# Water Monitoring & Prediction Sistem

HORIZON-CL6-2024-ZEROPOLLUTION-02-1-two-stage: Holistic approaches for effective monitoring of wáter quality in urban areas

AMBLING INGENIERIA Y SERVICIOS
Sergio Miguel Galán.
Chief Research and Development Officer

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# Who we are

## COMPANY

Engineering, Services and Innovation in the Water sector. AMBLING has significant know-how in the study, implementation and management of services and infrastructures, mainly in the field of the Integrated Water Cycle.

Supported by the extensive experience of the professionals who make up its multidisciplinary team and who provide the value and knowledge necessary to offer results with high quality standards, always prioritising the commitment to the environment and sustainability.

## WHERE

AMBLING operates nationally in Spain, managing integral water cycle services in several municipalities in the country. We have three main offices:

-Project Office in Plasencia

-R+D and Administration Office in Cáceres

-Tender Office and Delegation in Valencia

# What we offer

## EXPERTISE

AMBLING has extensive experience in R&D in the water sector. Focused right now on the process of digitalisation of water uses, we have professionals in the fields of civil and industrial engineering, telecommunications, computers and data analysts.

As managers of the integral water cycle in several municipalities, we can offer all the hydraulic infrastructure that we manage as a test bed for developments, proofs of concept or application of new technologies.

## MAIN SKILLS

- Willingness to learn
- Teamwork
- Problem solving
- Networking

## EU EXPERIENCE

AMBLING has collaborated in European projects led by other entities or companies that have placed their trust in us to add and contribute our knowledge and experience.



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# TOPIC AND PROJECT IDEA

## TOPIC

HORIZON-CL6-2024-ZEROPOLLUTION-02-1-two-stage: Holistic approaches for effective monitoring of wáter quality in urban areas

## PROJECT IDEA

The aim of this project is to achieve an improvement in the exploitation of water resources through the implementation of **new processes and solutions**, thus achieving greater efficiency in the supply system in rural areas and increasing its control with **IoT devices** dedicated to **monitoring water quantity and quality** measurements in public supply networks. The project allows leaks and uncontrolled water losses to be detected in the network, which translates into shorter response time in the event of breakdowns and, consequently, a reduction in the volume of unregistered water. The reduction of time in detecting leaks reduces wasted water and consequently the volume of water that must be captured and treated. Consequently, there is a lower impact of the process on natural resources and the environment (less energy use, less use of chemical products in water treatment, etc )

In addition to the above, the **storage of consumption data** will allow the application of **data analysis** tools, **deep learning** and **artificial intelligence** in order to achieve future **predictions of water consumption**.



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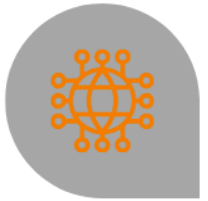
# TOPIC AND PROJECT IDEA

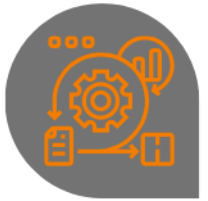
### Previous work

In the first instance, it will be necessary to assess the current situation of the supply systems to be integrated in the project. It is necessary to know their degree of digitalisation and propose a technological deployment plan for each of them.



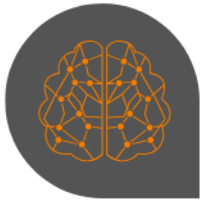
### Installation & Deployment

The installation of the devices in the chosen locations will be the starting point for the physical deployment, in parallel to which the telecommunications network will have to be deployed to collect all the information generated.



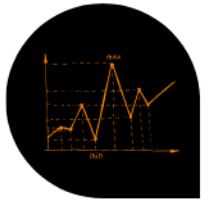
### Data integration

The data generated by the devices will have to be integrated into the management platform for exploitation and processing.



### AI, Deep Learning and data analytics

The use of these technologies will make it possible to analyse the data, apply predictive mathematical models and obtain consumption trends and predict future consumption.



### Results

All of the above processes will lead to obtaining results that allow for a broad vision and knowledge of the exploitation and management of the water service.

TECHNOLOGIES & SOLUTIONS

LoRaWAN · R · ChirpStack · RabbitMQ · PostgreSQL · python · Flutter



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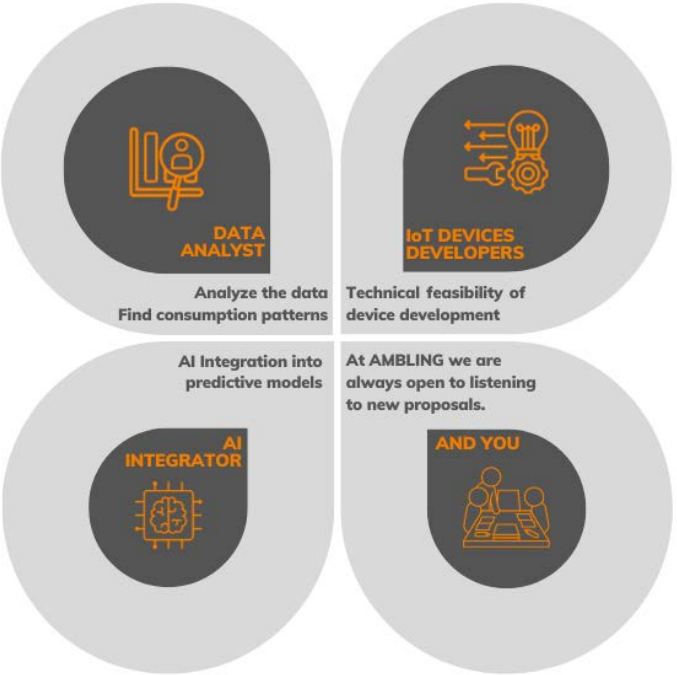
# PARTNERS SOUGHT



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https://ambling.es/

AMBLING

info@ambling.es

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