

Support Service for Citizen-led renovation projects - Phase II

Life Giga Regio Factory



1. DESCRIPTIVE ANALYSIS

1.1. Inspiring cases author and organisation

This inspiring case has been compiled by Marco Ortiz and Paulina Rodriguez, representing VITO and as part of the Citizen Led Renovation II initiative consortium under the European Commission's Directorate-General for Energy, and Pierre-Antoine Duffrene, associated director of Ressorts.

1.2 Name of CLR initiative and geographical scope

The LIFE Giga Regio Factory is a project co-financed by the European Commission under the LIFE programme. It follows up Energiesprong, aiming to upscale the market of industrialised zero-energy guaranteed renovations by supporting all the players involved in the process, from building owners to manufacturers and construction companies.

The LIFE Giga Regio Factory project aims to activate the next stages in the industrialisation of deep renovation in France and the rest of Europe by tooling both supply and demand players, helping them to organise themselves to launch highvolume orders and develop the appropriate production capacity. The project is a complementary consortium of 13 partners from Italy, Belgium, Germany and France.



Figure 1. Life Giga Regio Factory as a collective response to the renovation challenge

The Life Giga Regio Factory project focuses on two existing markets, France and Germany, to support their progression to the next level, while also kick-starting two emerging markets: Italy and Belgium.

The project aims to leverage three main drivers:

- a) a better organisation of aggregated demand batches,
- b) a more effective development of industrialised mixes of prefab solutions, and
- c) planning the next stage of industrial progress, where scaling demand will enable the construction of gigafactories in each EU region.

1.3. Citizen-led renovation focus, services and technologies

LIFE Giga Regio Factory project is highly innovative since it shifts building renovation from fragmented, project-based interventions towards a collective, industrialised, and scalable model. Inspired by the

Energiesprong approach, it promotes deep, near net-zero energy renovation through standardised, off-site solutions such as prefabricated façades, roof systems, and integrated HVAC kits, all supported by performance guarantees.

A defining feature is the transition from a **project-based to a product-based approach**, whereby renovation solutions are catalogued, repeatable, and comparable to consumer products. This enables faster deployment, cost reductions, and improved quality control.

Equally important is the **strong emphasis on demand aggregation and citizen-led approaches**. The initiative supports group purchasing schemes and renovation cohorts across social housing, private homeowners, and public buildings. Digital and open-source tools are used to cluster similar building typologies, enabling economies of scale and facilitating large-scale deployment.

The combination of **industrialisation, collective action, and open-source tools** makes this initiative particularly distinctive. It not only improves individual buildings but actively reshapes the renovation market by aligning demand, supply, and production capacity. Its ambition to enable “regional giga factories” further reinforces its role as a market-transforming initiative rather than a standalone project.



Figure 2. Industrialisation of high-performance energy renovation of housing. Source: Ressoris

1.4 Objectives, motivation, and establishment process

Life Giga Regio Project is driven by the urgent need to accelerate deep renovation in order to meet climate targets, reduce CO₂ emissions, and address energy poverty. It also seeks to overcome structural barriers such as fragmented demand, high costs, limited industrial capacity, and workforce shortages. A broader motivation includes strengthening European energy sovereignty and reducing dependence on fossil fuels.

Its objectives include making renovation faster, more affordable, and scalable, while improving user experience and ensuring long-term performance. The initiative also aims to create stable market conditions that justify industrial investment in prefabrication and standardised solutions.

The establishment process builds on earlier pilot experiences, particularly within the Energiesprong framework and initial collective renovation schemes. These pilots demonstrated both the potential of demand aggregation and the challenges of forming homogeneous building groups.

The initiative was therefore designed to systematically address these barriers through:

- improved building typology identification and clustering,

- development of industrialised solution catalogues,
- and support for scaling manufacturing capacity.

It brings together a multi-country consortium of diverse actors, including beta testers from both demand and supply sides. This **iterative, co-creative process**, supported by pilot projects and real-world testing, has been essential in building trust, refining tools, and ensuring practical applicability. Citizen-led components are facilitated through local networks and municipalities, with structured group formats that balance inclusiveness and decision-making efficiency.

1.5 Key actors and stakeholders

It involves a comprehensive ecosystem of stakeholders across the renovation value chain. These include:

- Ressort / Energy Sprong France, acting as facilitator and coordinator
- Social housing providers, central to early large-scale deployment
- Local authorities and regional governments, supporting implementation and economic development
- SMEs and construction companies,
- Engineering consultancies and digital partners, providing technical and data expertise
- European institutions (e.g. CINEA), providing funding and strategic direction
- Citizens and homeowner groups,
- A key feature is the **integration of both demand-side and supply-side actors within a single collaborative framework**, enabling co-creation and real-world testing of solutions.

Particularly important is the role of **integrators**, who coordinate the full renovation process from design and off-site manufacturing to on-site assembly and performance monitoring.

The inclusion of citizen groups alongside institutional actors enhances inclusiveness and supports the development of citizen-led renovation models. This multi-actor collaboration is a critical success factor, ensuring alignment across the ecosystem and strengthening replicability.



Figure 3. Consortium of 12 partners from France, Germany, Italy, and Belgium

1.6 Organisational structure

The organisational structure is based on a **multi-stakeholder, multi-country consortium** operating as a coordinated platform rather than a centralised delivery body. Activities are organised around key workstreams, including demand aggregation, industrial solution development, and scaling of production capacity.

A central coordinating role is often played by a neutral intermediary (e.g. Ressort), ensuring alignment between stakeholders and maintaining transparency.

Governance is collaborative and iterative, with **beta testers embedded within the consortium** to continuously test and refine tools. This creates strong feedback loops and ensures outputs remain grounded in practice.

The initiative emphasises:

- collective coaching and peer learning,
- open-source tools and shared methodologies,
- and national adaptations within a common European framework.

Smaller cohorts (typically 15–20 participants) are used to balance collective engagement with efficient decision-making. Facilitation methods are employed to address behavioural and organisational challenges. Although not formally structured as a One Stop Shop, the initiative effectively provides integrated support across the renovation journey, including technical tools, facilitation, training, and coordination.

1.7 Financing

The initiative is primarily funded through European programmes such as LIFE, Horizon Europe, and Interreg. These funds support technical assistance, tool development, coordination, and market-building activities rather than directly financing renovations.

Public funding is complemented by:

- regional and local authority contributions,
- and private investment stimulated by improved market visibility and aggregated demand.

Innovative financial mechanisms include:

- Group purchasing schemes to reduce costs for participants
- Aggregation of renovation demand to attract industrial investment
- Market signalling to enable companies to secure financing for production facilities

A notable innovation is the development of **business plan tools for manufacturers**, enabling them to model investments, forecast revenues, and present bankable cases to financiers.

Performance guarantees and predictable energy savings enhance financial viability and facilitate access to affordable funding. Overall, the initiative links **technical standardisation with financial structuring**, supporting the transition from grant-funded pilots to sustainable market investment.

1.8 Customer journey and acceptance

The customer journey operates at both organisational and citizen levels.

It typically begins with **awareness-raising and mobilisation**, facilitated through municipalities, community networks, workshops, and communication campaigns. Participants are then grouped into cohorts or collective purchasing schemes.

Using digital and open-source tools, building stocks are analysed to:

- identify suitable typologies,
- cluster similar buildings,
- and assess technical and financial feasibility.

Participants are supported throughout the process via:

- technical assessments,
- facilitation of group decision-making,
- access to solution providers,
- and coordination during implementation.

For supply-side actors, the journey includes profiling, training, and capacity-building to support industrialisation and scalability.

A distinctive feature is the **active role of participants**, who co-create solutions, engage in peer learning, and often become ambassadors for further replication. High satisfaction rates and the “wave” approach contribute to a strong ripple effect, supporting scaling and market transformation.

2. Impact analysis

2.1 Environmental, economic, and social benefits

Environmentally, the initiative achieves significant reductions in CO₂ emissions through deep energy renovations, often reaching net-zero energy performance. Energy demand reductions of up to five- to sixfold provide strong resilience against energy price fluctuations.

Economically, participants benefit from reduced energy bills and improved housing value. At system level, the initiative supports job creation and reindustrialisation by developing local supply chains and prefabrication industries. It strengthens local economies by promoting non-offshorable activities and European resource use.

Socially, the initiative has strong impacts on well-being and inclusion. Renovations improve living conditions, addressing issues such as cold, damp, and mould. Testimonies highlight increased dignity and pride among residents, particularly in social housing. Collective approaches also strengthen social cohesion and trust.

Compared to standard renovation, the initiative delivers additional benefits:

- Economies of scale through aggregated demand
- Reduced costs via group purchasing
- Improved efficiency through standardised solutions
- Stronger community engagement and energy awareness
- Faster market development

3. HIGHLIGHTS OF DRIVERS AND SUCCESS FACTORS

3.1 Contextual, financial, and organisational factors

The success of the initiative is influenced by several contextual factors:

- **Cultural:** Growing acceptance of collective action and innovation in sustainability
 - **Social:** High levels of energy poverty and need for improved housing conditions
 - **Environmental:** Strong climate targets driving renovation urgency
 - **Political:** Active EU and regional policy support for decarbonisation and reindustrialisation
 - **Infrastructure:** Availability of building data and digital tools enabling analysis and planning
- Organisationally, the use of multi-actor consortia and a neutral facilitator is critical. The integration of supply and demand actors ensures alignment and practical relevance. Financially, EU funding provides initial support, while aggregated demand and clear market signals enable private investment.

Local governance plays a key role in mobilisation and implementation, particularly through municipalities and regional authorities. The initiative also promotes inclusiveness by engaging vulnerable groups, especially in social housing, and supporting participation through facilitation and adapted group sizes.



Figure 5. Deployment support. Source: Pôle GreenWin

4. LESSONS LEARNED AND PRACTICAL RECOMMENDATIONS

4.1 Lessons learned and recommendations

Key lessons include the importance of scaling beyond pilot projects and structuring the market to enable mass deployment. Standardisation and clustering of similar buildings are essential to unlock cost reductions through learning effects.

Another critical insight is the need to balance collective action with decision-making efficiency. Smaller cohorts and phased approaches help overcome this challenge.

Challenges included mismatched building typologies, lack of skilled supply chains, and resistance from industry stakeholders. These were addressed through better data tools, supply chain development, and stakeholder engagement.

Behavioural and social dynamics are also crucial. Effective facilitation, trust-building, and clear communication significantly enhance participation and outcomes.

Recommendations for replication include:

- Start with pilot projects but plan early for scale-up
- Use data to cluster buildings and standardise solutions
- Foster strong collaboration between supply and demand actors
- Implement group purchasing to reduce costs and build trust
- Invest in facilitation and community engagement
- Ensure long-term policy and financial support

These factors collectively enable a transition from fragmented renovation efforts to a scalable, systemic approach.



Figure 4. Achievements at the end of the project

5. WHERE TO LEARN MORE

For additional information, visit the following resources:

- <https://www.energiesprong.org/project/giga-regio-factory/>
- <https://ressorts.life/projets/giga-regio-factory-life/>
- <https://www.greenwin.be/fr/page/giga-regio-factory>
- <https://www.youtube.com/watch?v=DMN-0GgVMFY>
- <https://build-up.ec.europa.eu/en/resources-and-tools/links/life21-cet-buildreno-life-giga-regio-factory-project>
- <https://www.linkedin.com/company/lifegigaregiofactory/posts/?feedView=all&viewAsMember=true>