

GREENFUTURE – Specialization of SMEs in the design, construction and maintenance of green roofs and facades solutions

Summary

Scope – Currently, the increase in urbanized areas and population density in cities has made urban centres increasingly vulnerable to the effects of climate change. In this regard, it is essential to adopt immediate measures to mitigate or adapt cities to this reality. Nature Based Solutions (NBS) have been pointed out as possible solutions for creating more sustainable and resilient urban environments. Among these solutions, green roofs and facades (GRF) stand out. In fact, these types of systems can bring benefits to the building, through the improvement of thermal and acoustic insulation, and to the urban environment, through water retention (damping flood peaks), mitigation of the urban heat island effect, and improvement of air quality and increase of biodiversity.

Despite the benefits described and the incentives for the development and installation of GRF solutions, there are still some barriers regarding their implementation. The high costs of these types of solutions and the difficulty in assessing the real benefits of their implementation are among those barriers. In fact, the difficulty increases due to the high diversity of solutions and components that make up these systems and the complexity of the phenomena involved in their behaviour. In addition to these aspects, the lack of knowledge of manufacturers regarding the certification procedures, namely with regard to CE marking, has been hindering the dissemination of GRF.

Main objective

The aim of this project was to transfer scientific and technological knowledge to SMEs that act in the market of green roofs and facades, stimulating the development and implementation of solutions that promote greater environmental sustainability and climate resilience in urban areas.

Project description

This project aimed to transfer scientific and technological knowledge of the R&I system to Portuguese SMEs that operate in the GRF market, in order to support the technicians and entities involved in the implementation of GRF to develop, design and install innovative, efficient and sustainable solutions, as well as support the CE marking of these solutions. Additionally, this project also aimed to promote the widespread of these solutions, boosting the economic value of the Portuguese GRF market, as well as the adoption of solutions that contribute to more sustainable and resilient urban areas to the effects of climate change.

Main objectives

- Carry out a diagnosis of the current situation of the Portuguese GRF market, with the identification of barriers associated with the implementation of solutions;
- Systematize knowledge and technologies related to the implementation of the GRF;
- Carry out a case study of GRF implementation;
- Create design tools to help technicians and companies develop and design different GRF solutions;
- Systematize information regarding the GRF CE marking process;
- Gather technical data and monitoring results of functional GRF prototypes;
- Develop dissemination, demonstration and awareness actions.

Project activities and expected results

The GREENFUTURE project was divided into the following main activities:

- Activity 1 – Support creation, registration and launching of a collective brand;
- Activity 2 – Research and diagnose actions directly related to the development of the project;
- Activity 3 – Development of prediction tools and a collaborative web platform;
- Activity 4 – Promotion and dissemination of project activities and results;
- Activity 5 – Organization and implementation of awareness information and demonstration actions.



Figure 1. Functional prototype of a green roof installed in the Itecons building in Coimbra.

GREEN FUTURE

by itecons

Project Reference

POCI-01-0246-FEDER-181322

Leading Institution

Itecons – Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia, Ambiente e Sustentabilidade (Portugal)

Partners

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Funding

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Period

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Total

437 192.40€

CERIS

Coimbra Hub: 437 192.40€

Project Website

<https://greenfuture.itecons.pt/>

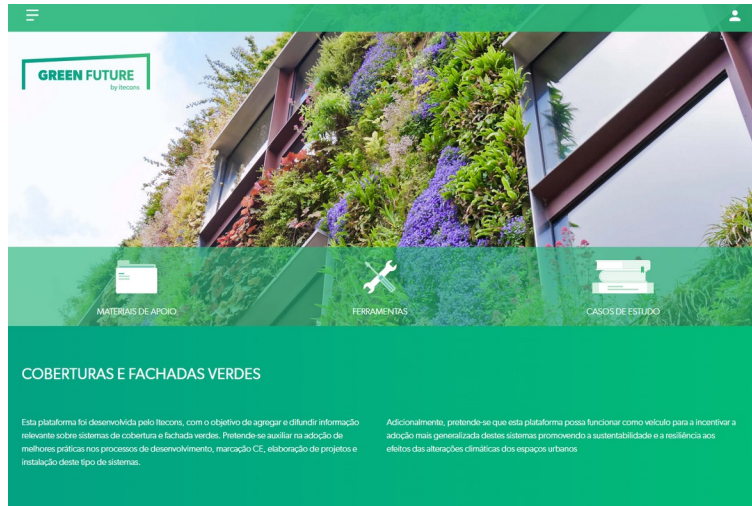


Figure 2. GREENFUTURE platform (greenfuture.itecons.pt).