



ADAPTIVE MICROFLUIDIC - AND NANO - ENABLED SMART SYSTEMS FOR WATER QUALITY SENSING

ICT4Water Cluster Session

WssTP, Water Innovation Europe

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June 14th ,2016



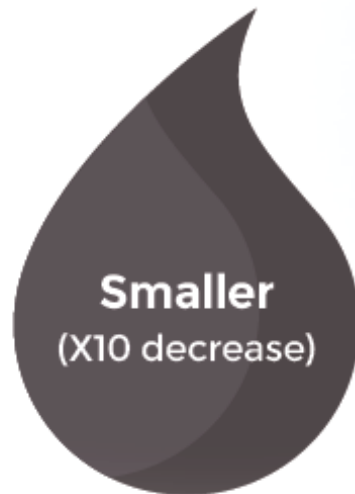
Brussels, Belgium

www.proteus-sensor.eu



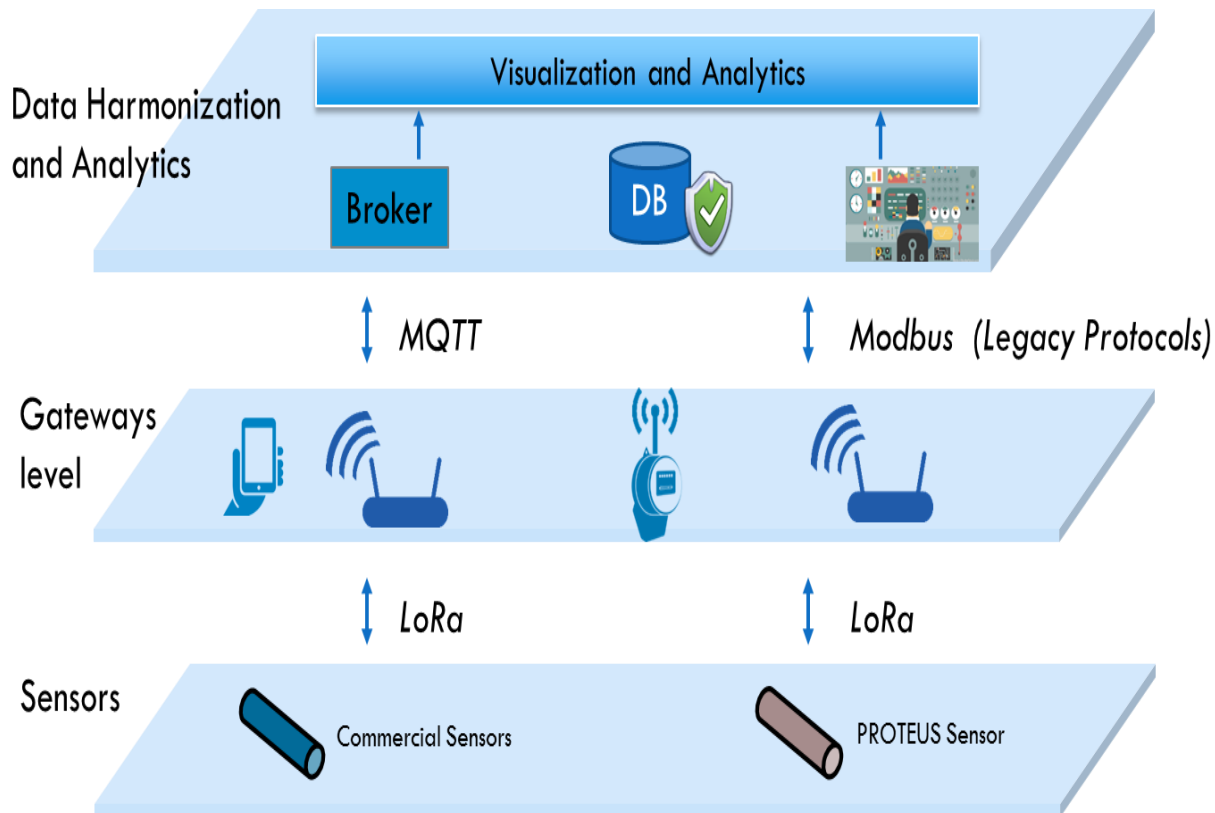
Overview

Delivering an **autonomous,**
highly **multifunctional MEMS- and nano-enabled**
sensor node for **adaptive and cognitive**
drink & waste water quality monitoring.



ICT Water Standards & Data Harmonization

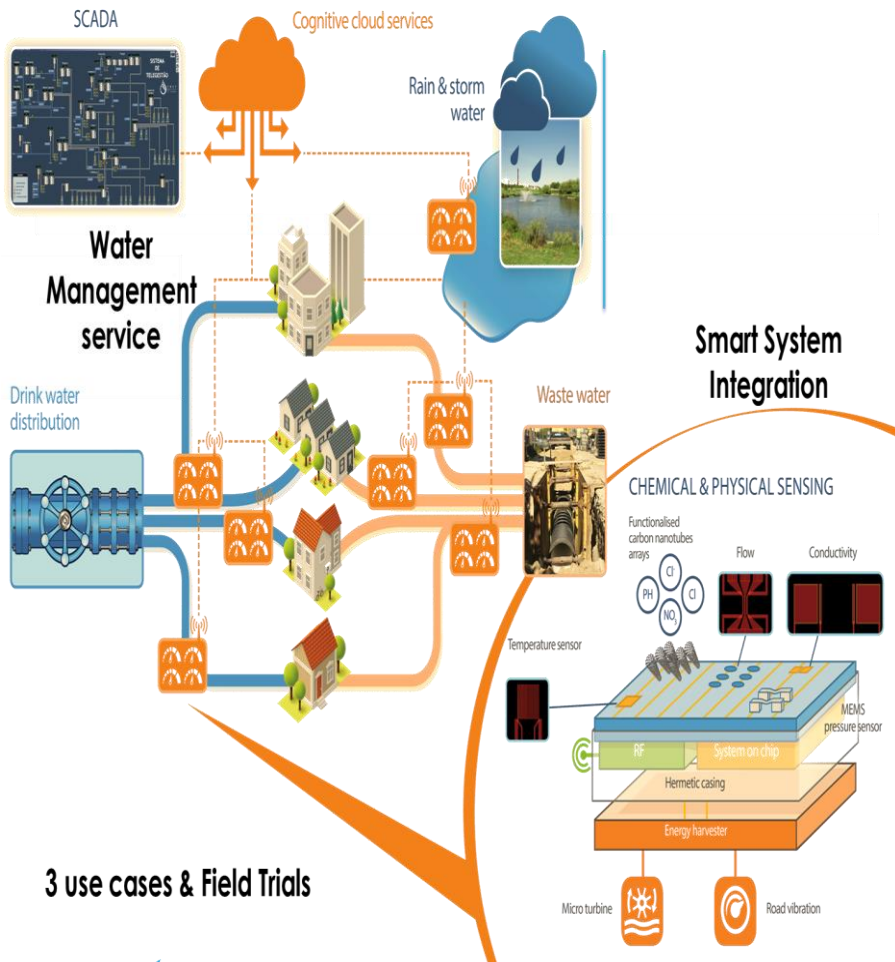
ICT Standards



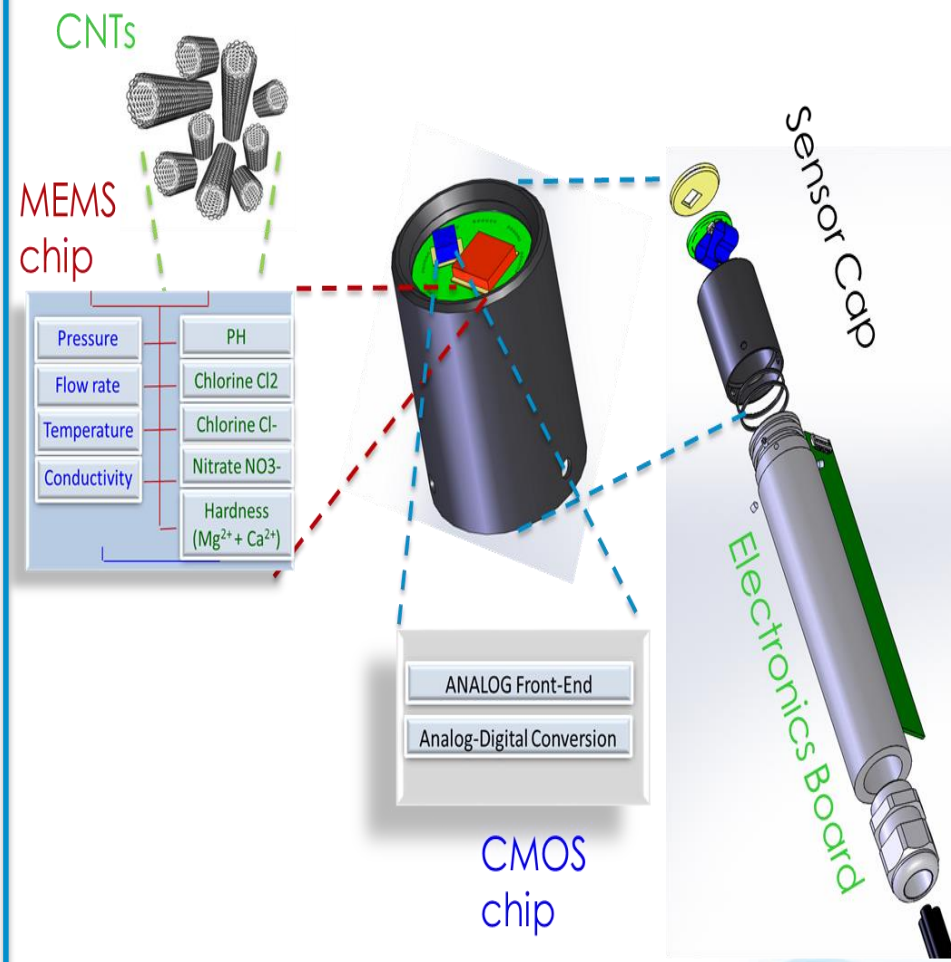
Water Quality Standards

- Compatibility with the already existing systems (PLC, RTU, SCADA, Big data systems).
- Compliance with different standards, such as: ISO-7888: conductivity, ISO-7393: Chlorine
ISO- 10523: pH
- Electronics and housing: ETSI EN 301 489 – 7, ETSI EN 301511 and EN 60950-1 : EMC – ERM compatibility, BS EN 60529, 1992: Specifications for degrees of protection (IP68)

Next Revolution of Water Infrastructure: Road to Water 4.0



3 use cases & Field Trials



Proteus view

ICT role in water governance and legislation

- The expectation on the revision of the water quality directive is that it will change the paradigm of quality management, forcing the implementation of Water Safety Plans (as annexes II and III already reviewed have come to advocate).
- Preventive management is largely based on the analysis of critical points and on obtaining in real time the main parameters indicators.
- The tools that will accompany risk management should be increasingly adaptive and incorporate intelligence through predictive modeling.
- As with safety, safety is of increasing importance in the water sector, which implies greater monitoring of water networks



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