



Engineering, Consultancy and Innovation

for the Water and ICT Sectors

Aqua-Consult Ingenieros, S.L. (A-CING) is a Spanish engineering and consultancy company, focused in advanced technologies and modern management procedures for the **WATER** and **ICT** fields since 2003. A-CING belongs to **TPF GROUP**, with more than 3.000 employees and permanent branch offices in 4 continents.

Water & ICTs

Hydraulic and water quality
Modelling

Engineering services for
Planning, Operation &
Control Management

Decision Support Systems

Operator Performance Audit



INNOVATION
Collaborative projects



Smart Cities

Aggregated Indicators

Interoperability of technologies

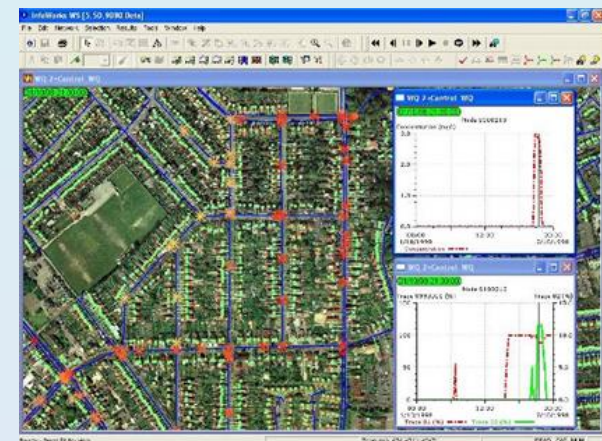
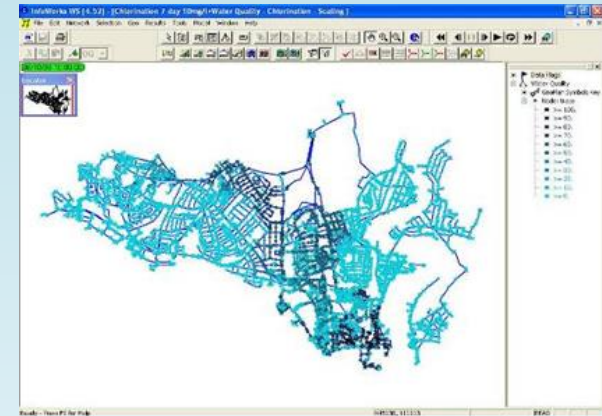
Satellite Networks

Wireless Sensor Networks and
Tele control

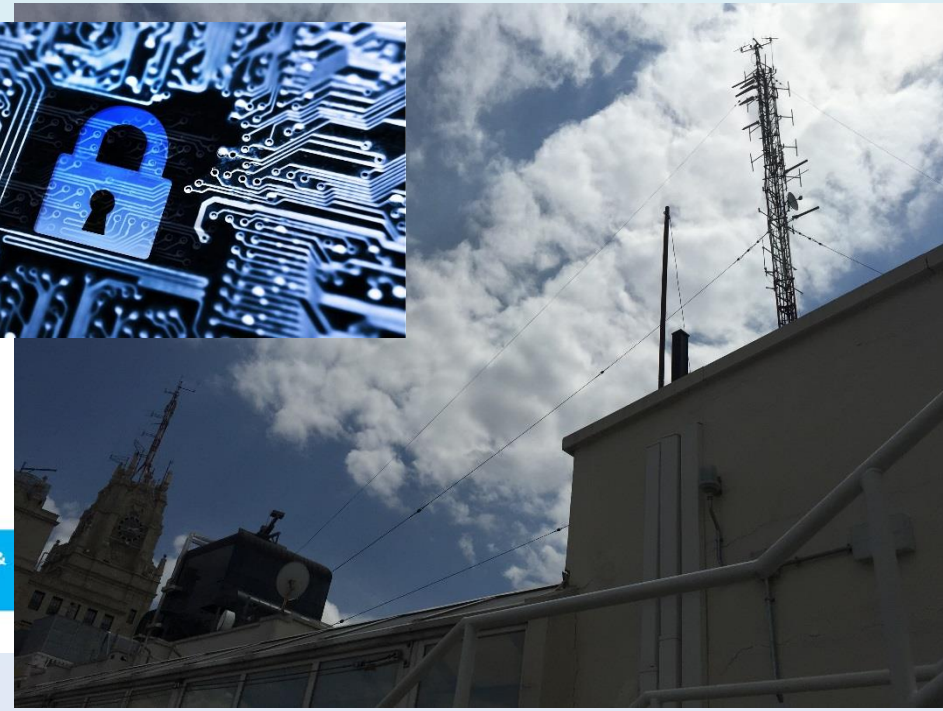
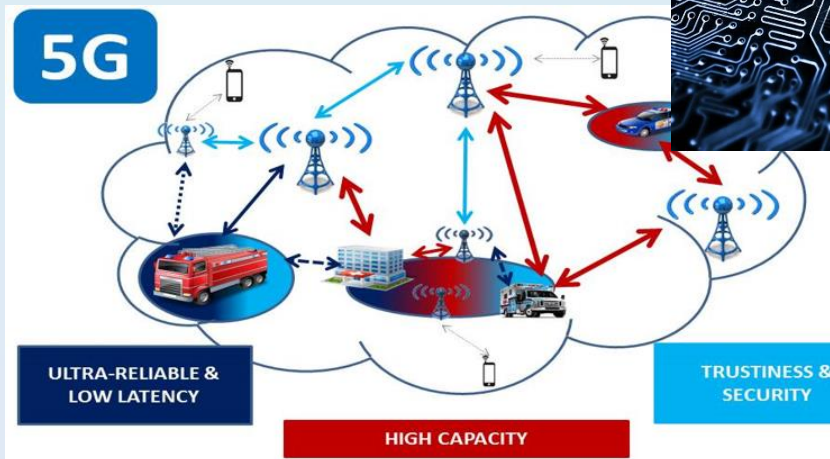
Radio Spectrum Planning and
Management



- **Water supply networks risks and impact assessment**
- **Water quality modelling**, for water quality assessment and management of pollution events. Counter measurements modelling
- **Hydraulic modelling** for network performance assessment
- **Modelling and Decision Support Systems (MDSS).**
- **Data analysis and visualization.** spatial data analysis and visualization, transformation and mapping. Geographic Information systems (GIS).
- **Water management and governance** (Regulation policies).



- ICT tools for assessment of **water networks resilience**
- **New security challenges** for protecting critical water infrastructures
- **Interoperability** of next generation technologies for public safety and security
- Regulatory policies regarding **new frequency sharing schemes**
- **Coexistence of multi-radio systems** in complex scenarios: Interference analysis
- **New generation emergency networks**
- **Web applications**
- **Monitoring and Sensoring**



EFFECTIVE AGGREGATED INDEX DESIGN

SINGLE INDICATORS GENERATION

+

MATHEMATICAL RATING AGGREGATION MECHANISMS



CIBER SECURITY

70

VANDALISM

60

ATTACKS

81

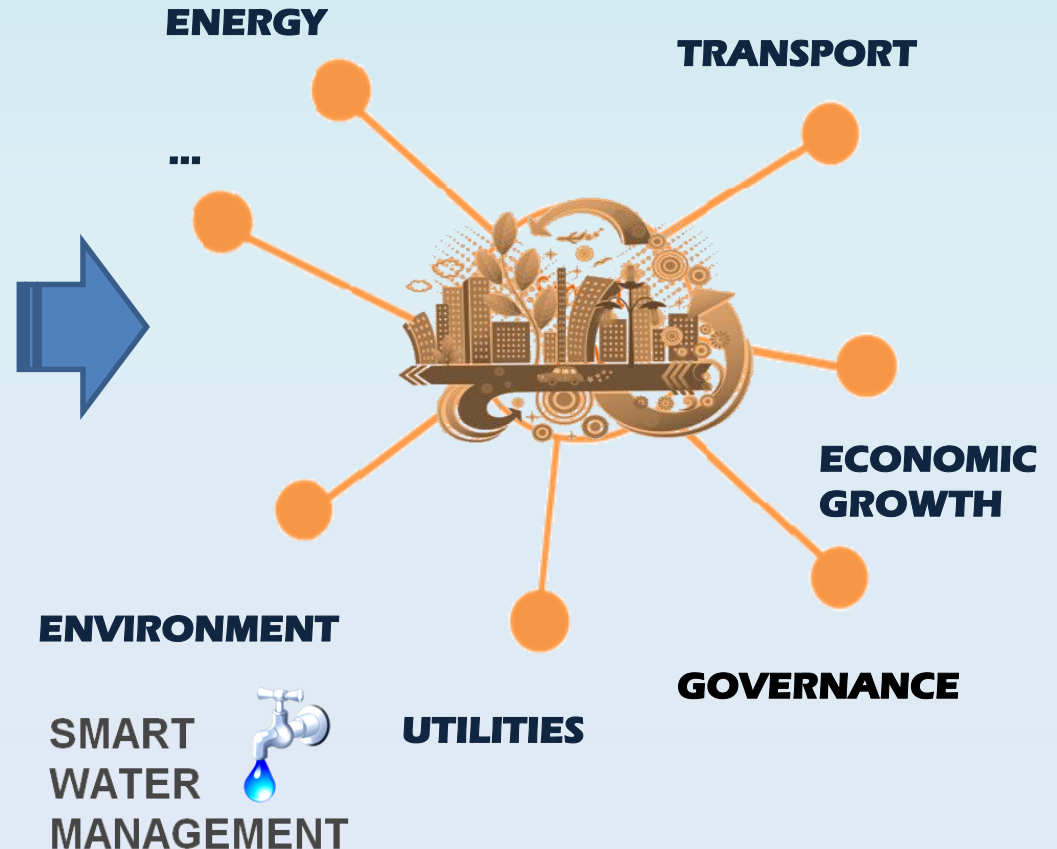
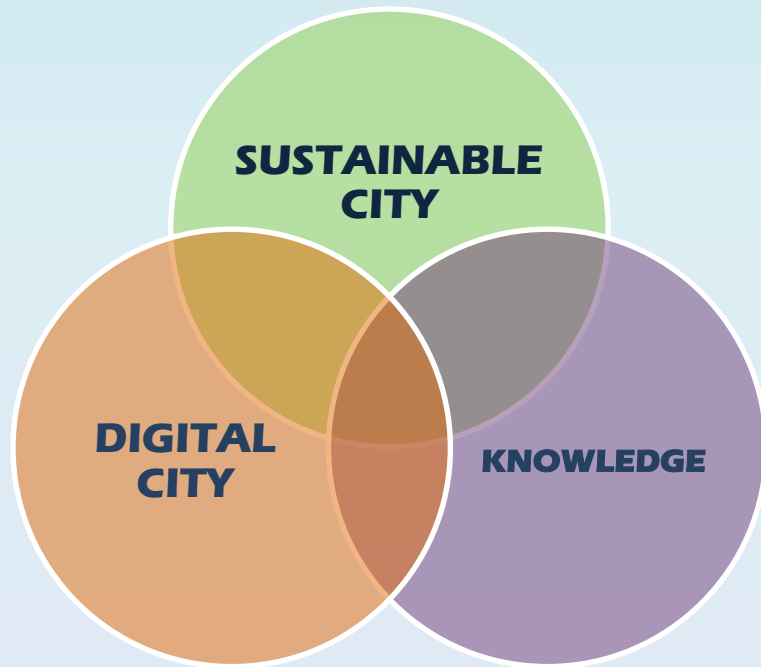
NATURAL
DISASTERS

55

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A-CING staff has participated in the development of several **Strategic Smart City Plans** providing **performance indicators and metrics, data analysis and decision support tools** to enhance the Smart City management.





AENOR



- **iMETLAND, H2020, water-1a-2014:** *A new generation of Microbial Electrochemical Wetland for effective decentralized wastewater treatment systems*
- **ClusMED, FP7-ICT-10.3.** *Reinforcement of ICT Regulations and ICTs for tackling Societal Challenges links in Europe and Mediterranean countries*
- **Global ITV, FP7-ICT-2013-EU-Brazil.** *Interoperability of Interactive and Hybrid TV systems - A new advanced scheme for future services and applications in a global environment*
- **SMART WETLAND** (National INNPACTO call). *Tele control 2.0: advanced monitoring and controlling of natural spaces.*
- **BRIOSistemas** (National INNPACTO call). *Development of a bio-sustainable Bryophyte envelop for buildings*
- **PAVIREX** (National INNPACTO call). *New more secure paviments facing extreme wheather conditions.*
- ACING's staff has been involved in several other projects MAPEER SME, Avista, NEMi, 4NEM, FutureNEM, Mossa, sISI, FISi, MAR2, iCOAST, FIELD_AC, NEPTUNE, etc.

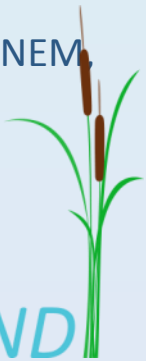


ClusMED

GLOBALITV



**SMART
WETLAND**



A-CING research and consultancy roadmap in the field of Secure Society:

- Development of secure environment for water infrastructures, including integral secure axis for infrastructure, processes and controls as well as special attention to those parts included in the critical infrastructure protection protocols.
- Development of secure audit for companies managing, supervising, surveilling water infrastructures.
- Diagnosis of the secure readiness for the water infrastructure. Analysis of risks and prevention measures
- Immersive use of ICT technologies for the enhancement of the water and sanitary infrastructures
- Disaster relief protocols for emergency situations

A-CING is - mainly - interested in the following ongoing Secure societies H2020 calls:

- DRS 6 - Crisis management topic 6: Addressing standardisation opportunities in support of increasing disaster resilience.
- DRS 12 - Critical Infrastructure Protection topic 1: Critical Infrastructure “smart grid” protection and resilience under “smart meters” threats.
- DRS 14 - Critical Infrastructure Protection topic 3: Critical Infrastructure resilience indicator - analysis and development of methods for assessing resilience
- DRS 18 - Communication technologies and interoperability topic 1: interoperable next generation of broadband radio communication system for public safety and security
- DS 3 - The role of ICT in Critical Infrastructure Protection

Thank you!

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