

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

THE PROJECT

InnovaConcrete is an innovative project aimed at **preserving concrete-based monuments**, the most significant Cultural Heritage (CH) **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. Moreover, these products can incorporate additional performances: **superhydrophobicity** and **corrosion inhibition**, promoting **multifunctional tailored treatments**.

Alternatively, other materials and techniques: **inorganic nanotubes**, **bioenzyme-assisted self-healing**, and **atmospheric plasma technologies** are investigated.

Theoretical Modelling is combined with **experimental tests** and **in situ validation**, on a selection of significant monuments and buildings. Technical interventions are joined with activities to promote and achieve **social awareness** and **value creation** linked to historic concrete.

CASE STUDIES



CENTENNIAL HALL
Wrocław, Poland



E. CHILLIDA SCULPTURE
Gijón, Spain



TORROJA BUILDING
Madrid, Spain



TRAIN STATION
Warsaw, Poland



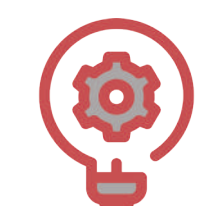
WAR MEMORIAL
Torricella Peligna, Italy

EXPECTED IMPACTS

TECH



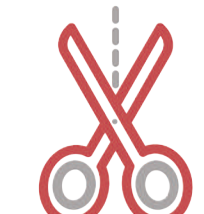
Innovative and affordable products/techniques



Modelling-based decision making tool



Effective market uptake



Tailored concrete restoration & preservation

SOCIAL



Citizens awareness of 20th Century Cultural Heritage



Tool for evaluating socio-economic prospects

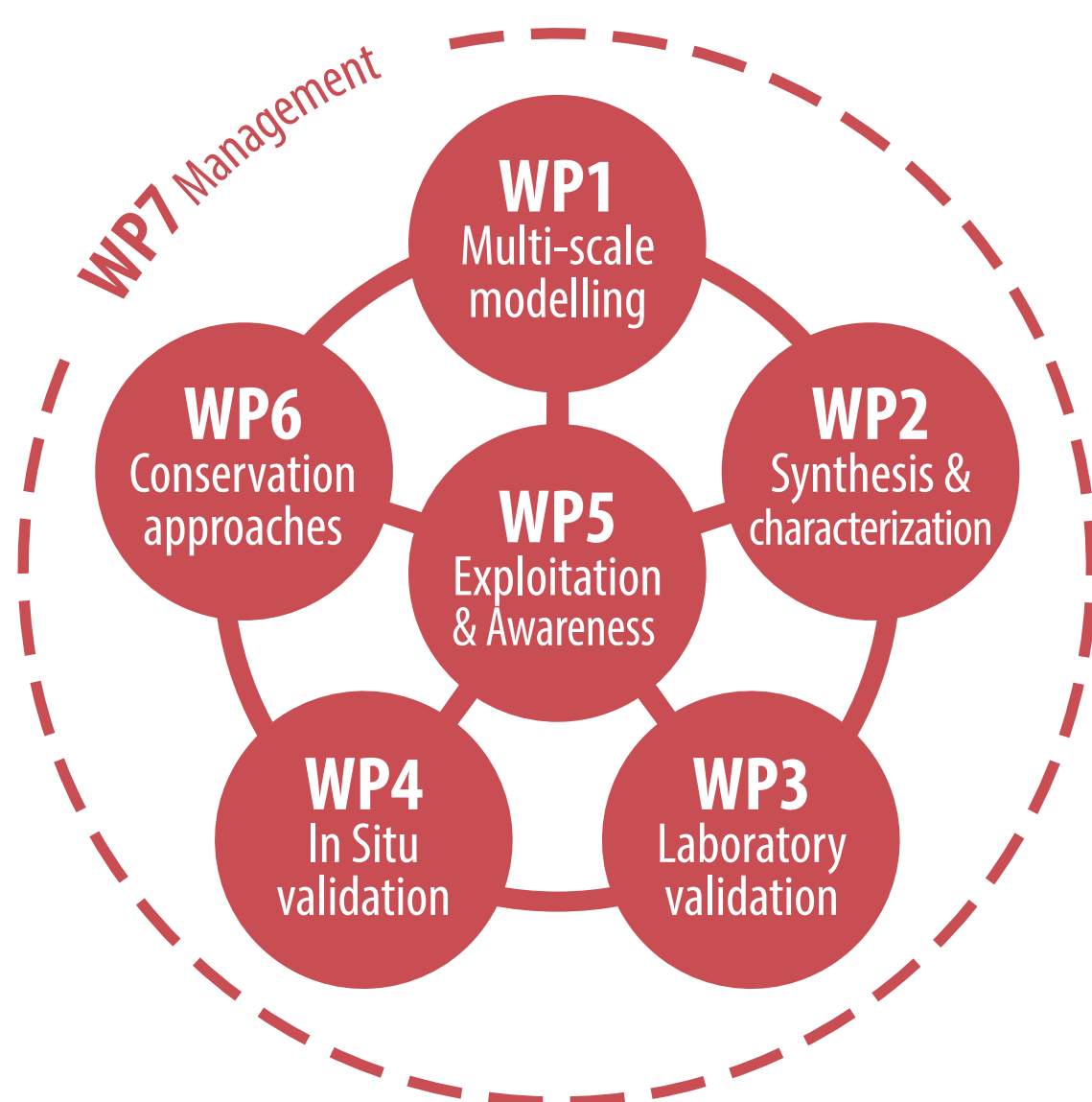


Open repository of project outcomes



Environmental friendly solutions

WORK PACKAGES

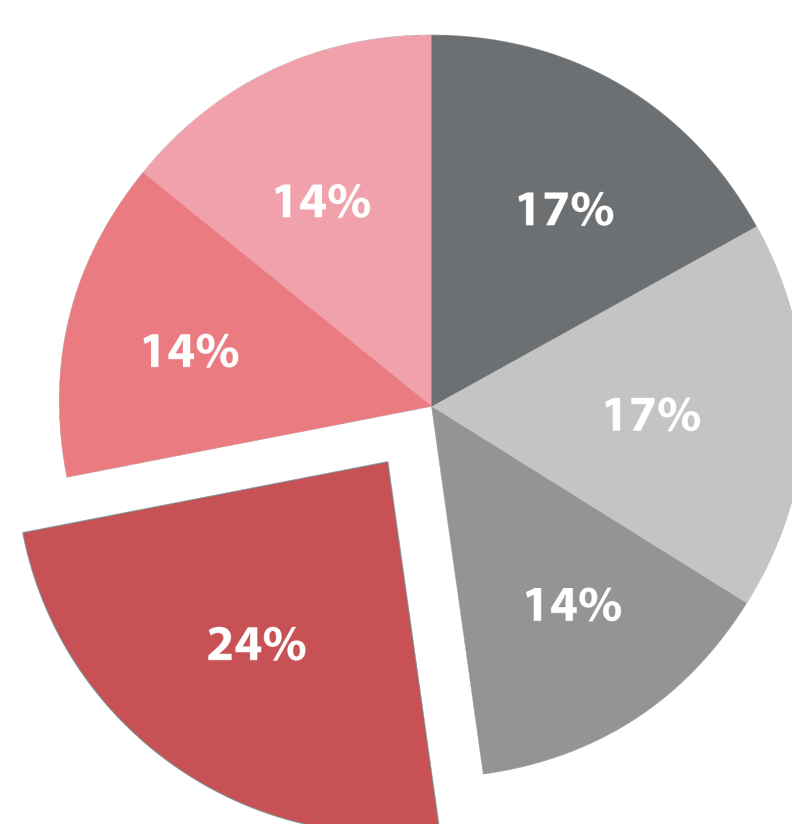


THE AMBITIONS

- 1 Developing **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.

TEAM

AN INTERDISCIPLINARY AND BALANCED WORLD EXPERT PANEL:



- Cultural Heritage stakeholders
- Certification bodies and ICT
- Manufacturers
- Multi-Modellers
- Material Scientists
- Architect-Engineer

CONTACTS

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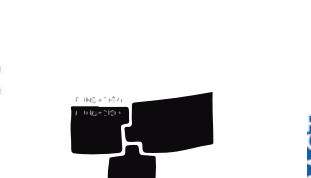
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11 Countries



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www.innovaconcrete.eu



PARTNER OF:



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