ICT for water - Annual Cluster

19 March 2015
Brussels
avenue de Beaulieu 25 room S 9

Agenda

09:30 – 10:00   Registration

<u>Morning session</u> (1) The scene

10:00 – 10:05	Welcome	Grazyna Wojcieszko
10:05 – 10:20	Water policies/ EIP water - update	CAPITAO Joaquim ENV
10:20 – 10:40	Info on prospective H2020 call (tbc)	Marton Haraszti CNECT
10:40 – 11:00	Update on ICT water Roadmap	Oscar Corcho

<u>Morning session</u> (2) Reports from the workshops & discussion

11:00 – 11:30   Report on ICT water Roadmap - WDDEST; KINDRA

11:30 – 12:00   Report on Smart Cities and Communities/Identification/selection of KPIs -BlueSCities

12:00 – 12:30   Report on Data use and sharing - WaterInnEU, FREEWAT

<u>Afternoon session</u> (3) Update on ICT water Roadmap – input on selected TOPICS

14:00 – 15:15   EFFINET/ ICeWater/ iWIDGET/ WatERP/ UrbanWater

15:15 – 16:30   DAIAD/ ISS-EWATUS/ SmartH2O/ WATERNOMICS/ WISDOM

<u>Afternoon session</u> (4) Discussion

16:30 – 17:00   Common dissemination event

17:00 – 17:30   Discussion/Conclusions

TOPICS

- Identify gaps and propose concrete actions for R&D in the area of ICT and water management
  - Need to deal in a balanced way with real-time and non-real-time data. Real-time data, even if desirable, are not always available because of different factors (device characteristics, manual measurement processes, data privacy, non-disclosure of data by utilities, etc.).
  - Need to supplement case studies data with generated data coming from simulations because data available in case studies may not exhibit all the characteristics needed for developing ICT platforms (e.g., for testing the behaviour against concrete events or scalability).
  - Need to guide and educate on the use of indicators. There are plenty of different indicators that can be used (e.g., for water losses) and people do not always have a clear view which indicator is the best to be used. Selecting a wrong indicator may lead to incorrect interpretations; furthermore, different indicators take into account different perspectives and none of them will satisfy every perspective/stakeholder.
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- Enhance emerging water issues (current and future trends) in terms of interoperability and standardization, including the investigation of the ICT GHG Footprint
  - Projects are looking into existing open source platforms or components to be reused in their developments; one of the drivers for this is to achieve interoperability at the software level. To this end, having common programming interfaces (APIs) would also support interoperability.
  - Data sharing is an issue. Getting data from utilities in projects is a nearly impossible task with current legislation; this problem could be alleviated through policies coming from the European Commission. Furthermore, the terms and conditions under which projects can share data are not clear yet, even if projects are willing to do so.
  - The standardization process goes beyond the projects in the cluster and currently it is not clear either which standards would be necessary or who should take the lead on them. Furthermore, the need for engaging a larger group of stakeholders in any standardization process has been pointed out.

- Identify cost/benefit estimates of problems and solutions
  - Utilities already have these socio-economic studies (e.g., for social classification of users according to their stratification) but they do not disclose them to projects. As a result of this, a lot of effort is spent by projects in this task without having clear benefits of improvement with respect to the current state-of-the-art in industry
- Identify synergies between the proposed solutions and with other related sectors (e.g. transport, energy and smart cities)
- Identify references to on-going policies to map where the highlighted problems and solutions fit in or not

- o there are no clear policies for data sharing with utilities (e.g., water or energy consumption), which makes progress in the projects slower and hinders the evaluation of developments with real data. There was a clear agreement on the need to have more policies coming from the European Commission in this respect.
- o The need for selecting correct indicators in regulations was also highlighted, since there are plenty of different indicators that can be used (e.g., for water losses), each taking into account different perspectives.
- o The role of regulators in the adoption of new standards or policies has been emphasized.

Related initiatives

- **INSPIRE Directive**
  http://inspire.jrc.ec.europa.eu/index.cfm

- **WISE**
  http://water.europa.eu/info

- **EIP on Water**
  http://ec.europa.eu/environment/water/innovationpartnership/

- **EIP on Smart Cities and Communities**
  http://ec.europa.eu/eip/smartcities/

- **A Roadmap "ICT for water" (2014)**
  http://ec.europa.eu/digital-agenda/en/news/ict-water-resources-management-experts-consultation-4022014

Invited:

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ICeWater - to develop infrastructure for smart metering and real-time monitoring of water infrastructures, with the aim of lowering consumption during peak periods, detecting and localising leakages in real-time and optimising the water-energy nexus.
Validation : Milan (IT) and Timisoara (RO).

iWIDGET - to make households more aware of their water consumption patterns and help utilities and ICT industry with the sharing of such information in order to improve their demand forecasting capacities, while also contributing to a sustainable partnership of ICT and water domain stakeholders.
Validation : Barcelos (PT) and Waterwise (Southern Water region UK)

EFFINET - to improve the efficiency of drinking water networks by managing better consumer behaviour via advanced metering, monitoring of user demand profiles, fault detection and predictive control techniques and integration of information stemming from various sources.
Validation: Barcelona (ES) and Lemesos (CY).

WatERP - to develop a web-based, open management platform to enable water supply distribution chains to be managed in a coordinated and customised way, based on open interfaces and standards. The aim is to improve coordination among water management actors and to foster behavioural change in order to reduce water and energy consumption.
Validation : Llobregat river basin (ES) and Leipzig water supply network (DE).

UrbanWater – to integrate advanced metering solutions, real-time communication of consumption patterns with predictive capability, adaptive pricing and customer empowerment tools.
Validation : urban setting in Scotland (UK) and Algarve (PT).

DAIAD - will focus on real-time knowledge of residential water consumption. The goal is to research and develop innovative low cost, inclusive technologies for real-time, high granularity water monitoring and knowledge extraction to incur behavioural changes, water demand strategies and water pricing. Validation : Athens (GR) and Brighton (UK)

ISS-EWATUS – will increase the awareness of water consumption via social media platform (smartphones, tablets) to reduce water consumption and will build a decision support system to reduce leaks. Coupling with adaptive pricing policy and reduction of peaks.
Validation : Skiatos (GR) ; Sosowiec (PL)

SmartH2O - aims at providing an ICT enabled platform to design, develop and implement better water demand management in collecting user behavioural data due to smart meters and an online social participation application (social game). Awareness campaigns and price signals are delivered through the same app to inform the users on how to save water and money.
Validation : Gordola (CH) and London (UK).

WATERNOMICS - will enable the introduction of Demand Response principles and open business models through an innovative human centric approach that uses personalized water data, water availability based pricing, and gamification of water usage statistics.
Validation: Thessaloniki (GR), Milano (IT) and Sochaczew (PL)

WISDOM – will increase user awareness, significant reduction of water consumption, peak-period reduction of water and energy distribution loads, improved resource efficiency and business operations of water utilities due to ICT, and contribute to the improvement of the environmental performance of buildings.
Validation : Cardiff (UK) and La Spezia (IT).

WaterInnEU primary vision is to create a marketplace to enhance the exploitation of EU funded ICT models, tools, protocols and policy briefs related to water and to establish suitable conditions for new market opportunities based on these offerings. WaterInnEU will build upon existing knowledge bases and platforms developed in previous projects but will provide new concepts, connections, and omponents that are essential for a marketplace to work.

KINDRA The overall objective of KINDRA is to create an inventory of this knowledge-base and then use the inventory to identify critical research challenges in line with the implementation of the WFD and new innovation areas within integrated water resources management based on the latest research.

FREEWAT aims at promoting water management and planning by simplifying the application of the Water Framework Directive and other EU water related Directives. FREEWAT will be an open source and public domain GIS integrated modelling environment for the simulation of water quantity and quality in surface water and groundwater with an integrated water management and planning module.

BlueSCities The project Blueprints for Smart Cities aims to develop the methodology for a coordinated approach to the integration of the water and waste sectors within the 'Smart Cities and Communities' EIP. It will identify synergies in accordance with Smart City ideology and compliment other priority areas such as energy, transport and ICT. It will seek to contribute to the achievement of the 20-20-20 objectives.

WIDEST The project has the vision of establishing and supporting a thriving, interconnected ICT for water community to promote the dissemination and exploitation of EU funded activities and results in this area. WIDEST will address its goals through a project-to-project approach and the coordination among relevant stakeholders by means of five objectives.