities for the public - during summer season (M26-28) and then for schools - during autumn semester (M29-30).

6. Both public and school-activities will be evaluated during the first part of 2022 (M33-34). The evaluation will cover, among other things, questions about the engagement of the participants with the subject 'water', and questions regarding their behavior. The goal being, to measure the effectiveness of the different programs. For a better understanding of the result, data of the activities will be collected and analysed, to be accounted for in the final report.

7. The last step is summarising the lessons learned and writing the final report (M36).

M1 (maj 19)	M2 (juni 19)	M3 (juli 19)	M4 (aug 19)	M5 (sept 19)	M6 (okt 19)	M7 (nov 19)	M8 (dec 19)	M9 (jan 20)	M10 (feb 20)	M11 (mars 20)	M12 (april 20)
				Projectplanning					*Portal development*		

M13 (maj 20)	M14 (juni 20)	M15 (juli 20)	M16 (aug 20)	M17 (sept 20)	M18 (okt 20)	M19 (nov 20)	M20 (dec 20)	M21 (jan 21)	M22 (feb 21)	M23 (mars 21)	M24 (april 21)
Portal development		*Launch Digital Universeum*			Development programme activities					Digital development	
				D7.8	Reporting			Reporting			Reporting

M25 (maj 21)	M26 (juni 21)	M27 (juli 21)	M28 (aug 21)	M29 (sept 21)	M30 (okt 21)	M31 (nov 21)	M32 (dec 21)	M33 (jan 22)	M34 (feb 22)	M35 (mars 22)	M36 (april 22)
Prototyping towards public (digital activity)					Protoyping towards schools (autumn semester)						Deadline D4.14
				Evaluation, assessment & adjustment				Evaluation, assessment & adjustment			
	Reporting			D7.4	Reporting			Reporting	Deliverable report		Reporting

M37 (maj 22)	M38 (juni 22)	M39 (juli 22)	M40 (aug 22)	M41 (sept 22)	M42 (okt 22)	M43 (nov 22)	M44 (dec 22)	M45 (jan 23)	M46 (feb 23)	M47 (mars 23)	M48 (april 23)
		Reporting			Reporting			Reporting			Reporting

Figure 7 | Universeum activity plan

6.2. PROGRESS TOWARDS THE GOALS

The project has been going on for two years now, and Universeum reached the phase of rolling out the activities. One activity has already been delivered at the time of writing this report, the *Water World* – more about that below. The other two activities, the water purification lab and an activity on dealing with sensors and sensor information, will be rolled out in the end of 2021 and the beginning of 2022.

The activities are:

1) A digital exhibit called *Water World* (Deliverable 4.14) targeting families with children aged 6-10. This exhibit has the aim to reach out to families, inspiring them to think about their impact on the water cycle and how they affect the city's water cycle. The focus is on the importance of making sustainable everyday life-choices. Digital Universeum, the platform that makes it possible to host digital exhibits, was launched in 2021. This was quickly followed by the launch of the *Water World* during the summer of 2021 (M27). Unfortunately, there are less users/visitors than expected, and therefore Universeum is putting extra resources into the marketing of the exhibit. In the case of insufficient information -due to the lack of visitors-, the evaluation and assessment (step 6) would become less effective.

2) A water purification lab at Universeum in the Chemistry lab, aimed at school classes with children aged 7-14. The pupils will follow some steps in a purposefully designed experiment, meant to teach them about the water cycle. They will also learn how water connects to common chemicals in their home, and the impact of the chemicals on the environment. The water purification lab will be launched in November 2021 (M31), and evaluated during the winter-break (M33).

3) An activity about how sensors can be used to collect data on water quality, and then programmed with the help of micro-bits. This is considered a high school activity, aimed at children aged 14-16. The activity will take place at Universeum in the "The Hub[5]": the exhibit about smart technology.

6.3. INSIGHTS INTO THE WATER WORLD DIGITAL EXHIBIT

The *Water World* is made up of a selection of educational games, puzzles and quizzes. In a playful manner the players learn a lot about sustainable behaviors when it comes to everyday water usage.

The exhibit is, at the time of writing, freely accessible by anyone. There is no need to login, and the full exhibit is available in Swedish and English. One can visit it through this link: https://digitala.universeum.se/waterworld.

The pictures below give an impression of the *Water World* through a series of screenshots.
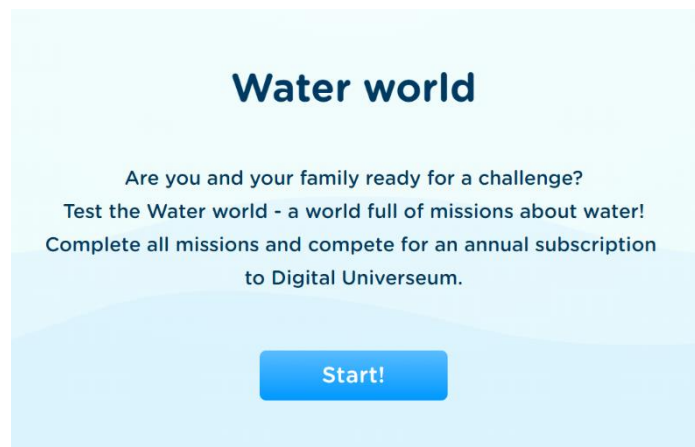
Figure 8 | The starting page of Water world

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[5] The Hub lets you explore the digital technology of today and of the future. How does a radar work, will artificial intelligence take over and what kind of opportunities does a more connected world bring? Welcome to The Hub, where we explore the possibilities of new technology and how technological progress can contribute to a sustainable future. https://www.universeum.se/experiences/the-hub/
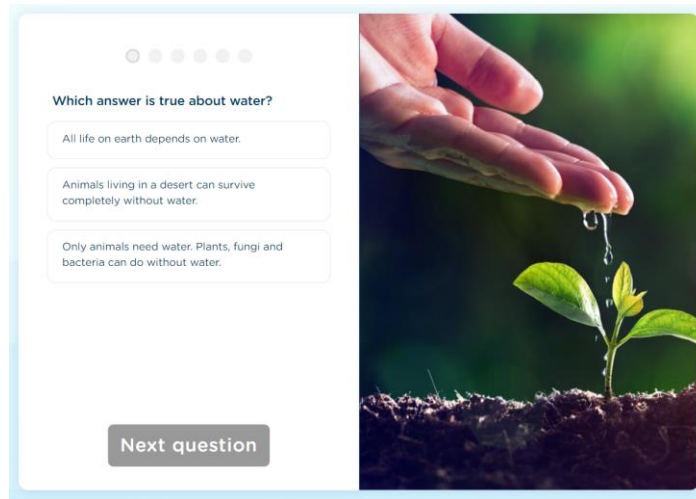
Figure 9 | Starting off with a quiz
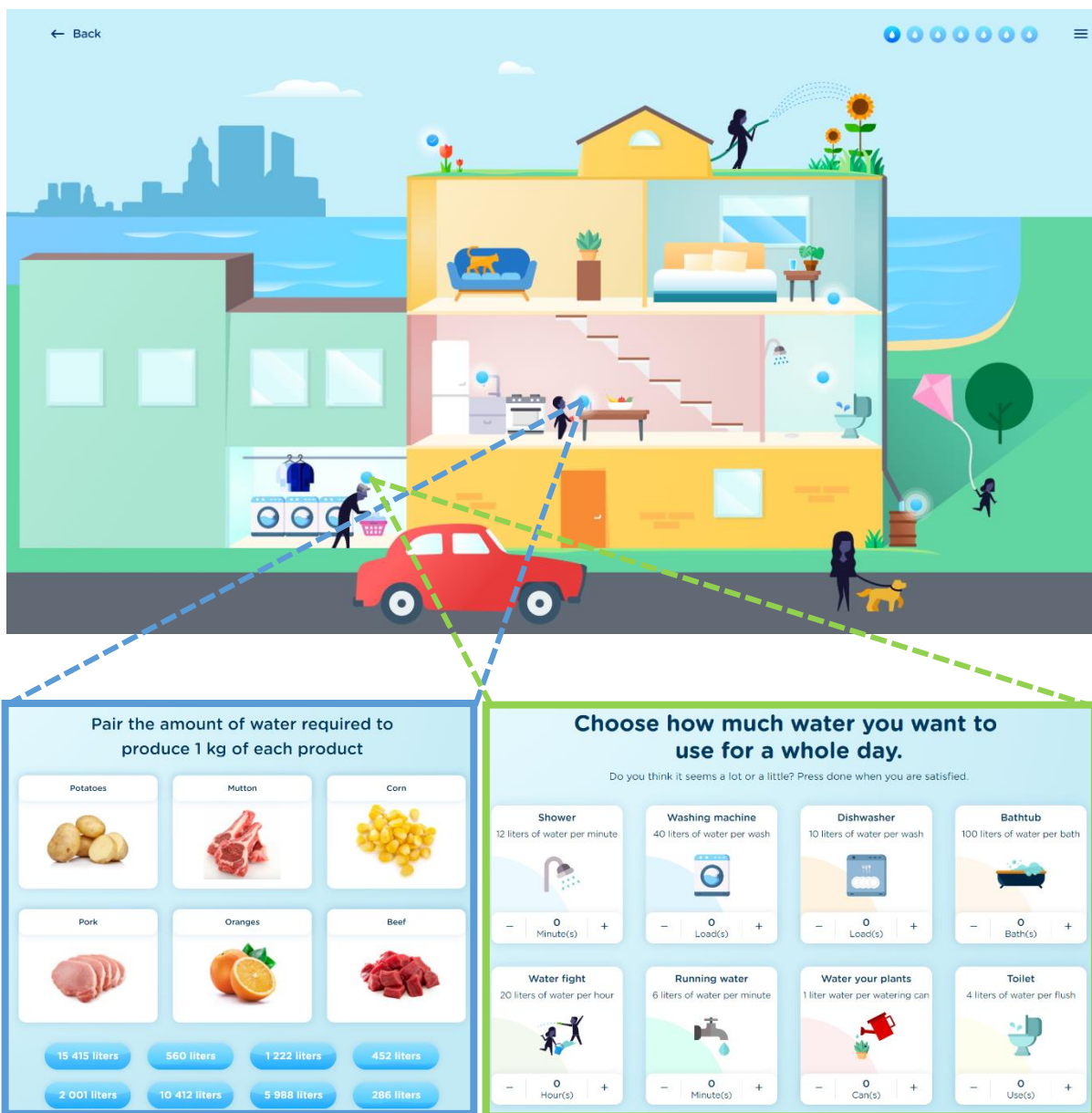
Figure 10 | The homepage of *Water World* with the mini-games

ANNEX 1 – CROSS-CASE STAKEHOLDER EVENTS

ANNEX 2 – PRESENTATION FORMAT SCOREWATER INTRO

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7.4 Share lessons learned, v 1, 28 October 2021

ANNEX 3 – TWITTER, LINKEDIN AND WEBSITE

TWITTER STATISTICS

*Magnify the page to see the statistics

	2019 sept	2019 oct	2019 nov	2019 dec	2020 jan	2020 feb	2020 mar	2020 apr	2020 may	2020 jun	2020 jul	2020 aug	2020 sept	2020 oct	2020 nov	2020 dec	2021 jan	2021 feb	2021 mar	2021 apr	2021 may	2021 jun	2021 jul	2021 aug	2021 sept
Days in month	30	31	30	31	31	29	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30
Project months	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
		Q4 - 2019			Q1 - 2020			Q2 - 2020			Q3 - 2020			Q4 - 2020			Q1 - 2021			Q2 - 2021			Q3 - 2021		
total impressions	906	7354	8733	6889	6267	7335	11897	19989	8117	16354	13415	8803	6463	6600	14731	9363	9980	22341	17490	10135	13062	15203	9171	11225	5232
total tweets	1	15	11	10	6	9	12	29	8	27	29	15	13	13	17	15	26	47	25	13	13	25	7	43	22
total engagements	13	223	192	121	115	112	206	312	85	501	284	144	120	88	438	149	209	396	359	153	184	237	101	200	136
total retweets	3	24	25	18	11	15	23	53	12	71	50	20	20	10	31	14	45	61	36	27	41	42	19	32	10
total likes	2	51	61	46	24	45	58	84	16	118	86	37	28	24	73	43	81	102	89	44	52	78	28	58	32
total user profile clicks	7	22	19	14	13	23	42	25	16	29	19	19	7	6	19	15	11	22	18	14	8	13	5	20	9
total url clicks	0	34	11	6	26	1	19	52	5	48	33	6	17	9	22	12	13	10	30	19	22	31	18	14	11
total replies	0	2	0	0	1	4	2	3	1	4	7	2	0	0	1	3	3	14	8	1	1	4	0	8	7
av. Impressions/day	30	237	291	222	202	253	384	666	262	545	433	284	215	213	491	302	322	798	564	338	421	507	296	362	174
av. Impressions/tweet	906	490	794	689	1045	815	991	689	1015	606	463	587	497	508	867	624	384	475	700	780	1005	608	1310	261	238
av. Engagements/tweet	13	15	17	12	19	12	17	11	11	19	10	10	9	7	26	10	8	8	14	12	14	9	14	5	6
av. Likes/tweet	2	3	6	5	4	5	5	3	2	4	3	2	2	2	4	3	3	2	4	3	4	3	4	1	1
New followers	48	10	21	15	14	14	23	34	14	24	14	9	17	16	17	20	29	27	24	21	13	16	22	11	24
Total followers end of month	65	75	96	111	125	139	162	196	210	234	248	257	274	290	307	327	356	383	407	428	441	457	479	490	514
Growth % followers		15%	28%	16%	13%	11%	17%	21%	7%	11%	6%	4%	7%	6%	6%	7%	9%	8%	6%	5%	3%	4%	5%	2%	5%

Explanation of used terms

Impressions:	Times a user is served a Tweet in timeline or search results
Tweets:	Times the SCOREwater account tweets
Engagements:	Total number of times a user interacted with a Tweet. Clicks anywhere on the Tweet, including Retweets, replies, follows, likes, links, cards, hashtags, embedded media, username, profile photo, or Tweet expansion
Retweets:	Times a user retweeted the Tweet
Likes:	Times a user liked the Tweet
User profile clicks:	Clicks on the name, @handle, or profile photo of the Tweet author
Total url clicks:	Clicks on a URL or Card in the Tweet
Replies:	Times a user replied to the Tweet

Twitter account actively moderated since Sept 2019

LINKEDIN STATISTICS

*Magnify the page to see the statistics

|	2019 oct	2019 nov	2019 dec	2020 jan	2020 feb	2020 mar	2020 apr	2020 may	2020 jun	2020 jul	2020 aug	2020 sept	2020 oct	2020 nov	2020 dec	2021 jan	2021 feb	2021 mar	2021 apr	2021 may	2021 jun	2021 jul	2021 aug	2021 sept
Days in month	31	30	31	31	29	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30
Project months	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	Q4 - 2019			Q1 - 2020			Q2 - 2020			Q3 - 2020			Q4 - 2020			Q1 -2021			Q2 - 2021			Q3 - 2021		
Total views	2873	3380	2890	1939	998	749	1080	377	1471	992	320	2375	742	3629	1528	2727	2127	2242	1329	1830	1446	1758	855	1079
Total pageviews	128	133	75	95	47	28	51	46	150	40	7	91	40	146	77	70	133	137	44	74	54	57	13	25
Total unique visitors	53	60	24	43	23	14	24	17	54	14	3	34	20	50	35	29	50	54	21	29	23	26	11	29
Total new posts	14	12	10	4	5	4	9	1	5	4	1	10	4	10	4	11	7	10	6	10	8	8	3	4
Total new followers	16	27	18	24	8	4	3	2	24	4	11	12	9	43	12	12	21	24	10	14	6	15	4	10
Total followers end of month	30	57	75	99	107	111	114	116	140	144	155	167	176	219	231	243	264	288	298	312	318	333	337	347
Growth % followers		90%	32%	32%	8%	4%	3%	2%	21%	3%	8%	8%	5%	24%	5%	5%	9%	9%	3%	5%	2%	5%	1%	3%

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Google Analytics | SCOREwater all website data

Doelgroepoverzicht

Alle gebruikers
100,00% Gebruikers

1 sep. 2019 - 30 sep. 2021

Overzicht

● Pageviews

Gebruikers	Nieuwe gebruikers	Sessies	Aantal sessies per gebruiker
7.391	7.381	11.554	1,56

Paginaweergaven	Pagina's/sessie	Gem. sessieduur	Bouncepercentage
26.887	2,33	00:02:12	57,82%

■ New Visitor ■ Returning Visitor

14,8%

85,2%
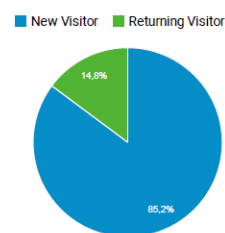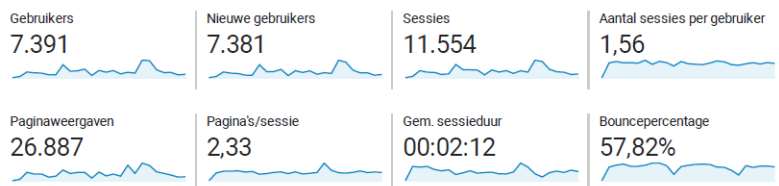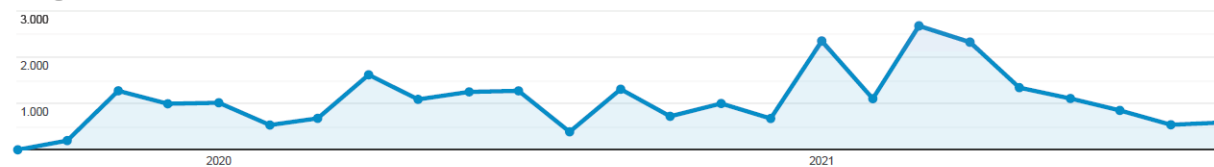
	Taal	Gebruikers	% Gebruikers
1.	en-us	2.120	28,64%
2.	nl-nl	1.175	15,87%
3.	es-es	753	10,17%
4.	en-gb	686	9,27%
5.	nl	405	5,47%
6.	sv-se	373	5,04%
7.	ca-es	297	4,01%
8.	es	163	2,20%
9.	zh-cn	138	1,86%
10.	ca	104	1,41%

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ANNEX 4 – PUBLICATIONS LIST

*This list contains all the external and internal publications mentioning the SCOREwater project from the start of the project up till July 2021.
*The publications marked in green are the ones displayed on the website.
*Magnify the page to read the details.

On website	Date	Language	Type of publication	Case	Source (name of organization/ website)	Title	Link
	jan-19	Dutch	Online	General	Kansen voor West	Regionale Innovatie Slimme Specialisatie Strategie RIS3 West-Nederland	https://denhaag.raadsinformatie.nl/document/8509260/1/RIS304715_Bijlage
x	mei-19	Catalan	Online	Barcelona	Ajunament de Barcelona	Intel·ligència Artificial i Big Data aplicades al clavegueram de Barcelona facilitaran informació sobre la personalitat dels barris	https://ajuntament.barcelona.cat/premsa/2019/05/30/intelligencia-artificial-i-big-data-aplicades-al-clavegueram-de-barcelona-facilitaran-informacio-sobre-la-personalitat-dels-barris/
x	mei-19	Dutch	Online	Amersfoort	Future City Foundation	Amersfoort wil leren van water	https://future-city.nl/amersfoort-wil-leren-van-water/
	mei-19	Swedish	News media	General	Aktiespararnas	TalkPool AG: Talkpool har tilldelats 270 kEUR av Horizon 2020-projektet "Digitala lösningar för vatten som förbinder den …	https://www.aktiespararna.se/analysguiden/nyheter/talkpool-ag-talkpool-har-tilldelats-270-keur-av-horizon-2020-projektet-digitala-losningar
	mei-19	Dutch	Online	Amersfoort	Amersfoort Business	'Vanuit Amersfoort brengen we oplossingen voor slim waterbeheer in de praktijk'	https://www.amersfoortbusiness.nl/hydrologic-amersfoort-oplossingen-slim-waterbeheer/
	mei-19	Catalan	Online	Barcelona	ICRA	Intel·ligència Artificial i Big Data aplicades al clavegueram de Barcelona a fi de generar informació sobre la personalitat dels barris	http://icra.cat/news/intel-ncia-artificial-data-aplicades/759
	mei-19	Dutch	Online	Amersfoort	LinkedIn Amersfoort business (5.039 followers)	Blogpost Amersfoort Business	https://www.linkedin.com/feed/update/urn:li:activity:6534339487474954240/
	mei-19	Spanish	Online	Barcelona	Posibl.com	Proyecto europeo que analizará las aguas residuales para conocer los hábitos de los barrios	https://www.posibl.com/es/news/medio-ambiente/proyecto-europeo-que-analizara-las-aguas-residuales-para-conocer-los-habitos-de-los-barrios-a569ec4
	mei-19	Spanish	News media	General	Redacción EFEverde	Un proyecto europeo analizará las aguas residuales para conocer los hábitos de los barrios	https://www.efeverde.com/noticias/aguas-residuales-habitos-barrios/
	mei-19	English	Online	General	Talkpool AG	Talkpool awarded 270 kEUR from the Horizon 2020 call "Digital solutions for water: linking the physical and digital world for water solutions"	https://news.cision.com/talkpool-ag/r/talkpool-awarded-270-keur-from-the-horizon-2020-call--digital-solutions-for-water--linking-the-physi,c2826162
x	jun-19	Catalan	News media	Barcelona	Corporació Catalana de Mitjans Audiovisuals, SA	El "big data" baixa a les clavegueres per estudiar els hàbits dels ciutadans	https://www.ccma.cat/324/el-big-data-baixa-a-les-clavegueres-per-estudiar-els-habits-dels-ciutadans/noticia/2925608/?fbclid=IwAR2hcOHJ8Xp4Ufpc6IL_Gn7b-jUdL6d31039aD4anNipiMQbivtG9KmLObA
x	jun-19	Spanish	News media	Barcelona	Cronica Global	Inteligencia artificial y 'big data' para el alcantarillado de Barcelona	https://cronicaglobal.elespanol.com/creacion/vida-tecky/Inteligencia-artificial-big-data-alcantarillado-barcelona_251541_102.html
x	jun-19	Swedish	Online	General	IVL Svenska Miljöinstitutet	Digitalisering ska säkerställa en motståndskraftig vattencykel i våra städer	https://www.mynewsdesk.com/se/ivl_svenska_miljoinstitutet_ab_/pressreleases/digitalisering-ska-saekerstaella-en-motstaandskraftig-vattencykel-i-vaara-staeder-2884179
	jun-19	English	Online	General	European Commission	Kick-off meeting of four new Horizon 2020 projects - joint forces to foster the digital transformation of the water sector	https://ec.europa.eu/easme/en/news/kick-meeting-four-new-horizon-2020-projects-joint-forces-foster-digital-transformation-water
	jun-19	English	Online	General	ICT4water	Flash report: ICT4Water cluster Annual Event 2019	https://www.ict4water.eu/index.php/2019/07/04/flash-report-ict4water-cluster-annual-event-2019/
	jun-19	Catalan	Online	Barcelona	InformaTICa	El "big data" baixa a les clavegueres per estudiar els hàbits dels ciutadans	https://enginyeriainformatica.cat/?p=29000
	jun-19	Spanish	Online	Barcelona	tecnonews	Inteligencia Artificial y Big Data aplicadas al alcantarillado en Barcelona	https://www.tecnonews.info/noticias/inteligencia_artificial_y_big_data_aplicadas_al_alcantarillado_en_barc
x	jul-19	English	Online	General	FIWARE	MOVING TOWARDS THE SMART CITY OF THE FUTURE THROUGH DIGITAL WATER, DATA SHARING, INTEROPERABILITY AND OPEN/STANDARD ARCHITECTURE	https://www.fiware.org/2019/07/08/moving-towards-the-smart-city-of-the-future-through-digital-water-data-sharing-interoperability-and-open-standard-architecture/
	jul-19	Other	Online	General	Upgate	ICT4WATER, LA TRASFORMAZIONE DIGITALE DEL SETTORE IDRICO	https://www.upgate.it/it-it/ict4water-la-trasformazione-digitale-del-settore-idrico.aspx
x	aug-19	English	Online	General	CORDIS - European Commission	Project description	https://cordis.europa.eu/project/id/820751
x	sep-19	Swedish	News media	General	Engage Agency	Innovationsprojektet som kan förändra hur vi bygger städer	https://positionsverige.se/2019/09/12/innovationsprojektet-som-kan-forandra-hur-vi-bygger-stader/
	sep-19	English	Online	General	Civity	Learn and improve with water data!	https://civity.nl/en/learn-and-improve-with-water-data/
	sep-19	English	Online	General	Civity	SCOREwater European collaboration in the field of water management	https://civity.nl/en/scorewater/
	sep-19	English	Online	General	fabiodisconzi	Information about SCOREwater project	https://www.fabiodisconzi.com/open-h2020/projects/223737/index.html
	sep-19	English	Online	General	HydroLogic	SCOREwater ensures climate resilience of European cities	https://www.hydrologic.com/projects/scorewater/
	sep-19	Dutch	Online	General	HydroLogic	SCOREwater zorgt voor veerkracht van Europese steden	https://www.hydrologic.nl/projecten/scorewater-zorgt-voor-veerkracht-van-europese-steden/
	sep-19	Catalan	Online	General	IoT Catalan Alliance	Intel·ligència Artificial i Big Data aplicades al clavegueram de Barcelona a fi de generar informació sobre la personalitat dels barris	https://www.cataloniaiot.com/intel%c2%b7ligencia-artificial-i-big-data-aplicades-al-clavegueram-barcelona-fi-generar-informacio-la-personalitat-dels-barris/
	sep-19	Other	Online	General	s::can	SCOREwater – die Zukunft ist öko	https://www.s-can.at/de/news/item/217-scorewater-die-zukunft-ist-oeko
	sep-19	English	Online	General	s::can	SCOREwater – the future is eco	https://www.s-can.at/news/item/217-scorewater-the-future-is-eco
	sep-19	English	Online	General	SCOREwater	Learn and improve with water data!	https://scorewater.eu/news/3
	sep-19	Dutch	Video	Amersfoort	SCOREwater	SW Amersfoort workshop	https://www.youtube.com/watch?v=m6TI8vqf6YA
	sep-19	Dutch	Online	General	SCOREwater / HydroLogic	SCOREwater zorgt voor veerkracht van Europese steden	https://scorewater.eu/news/4
	sep-19	Spanish	Online	General	Universitat de Girona	SCOREwater: Smart City Observatories implement REsilient Water Management	http://udg.edu/en/grupsrecerca/gEMM/Que-fem/Projectes
	sep-19	English	Online	General	Utrecht Region	Meet The SCOREwater project	https://expand.utrechtregion.com/our-services/trade-missions-trade-fairs-and-events/innovation-mission-barcelona/meet-some-of-our-dutch-delegates/meet-the-scorewater-project
	sep-19	English	Online	General	Utrecht Region	Discover our innovative projects	https://invest.utrechtregion.com/rci

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	sep-19	Spanish	Online	Barcelona		Workshop in Barcelona	
x	okt-19	English	Video	Amersfoort	City of Amersfoort	4-minute pitch from Edwin Hubers on the Amersfoort case	https://www.youtube.com/watch?v=dkWKsGTKxRQ
x	okt-19	Dutch	Online	Amersfoort	Economic Board Utrecht	Effectief waterbeheerproject in Amersfoort creëert kansen voor duurzame regionale economie	https://www.economicboardutrecht.nl/nieuws/effectief-waterbeheerproject-in-amersfoort-creeert-kansen-voor-duurzame-regionale-economie
x	okt-19	Dutch	News media	Amersfoort	Ruud van Slooten (AD news)	Amersfoort is Europese proeftuin voor waterbeheer	https://www.ad.nl/amersfoort/amersfoort-is-europese-proeftuin-voor-waterbeheer~ac505f48/
	okt-19	English	Online	General	Bluetech Research	Meet The Innovators – BlueTech's Neighbours At Aquatech	https://www.bluetechresearch.com/blog/meet-the-innovators-bluetechs-neighbours-at-aquatech/
	okt-19	English	Video	General	FIWARE	Fiware summit Berlin	https://www.youtube.com/watch?v=VaNEBvW-x7w
	okt-19	Other	Online	General	IVL China	EU Smart Sustainable Water Resources Management Project-Water resources-oplossingen die de fysieke en digitale wereld met elkaar verbinden	http://www.ivl-china.com/news/zxdt/136.html
	okt-19	Dutch	Online	Amersfoort	SCOREwater / Economic Board Utrecht	Effectief waterbeheerproject in Amersfoort creëert kansen voor duurzame regionale economie	https://scorewater.eu/news/5
	okt-19	Dutch	News media	Amersfoort	SCOREwater / Ruud van Slooten (AD news)	SCOREwater	https://scorewater.eu/news/6
	nov-19	English	Online	General	AWE International	s::can is Teaming up with SCOREwater to Establish a Water Smart Society	https://www.aweimagazine.com/press-release/scan-is-teaming-up-with-scorewater-to-establish-a-water-smart-society/
	nov-19	Swedish	Online	Göteborg	IVL	Smart sustainable water management in big cities	https://www.ivl.se/english/startpage/pages/ongoing-research/research-projects/water/scorewater.html
	nov-19	English	Online	General	Johanneberg Science Park	Air quality in focus at Open data workshop	https://www.johannebergsciencepark.com/en/news/air-quality-focus-open-data-workshop
	nov-19	English	Online	General	SCOREwater / IVL Beijing	SCOREwater: Water solutions connecting the world of materials and the digital world	https://scorewater.eu/news/7
	nov-19	English	Online	General	SCOREwater/ AWE International	s::can is Teaming up with SCOREwater to Establish a Water Smart Society	https://scorewater.eu/news/8
	nov-19	English	Online	General	WOW, Worldwide Network of Women	Join us for The WOW Dinner in Barcelona	https://wowdinnertoronto.com/news/
x	dec-19	Spanish	Online	Barcelona	ITI - INSTITUTO TECNOLÓGICO DE INFORMÁTICA	(PDF) Análisis de la estrategia Big Data e Inteligencia Artificial en España	https://www.medicamentos-innovadores.org/servlet/descargar/medicamentosinnovadores/docs/PRODF284617.pdf
x	feb-20	Spanish	Online	Barcelona	Alejandra Avendaño	Día Mundial del Agua: Las tecnologías 4.0 innovan la gestión del agua y saneamiento en España	http://www.alkaeducacion.com/en-profundidad/dia-mundial-del-agua-las-tecnologias-4-0-innovan-la-gestion-del-agua-y-saneamiento-en-espana/
x	feb-20	English	Online	Barcelona	ICRATech	(PDF) paper on sewager sociology	https://www.aigues.net/wp-content/uploads/2020/02/ICRATech-IV-Sewage-Sociology-1.pdf
x	feb-20	Spanish	Online	Barcelona	Jordi Fàbregas	Grupo ICRATech (IV): Sociología Basada en el Análisis de Aguas Residuales	https://www.aigues.net/grupo-icratech-iv-sociologia-analisis-aguas-residuales/
	feb-20	English	Online	Barcelona	SCOREwater	The 'brown gold' : Why we need to mine sewage	https://scorewater.eu/news/10
x	mrt-20	English	Video	General	Future City Foundation	How FIWARE solutions change the city by Ulrich Ahle, CEO FIWARE Foundation.	https://youtu.be/1NvRwN4OcO0?t=894
	mrt-20	English	Online	Göteborg	SCOREwater	Milestone reached!	https://scorewater.eu/news/11
	mrt-20	English	Online	Barcelona	SCOREwater	Selection of sampling points for the Barcelona case study	https://scorewater.eu/news/12
	mrt-20	English	Online	General	SCOREwater	Breaking down boundaries with FIWARE	https://scorewater.eu/news/13
	apr-20	English	Video	Amersfoort	City of Amersfoort, Fatma Koser Kaya	Councilor from Amersfoort using SW as a prime example	https://youtu.be/oRXXD2vpIIc?t=493
	apr-20	Catalan	News media	Barcelona	El Punt Avui	TERÀPIES. EPIDEMIOLOGIA I PREVENCIÓ	https://www.elpuntavui.cat/societat/article/14-salut/1776458-institut-catala-de-recerca-de-l-aigua-icra.html
	apr-20	English	News media	General	Fiware4Water	[mentioning SW in newsletter]	https://public.message-business.com/emailing/56581/1/r16pohauuumiqimfubommoqbhmuyggfoaai/emailing.aspx
	apr-20	English	Video	Göteborg	Future City Foundation	Online get-together with SCOREwater	https://www.youtube.com/watch?v=NjZpZ1WFla8
	apr-20	English	News media	Barcelona	ICT4water & Future City Foundation	The power of 'sewage sociology'	https://preview.mailerlite.com/v7v4w5/139118106556079044711i0/
	apr-20	Catalan	Online	Barcelona	IERMB	NOTÍCIESL'IERMB comença una recerca sobre l'ús de tovalloletes d'un sol ús durant el confinament per la situació del COVID-19	https://iermb.uab.cat/ca/noticias/iermb-comenca-una-recerca-sobre-lus-de-tovalloletes-dun-sol-us-durant-el-confinament-per-la-situacio-del-covid-19/
	apr-20	English	Online	General	Mark and Focus Volume 3, Issue 1	digital-water.city: a European project to leverage the potential of data and digital technologies for urban water management (p44-49)	https://issuu.com/markandfocus/docs/mark_and_focus_vol_3_issue_1
	apr-20	English	Online	Amersfoort	SCOREwater	Key insights from the workshop on 'Digital Twins'	https://scorewater.eu/news/14
	apr-20	English	Online	Göteborg	SCOREwater	Developing a water resilient city with sensor data	https://scorewater.eu/news/16
	mei-20	Catalan	News media	Barcelona	Diari de Girona	L'ICRA investiga si les depuradores eliminen el coronavirus	https://www.diaridegirona.cat/comarques/2020/05/22/icra-investiga-depuradores-eliminen-coronavirus/1044500.html
	mei-20	Dutch	Online	Amersfoort	SCOREwater	Amersfoort workshop	https://scorewater.eu/news/17
x	jun-20	English	Online	General	SCOREwater	SCOREwater year 1 update (PDF)	https://bit.ly/scorewateryear1
x	jun-20	Dutch	Online	Amersfoort	Tygron, Florian Witsenburg	Klimaat adaptief ontwerpen van het Stationsgebied van Amersfoort; Hoe een Digital Twin kan helpen.	https://www.tygron.com/nl/2020/06/15/klimaat-adaptief-ontwerpen-van-het-stationsgebied-van-amersfoort-hoe-een-digital-twin-kan-helpen/
	jun-20	English	Online	Barcelona	SCOREwater / City of Barcelona	Survey - sanitation practices during the COVID19 confinement	https://scorewater.eu/news/18
	jun-20	English	Online	General	SCOREwater	The importance of SCOREwater according to the European Commission	https://scorewater.eu/news/21
	jun-20	English	Interview	General	SCOREwater / s::can	Behind the sensors - Interview with Jordi Raich	https://scorewater.eu/news/22
	jun-20	English	Online	General	SCOREwater	the importance of sensor validation	https://scorewater.eu/news/23
	jun-20	Other	Video	Amersfoort	Tygron	Video on digital twin station area Amersfoort	https://youtu.be/84mq7znKzLc
x	jul-20	Dutch	Online	Amersfoort	Amersfooort Duurzaam .nl	SCOREwater & Meet je Stad! gaan bodemvocht meten	https://amersfoortduurzaam.nl/nieuws/1716228.aspx
	jul-20	Dutch	Online	Amersfoort	SCOREwater	SCOREwater & Meet Je Stad gaan bodemvocht meten in Amersfoort	https://scorewater.eu/news/24
	jul-20	English	Online	General	SCOREwater / Aqua3s	Intensified collaboration between EU water projects	https://scorewater.eu/news/25
	jul-20	Swedish	Online	General	Universeum	Ett projekt för smart vattenhantering i storstäder	https://www.universeum.se/hallbar-varld/scorewater/

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	Date	Language	Type	City	Source	Title	URL
x	aug-20	Catalan	Online	Barcelona	Ajuntament de Barcelona	Barcelona impulsa projectes internacionals per analitzar l'impacte del coronavirus en el cicle de l'aigua	https://ajuntament.barcelona.cat/premsa/2020/08/04/barcelona-impulsa-projectes-internacionals-per-analitzar-limpacte-del-coronavirus-en-el-cicle-de-laigua/
x	aug-20	Catalan	Video	Barcelona	betevé	Barcelona analitza la presència de covid-19 a les aigües de bany i residuals	https://beteve.cat/societat/barcelona-analitza-coronavirus-aigua-bany-residuals-estacions-platja/
	aug-20	Catalan	News media	Barcelona	aldia.cat	Coronavirus.- Barcelona analitza la presència de Covid-19 en les aigües residuals i de bany	https://www.aldia.cat/catalunya/noticia-coronavirus-barcelona-analitza-presencia-covid-19-les-aigues-residuals-bany-20200804133313.html
	aug-20	Spanish	News media	Barcelona	betevé	Barcelona analitza la presència de covid-19 a les aigües de bany i residuals	https://beteve.cat/societat/barcelona-analitza-coronavirus-aigua-bany-residuals-estacions-platja/
	aug-20	Catalan	News media	Barcelona	Catalunyapress	La alcaldesa Ada Colau se marca faroles con el Covid-19 para justificar su desprecio al talento local	https://www.catalunyapress.es/texto-diario/mostrar/2049950/alcaldesa-ada-colau-marca-faroles-covid-19-justificar-desprecio-talento-local
	aug-20	Catalan	News media	Barcelona	El País.cat	Barcelona analitza les aigües per detectar els brots de covid	https://cat.elpais.com/cat/2020/08/04/catalunya/1596555561_505006.html
	aug-20	Spanish	News media	Barcelona	iagua	Análisis del SARS-CoV-2 en aguas residuales: los proyectos de 6 ciudades españolas	https://www.iagua.es/noticias/redaccion-iagua/analisis-sars-cov-2-aguas-residuales-proyectos-6-ciudades-espanolas
	aug-20	Spanish	News media	Barcelona	La Razón	Barcelona analizará la calidad del agua para detectar brotes de coronavirus	https://www.larazon.es/cataluna/20200804/ocj76zlawrehrh76c5d5wsrnx4.html
	aug-20	Catalan	News media	Barcelona	La República	Barcelona impulsa projectes internacionals per analitzar l'impacte del coronavirus en l'aigua de la ciutat	https://www.larepublica.cat/minut-a-minut/barcelona-impulsa-projectes-internacionals-per-analitzar-limpacte-del-coronavirus-en-laigua-de-la-ciutat/
	aug-20	Spanish	News media	Barcelona	La Vanguardia	Barcelona analiza su agua para anticiparse a los brotes de coronavirus	https://www.lavanguardia.com/local/barcelona/20200805/482680932901/barcelona-agua-brotes-covid.html
	aug-20	Catalan	News media	Barcelona	NacióDigital	Barcelona analitza l'impacte del coronavirus en l'aigua de la ciutat	https://www.naciodigital.cat/noticia/206894/barcelona/analitza/impacte/coronavirus/aigua/ciutat
x	sep-20	Dutch	News media	Amersfoort	AD.nl - Amersfoort	Meetkastjes in de stad helpen in de toekomst natte voeten voorkomen in Amersfoort	https://www.ad.nl/amersfoort/meetkastjes-in-de-stad-helpen-in-de-toekomst-natte-voeten-voorkomen-in-amersfoort~a4e71e93/
x	sep-20	English	Online	General	Business Reporter	FIWARE is powering up cities across the board	https://business-reporter.co.uk/2020/09/03/fiware-is-powering-up-cities-across-the-board/
x	sep-20	English	Online	Amersfoort	Meet Je Stad	Soil moisture sensor locations and data	https://meetjestad.net/en/Soil_Moisture
x	sep-20	Dutch	News media	Amersfoort	Stadszaken.nl	In Amersfoort meten inwoners zelf voor de klimaatadaptieve stad	https://stadszaken.nl/artikel/2996/in-amersfoort-meten-inwoners-zelf-voor-de-klimaatadaptieve-stad
	sep-20	English	Online	General	17 Global Goals	FIWARE is powering up cities across the board	https://17globalgoals.com/fiware-is-powering-up-cities-across-the-board/
	sep-20	Dutch	Online	Amersfoort	Data-en Kennishub Gezond Stedelijk Leven	Gemeente Amersfoort en Meet Je Stad leggen netwerk van sensoren aan	https://gezondstedelijklevenhub.nl/nieuws-en-agenda/nieuws/gemeente-amersfoort-en-meet-je-stad-leggen-netwerk.html
	sep-20	Other	Online	General	EGM	Greencities 2020 – Digitalising the Future of Water	https://www.egm.io/greencities-2020-digitalising-the-future-of-water-4
	sep-20	English	Online	General	FIWARE	FUTURE CITIES: SMART, RESILIENT, INCLUSIVE AND SUSTAINABLE	https://www.fiware.org/2020/09/17/future-cities-smart-resilient-inclusive-and-sustainable-the-fiware-our-future-water-white-paper-is-out/
	sep-20	English	Online	General	Future City Foundation	Building a smart society	https://future-city.nl/eng/
	sep-20	English	Online	General	SCOREwater	Smart Cities are not only about technology	https://scorewater.eu/news/26
	sep-20	Dutch	Online	Amersfoort	SCOREwater	SCOREwater en Citizen Science in Amersfoort	https://scorewater.eu/news/27
	sep-20	Dutch	Online	Amersfoort	SCOREwater	De gemeente Amersfoort en Meet Je Stad leggen een netwerk van sensoren aan in de stad	https://scorewater.eu/news/28
	sep-20	Dutch	Newsletter	Amersfoort	Stadszaken.nl - newsletter	In Amersfoort meten inwoners zelf voor de klimaatadaptieve stad	https://stadszaken.nl/artikel/2996/in-amersfoort-meten-inwoners-zelf-voor-de-klimaatadaptieve-stad
	okt-20	English	Newsletter	General	FIWARE	Sponsor of the FIWARE newsletter of October 2 2020	
	okt-20	Dutch	Online	Amersfoort	Ondernamen.nl	HOEFAKKER LEVERT SENSOREN EU-PROJECT SCOREWATER AMERSFOORT	https://ondernamen.nl/hoefakker-levert-bodemvochtsensoren-en-klimaatsensoren-eu-project-scorewater-amersfoort/
x	nov-20	English	News media	Barcelona	CGTN	Barcelona 'smart' sewers could flush out key virus information	https://newseu.cgtn.com/news/2020-11-23/Barcelona-smart-sewers-could-flush-out-key-virus-information-VDe3Qy48JW/index.html
x	nov-20	English	Video	Barcelona	CGTN	Barcelona's smart water plan for sewers	https://newseu.cgtn.com/news/2020-11-23/Barcelona-smart-sewers-could-flush-out-key-virus-information-VDe3Qy48JW/index.html
x	nov-20	English	Online	Amersfoort	Meet Je Stad	Soil moisture Prototypes and Experiments	https://www.meetjestad.net/en/Soil_moisture_Prototypes_and_Experiments
	nov-20	English	Video	Barcelona	Frontline	Is it possible to predict future pandemics by analyzing waste water?	https://www.facebook.com/FrontlineStoriesFromReporters/videos/394038158415361/
	nov-20	Dutch	Online	Amersfoort	Meet Je Stad	Eerste Meet je Stad bodemvocht prototypes geplaatst in het kader van SCOREwater	https://www.meetjestad.net/nl/Eerste_Meet_je_Stad_bodemvocht_prototypes_geplaatst_in_het_kader_van_SCOREwater
	nov-20	English	Online	Amersfoort	NWP (Netherlands Water Partnership)	Water in the climate resilient city	https://www.netherlandswaterpartnership.com/events/water-climate-resilient-city
	nov-20	English	Online	Göteborg	Talkpool AG	Smart water quality management in Gothenburg: SCOREwater and Talkpool	https://talkpool.com/smart-water-quality-management-in-gothenburg-scorewater-and-talkpool/
x	dec-20	English	Online	Amersfoort	Meet Je Stad	Soil moisture Data Analysis	https://www.meetjestad.net/en/Soil_Moisture_Data_Analysis
x	dec-20	English	Online	General	SCOREwater	Citizen Science within a Horizon 2020 project	https://scorewater.eu/news/32
	dec-20	English	Online	General	Aeopas	Descripition of project & link to SW website	https://www.aeopas.org/en/i-d-i/
	dec-20	English	Newsletter	General	ICT4Water	About the 'Synergy Group Digital Water 2020'	https://preview.mailerlite.com/h2f3e1/1577587544290236051/r6v0/
	dec-20	English	Online	General	KTH Royal Institute of Technology	Projects on AI and digital twins in water management: Open Water and Scorewater	https://www.kth.se/en/abe/inst/philhist/historia/omoss/nyheter/projects-on-ai-and-digital-twins-in-water-management-open-water-and-scorewater-1.1037670
	dec-20	English	Online	Barcelona	SCOREwater	Deployment of the Poblenou Sampling Station in Barcelona	https://www.scorewater.eu/news/31
	dec-20	English	Online	Barcelona	SCOREwater	Deployment of the Poblenou Sampling Station in Barcelona	https://scorewater.eu/news/31
	dec-20	Dutch	Newsletter	Amersfoort	Stedelijk Interieur	Article in newsletter: In Amersfoort meten inwoners zelf voor de klimaatadaptieve stad	https://mailing.elbamedia.nl/mailcamp/webversion.php?subid=y8ygn39l1vrot03&ccode=np3ed3w0lqyla05kvrnr90z0h75xknk40kdihoqz2xrd8z8g6c0nnnoerxz1fxw1v&lid=rz99k&nstatid=y7kni71w7&nid=g7yv32e4k&statid=y7kni71w7&info=n3wxdg2
	jan-21	English	Online	Göteborg	SCOREwater	Smart water quality management in Gothenburg: SCOREwater and Talkpool	https://scorewater.eu/news/33
x	feb-21	English	Online	General	European Innovation Council and SMEs Executive Agency (European Commission)	Paper: The need for digital water in a green Europe; EU H2020 projects' contribution to the implementation and strengthening of EU environmental policy	https://op.europa.eu/s/pInJ
x	feb-21	English	Online	Göteborg	SCOREwater / IVL	A new and innovative way to measure turbidity	https://scorewater.eu/news/35
x	feb-21	Dutch	News media	Amersfoort	Stadszaken.nl	Samenwerken in de slimme stad: 'We leven niet meer in een tijd waarin elke gemeente zelf het wiel uitvindt'	https://stadszaken.nl/artikel/3348/we-leven-niet-meer-in-een-tijd-waarin-elke-gemeente-zelf-het-wiel-uitvindt
	feb-21	Catalan	Video	Barcelona	Life Ecosens Aquamonitrix	Jornada sobre Monitorización, análisis y gestión inteligente del agua Ponencia H2020 Scorewater	https://youtu.be/xjO3pdaDD4
	feb-21	English	Online	Barcelona	SCOREwater	Wastewater Fingerprinting - How healthy is your city?	https://scorewater.eu/news/36

x	mrt-21	English	Video	Amersfoort	SCOREwater	Webinar on 'How to collaborate with citizens in creating climate resilient cities?'	https://vimeo.com/528271016#t=334s
	mrt-21	English	Online	Amersfoort	SCOREwater	Citizen science keeps the feet dry in Amersfoort	https://scorewater.eu/news/38
	mrt-21	English	Online	Amersfoort	SCOREwater	Recap & recording of citizen science webinar March 25	https://scorewater.eu/news/39
	mrt-21	Dutch	News media	Amersfoort	Stadszaken.nl	Hoe betrek je burgers bij de klimaatadaptieve stad?	https://stadszaken.nl/agenda/hoe-betrek-je-burgers-bij-de-klimaatadaptieve-stad
x	apr-21	English	Academic	Barcelona	Sustainability, volume 13 - issue 7 (Journal)	Journal entry: Sediment Level Prediction of a Combined Sewer System Using Spatial Features	https://doi.org/10.3390/su13074013
x	apr-21	English	Academic	Amersfoort	University of Twente, Raphaël Kilsdonk	Master thesis: Predicting flooding due to extremeprecipitation in an urban environment using machine learning algorithms	https://www.utwente.nl/en/et/wem/education/msc-thesis/2021/kilsdonk.pdf
	apr-21	English	Online	General	Climate ADAPT	Description of the SCOREwater project	https://climate-adapt.eea.europa.eu/metadata/projects/smart-city-observatories-implement-resilient-water-management
	apr-21	Dutch	Online	Amersfoort	Provincie Utrecht	PDF | Europa investeert in de provincie Utrecht Overzicht 2015-2020	https://www.provincie-utrecht.nl/sites/default/files/2021-05/Europa%20investeert%20in%20de%20provincie%20Utrecht%20Overzicht%202015-2020%20%28april%202021%29.pdf
x	mei-21	English	Academic	Barcelona	Environment International, Volume 150 (Journal)	Journal entry: Showcasing the potential of wastewater-based epidemiology to track pharmaceuticals consumption in cities: Comparison against prescription data collected at fine spatial resolution	https://www.sciencedirect.com/science/article/pii/S0160412021000283
x	mei-21	English	Online	Göteborg	FIWARE	Description of the Gothenburg case of SCOREwater in the First Edition of the FIWARE4Cities Booklet	https://www.fiware.org/2021/05/19/the-first-edition-of-the-fiware4cities-booklet-is-out/
x	mei-21	English	Video	Göteborg	SCOREwater	Webinar on 'Solving stormwater pollution at construction sites'	https://vimeo.com/545006578#t=84s
	mei-21	English	Online	Göteborg	Aqua publica europa	Promotion of the SW webinar	https://www.aquapublica.eu/event/bcasa-scorewater-event-solving-stormwater-pollution-construction-sites
x	jun-21	Catalan	News media	Barcelona	Lína - el diari metropolità	Un estudi per detectar la presència del virus a les aigües de Barcelona	https://liniaxarxa.cat/noticies/un-estudi-per-detectar-la-presencia-de-covid-19-a-les-aigues-de-barcelona/
x	jun-21	English	Online	General	SCOREwater	SCOREwater year 2 update (PDF)	https://bit.ly/Year2Update-internal
x	jun-21	English	Video	Barcelona	SCOREwater	Webinar on 'Decrypting wastewater information'	https://vimeo.com/554512379#t=128s
	jun-21	English	Online	Barcelona	Aqua publica europa	Promotion of the SW webinar	https://www.aquapublica.eu/event/bcasa-scorewater-event-decrypting-wastewater-information-online-10-june
	jun-21	Catalan	Online	Barcelona	IERMB	Comença el treball de camp de l'enquesta ScoreWater per obtenir informació sobre els hàbits de vida i salut a tres barris de Barcelona	https://iermb.uab.cat/ca/noticies/treball-camp-enquesta-scorewater/
	jun-21	Catalan	Online	Barcelona	SCOREwater / City of Barcelona	Enquesta sobre hàbits de vida i salut a Barcelona	https://scorewater.eu/news/42
	jun-21	Spanish	Online	Barcelona	SCOREwater / City of Barcelona	Encuesta sobre hábitos de vida y salud en Barcelona	https://scorewater.eu/news/43
	jun-21	English	Online	Göteborg	SCOREwater	Year 2 update Göteborg - Water-safe infrastructure projects	https://scorewater.eu/news/45
	jun-21	English	Online	Barcelona	SCOREwater	Year 2 update Barcelona - Resilient sewer systems through sewer sociology	https://scorewater.eu/news/47
	jun-21	English	Online	Amersfoort	SCOREwater	Year 2 update Amersfoort - Climate resilience and flood prevention	https://scorewater.eu/news/46
	jun-21	English	Online	Amersfoort	Utrecht Region	SCOREwater mentioned as one of the innovative projects of Utrecht Region	https://invest.utrechtregion.com/en/rci
x	jul-21	Spanish	Video	Barcelona	CGTN	La digitalización del alcantarillado en Barcelona generará beneficios para las necesidades de la ciudad	https://espanol.cgtn.com/n/2021-07-22/FFdDIA/la-digitalizacion-del-alcantarillado-en-barcelona-genera-beneficios-para-las-necesidades-de-la-ciudad/index.html
x	jul-21	Dutch	Online	General	Future City Foundation	Het EU project SCOREwater komt met concrete oplossingen om de leefbaarheid van de stad te verbeteren	https://future-city.nl/scorewater-verbetert-leefbaarheid-van-de-stad/
x	jul-21	English	Interview	General	SCOREwater / Civity	The challenges of building a data platform - interview with Bas Vanmeulebrouk	https://scorewater.eu/news/48
x	jul-21	English	Online	Amersfoort	SCOREwater / HydroLogic	Flood alarm developed	https://scorewater.eu/news/50
x	jul-21	English	Online	General	SCOREwater / Universeum	Feeding data into educational programs - Launch of the 'Water World' by Universeum	https://scorewater.eu/news/49
	jul-21	Dutch	Online	General	LinkedIn group "Samen Klimaatbestendig" (+-4000 followers)	On the second year update of the SCOREwater project	https://www.linkedin.com/posts/samenklimaatbestendig_het-eu-project-scorewater-komt-met-concrete-activity-6825684282191691776-tl8B

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ANNEX 5 – STOCKTAKING

A final Annex of stocktaking was included in all Deliverables of SCOREwater produced after the first half-year of the project. It provides an easy follow-up of how the work leading up to the Deliverable has addressed and contributed to four important project aspects:

1. Strategic Objectives
2. Project KPI
3. Ethical aspects
4. Risk management

STRATEGIC OBJECTIVES

Table 2 lists those strategic objectives of SCOREwater that are relevant for this Deliverable and gives a brief explanation on the specific contribution of this Deliverable.

Table 2. Stocktaking on Deliverable's contribution to reaching the SCOREwater strategic objectives.

Project goal	Contribution by this Deliverable
SO4 "Demonstrate benefits of smart water management for increased water-system resilience against climate change and urbanisation by applying the SCOREwater approach in 3 high-profile, large-scale, cross-cutting innovation demonstrators across Europe."	This deliverable is about sharing the lessons. It is about sharing the solutions that are developed by the project partners. The focus is on the methods used for dissemination and communication of the results.
SO6 "Increase citizen involvement and engagement in the transition to a water-smart, resilient society by increasing the public perception of the value of water and public engagement and commitment"	Reaching visitors of Universeum through exhibitions like *Water World* and school programs designed for gaining knowledge about the properties and cycles of water. Using Twitter and LinkedIn also helps in increasing involvement of the stakeholders.

PROJECT KPI

Table 3 lists the project KPI that are relevant for this Deliverable and gives a brief explanation on the specific contribution of this Deliverable.

Table 3. Stocktaking on Deliverable's contribution to SCOREwater project KPI's.

Project KPI	Contribution by this deliverable
KPI 17 - Number of visitors in science center installations, school programs and serious game on sustainable water use.	This clearly happened through the developments of the programs by Universeum. With the launch of the digital exhibit Water World the combination between learning and playing a game has been made.
KPI 20 - Number of external stakeholder groups identified and approached	All the different means of communication, the different types of posts, videos, articles published on different channels are all aimed at reaching different kinds of stakeholders. Currently we have approached 12 different groups.

ETHICAL ASPECTS

Table 4 lists the project's Ethical aspects and gives a brief explanation on the specific treatment in the work leading up to this Deliverable. Ethical aspects are not relevant for all Deliverables. Table 4 indicates "N/A" for aspects that are irrelevant for this Deliverable.

Table 4. Stocktaking on Deliverable's treatment of Ethical aspects.

Ethical aspect	Treatment in the work on this Deliverable
Justification of ethics data used in project	N/A
Procedures and criteria for identifying research participants	N/A
Informed consent procedures	We use a disclaimer when inviting people to join SCOREwater related events.
Informed consent procedure in case of legal guardians	N/A
Filing of ethics committee's opinions/approval	N/A
Technical and organizational measures taken to safeguard data subjects' rights and freedoms	Secure internal way of sharing information through Sharepoint (created by IVL) People don't have to share any data when attending a SCOREwater livestream, since there is no need to login into third-party software.
Implemented security measures to prevent unauthorized access to ethics data	N/A
Describe anonymization techniques	N/A
Interaction with the SCOREwater Ethics Advisor	N/A

RISK MANAGEMENT

Table 5 lists the risks, from the project's risk log, that have been identified as relevant for the work on this Deliverable and gives a brief explanation on the specific treatment in the work leading up to this Deliverable.

Table 5. Stocktaking on Deliverable's treatment of Risks.

Associated risk	Treatment in the work on this Deliverable
Few Attendance (work plan 7.4)	We managed to attract enough visitors to the online events, however we do notice that people are getting a bit tired of online events in general. We managed to reach enough visitors through actively making use of the networks of the partners. The *Water World* gets less visitors than hoped for. Measures employed by Universeum is upping the marketing budgets.

Not enough input from the cases (work plan 7.4)	Since this deliverable is about sharing the lessons learned, delays in the case studies really impacts what we can do in this deliverable. There were some delays in WP4 -the case studies- which result that the communication team does not always have the most interesting news to be shared. Resulting in less posts and less visitors to the project website and social media channels.