

# R&D PROJECT



## PROJECT PARTNERS

- FUNDACION TECNALIA
- COMMISSARIAT A L ENERGIE ATOMIQUE
- CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT
- FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV
- THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE
- TECHNISCHE UNIVERSITEIT DELFT
- ICLEI EUROPEAN SECRETARIAT GMBH
- EUROPASEKRETARIAT GMBH)
- INNOVAWOOD ASBL
- BEEPLANET FACTORY SL
- COMSA SAU
- DUALSUN
- ENVOLVENTES ARQUITECTONICAS ENAR
- INGENIERIA CRUZ MARQUES S.L.P.
- IDP INGENIERIA Y ARQUITECTURA IBERIA
- FACHADAS SINGULARES UXAMA SL
- WESTAFLEX
- SYNDICAT I.DES ENERGIES DE LA LOIRE
- ASSOCIATION TENERRDIS
- AYUNTAMIENTO DE MALGRAT DE MAR
- SOPREMA
- ENTREPRISE CHAZELLE
- VAN BERKEL EN BOS U.N. STUDIO BV
- OMIKRON-DOKK MUANYAGIPARI KFT
- TEKNOLOGISK INSTITUT
- DOMEA.DK
- MAIRIE BOEN SUR LIGNON
- OTEIS
- TERMOLINE SRL
- GEZE GmbH
- GEZE IBERIA, S.L.

## BUSSINESS AREAS

Infrastructure area

## PROJECT DURATION

2022-2026

## PROJECT BUDGET

Consortium budget: 14.230.525,00 €

COMSA budget:

795.412,50 €

## KEYWORDS

Industrialization, digitalisation, sustainability, circularity, retrofitting

## COMSA COORDINATOR

Marcela Rubio

## Title of the project

**DigitAI and physical incrEmental renovation packaGes/systems enhancing environmental and energetic behaviour and use of Resources**

## Acronym

**AEGIR**

## Content of the project

Europe aims to achieve climate neutrality by 2050, through the deep decarbonisation of all sectors, boosting economic recovery, empowering citizens and granting wellbeing and comfortable living conditions. Buildings use energy for heating, cooling, ventilation, built-in lighting and power appliances, contributing to 40% of EUs energy consumption and about 36% of greenhouse gases (GHG), including direct and indirect from electricity use<sup>1</sup>. If we consider the use of construction materials and products like concrete, glass, insulations, etc., building renovation activities that have embodied carbon, the contribution rises to additional 10% of yearly GHG emissions. More than 220 million building units were built before 2001 (85% of building stock) with low or no energy standard criteria and most of them will still be standing in 2050. The oldest, non-renovated buildings are usually less energy efficient and require more energy to keep indoor environmental conditions. The worst performing older buildings are often occupied by lower income families which face problems to pay energy bills, and the indoor hygro-thermal conditions are far from the comfort range, which leads to health problems.

## General objectives

AEGIR's main objective is to demonstrate a scalable, industrialised, smart, non-intrusive, quick, and affordable four-packaged renovation solution to boost the take up of deep retrofitting achieving nearly zero energy buildings. This approach is supported by innovative, industrialized, high performance and non-intrusive multifunctional plug-and-play envelope solutions to increase the use of locally deployed renewable technologies.

## Project tasks

WP1 Management

WP2 Overall concept solution design

WP3 Circular economy and standardization measures

WP4 Prototyping of the active envelope and the energetic systems

WP5 Digital services for renovation design and KPI assessment

WP6 Digital services for an efficient installation, operation, and maintenance

WP7 Interventions in the demo sites

WP8 Replication at local and European level

WP9 Communication, dissemination and exploitation

## Results and conclusions

This project is currently in its ongoing phase.

