Winning project of the European Life call for proposals LIFE-2021-CET-BUILDRENO
LIFE-2021-CET-BUILDRENO : Large-scale rollout of industrialised deep renovation solutions

Objective:

The aim of this topic is to facilitate a greater market uptake and large-scale rollout of holistic, industrialised deep renovation solutions for buildings, thereby supporting the implementation of the EU Renovation Wave strategy.

Industrial approaches to deep renovation have been shown to result in many benefits including faster, higher quality construction; less disruption to building occupants; less waste and fewer mistakes; reduced costs including over the building’s life cycle; better integration of design teams, decision makers, end users and other stakeholders. The objective is to accelerate the rate and depth of energy renovation, and to deliver higher quality renovations with enhanced certainty of energy savings, and a reduced performance gap through industrialised solutions.
1. Understand the context: the need for high performance and massive retrofits has never been so strong

**Regulatory issue**
- Climat Résilience Law: end of energy stainers (DPE E-F-G)
- Stratégie Nationale Bas Carbone (SNBC)

**Social issue**
- Rising energy prices and the explosion of fuel poverty

**Climate issue**
- Urgent need to decarbonize
- Strong expectations from stakeholders

**Supply issue**
- Independence from fossil gas
- Electrification of uses and network capacity in the short/medium term

For example for France:

We must succeed in this energy jump...

... which will require A/B retrofits to compensate for those that cannot be taken beyond C
2. Build on past initiatives: after 5 years of EnergieSprong deployment, we now need to move from thousands to millions

- **Activation of a demand and a supply**
- **Resources** made available: specifications, guides, Cost/Quality/Impact Observatory, studies of housing typologies, feedbacks...
- **Innovation competitions** to develop integrated and desirable industrial solutions
- First **pilot projects** (prototypes: ten homes and first schools), then several projects in several regions (dozen to hundred homes)
- **A 1st large series**: MASH collective buy-in-scheme in region Pays de la Loire: from several hundred to a thousand homes

➔ Now, what are the next steps to go from thousands to millions?
3. Analyse the market barriers: to imagine what will happen next, we have to progress in understanding costs and typologies

Cost of operations

**Costs** have come down but are still **too high**, which is an obstacle to achieve the necessary pace.

At the same time, there is a need for better **thinking in terms of overall cost**: the Cost/Quality/Impact Observatory has shown that the first EnergieSprong operations presented the best economic balance.

Costs have to be reduced but **CAPEX will remain high** because we have to perform better and faster.

Homes archetypes

The choice of **housing types** is key to carrying out industrialized retrofits.

➔ **To better understand them** in order to standardize procurement and ambitions, within the framework of grouped and planned approaches in time.

➔ **It is not only a question of volumes**, the building typologies are also important and better selecting them should help us to lower the costs.
3. Analyse the market barriers: to imagine what will happen next, we have to progress in understanding costs and typologies

**Construction companies & contractors**

The sector suffers from its lack of industrial culture, which is particularly noticeable among construction companies.

Need to get out of the project logic to develop the product logic: develop catalogues of solutions and industrialize pricing.

**Industrialised solution providers**

Solutions exist and pioneers are starting out, but they now need to scale up in terms of industrialization: production capacity, digitalization, standardization, etc.

Now, to move from projects to products adapted to specific typologies to really obtain Giga Factories allowing serial renovations.

**Future Factory** has developed a catalogue of off-site solutions for tens of thousands of E=0 homes to be delivered in all regions.

Product development is the most important to bring down costs and deliver large series: doing off-site for single projects is not enough to solve the problem!
4. Deduce the needs of market players: a need to work better together to: plan, allow industrial development and thus reduce costs

- **Project owner issues**
  - Know the solutions that exist
  - To have economically balanced operations

- **Integrator’s issues**
  - Companies asked to do things faster and cheaper: need for new methods

- **Industrial issues**
  - Knowing the existing heritage
  - Have market visibility over time to develop

→ Shift into high gear in terms of planned renovation strategies:
To be able to aggregate homogeneous housing in terms of construction typologies and industrial solutions that are adapted to them, for more efficient grouped approaches

→ Shift into high gear in terms of industrialization:
To be able to catalog more easily their products and solutions according to the characteristics of the existing, for fast and reliable technical and economic feasibility

**Shared need for COLLABORATIVE VISIBILITY**

- **Volume planned in time**
- **Adapted and scaled solutions**

Cost reduction
5. Set the project’s answer in 3 clear key points: to facilitate this work by helping demand and supply side actors to scale up

1. Open source tool for better aggregation strategies
   - Enable more collective buy-in-scheme of retrofits, more efficient, in several regions
   - Massify the demand to give volume and visibility

2. Integration accelerator of industrial solutions
   - Helping construction companies to industrialize and develop their solution catalogs
   - Accompany the evolution of the market

3. Kit Giga Factory for industrialisation
   - Helping manufacturers and solution providers to scale up to meet the massive demand
   - Develop industrial capacities
6. Set up a consortium able to carry out this project: 12 partners in 4 countries with complementary skills and expertise

8 experts in consulting and social and environmental innovation = Market Development Teams

4 beta testers: supply and demand side partners

This project aims to capitalize on the first industrialized zero-energy renovation operations carried out in France and in Europe, to support scale up.
Some feedback – on the content

- Understand the challenges and needs of market and carry a strong vision and ambition, in a why/what/how approach

- Provide answers to market barriers: be in a position to facilitate market development, by inventing and deploying new economic models that can be replicated because they align the interests of the stakeholders

- Connecting to existing projects, in order to take advantage of all the profitable synergies

- Be inspired by the projects and ways of doing things in different European countries and their feedback, which is always useful to transpose answers/solutions in the context of other European countries

- Well evaluate the impacts of the project, to assess the scope of the action

- Take the time to detail the project's actions in terms of communication and dissemination, to ensure the visibility of the project, a sine qua non condition for its success
Some feedback - Organizational

• Start building the **consortium** at the same time as building the **desired answer** to the targeted issue

• Surround yourself with the right **complementary skills**: strategic advice, market development, presence in the territories, network/industry facilitation, communication, professional networks linked to the targeted stakeholders, etc.

• **Divide up the roles** in the drafting of the project proposal

• Draw up a **retro-planning** up to the date of submission of the proposal, including: finalisation of the consortium, finalisation of the project objective and work areas, distribution of tasks, time allocated and budgets, drafting of work packages, etc.

• Take the time to collect **letters of support** from key players/stakeholders in the sectors you wish to work with
Any questions?

Thank you for your attention!