CETAQUA
NETWORK OF TECHNOLOGY CENTRES
BARCELONA

CSC Conference
Digital Water Panel

MONTSE MUSSONS
12 / 1 / 2017

01
ABOUT CETAQUA

Our mission

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Cetaqua, as a technological center of reference at national and international level, is able to contribute value within the Suez Group in the creation of knowledge and development of technologies related to the water cycle.
Our contribution is especially relevant and innovative in the following fields:

01

WATER RESOURCES MANAGEMENT AND REUSE
Guarantee of supply. Quality in reuse, fit for use. Management of aquifers.

02

SUSTAINABILITY
Water footprint. Circular economy. Life cycle analysis (LCV). Cost of the life cycle (CCV). Cost-benefit analysis (CBA).

03

WATER 4.0
Robotics. Sensors. IoT. Mobility. Data analytics. Big data. Artificial intelligence.

In addition, Cetaqua offers a TERRITORIAL SUPPORT, involving local actors, support to the concessionaries and the own trustees in order to propose innovative solutions in the integral water cycle.

Lines of work

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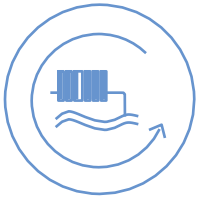
MANAGEMENT OF ALTERNATIVE WATER RESOURCES AND REUSE

- Drinking water treatment technologies
- Regeneration and Reuse
- Preservation of groundwater and recharge
- Climate services and watershed management



SANITATION AND VALORIZATION

- Aerobic treatments
- Anaerobic digestion
- Add-on wastewater treatment processes
- Recovery and valorization of water resources
- Treatment and recovery of gases

SUSTAINABILITY

- Circular economy
- Enviromental and socio-economic impacts and risks
- Management of demands and customers
- Natural environment and biodiversity

QUALITY

- Advanced control of microorganisms
- Advanced chemical compound control
- Impact on customers and environment

WATER 4.0

- Smart solutions: IOT & Smart cities
- Big Data & Data Analytics

NETWORKS

- Monitoring, automation and control
- Smart Operations
- Smart Asset Management

CETaqua also chairs WssTP's WG on Water & ICT

02
SMART CITIES & DIGITAL WATER

Challenges & Solutions:

1. Information for cities and citizens
2. Water resources management
3. Resilience of critical infrastructure

1. Information for Cities and Citizens

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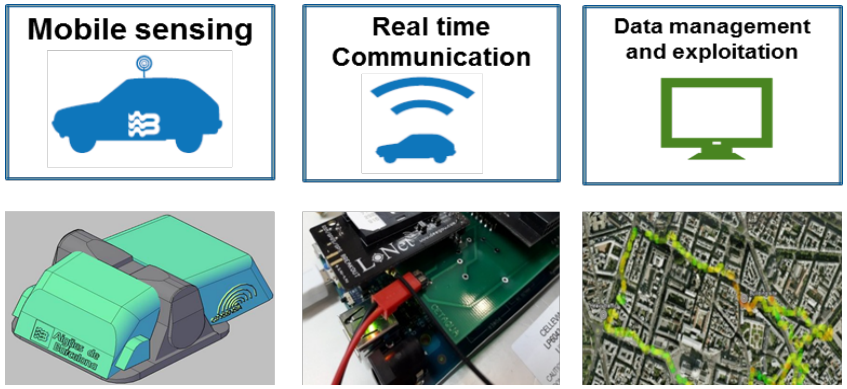
CITYSENSIA

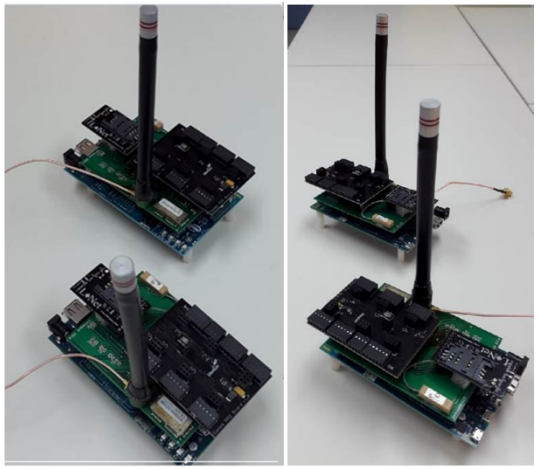


Mobile sensing of air quality parameters: Acquisition, transmission, management, visualization and statistical analysis of data.

Development of a multi-layer software platform to manage **high volume** and **data diversity** from low-cost sensors to foster new digital services in the framework of smart cities.

Real time mobile IoT sensoring system through GPRS communication.

IOT 169



IoT with Ultra Narrowband High Power RF Module at 169MHZ

Integration and evaluation of a VHF 169MHZ wireless communication component on the prototype device developed within the CitySensia project.

2. Water Resources Management

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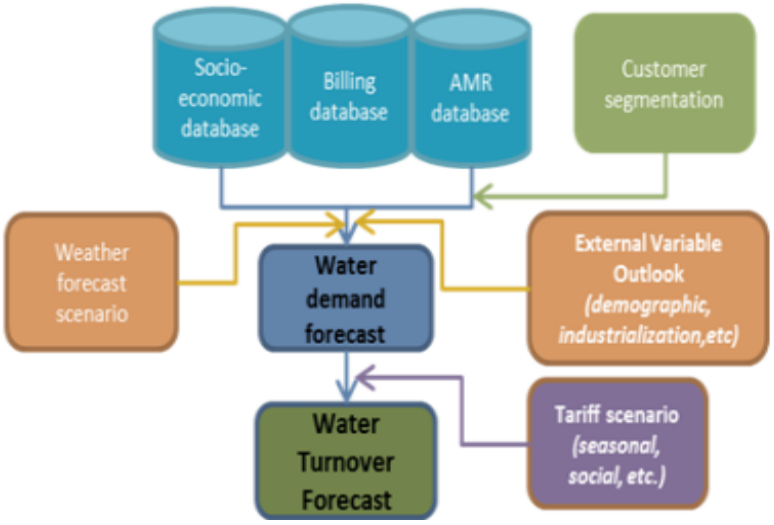
AQUADEMAND



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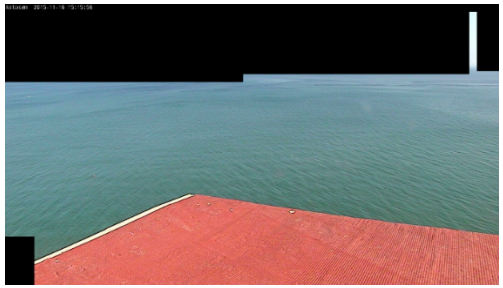

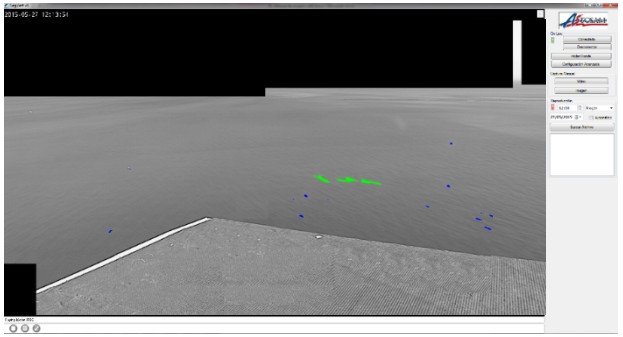

3. Resilience of City Infrastructure

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- Provide innovative models and tools to multisectorial end-users facing climate change challenges to build more resilient cities

- The holistic approach of the urban resilience will enable city managers and urban systems operators to decide the optimal investments to cope with future situations

- Cities studied: Barcelona, Bristol and Lisbon

HORIZON 2020

RESCCUE

RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS.

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Thank you!

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