

# Energy Efficient Buildings & NEB Matchmaking and Study Visit

11-13 MARCH 2026  
BRUSSELS

HORIZON  
europe

NCBR  
National Contact Point  
for EU Research Programmes

  
Industry  
Contact  
Point  
Low-emission  
Technologies  
and Clean Energy

NCBR  
National Centre for Research  
and Development

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europe

# ITeC: The Catalonia Institute of Construction Technology

A non-profit foundation advancing construction sector innovation through research and technological development since 1978.

## R&D&I Contributions:



### Digital Solutions for Sustainable Construction

BIM modeling, Building material passports, Digital product passports & Renovation passport.



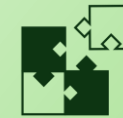
### Impact Assessment & Circularity Evaluation

LCA, LCC, Circularity performance assessment, Methodological alignment with Level(s) framework & integration in software tool (TCQi GMA).



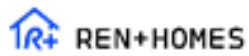
### Replicability, Scalability & Market Uptake

Replicability and scalability analyses, Product certification & regulatory alignment & Assessment for future market deployment.



### Integrated Knowledge & Tools

TCQi platform for project and impact management, BEDEC database integration for material and product information, Alignment with EU taxonomy & EPDs.




















# 2 – Project Idea: Federated Digital Infrastructure for Operational Whole Life Carbon in European Buildings

**HORIZON-CL5-2026-09-D4-03: Advanced data platforms to integrate whole life carbon in building information tools, assessments, and certification (Built4People Partnership)**

**Concept initiated and coordinated by ITeC – Digital backbone architect**

## Main objectives

- Develop a federated, interoperable European data backbone enabling operational integration of Whole Life Carbon (WLC) across building information tools and certification schemes.
- Harmonise embodied carbon data and life cycle inventories across national contexts to ensure EU-aligned GWP calculations.
- Deliver machine-readable, certification-ready building-level carbon profiles aligned with EPBD recast requirements.
- Validate integration across multiple building typologies and regulatory environments through large-scale pilots.

## Innovative Aspects

- Moves beyond isolated carbon assessment tools toward a structured EU-level data infrastructure.
- Bridges product-level environmental data (DPP/EPD logic) with building-level carbon intelligence.
- Enables interoperability between EPC-related workflows, DBL environments and BIM/digital twins.
- Embeds operational, embodied and carbon removal potential within a unified performance logic.
- Ensures scalability from single buildings to portfolio-level applications.

## Expected Results & Impacts

- Increased uptake of interoperable WLC integration across certification schemes and building information tools.
- More reliable and comparable embodied carbon datasets aligned with EU frameworks.
- Operational support for EPBD GWP reporting and national decarbonisation strategies.
- Replicable validation across diverse building types and climates.

# 3 – Expression of Interest

## Areas of Expertise We Bring (ITeC)

- **Harmonised building-level data modelling** (DBL-aligned structures)
- **Whole Life Carbon integration** (LCA, LCC, building-scale carbon modelling)
- **Interoperability frameworks** linking BIM, certification and performance tools
- **Machine-readable regulatory modelling** aligned with EPBD and CPR
- **Coordination** of EU innovation projects in digital and circular construction.

## Contribution Proposed

The emerging consortium currently covers the following roles:

- Digital backbone architect - interoperable WLC data infrastructure
- Performance assessment expertise - integration of energy, WLC and lifecycle metrics
- Advanced analytics and decision-support methodologies
- BIM and digital modelling integration
- Sustainability and circular construction expertise

## Partners Already Involved

Core technical partners with expertise in:

- Building performance modelling
- digital modelling and BIM workflows
- sustainability assessment
- advanced analytics and optimisation approaches
- Standardisation and regulatory alignment expertise

(Consortium currently being structured around digital and sustainability expertise.)

## Partners Sought

To strengthen the European impact dimension, we are selectively looking for:

- **Environmental database and LCI data stewards:** Organisations managing recognised national or EU environmental datasets for construction products and embodied carbon.
- **Large building portfolio owners for large-scale pilots:** Public housing organisations, municipalities or large asset managers able to validate the approach across multiple buildings.
- **Digital twin or building monitoring platforms:** Actors capable of integrating real-time building data and supporting interoperability with BIM and building information tools.