Project Partner Search Form

☒ I offer my expertise to participate as a Partner in a European Project
☐ I am planning to coordinate a project and I am looking for Project Partners

TOPICS OF INTEREST AND POTENTIAL PARTNERS

Building sector and New Materials Area:

- Private clients (manufacturers of raw materials and building materials)
- NGO and Technology Centers.

Heritage Area and old materials:

- Private clients (restoration/construction companies, architecture studios).
- Public administrations

PARTNER INFORMATION

TESELA, Materiales Innovación y Patrimonio S.L., located in the Spanish town Padul (Granada), is a technology-based SME set up in 2015 which whose main activity is centered in building materials and heritage sectors, providing innovative research and development solutions with its highly qualified staff and excellent facilities.

It is based on the 25 years-research experience on traditional, modern, raw, and artificial building materials of the group "Study and conservation of building materials in the Architectural Heritage" belonging to the Department of Mineralogy and Petrology of the University of Granada and leadered by Prof. Eduardo Sebastián Pardo.
The company is managed by highly qualified technical staff with extensive prior experience in research, development and study of building materials and historical heritage, as well as in the use of high-resolution and modern analytical techniques. We have the highest technology for carrying out studies and research, making use of all the instruments available at the University of Granada and its associated technology centres.

TESELA can also certificate building materials for Heritage according to their own European material seal and international ISO standards Test methods for building materials to guarantee quality and functionality of the materials. Its laboratories are certified according to the standard ISO 9001:2015 and UNE 166002:21, to carry over 40 tests for finished products and/or components.
It has also an extensive contacts' network, which includes more than 150 people from companies, research centres and other organizations, and several means of communication to disseminate the results of the project, such as its own website, social networks, newsletters, or regional associations. TESELA also attend fairs and events of building materials, heritage, or innovation between others, and organize seminars and sessions on project results in its facilities. In addition, TESELA is member of several organizations and associations, highlighting the Technological platform of Building of Spain (PTEC), The Interdisciplinary Thematic Platform "PATRIMONIO ABIERTO: INVESTIGACIÓN Y SOCIEDAD, PTI-PAIS (Open Heritage: Research and Society), Clúster Andaluz de la Cal. It has also the certifications UNE-EN ISO 9001:2015, and UNE 166002:2021.

Description of the Legal Entity

☐ Higher Education	☒Research Institution	☐ Public Administration
☒Industry /SME	☐ NGO	☐ Other: ***Please specify***

Description of the (Research) Team

The Team is composed by:

- Eugenio Navarro. Chemist (Granada University). Founder and chief executive officer (CEO). Responsible for R&D and laboratory. Extensive experience in the field of developing materials for the building sector. From 2003 to 2004 he has acted as laboratory technician for ARGOS mortars S.L. After that he was promoted to R&D and Laboratory Director for ARGOS mortars S.L. from 2004 to 2018. During this period, he has carried out product formulation tasks, quality control, research and development of new products and systems and certifications, definition of strategies and planning of development of new products, market studies and budget management and control.

- Anna Arizzi. Chemist (Università degli studi di Messina), Master in Geology, Ph. D. in Earth Sciences (Granada University) and Post-doctorate at the University of Oxford (Marie Curie IEF grant). From 2009 to 2015, she has been carrying out teaching activities in the Degrees of Chemistry, Geology and Conservation and Restoration of Cultural Assets and in the master's degree in Science and Technology in Architectural Heritage, as well as in training courses, all of them in the University of Granada. Participation in 1 European, 2 national and 1 Andalusian research project. She has published 23 scientific articles in peer-review journals, 1 book, 4 book chapters and has presented 34 papers at national and international conferences, all related to construction materials (stone, brick and, above all, lime mortar). She is currently a contracted professor in the Department of Mineralogy and Petrology. Its main lines of research are focused on (1) Optimization of the manufacture of hydraulic lime; (2) Design of new lime mortars for restoration; (3) Use of natural additives in mortars and study of their durability; (4) Design of new sustainable building materials. Actually, she is founder and scientific director at TESELA.

- Eduardo Sebastián Pardo. Main researcher of the Research Group "Study and conservation of building materials in the Architectural Heritage" within the Department of Mineralogy and Petrology (University of Granada). Actually, he is founder and main advisor at TESELA.

- Gaspar Carrasco-Huertas. Chemist (Malaga University), Master in advanced chemistry and Nanotechnology and PhD. Industrial Ph. D. in Advanced Chemistry (Autonomous University of Madrid). High experience in the field of advanced and sustainable materials for energy and water remediation. Previous experience as Sustainable and Advanced materials department in The Footwear Technology Center of La Rioja. Actually, he acts as R&D Project Manager at TESELA.

- Jorge A. Porta. Art historian (Granada University). Extensive experience in the field of analyzing materials for the building sector and for heritage. Actually, he acts as R&D and laboratory technician at TESELA.

- Miriam Alguacil. Chemist (Granada University). Senior technician in clinical trials laboratory. Extensive experience in design of cement derivatives, quality control of raw materials and finished product in cement mortar. Also, she has experience in previous stages of homologation of new additives and in research and design projects. Actually, she acts as R&D and laboratory technician

Research facilities for project implementation

In TESELA we work with a wide range of high-resolution analytical instruments that enables us to identify and characterize any material. To do this, we use the equipment available at the University of Granada and its technological centers, which makes it one of the most modern and prestigious research centers in our country. Among them we highlight:

- Optical polarized, fluorescent, and confocal light microscopy.
- Scanning, environmental, and high-resolution transmission electron microscopy with microanalysis (EDX).
- X-ray diffraction and X-ray fluorescence.
- Thermogravimetry
- Structural analysis and determination (EAN; Chromatography; FTIR; RAMAN)
- Porosimetry by mercury injection and gas adsorption
- Ultrasounds
- Carbon 14 dating
- Petrophysical tests
- Colorimetry and spectrophotometry
- Laser granulometry
- Accelerated decay tests

Expertise of the Team Leader

Eugenio Navarro. Chemist (Granada University). Founder and chief executive officer (CEO). Responsible for R&D and laboratory. Extensive experience in the field of developing materials for the building sector. From 2003 to 2004 he has acted as laboratory technician for ARGOS mortars S.L. After that he was promoted to R&D and Laboratory Director for ARGOS mortars S.L. from 2004 to 2018. During this period, he has carried out product formulation tasks, quality control, research and development of new products and systems and certifications, definition of strategies and planning of development of new products, market studies and budget management and control.

Some relevant developed projects

- *REVOLUM:* Control of dimensional variation (phenomena of volumetric shrinkage) in lime mortars for its use in heritage works. Fundings from Spanish Office for Science and Technology (CDTI) PID Project

- *CALSILAM (SEED Call):* This proof-of-concept project aims to expand the potential of sound and thermal insulating composite materials in an additive manufacturing (AM) process in a similar way to 3D Concrete Printing. Additive manufacturing of Calcium Silicates Hydrates (CSH) scaffolds. Fundings from METABUILDING - HORIZON 2020. METAclustering for cross-sectoral and cross-border innovation ecosystem BUILDING for the European Construction, Additive Manufacturing and Nature-Based Solutions industrial sectors' SMEs.

- *CALSILAM (GROW Call)*: The project aims to upscale previous CALSILAM project for thermal insulating composite materials in additive manufacturing (AM) process in a similar way to 3D Concrete Printing. Fundings from METABUILDING - HORIZON 2020.

- *hermETICS:* Lightweight Autohealing Mortars for External Thermal Insulation Building Systems. Fundings from AMULET - HORIZON 2020. The Advanced Materials & Manufacturing United for LightwEighT.

Potential role in the project

☒ Research ☐ Training

☐ Dissemination ☐ Other: ***Please specify***

Already experience as a	Coordinator	☒ YES	☐ NO
	Partner	☒ YES	☐ NO
	Expert Evaluator	☐ YES	☐ NO

CONTACT DETAILS

Contact Person: EUGENIO NAVARRO TORRES
Organization: TESELA, MATERIALS INNOVATION AND HERITAGE S.L.
City: PADUL (GRANADA)
Country: SPAIN
Phone: (+0034) 608 654 947
Email: eugenionavarro@teselainnova.com
Organization Website: https://teselainnova.com/
Contact Person Webpage: EUGENIO NAVARRO TORRES

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