D6.3 Fiware4Water Newsletter #1

Natacha Amorsi, OIEau

March 2020
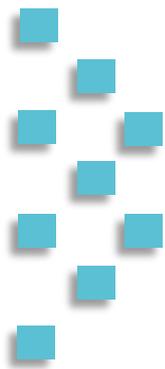
Disclaimer

This document reflects only the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

Intellectual Property Rights

Project Consortium

Document Information

Programme	H2020 – SC0511-2018
Project Acronym	**Fiware4Water**
Project full name	FIWARE for the Next Generation Internet Services for the WATER sector
Deliverable	**D6.3: Fiware4Water Newsletter #1**
Work Package	**WP6:** **Ecosystem building for communication and dissemination strategies and activities**
Task	Task 6.1: Communication and dissemination of project outcomes
Lead Beneficiary	P1: OIEau
Author(s)	Natacha AMORSI (OIEau)
Contributor(s)	Alberto Abella (Fiware), Angeles Tejado (Fiware)
Quality check	Alberto Abella (Fiware)
Planned Delivery Date	M9 (29/02/20)
Actual Delivery Date	M10 (13/03/20)
Dissemination Level	Public (Information available in the Grant Agreement)

Revision history

Version	Date	Author(s)/Contributor(s)	Notes
Draft1	14/02/20	Natacha Amorsi (OIEau)	
Draft2	21/02/20	Natacha Amorsi (OIEau)	Add a section on the link between Fiware and Fiware4Water / modification of the infographic of the project / update of SWW article
Final version	13/03/20	Natacha Amorsi (OIEau)	Integration of remarks

Table of content

I. Introduction

D6.3 Fiware4Water e-newsletter #1 aims at explaining the structure of the three e-newsletters that will be prepared over the time frame of the project (section II) and presenting the content of the first e-newsletter (section III). Each e-newsletter will be conceived in the way to present the latest development of Fiware4water. They are complementary to the communication activities made through the social networks (fiware4water twitter and LinkedIn), and regular updates of the project website.

II. Structure of the e-newsletter

Three e-newsletters are planned over the course of the project at month 9 (February 2020), month 21 (February 2021) and month 33 (February 2022).

The first one aims at presenting the project (the context, objectives and partners) and the preliminary delivery of the project (i.e. in the demo case)

The two others will mainly focus on the delivery of the project, events and liaison with other initiatives.

To provide a well balance content, some of the e-newsletter sections work as a teaser. Some of the sections propose an introduction completed by a "read more" or "more information bottom" redirecting towards Fiware4Water website and providing the full content of the sections.

II.1. Table of content

The e-newsletter will start with a Foreword. The first one is a mean for the coordinator to introduce and welcome to the project. For the two others e-newsletter, the foreword will be carried by a partner in line with the latest development in the project. **A series of article will** follow as listed in the table below

Articles of the e-newsletter #1	Foreseen articles for the e-newsletter #2 #3
Foreword from the coordinator	Foreword from a partner
Fiware4Water in a nutshell	Interviews (with expert and stakeholder)
Why Fiware4water?	Update on the demo case (#2: DC1 Greece and DC 3 Netherlands / #3 DC3 (France)
What are the links between Fiware And Fiware4Water	Update on the demo network
Fiware4Water objectives and concept	The view of the Advisory board
Fiware4Water method	Save the dates
Demo Case #4: Smart meters and customers, SouthWestWater (UK)	Liaison activities
Feedback on the collaboration with EPANET	How to get involved?
Want to learn more, look at the first series of Fiware4Water webinars	
Save the date: meet at FIWARE summit	
Liaison activities	
How to get involved?	

II.2. Targets

The e-newsletters aim at reaching all the 6 main targets of the project: water utilities, SMEs ((developers & equipment providers), River basin organisations, Industrials users, Academia and Citizens & consumers (see the 6.1 Communication and dissemination strategy towards a smart society for a more detailed description of the Fiware4Water's targets).

II.3. Release of the e-newsletters and planning

In order to be compliant with the RGPD directive, a registration form will be created on Fiware4Water website. The e-newsletter will be sent to all Fiware4Water partners (that already have given their consent to receive the document). Then, the partners will use their own networks to disseminate the e-newsletter or invite contacts to register on the website. The promotion of the release of e-newsletter will also be made through the project social networks (Twitter @Fiware4Water and LinkedIn @euprojectFiware4water) and the partners' ones.

The creation of the registration form and the online newsletter accessible from Fiware4Water website is planned second/third week of mars 2020. Right after the newsletter will be sent to fiware4water partners and promoted on social networks.

III. Content of the first Fiware4Water e-newsletter

As explained in section II, the e-newsletter will provide part of articles. A read more bottom will redirect on Fiware4Water website for the full content of articles.

To distinguish to content of the e-newsletter and the complementary content accessible on the website, a colour system has been used in the following sections: **text in black** corresponds to the content of the e-newsletter, **text in orange** to the complementary content providing on the website.

III.1. Foreword

The first issues of Fiware4Water newsletter is for us the opportunity to embark you on the project's journey which aims at the end of the 3 years (2019-2022) to deliver a digital single market for smart water services. Fiware4Water is on its way to develop an additional component to the FIWARE Platform aiming at accelerating the development of smart solutions.

Fiware4Water has officially started in May 2019 and being launched at Fiware4Water first General Assembly held in Brussels on the 10 of June. One key objective of the first 6 months or so was to deliver the end-users, demo case and innovation requirements. The results are nowadays available on our website (https://www.fiware4water.eu/deliverables). Their analysis will be delivered very soon, focusing on a gap analysis that will bring out the final requirements. So Fiware4Water reference architecture, smart applications and devices development can start in the closest possible way with the 4 cases studies.

The articles that have been prepared for this newsletter aim at giving you the general picture of the project, explain the link between Fiware and Fiware4Water as well as bring an update on the latest activities. We invite you to visit our website (www.fiware4water.eu) and follow us on LinkedIn and Twitter to get more details.

We hope you will enjoy your reading and we will be pleased to answer any of your Fiware4Water questioning (fiware4water@oieau.F).

Gilles Neveu, coordinator, on behalf of Fiware4Water consortium

III.2. Fiware4Water in a nutshell

Objective

Link the water sector to FIWARE by demonstrating its **capabilities** and the specific potential of its **interoperable and standardised** interfaces for both water sector end-users (cities, water utilities, water authorities, citizens and consumers) and solutions providers (private utilities, SMEs, developers), seen as an innovation ecosystem, by building and demonstrating a series of **complementary** and **exemplary paradigms,** and by promoting an EU and global wide **network of users.** It will create the *Fiware4Water* **ecosystem,** demonstrating its **technical, social** and **business** innovative potential**.**

3 years
2019-2022

14 partners,
experts in ITC, water and social sciences, coordinated by OIEau

Contact
fiware4water@oieau.fr
.@Fiware4Water
www.fiware4water.eu

4 Demo Cases
Athens Water Supply and Sewerage (GR)
Cannes Water Distribution System (FR)
Amsterdam Wastewater Treatment (NL)
Smart metering (UK)

3 Demo Networks
Municipal Governments
Policymakers and managers
SMEs and innovators

III.3. Why Fiware4Water?

The prerequisite of Fiware4Water is to lever the barriers of the water digital sector that is facing a low level of maturity in the integration and standardization of ICT solutions, in the business processes of these solutions and relative implementation of legislative framework, as described by the ICT4Water cluster.

The related needs are how to exploit the value of data for the water sector, how to develop and test robust and cyber-secured systems, how to create water-smart solutions and applications how to ensure interoperability and higher information capacity and how to design tailored solutions addressing a real need such as optimisation, prediction, diagnosis, real-time monitoring.

III.4. What are the links between Fiware and Fiware4Water?[1]

FIWARE Open APIs for Open Minds	FIWARE MISSION	FIWARE Community
A curated framework of open source platform components which can be integrated together and with third components to ease development of smart solutions in multiple sectors	Drive the definition of public, royalty-free and implementation-driven standards laying the foundation for an open, sustainable and innovation-driven ecosystem bringing opportunities for all	Those engaged in achieving the FIWARE mission, contributing to the technology or the development of the ecosystem, making it sustainable over time

FIWARE (https://fiware.org) is a curated framework of open source components which can be assembled together and with other third-party components to accelerate the development of Smart Solutions (https://developer.fiware.org). The main and only mandatory component of any "Powered by FIWARE" platform or solution is the FIWARE Orion Context Broker (OCB), which brings a cornerstone function in any smart solution - the need to manage context information, enabling to perform updates and bring access to context. Building around the FIWARE Context Broker, a rich suite of complementary FIWARE components (Generic Enablers) are available, dealing with:

- Interfacing with the Internet of Things (IoT), Robots and third-party systems, for capturing updates on context information and translating required actuations.
- Context Data/API management, publication and monetization, implementing the expected smart behavior of applications and/or assisting end users in making smart decisions.
- Processing, analysis, and visualization of context information, bringing support to usage control and the opportunity to publish and monetize part of managed context data.

From the FIWARE architecture, at least five major benefits for the water domain will be developed by **Fiware4Water**: (i) Bringing water into cross domain applications (ii) using standardised interfaces, models and methods also for interoperability (iii) revealing the power of data (iv) integrating seamlessly legacy system (v) boosting innovation in the water domain.

Fiware4Water is making a strong step forward towards the consecution of digital water challenges, linking the physical and the virtual worlds, converting data coming from sensors, and combining it with information from other systems, value chains and domains. FIWARE provides technology enablers which simplify the generation of effective knowledge, and the deployment of personalised smart applications. These will maximise the water data value by providing collective and collaborative management of the water resources, considering side-effects at cross-domain.

III.5. Fiware4Water objectives and concept

To tackle the barriers and related needs of the water digital sector, Fiware4Water aims at creating the Fiware4Water ecosystem and prove its innovative technological, social and business potential by linking the water sector to FIWARE (the open and license free smart solutions platform).

---

[1] Link on the website for the section "What are the links between Fiware and Fiware4Water?: https://bit.ly/2QayTmE

Fostering a Digital Single Market for Smart Water Services

III.6. Overview of Fiware4Water demo cases[2]

The Fiware4Water project is based on 4 demo cases dealing with specific aspects of digital water. The Greek demo case explores the raw water supply optimisation, the French demo case deals with the water distribution system management, the Dutch demo case is about intelligent control for wastewater and finally and the English demo case focusses on smart metering and citizen engagement.

III.7. A word from SouthWestWater in charge of the Smart Meters and Customers demo case (UK)

Our demo case is well underway; the IoT communications network is installed, residents and business owners are on board, smart meters are in the ground and the data is being analysed. I'm pleased to say that we are already more proactively identifying and fixing leaks that our customers weren't aware of and on average we are forecasting that our customers would save £327/year on their water bill.

All of the above has been achieved the old fashioned way (apart from the IoT smart meter of course), i.e., through in-person customer engagement, manual data analysis, bill comparison and consumption letters and phone calls. The next step is where FIWARE comes in. Our aim is to digitise this process within FIWARE to prove that the above (and more) can be achieved digitally. If we are successful, then we are confident we can make this a viable business as usual process for our wider customer base which will mean the benefits we are seeing can be realised across our entire region.

The project in numbers:

1No. Sigfox IoT communication network

100No. Domestic smart meters

5No. Commercial smart meters (high resolution loggers)

4No. Large customer leaks identified and repairs (c.1,000 litres/day each)

1No. Large commercial leak identified (est. >2,500 litres/day)

344No. Customer water efficiency visits completed (average water saving 60 litres/day)

>70%   Customers saving money (£327 average saving, £860 largest saver)

---

[2] Link to the website for the section "Overview of Fiware4water demo case": https://bit.ly/2QcEWY5

III.8. Feedback on the collaboration with EPANet

Digital transformation is all about connecting the physical world to digital solutions. As a water engineer and a consultant for water utilities and start-up companies, I often see, on one hand, the huge amount of data being collected by the water utilities, and on the other hand, the difficulties connecting it to available smart digital solutions. When I was asked to serve on the External Advisory Board of the Fiware4Water H2020 research project, I saw the opportunity to help bridge this gap. The project aims to utilize the FIWARE platform capabilities to allow water utilities and authorities to publish their data in a standardized way, and for solution providers to interact with the data via open API architecture. Two of my passions are water engineering and open source software. By contributing to the open source EPANET project I'm able to combine the two (EPANET is an industry-standard program for modelling the hydraulic and water quality behaviour of water distribution system pipe networks). The Centre for Water Systems in the university of Exeter UK, which is one of the Fiware4Water project partners, developed a revised version of the program, EPANET-p, which extends its capabilities to include pressure driven demands. During the first project's general assembly, held on November 2019 in Amsterdam, we arranged for a side meeting to discuss ways for real-time water simulation using EPANET-p combined with the FIWARE platform. The technologies planned to be developed in the project will be demonstrated on real-world test cases with challenging objectives such as: forecast and manage water demands, reduce leakage, optimal operations of water and wastewater systems and enhance citizen engagement regarding their household demand. All of these digital solutions heavily relay on different sensor data, provided via the FIWARE platform, and include flow, water quality, and pressure readings. I'm thankful for the opportunity to have a role within the project and hope it will benefit from my experience

Elad Salomons

III.9. Want to learn more, look at the first series of Fiware4Water webinars[3]

Fiware4Water participated to the organisation of a series of webinars to raise awareness on FIWARE, Water Data models & EPANET. All the sessions were successful with a participation between 35 to 53 persons. The three webinars are available on line.

Webinar #1 - FIWARE Ecosystem for water management (Monday November 25th 9:30-10:30CET). Purpose of the session was to provide participants with a global understanding of the FIWARE offer and pointers to further exploit this platform capabilities.
- **Overview of the FIWARE ecosystem: Fernando Lopez (FIWARE Foundation)**
  To understand the FIWARE architectural paradigm and overall ecosystem (catalogue of enablers, the labs, data models, the community)
- **Example of interaction with a NGSI-LD broker: Benoit Orihuela (EGM)**
  To understand how to interact with a FIWARE broker, using the latest Linked Data evolution of the interface specification (NGSI-LD)

---

[3] Link on the website for the section "Want to learn more": Link : https://bit.ly/2vSoNQJ

Webinar #2 - Data models for water management (Tuesday November 26th 9:30-10:30CET). Purpose of the session was to present and discuss on-going work in data modelling for water management

- **Overview of existing models for water management: Albert Chen (University of Exeter)**
  Overview of the current landscape of data models in water systems.
- **The SAREF4WATER semantic model: Raúl García Castro (Universidad Politécnica de Madrid)**
  Presentation of the semantic model for IoT management in water systems
- **The NGSI-LD cross domain ontology: Franck Le Gall (EGM)**
  Overview of the NGSI-LD cross domain ontology as a basis to exchange context information across domains.

Webinar #3 - The EPANET Water network simulator (Wednesday November 27th 9:30-10:30CET). The EPANET simulator: Fanlin Meng (University of Exeter). Purpose of the session was to provide participants with a global understanding of the EPANET water network simulator

Contact: Franck LE GALL, franck.le-gall@eglobalmark.com

III.10. Save the dates[4]

4-8th May 2020: Join Fiware Foundation at the IFAT World's Leading Trade Fair for Water, Sewage, Waste, and Raw Materials Management!

FIWARE Foundation will be running shows on May 5 (13-17h) and May 6 (10-13h) in the Federal Association booth of KOMMUNAL 4.0. We will be more than pleased to showcase together on stage expertise, technology trends and use cases around WATER.

23-24th June 2020: With the support of #F4W, an agreement has been reached with the #FIWARE foundation to host a Smart Water Technical Workshop during the forthcoming FIWARE summit in Malaga (https://www.fiware.org/summit/).

The workshop will take place on the 23rd afternoon. The discussions will focus on FIWARE based implementations (planned or on-going) for the water domain.

III.11. Liaison activities[5]

Fiware4Water has been developed within an environment of existing initiatives. The project is part of the ICT4Water cluster (https://www.ict4water.eu/), a hub for EU-funded research and innovation projects on **ICT applied to water management**. Currently, **around 40 projects are members of the cluster**. These are both ongoing projects and projects that were members of the cluster before their completion. In the latter case, the ICT4Water site continues to display links to the projects' webpages and to selected project outcomes (e.g. videos, IT tools open to the public). This permanent link between the cluster and the projects, even after their completion, helps **showcasing project results and supports their dissemination and exploitation**.

F4W has 3 sister projects that have been funded under the same call than Fiware4Water and started in 2019: **Scorewater** (https://www.scorewater.eu/) focussing on the resilience of European cities; **Naiades** (https://naiades-project.eu/) supporting the modernization and digitization of the water sector by providing a holistic solution for the control and management of water ecosystems and **Digital Water.City** (https://www.digital-water.city) aiming at boosting the integrated management of waters

---

[4] Link on the website for the section "Save the dates": https://bit.ly/38Mndgv
[5] Link on the website for the section "Liaison activities" https://www.fiware4water.eu/links

systems in five major European urban and peri-urban areas. The collaboration among the 3 projects and Fiware4Water has been initiated and will start with joint actions such events participations.

III.12.   How to get involved?

Project email: fiware4water@oieau.Fr

Fiware4Water

Website: www.fiware4water.eu