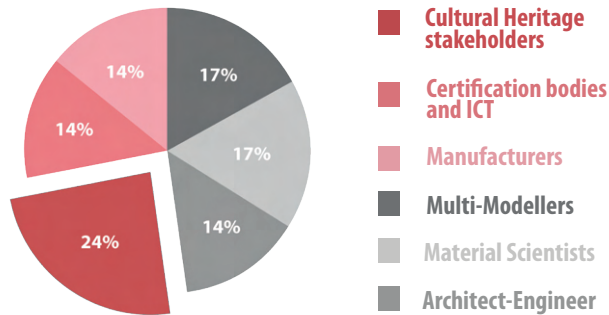


TEAM



29 PARTNERS
11 Countries

AN INTERDISCIPLINARY AND BALANCED WORLD EXPERT PANEL:



THE AMBITIONS

- 1 To develop **advanced materials and techniques** specifically designed for concrete heritage preservation.
- 2 To serve as watchdogs of concrete heritage and to open **social-economic activities** around "historic concrete".
- 3 **Effective market uptake** of technical solutions developed in InnovaConcrete.

PARTICIPANTS



Innovative Materials and Techniques for the Conservation of the 20th Century Concrete-based Cultural Heritage

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THE PROJECT

InnovaConcrete is an innovative project aimed at **preserving concrete-based monuments**, the most significant Cultural Heritage in the **20th century**.

The approach is the **impregnation of new products**, on the surface and cracks of decayed monuments **producing C-S-H gel**, responsible for the engineering properties of cement paste.

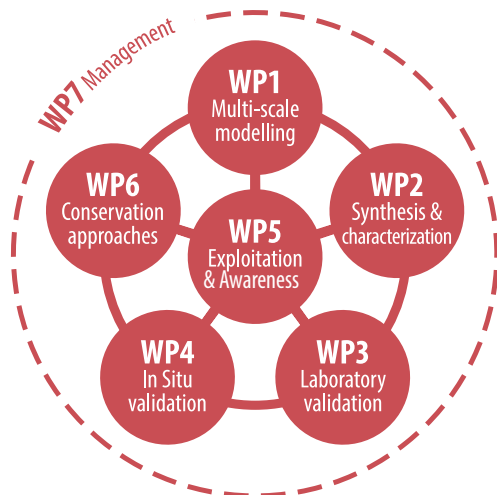
Multifunctional tailored treatments will incorporate additional performances: **super-hydrophobicity** and **corrosion inhibition**.

The original formulations and techniques include **inorganic nanotubes**, **bioenzyme-assisted self-healing**, and **atmospheric plasma** technologies.

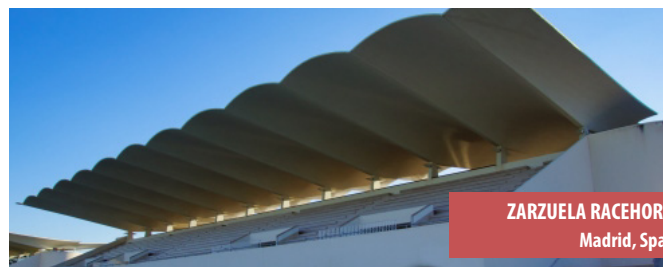
Theoretical Modelling is related with **experimental tests** and **In Situ validation**.

Technical interventions will be combined with activities to promote and achieve **social awareness and value creation** linked to monuments and buildings.

WORK PACKAGES



CASE STUDIES



RESULTS

SCIENTIFIC-TECHNICAL

- 9 conservation products and an application technique (plasma atmospheric), **optimized by simulation**.
- **One product in the market** (Surfa Pore™ FX) and two impregnation treatments (C-S-H technology) with commercial exploitation agreements.
- A promising **enzyme-assisted method** for self-healing of cement.
- Evaluation of InnovaConcrete technologies on more than **1000 samples at laboratory level**.
- Evaluation of InnovaConcrete technologies on 8 case studies, **being one of them completely restored**.
- A **Decision Making Tool** focused on concrete conservation.

SOCIALS

- More than **100 different dissemination, citizen awareness and training activities**, including some non-European activities.
- A tool for touristic and commercial potential analyses of **cultural concrete heritage** (spin-off launched, ITech-Heritage & Welfare).
- A first **benchmark guidance to conserve historic concrete** (Cadiz Document).
- A selection of the **100 more significant 20th Century** concrete heritage buildings in Europe.