

# Integrated Support System for Efficient Water Usage and Resources Management (ISS-EWATUS)

## ISS-EWATUS

### Resumen:

The project is an interdisciplinary effort of specialists from water management and ICT research to develop an intelligent Integrated Support System for Efficient WATER USAge and resources management (ISS-EWATUS).

The project will develop several innovative ICT methods aiming to exploit the untapped water-saving potential in EU. This main goal will be achieved by developing an innovative, multi-factor system capable to optimize water management and reduce water usage.

### Objetivos:

At household level

- To increase the awareness of water consumption through an Information system for gathering data about water usage. The interpreted data will be presented to household consumers in an understandable way using mobile devices (smartphones, tablets);
- To reduce water consumption through a household decision support system (DSS) for mobile devices. Recommendations regarding water-saving devices and behaviour will be produced;
- To reinforce water-saving behaviour of consumers by means of social interactions among people (also linking consumers and experts of water-saving techniques) through a social-media platform.

At urban level

- To reduce leakages at municipal level through an innovative decision support system for reducing leaks in the water delivery system by the dynamic modifications of pumping and tank filling/emptying schedules;
- To induce water-saving behaviour and reduce peaks in water and energy distribution loads through an adaptive pricing policy as the economic instrument;

### Objetivos contribución:

The UPO partner will contribute to the following objectives:

- Develop a functional, technical and architectural requirement specification.
- Develop DSS, as a piece of software with functional and visual components.
- Support of Hydraulic Simulation of the two Water Supply Systems.
- Prepare a Plan of Validation.
- Developing an installation and configuration dedicated platform.
- Validation processes.
- Final Report of the evaluation process.

### Entregables:

The UPO will contribute to the following deliverables:

- Functional, technical and architectural requirement specification.
- A DSS piece
- Hydraulic Simulation of the two Water Supply Systems.
- Plan of Validation.
- Installation, configuration dedicated platform.
- Report on validation processes.
- Final Report of the evaluation process.

### Impacto:

- Increased user awareness and modified behaviours concerning the use of water (number of positive answers in Q&A questionnaires, number of water-saving appliances bought by water consumers).
- Modified behaviours concerning the use of water (detected number of stable changes in user behaviour, number of water-saving appliances bought by water consumers).
- Increased rate of ICT-innovation in water management companies (increased savings of water management company).

- Peak-period reduction of water and energy distribution loads (number of reduced or weakened peaks in water consumption recognized by the analysis gathered data).

**Presupuesto:** 2,427,585.00

## **Equipo de investigación**

**Nombre:** SISTEMAS Y TECNOLOGÍAS DE LA INFORMACIÓN

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