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GreenWin is proud to be part of the consortium behind the European Life Giga Regio Factory project and to share its initial achievements with you. Giga Regio Factory is co-financed by the European Union under agreement No. 101077258. Giga Regio Factory aims to accelerate efficient, large-scale renovation across Europe. It brings together 16 partners from 4 different EU countries: Belgium, France, Germany and Italy.

**Yours to discover !**

### The Life Giga Regio Factory and EnergieSprong project: Accelerating the transition to high-performance renovation in Europe.

With the Life Giga Regio Factory project and the work carried out by the [European EnergieSprong](#) teams, the transition to industrialised, high-performance renovation is underway in Europe.

The acceleration of high-performance renovations is more necessary than ever to meet the EU's commitments in terms of decarbonisation by 2030 and 2050. To achieve this, the Life Giga Regio Factory project aims to bring about a change of scale for all the players in the value chain:

- > On the demand side: building owners (social housing organisations), by providing them with the tools they need to take collective action on a regional scale.
- > On the supply side: companies, suppliers and manufacturers, by helping them to develop their offers, products and methods to enable them to respond to the massive markets of the future: industrialisation and standardisation of their solutions, development of their industrial production capacity, improved implementation, etc.

The aim of the project is to accelerate the development of the high-performance off-site renovation market, making dedicated solutions affordable and triggering mass production.

### About "Demand"

The asset aggregation tool is making progress. The aim of this tool is to use a list of homes and available data to help project owners select and group together homes that are suitable for renovation using industrial methods. The aim is to facilitate the emergence of collective approaches to group purchases between different contracting authorities. 3 working groups are currently working in parallel to :

- > Identify the best level of energy performance that can be achieved by each dwelling.
- > Qualify its potential for renovation using off-site solutions
- > Propose clusters of homes with similar construction and architectural features, to define lots with homogeneous housing types that can be used to programme collective renovation contracts (off-site or hybrid off-site/traditional). The idea is that the homes grouped together in this way should also be homogeneous in terms of the industrialised and off-site renovation solutions that exist on the market or are planned for the future.

The potential of this tool is very significant in terms of better detecting the homes most suitable for efficient off-site renovation and being able to group them together judiciously when programming these mass operations. We are in the process of consolidating the method and its indicators.

### About « Supply »

Our support programme for companies and solution providers has been launched.

- > We continue to provide valuable resources in our training kit: the EnergieSprong Observatory barometer, a practical guide for companies, presentations given at EnergieSprong Clubs, etc.

- > We have launched individual coaching for 20 players across Europe, in France, Italy and Germany. The aim is to help them develop their products and solutions: technical and economic analysis, market positioning, targeted building types, replicability strategies, commercial deployment and partnerships, etc.
- > At the same time, we are launching the organisation of collective workshops. The first topic to be covered will be feedback from EnergieSprong projects: analysis of recently delivered projects in collective and individual housing: prices, solutions implemented, market formats, key lessons learnt on the digitisation, prefabrication and implementation aspects, etc.

#### Coming soon:

- > Update of the EnergieSprong Observatory in France and Italy.
- > Publication of the Off-Site Renovation Reference Guide, to identify and qualify the different families of solutions available on the market: the different types of insulating facades, insulating roofs, technical equipment for heating and hot water, etc. etc.

#### Future event

- > Consortium meeting in Brussels in 2024

#### Parcours d'accompagnement

The support programme has been launched and is common to work packages 3 and 4. It comprises a number of different elements:

- > The e-learning modules, a set of training videos providing an overview of the subjects and issues involved in industrialised renovation (part of the free online resources of the Offsite Campus);
- > The training kit in the form of written documents for companies, depending on their level of maturity and the issues to be addressed;
- > Personalised coaching, for which this selection of players is intended, to help them develop their skills in industrial renovation.

These players will be supported through collaborative and/or individual workshops (at the level of their company), drawing on the resources and knowledge of the consortium members, in particular [Ressorts](#) and [Hors Site Conseil](#).

This specific support will help to overcome the problems faced by manufacturers in developing their products and production tools. Depending on the maturity of the company, the type of support offered will be determined according to the model below :

### 1. E-learning module

Designed for operational teams or companies wishing to learn about the challenges of high-performance industrialised renovations

### 3. Customised coaching

For companies wishing to join the scheme, Customised coaching by experts from the group can be made available.



### 2. Training kit

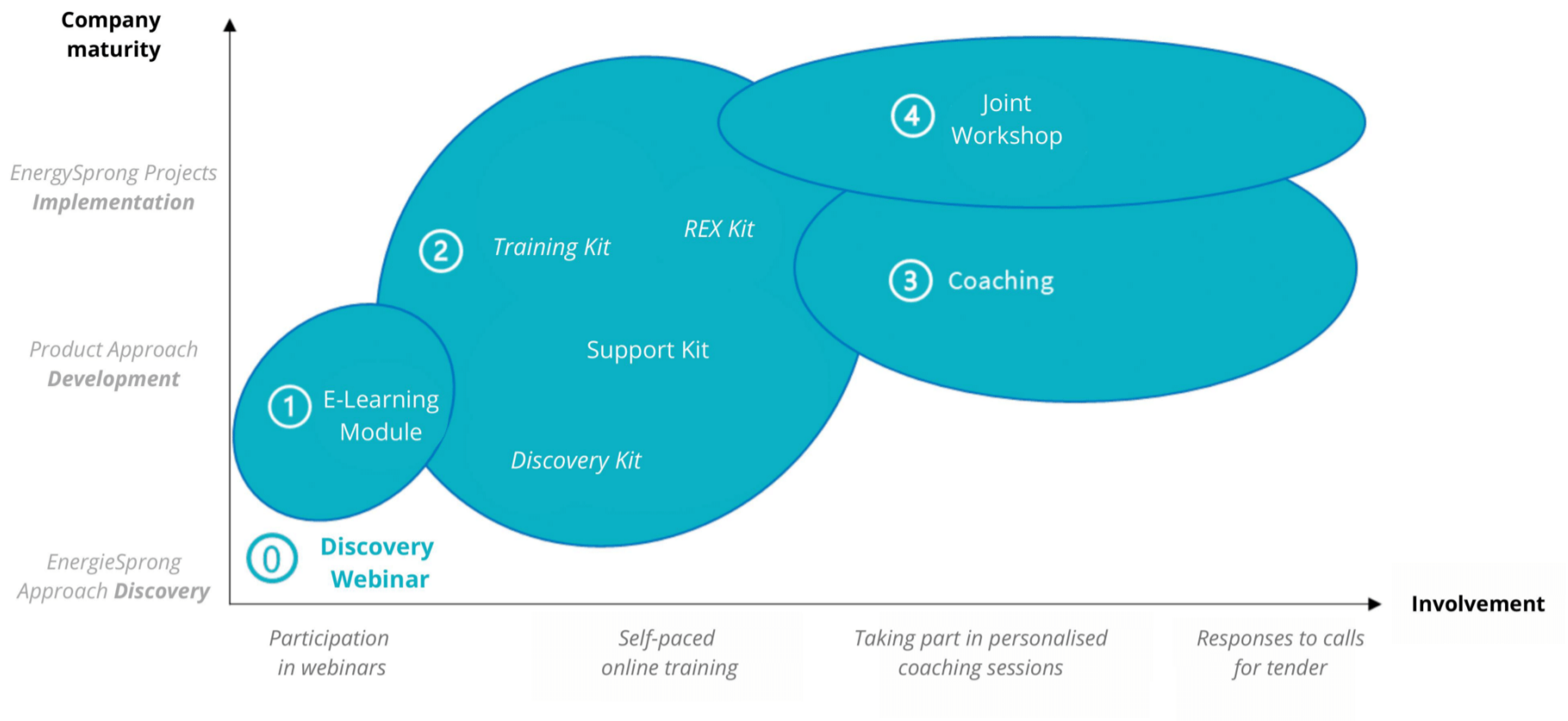
Aimed at companies wishing to :

- > Resources linked to the development of EnergieSprong markets (Cost-Quality-Impact Observatory)
- > Resources to draw inspiration from best practice

### 4. Networking & collaboration

Throughout the skills-building process, workshops and meet-ups will be organised to structure offers and groupings.

**The aim of this support programme is to create an 'incubator' for the industrialisation of renovation, at your disposal.**



## A support programme tailored to your profile

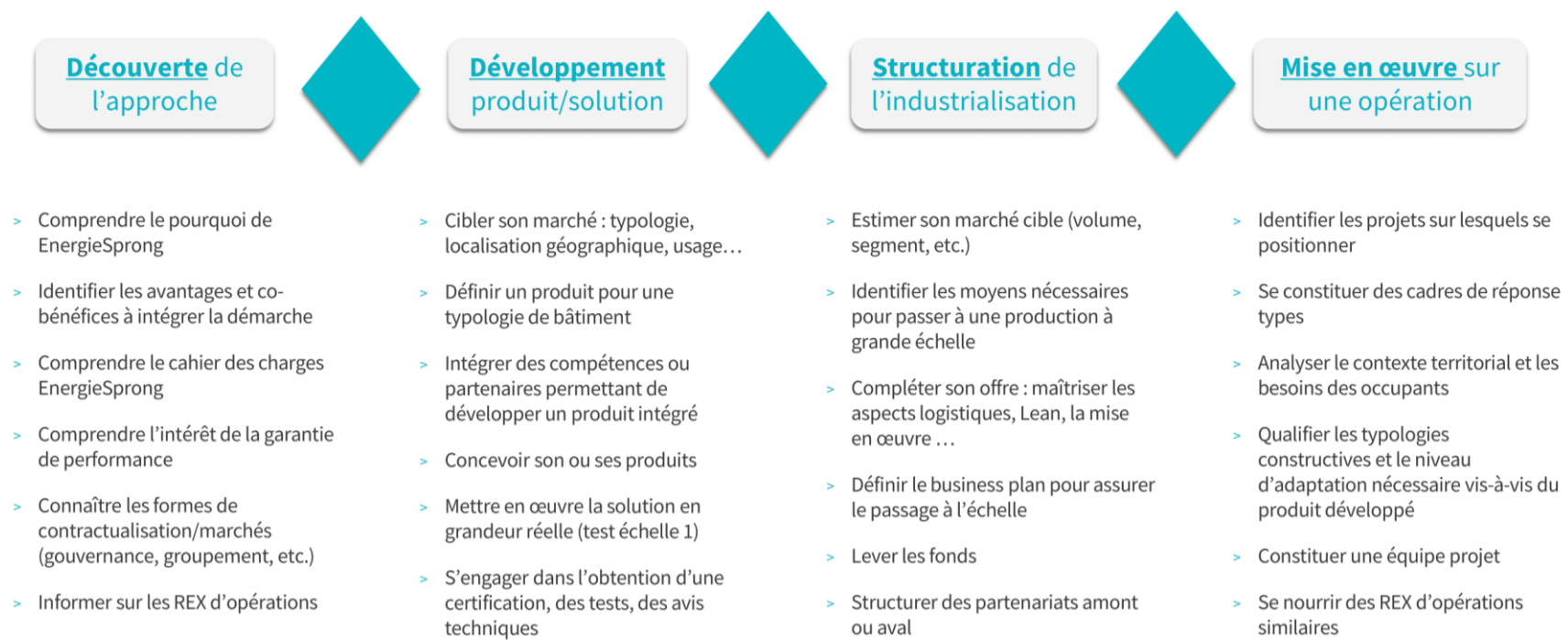


For bespoke coaching, the GreenFlex, Ressorts and Hors Site Conseil teams are mobilised to organise :

- > Group workshops to pool the needs of players with the same profile, enabling them to spend time working on the techniques used and the problems involved in setting up consortia, etc.
- > Individual workshops for each company selected, to understand the problems it faces at an organisational level, with regard to technical, financial, organisational and logistical issues, etc.

This coaching time can focus in particular on the following needs:

## Des besoins différents selon le positionnement et le vécu de l'acteur



The individual workshops will focus on case studies: analysis of a bid or offer submitted, looking at strengths and areas for improvement; sharing feedback on other projects carried out to complement best practice; looking back at questions that may have arisen during a project carried out and highlighting areas for improvement; analysis of the economic models of off-site projects/production to find ways of reducing costs and/or opportunities for new income, etc.

9 companies from different backgrounds were selected:

- > [Vinci / Rehaskeen](#)
- > [BioConstruction](#)
- > [Rexel](#)
- > [Rabot Dutilleul](#)
- > [Lign-O](#)
- > [Nibe](#)
- > [Macoretz](#)
- > [Viva Wood](#)
- > [Murébois](#)

### Geographic Focus

#### Germany

First renovation series in Offenbach



The municipal housing company [GBO \(Gemeinnützige Baugesellschaft mbH Offenbach\)](#) launches the first serial renovation project in Offenbach-Lauterborn

In the Richard-Wagner-, Franz-Liszt- and Weikersblochstraße district, seven buildings dating from the 1950s will be modernised for energy efficiency using an innovative approach. The conversion of the attic space will create 14 new flats, in addition to the existing 42. Work will start in autumn 2024 and is scheduled for completion by the end of 2025, with an investment of €9 million by the GBO.

Faced with a shortage of skilled labour, the GBO has opted to carry out a series of renovations using prefabricated facade elements, thereby reducing staffing requirements and inconvenience to

residents, who will be able to remain in their homes during the works. The new building envelopes will improve energy efficiency and protect against summer heat. The buildings will be connected to the district heating network, offering energy savings of 80-90% and protecting tenants from rising fossil fuel prices and CO2 taxes.



The main contractor is [B&O Bau](#), which has already densified a vacant area with two hybrid timber buildings. In Offenbach, where open spaces are scarce, raising existing buildings is a viable solution for creating new affordable housing.

The façade modules will be prefabricated in the B&O factory in Frankfurt/Oder, one of the most modern factories in Europe for wooden wall elements. These elements will be used to renovate facades, raise roofs and build new homes using hybrid wood.

<https://www.energiesprong.de/news-downloads/news/news-details/erste-serielle-sanierung-in-offenbach/>

### **GAP Solution and ELK bring serial renovation solution to industrial scale**

The technology leader in serial renovation innovations, [GAP Solution](#), and the ELK Group, one of the largest timber construction companies in the German-speaking world, will now be working together to promote the renovation of existing buildings on a large scale.

GAP brings 25 years of renovation experience and a patented, award-winning solar facade solution to the partnership, while ELK has manufacturing and assembly capacity in Germany and Austria for more than 500,000 m<sup>2</sup> of facade per year.

The first result of this partnership is a façade module combining innovative solar cell technology with proven photovoltaic modules. This solution makes it easy and cost-effective to modernise districts with taller buildings to the climate-neutral NetZero standard, with time savings of up to 80% compared with conventional methods.

The solution is currently being implemented as part of a [Vonovia pilot project in Witten](#). In Witten. After the refurbishment, which is due to be completed in autumn, 112 residential units, covering a total area of around 8,300 square metres, will be upgraded from E to A+ energy efficiency.

« Avec l'expertise unique de GAP Solution et notre compétence industrielle, nous voulons désormais concrétiser ensemble ce projet », souligne Stefan Anderl, directeur général de ELK.

[GAP Solution und ELK bringen serielle Sanierungslösung auf Skalierungskurs | Energiesprong DE](#)

### **Precision meets efficiency: using digital tools**

Greater efficiency and planning certainty thanks to accurate data capture: a new information document provides an overview of the use of 3D scanning in mass renovation planning processes.

[Here is \(in French\) the BIM & 3D-laser digitalisation document](#)

Efficiency gains and process optimisation play a crucial role in **Energiesprong's** series renovation. An important factor is the use of digital tools that enable standardisation and guarantee reliability and quality in prefabrication.

Particularly in the planning process, AI-based digital tools make a decisive difference by enabling scaling. Indeed, façade, photovoltaic or roof modules prefabricated in the factory must fit perfectly to the millimetre on the building. To ensure this reliability, series renovation uses 3D laser scans combined with thermal imaging, point clouds and surface modelling. This data is used to create a digital twin, a complete digital representation of the new building, greatly simplifying the analysis and planning processes.

This recently published document provides an overview of the 3D scanning process and explains the steps to consider when planning. What are the requirements for capturing data from existing buildings, and what risks should be avoided? The paper provides a comprehensive overview of how highly accurate digital twins support the planning and production of bespoke components. It highlights aspects to consider and best practices that contribute to successful implementation. This document is aimed at those who are already implementing or planning a series renovation project

[Präzision trifft Effizienz: Einsatz von digitalen Tools | Energiesprong DE](#)

### **Events**

On 20 June, at the [Energiesprong Innovation Day](#) in Berlin, leaders in the construction industry met to present the very latest in serial renovation solutions, share their experiences and forge links. The Life Giga Regio Factory project was presented at the workshop on digitalisation and AI, with the aim of raising awareness in the construction industry of the opportunities for scalability thanks to digitalisation and AI, and solving market challenges.

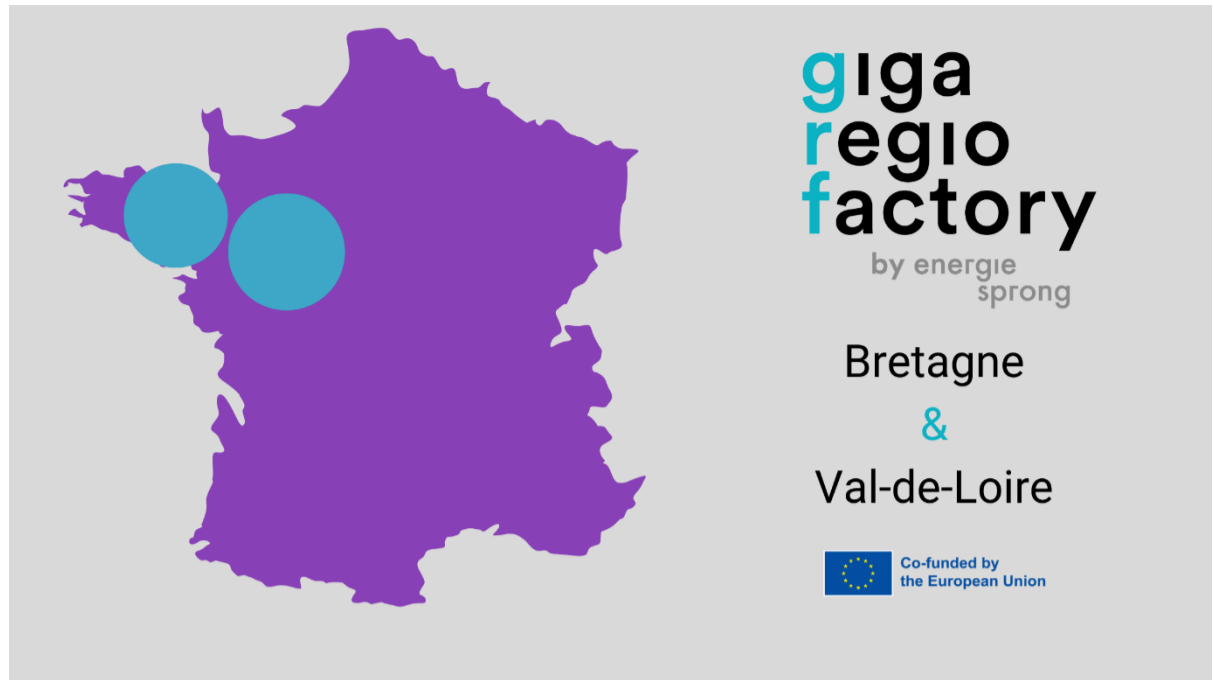
## **Belgium**



A '[SOCIALE ENERGIESPRONG](#)' information day was organised on 14 June by [Wonen in Vlaanderen](#), the umbrella company for Flemish property companies. The event focused on the Dutch [NOM](#) standard (Nul-op-de-meter, 'zero on the meter') for energy-neutral buildings, similar to the Energiesprong concept of zero net energy. The NOM standard was promoted in the Netherlands by [Stroomversnelling](#), the initiator of the Energiesprong concept. This information day focused on what has been achieved in Belgium in the field of industrialised renovation, with presentations by experts in several fields and a round table discussion including questions put to the public (social housing companies) to gauge their opinion (public yes/no vote). The ultimate aim was to convince social housing companies to embark on industrialised renovation.

## France

- > > Several projects from the **1st collective initiative in Pays-de-la-Loire (MASH) are underway or have recently been completed**: [Résidence Georges Gauthier au Mans](#) (Sarthe Habitat), [résidence Moulin du Bois à Saint-Herblain](#) (Atlantique Habitation) and [résidence Bois Rochefort à Guérandes](#) (Habitat 44).
- > > Progress of the collective initiative in Brittany: 1,000 homes planned. The [EnergieSprong Club in Brittany](#) has been relaunched.
- > > The Pays-de-la-Loire region will be joining the initiative to launch a second wave of mass renovations: the launch day is scheduled for 10 September.
- > > An EnergieSprong day is planned at the national [Batimat](#) trade show in early October: a morning session will be devoted to companies that have been coached, focusing on feedback, followed by an afternoon dedicated to the [EnergieSprong France](#) meetings.
- > > The EnergieSprong France Observatory barometer will be updated by the end of the year.



## Italy



In Italy, **Energiesprong players are working on pilot projects** and cooperating to develop sustainable business models for industrialised deep renovation, taking into account the different types of buildings and customer targets. **Thanks to the international activities and collaboration of the Life Giga Regio Factory project**, the economic model also explores **how to accurately define the construction cost of the intervention**, considering direct and indirect expenses, as well as the future scaling scenario.



Indeed, one of the main objectives of this tool is to find the conditions that will enable the volume of building renovations to be increased, costs to be reduced and decarbonisation objectives to be achieved. At the same time, the various economic models aim to facilitate the role of all players in the supply chain by offering them an instrument capable of adding value to their investment or contribution.

Finally, demonstrating the economic sustainability of industrialised deep renovation is likely to encourage the development of new sources of funding and government subsidies, enabling market development and increasing credit availability for net-zero-emission off-site renovations.

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a European project supported by this consortium:

