



# BRESAER

## **BREakthrough Solutions for Adaptable Envelopes in building Refurbishment**

**STANDARDIZATION IN INNOVATION PROJECTS**



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# 1. THE PROJECT - OBJECTIVES

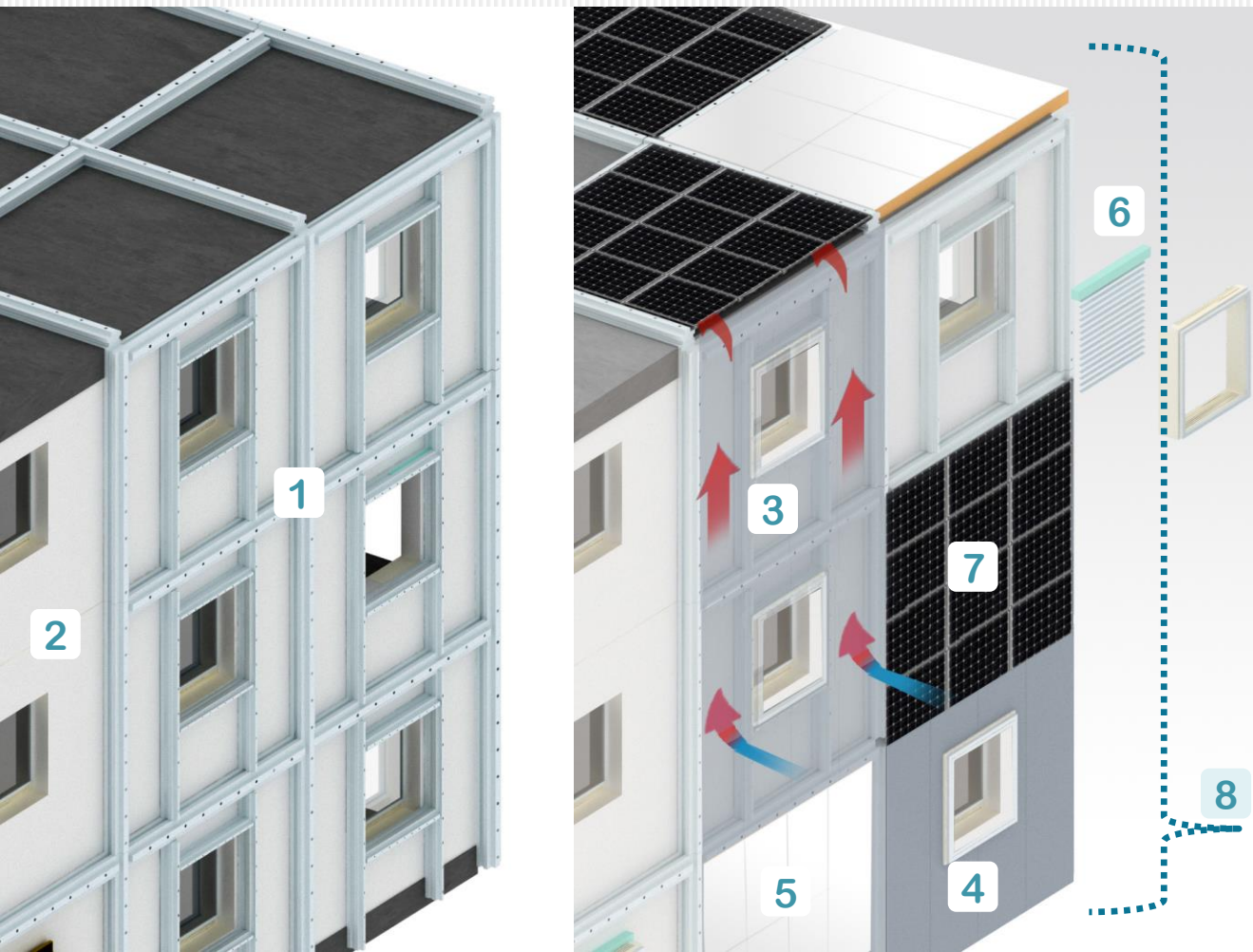
- To design, develop and demonstrate an innovative, cost-effective, **ADAPTABLE AND INDUSTRIALIZED ENVELOPE SYSTEM** for **BUILDINGS REFURBISHMENT** including combined **ACTIVE AND PASSIVE** prefabricated solutions integrated in a versatile lightweight structural mesh.
- To perform a **REAL DEMONSTRATION IN AN EDUCATION BUILDING IN SPAIN**, and four additional virtual demonstrations in occupied real building in other countries of Europe (Turkey, Romania, Poland and Norway) covering complementary European climatic zones.



# 1. THE PROJECT - CONSORTIUM



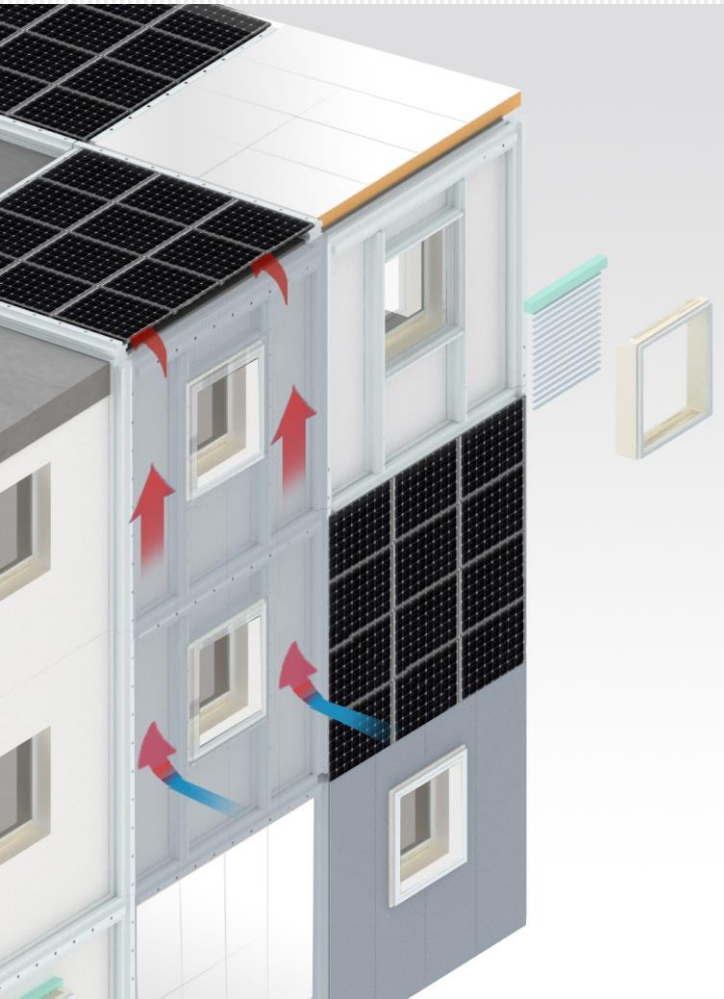
# 1. THE PROJECT - SOLUTIONS



1. Metallic substructure
2. Insulation layer
3. Solar thermal air component
4. Lightweight ventilated façade module
5. Multifunctional insulation panel + nanocoating
6. Dynamic window with automated solar blinds
7. PV integrated into envelope components
8. Building Management System

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# 1. THE PROJECT - INNOVATION



## 1 INTEGRATE SEVERAL TECHNOLOGIES INTO A SINGLE SYSTEM

- Market & novel
- Active & passive
- Construction, facilities & electronics

## 2 ADAPTABLE, TAILORED & INDUSTRIALIZED SYSTEM FOR:

- Different climates
- Different countries
- Different building typologies & uses
- Different budgets
- Different aesthetical requirements

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## 2. WHY STANDARDIZATION?

BRESAER system aims to **penetrate whole European Market**

Standard are key drivers to:

- Guarantee **compatibility and interoperability**
- Prevent potential **technical trade barriers**
- Facilitate and speed **market acceptance**
- Help **shaping the market framework conditions**
- **Share knowledge** with European industry
- **Spread technical results** through the standardization system

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# 3. STANDARDIZATION IN BRESAER PROJECT

## INCLUSION IN PROJECT'S STRUCTURE:

- Previous projects led by Acciona failed on addressing properly standardization activities due to lack of knowledge and experience
- UNE was invited to join the Consortium as key partner to guide, lead and facilitate standardization activities.
- Specific task for standardization closely linked to dissemination and exploitation activities, and with the participation of all partners.



# 3. STANDARDIZATION IN BRESAER PROJECT

## ACTIVITIES CARRIED OUT:

- Mapping of the relevant standards and technical committees in CEN and ISO and identification of most suitable for BRESAER contact and interaction.
- Training of BRESAER Consortium on standardization
- Dissemination of the BRESAER project in identified technical committees.
- Attendance to CEN/TC 33/WG 6 “Curtain walling” meeting to discuss BRESAER system standardization possibilities.

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# 3. STANDARDIZATION IN BRESAER PROJECT

## ACTIVITIES PLANNED:

- **Intensive interaction with 7 key TCs** to offer collaboration and gather inputs about standardization possibilities and propose changes to existing standards.
- **CEN WORKSHOP developments and AGREEMENT (CWA)** as a first step for a future standard about integrative envelope systems for building refurbishment



# 4. RECOMMENDATIONS

- How to overcome Partner's general lack of knowledge about standardization procedures. Hard to engage industrial partners.

✓ Standardization body as a project's partner to get involved from the very beginning of it's lifespan

- How to draw attention from Technical Committees to collaborate with innovative products

✓ Standardization body as a project's partner to get involved from the very beginning of it's lifespan

# CONCLUSIONS

**STANDARIZATION IS A KEY DRIVER**

for innovative products to reach the market



To overcome the barriers researchers need a

**HAND-IN HAND COLLABORATION**

Thank you very much for your  
attention

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