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H₂O Map

H₂O Map: Innovative learning by hydraulic heritage mapping

E-LEARNING COURSE FOR TEACHERS: *Innovative Educational Tools for Assessment of the Hydraulic Heritage with by ICT Tools.*

PART I: HYDRAULIC HERITAGE

 UNIVERSITAT
JAUME I


Universitat d'Alacant
Universidad de Alicante


UNIVERSITÀ
DI PAVIA


IES PENYAGOLOSA


I.S. TARAMELLI - FOSCOLO


AGRUPAMENTO DE ESCOLAS
Nº 3 DE ELVAS
Código: 135292


AGRUPAMENTO DE ESCOLAS DE CAMPO MAIOR

General Structure

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1.1 PROJECT DESCRIPTION

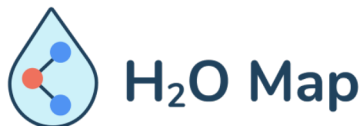
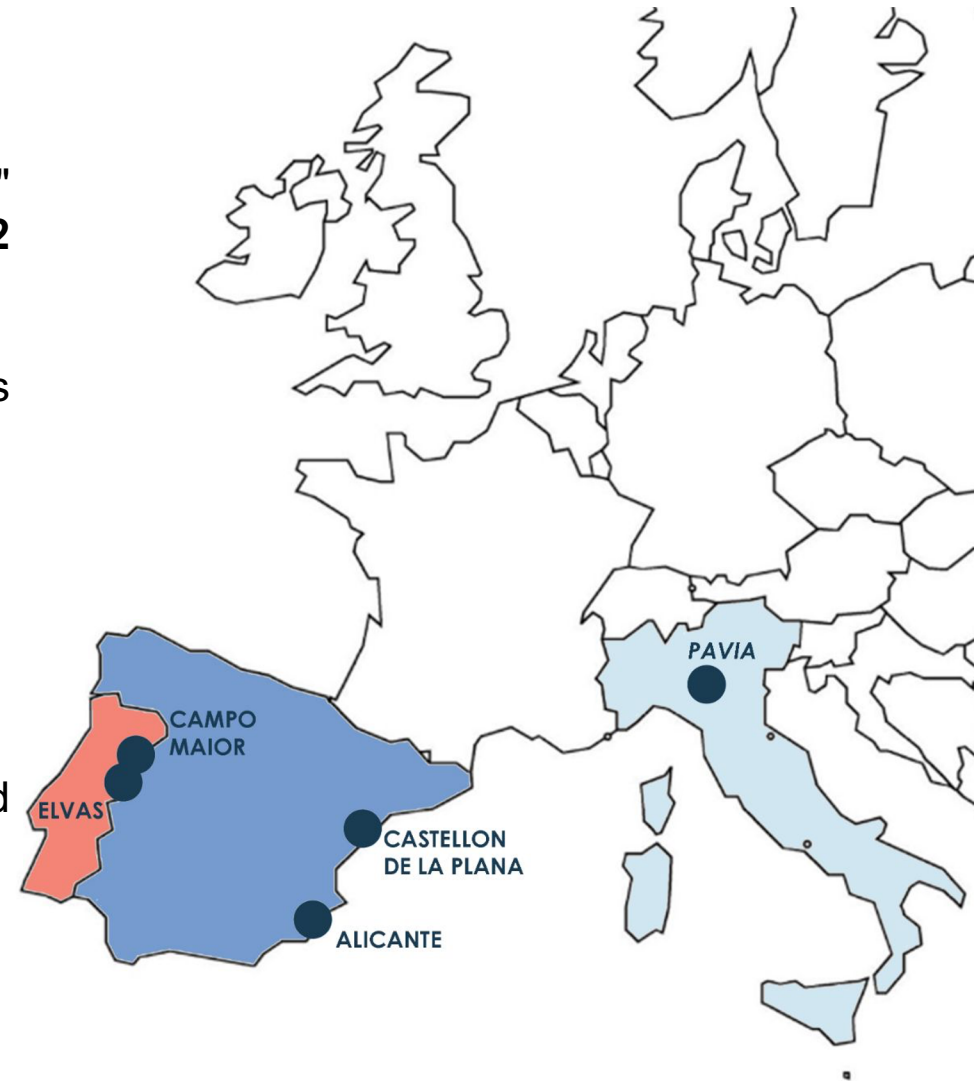
The "**H2OMap: Innovative Learning by hydraulic heritage mapping**" project is funded by the **European Community** within the **Erasmus + KA2 Project** (strategic partnerships in the field of school education).

The project sees the strategic collaboration of the following European partners for the creation of **innovative and suitable tools** to pursue the set objectives:

Coordinator: Universitat Jaume I (ES)

University partners: University of Pavia (IT) and University of Alicante (ES),

High Schools partners: les Penyagolosa (ES), IS "Taramelli - Foscolo" (IT), Agrupamento de escolas n. ° 3 de Elvas (P) and Agrupamento de escolas de Campo Maior (P)



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1.1 PROJECT DESCRIPTION

H2OMap: Innovative Learning by hydraulic heritage mapping has the following objectives:



Enhance the European
hydraulic heritage



Increase **STEM** interest (Science
Technology Engineering and
Mathematics);



Improve skills with **ICT** tools
(information and communication
technologies)



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1.1 PROJECT DESCRIPTION

Who is H2O Map for?

High school teachers and students. They will be able to develop new skills in the field of information and communication technologies (ICT).

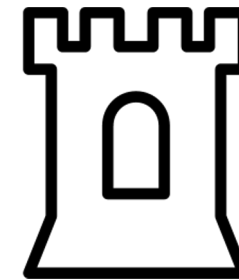
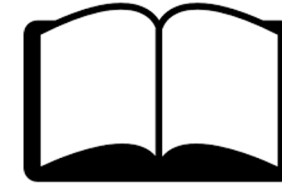
What skills does the project combine?

The project combines the humanistic skills related to historical heritage with the technical ones of hydraulics with the scientific ones for the mapping and identification of places.

What does H2O Map develop?

The technologies developed are:

- a mobile application that students can use to perform data analysis (geolocation, photographic collections, etc.);
- a platform to create interactive maps and historical maps of all the identified hydraulic heritage.



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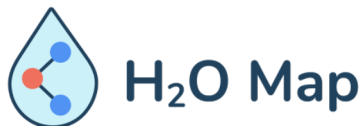
1.1 PROJECT DESCRIPTION

Why is important?

Numerous European **cities** arise and develop by confronting the water, creating a relationship that blends the morphological order with the elements of the **landscape** and the **water**.

H2O Map is an opportunity for knowledge and therefore for the protection of the natural and **cultural heritage** that unites all European citizens.

The project follows the objectives of the **2030 Agenda for Sustainable Development**, raising awareness not only on a cognitive and scientific level but also on **ethical and civil responsibility**.



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1.2 TOPIC PRESENTATION

The relationship of water with the landscape

Natural or artificial **watercourses** play a great role geographically as they are capable of conditioning or promoting human activity, permeating the territory, its development, and its cultural characteristics.

The comparison of the representations of the hydraulic heritage, from historical maps to the most recent georeferencing systems, allows us to read the territorial processes that are historically linked to the water landscape and that have made it the container of important **collective identities**.

Knowing the canals and rivers of a territory helps to understand its urban and rural history, in terms of defense, trade, transport, and agricultural and industrial development.

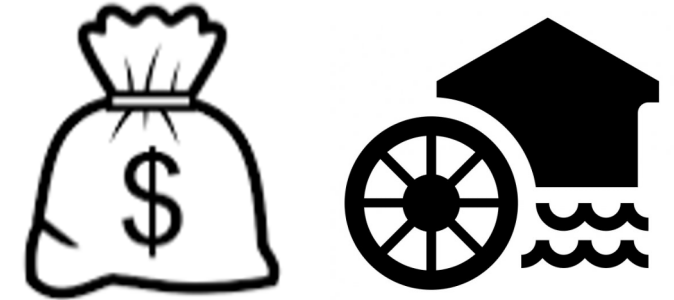


1.2 TOPIC PRESENTATION

The value of hydraulic systems

The different and extensive hydraulic systems, which characterize many European and world cities, feature:

- a **use-value**, for economic, agricultural, defensive growth and development, of the territorial reality on which they insist;
- a **historical and architectural value**, linked to the planning and construction of the system and the engineering works connected to it;
- an **artistic and social value**, which places the huge system at the center of even intangible heritage.

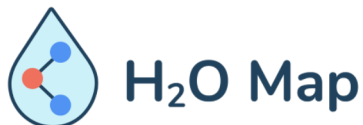


1.3 DESCRIPTION OF THE PROJECT METHODOLOGY

To achieve the objectives of knowledge and increase in ICT and STEM skills, the project develops and makes use of synthetic learning methodologies on **Project Based Learning** (PBL) and **Learning-by-doing**.

Support of the teaching activity of the teachers has produced the **methodological guide** which we briefly scroll together through these slides.

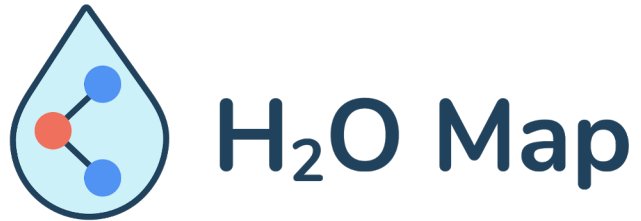
The guide is intended to be a manual that helps professors and researchers in the **knowledge** and **enhancement** of the water and **hydraulic heritage** in Europe.



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