A holistic water ecosystem for digitisation of urban water sector

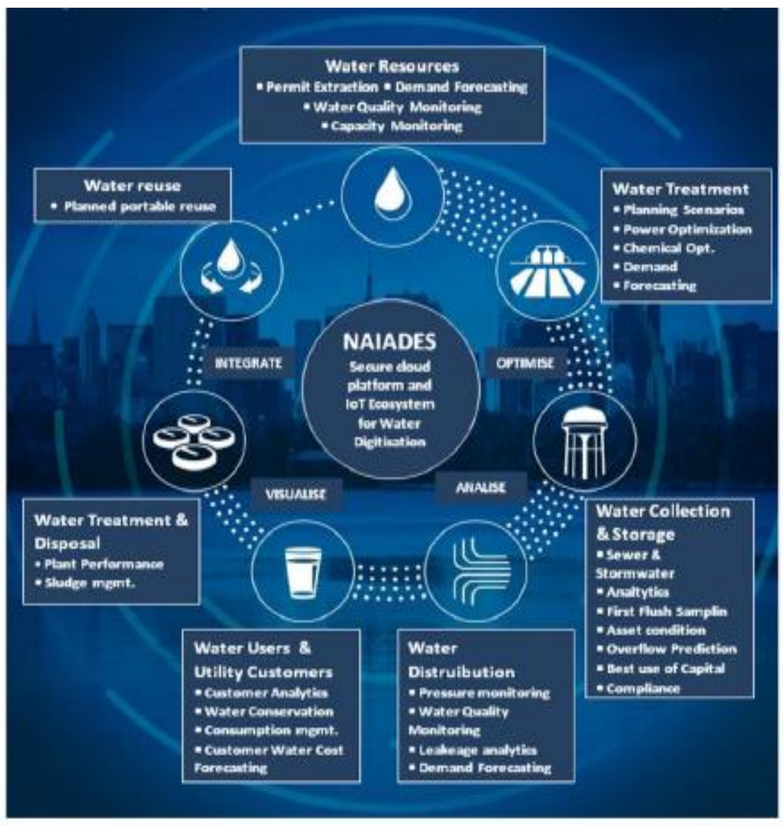
Problem

Access to good quality water is essential for people, nature and economic activities. But freshwater sources are increasingly at risk from a variety of natural and human-induced stressors, including population growth, climate change land-use changes and pollution.

Objectives

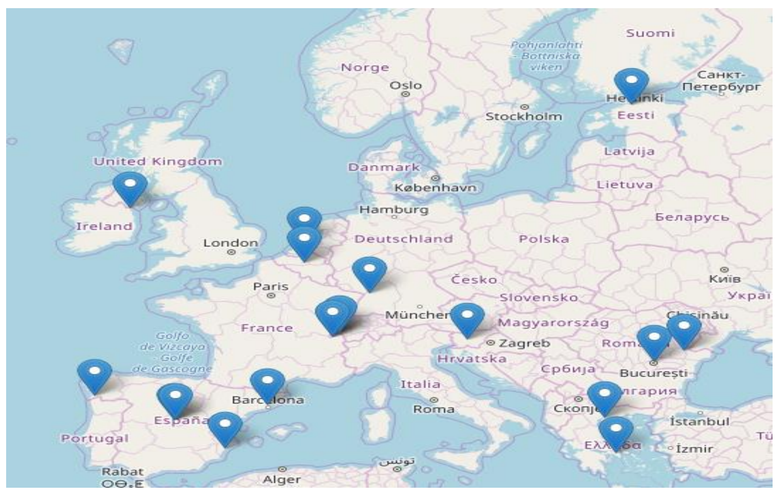
NAIADES Ecosystem envisions transforming urban water management through automated and smarter water resource management and environmental monitoring. NAIADES aims to:

- Address the increased need for sustainable and eco-friendly water methodologies defining a new ICT framework.
- Provide multidimensional intelligence on the water ecosystem through the introduction of Artificial Intelligence technologies



NAIADES framework

Partners:



The project

NAIADES's vision is to support the modernization and digitization of water sector by providing a holistic solution for the control and management of water ecosystems. NAIADES aims to address the increased need for sustainable and eco-friendly water methodologies and redefines water management.

NAIADES covers four application domains:

Water consumption and efficiency

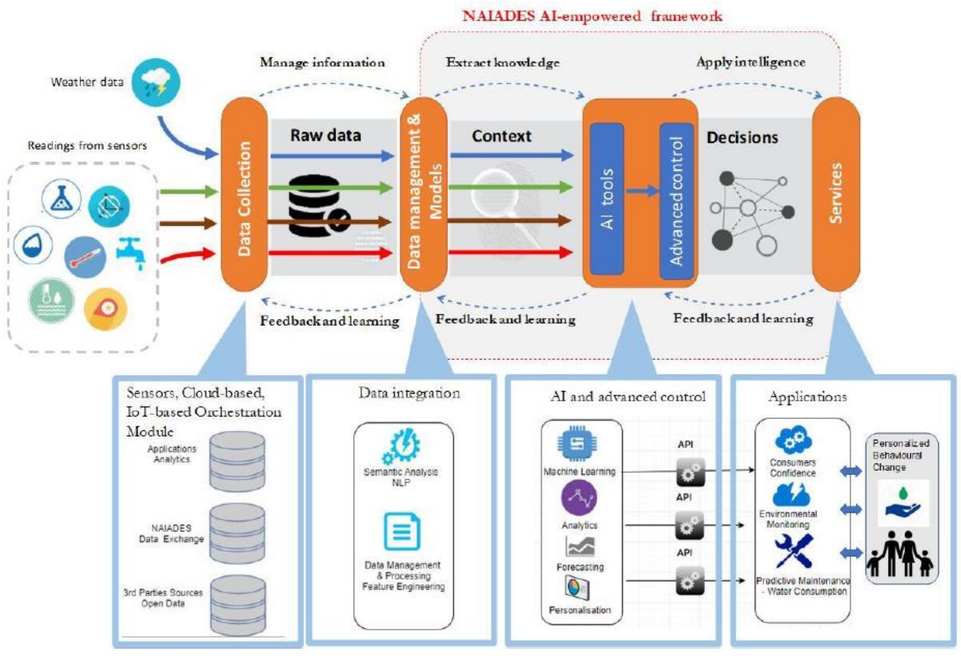
Confidence of water consumers

Safety and reliability

Personalized persuasive feedback and services

NAIADES Intelligence Framework

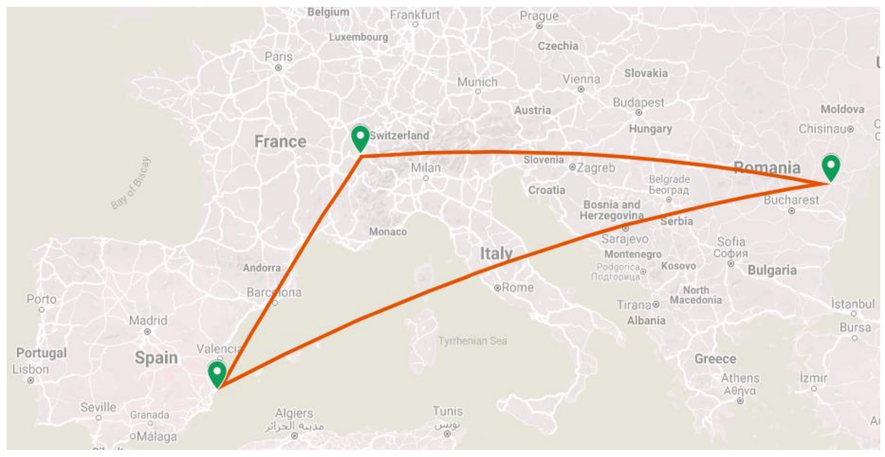
The Intelligence Framework of the proposed integrated solution comprises a number of interconnected technological components:



Intelligence Framework

- Data Collection, integration and Fusion Middleware
- Advanced Data Mining Engine
- The core Machine Learning and control Development Environment
- The NAIADES Decision Support tool-Migration and Counteraction Platform
- AI-driven services
- Communication platform
- Blochain Auditing mechanism
- NAIADES AI Marketplace

Pilot Use Cases



NAIADES will validate the proposed technology framework through pan-European demonstrations in water management areas, cycles and value chains and use cases aiming to present the high adaptability and flexibility of the proposed solution. For that reason several pilots will be deployed in the last part of the project. The proposed ecosystem and business framework will be validated through demonstrations in 3 areas Alicante, Brăila and Carouge.

Impact

- Gives the floor to technology partners to introduce novel optimized and integrated approaches to potential end users.
- Facilitates an opportunity to innovative European companies to join forces with incumbent European industries for the delivery of advanced technology solutions in a niche domain.

Project Partners

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