



IMPROVING THE EFFICIENCY OF
URBAN WATER MANAGEMENT
IN EUROPE



Aude Glénisson

DG CONNECT
European Commission
Smart Mobility and Living

Finding innovative solutions for Europe's water sector: Insights from the ICT4Water Cluster

Water PIPP

10 November 2016
Zaragoza

IMPROVING THE EFFICIENCY OF
URBAN WATER MANAGEMENT
IN EUROPE

7FP Call 2011

**Objective ICT-2011.6.3 ICT for Efficient
Water Resources Management**

3 key building blocks:

Demand management systems,
Decision support systems,
Data management

5 STREPs

ICT4WATER CLUSTER

7FP Call 2013

**Objective ICT-2013.6 Water Resources
Management**

To **pilot and demonstrate** ICT systems and services
for efficient water use and reuse to improve
awareness.

To **induce changes** in **consumer behavior**.

5 STREPs

H2020 call 2014/2015

**Water 4a and 1b- Water Innovation –
Boosting its value for Europe**

EIP water priorities, ICT enabler for positive
impact on the environment, promotion of
interoperability and standardisation

5 CSAs + 5 IAs



IMPROVING THE EFFICIENCY OF
URBAN WATER MANAGEMENT
IN EUROPE

ICT innovative solutions for water management

- EFFINET
- ICEWATER



ICeWater

IMPROVING THE EFFICIENCY OF
URBAN WATER MANAGEMENT
IN EUROPE

- Oriented to WDN manager
- Water-energy nexus
- Decision Support as a Service

- Leakage management
- Resilience
- Demand forecasting
 - ❑ on SCADA (flow) data for pump scheduling optimization
 - ❑ on AMR data for communication to customers
 - ❑ *future applications enabled by AMR data and forecasting*
 - *Cyber security (detecting False Data Injection)*
 - *Online leakage detection*
 - *Simulation «proactive»*



Roadmap 2015/2016 – **MAIN GAPS**

- *Efficient Water use and reuse*
- *Reduce Total Cost of Ownership for water ICT*
- *Big Data, Data Sharing and privacy management*
- *Consumer awareness*
- *Decision Supporting System*
- *Water-energy nexus and Water-food-energy nexus*
- *Standardization*
- *Interoperability*



European Commission

Water providers

Customers


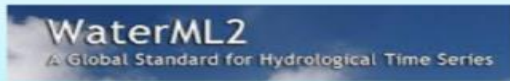
Standard. organisations



Metadata repositories (DCAT-AP, Joinup)



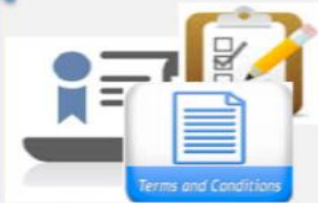
City Information Models and APIs

privacy preservation



terms & conditions



Policy makers



ICT and Urban Water Management: main components required for addressing data sharing, interoperability, standardisation and dynamic adaptive pricing challenges

Roadmap 2016 – **NEW ACTIVITIES**

- *Development of specifications for interoperability and data sharing across services and infrastructures;*
- *Creation of ecosystems of "Platforms for Connected Smart Objects", integrating the future generations of smart devices (i.e. sensors) and network technologies and other evolving ICT advances;*
- *Initiatives on data ownership, free flow of data and on a European Cloud;*
- *Identify, assess and manage Water-Food-Energy interactions;*
- *Provide a market analysis of the water industry in terms of current and foresight integration of ICT solutions and systems*



Roadmap 2016

CONCLUSION

IMPROVING THE EFFICIENCY OF
URBAN WATER MANAGEMENT
IN EUROPE

- *Constantly update the roadmap including the results of the ongoing projects taking into account the current situation;*
- *Stimulate demo-site infrastructures in physical terms of establishing large scale test facilities and in terms of financial packages to mitigate risks of the first takers to launch innovative solutions;*
- *The creation of a borderless Digital Single Market for Water Services.*



More information

ICT4Water Cluster: <http://www.ict4water.eu/>

EFFINET: <http://effinet.eu/>

ICEWATER: <http://icewater-project.eu/index.php?id=000000&spid=en&site=preview>

Roadmaps 2015/2016:

<https://ec.europa.eu/digital-single-market/en/news/emerging-topics-and-technology-roadmap-ict-water-management-august-2016>

European Commission: aude.glenisson@ec.europa.eu