

Study cases

/ **BIG4LIFE** will improve the long-term sustainability of eight BIG systems in Lleida, Barcelona, and El Prat de Llobregat, and the provision of ecosystem services in Mediterranean cities.



BIG1-H-PCITAL. Lleida



BIG2-Ronda-La Mercè. Lleida



BIG3-Porxos d'en Xifre. Barcelona



BIG4-TEBVERD. Barcelona



BIG5-URBASER. Barcelona



BIG6-Pérez-Iborra. Barcelona



BIG7-Auditori l'Artesà. El Prat de Llobregat



BIG8-Tíbidabo. Barcelona



Promoting collaborative strategies for management, maintenance, impact monitoring, and evaluation of Building Integrated Greenery (BIG) systems

Towards the New European Bauhaus by advancing the lifespan of BIG Systems



PCITAL



The BIG4LIFE project has received funding from the LIFE Programme of the European Union

This project has received funding from the European Union's LIFE Program under grant agreement No 101114024. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union.

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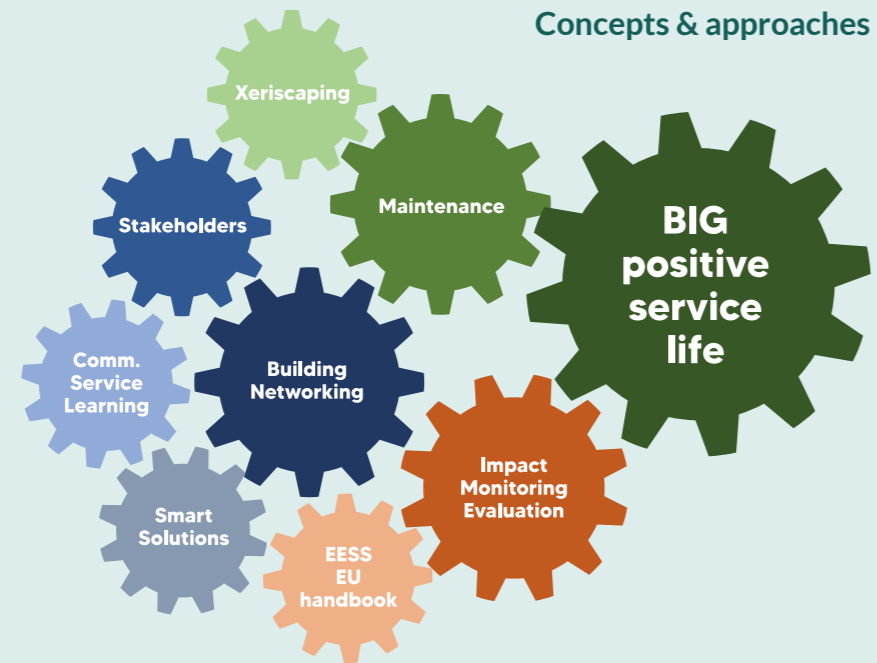


Outcomes and expected impacts

- / **Innovation in professional practices by improving collaborative maintenance and monitoring of BIG systems.** Only in Spain, 65.000 professionals will be engaged during the project.
- / **Adaptation of municipal regulations** concerning BIG systems in three municipalities in Catalonia (Barcelona, Lleida, and El Prat de Llobregat). Professional guides and regulations update for BIG systems in Spain.
- / **Increased social awareness of the socioenvironmental benefits of BIG systems.** At least 5.000 people engaged during the project.
- / **Training and capacity building for specialized professionals from the BIG sector.** About 500 local, national, and international people are expected to participate in training activities.
- / **Improve the quality of life in cities by enhancing their adaptation to climate change.** A cost-benefit analysis will be conducted for each case study.

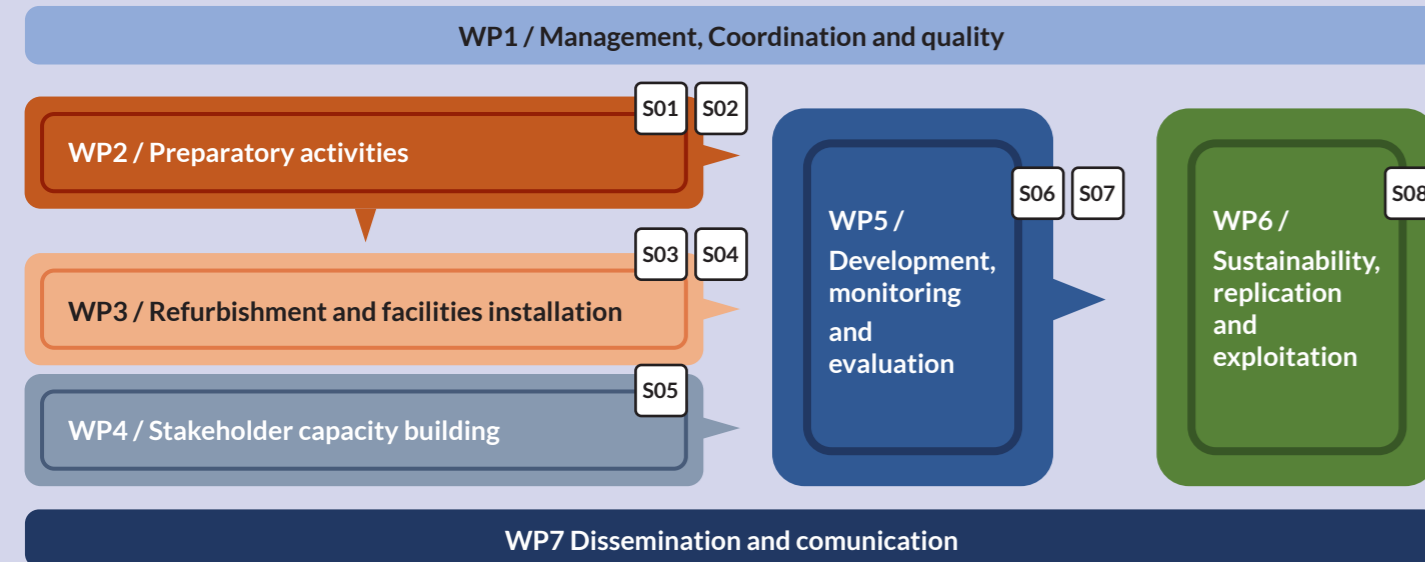
Objective

The general objective of the BIG4LIFE project is to demonstrate that through the application of appropriate collaborative strategies for the management, maintenance, and impact monitoring & evaluation of BIG systems, i.e. green roofs, and green walls/ facades, it is possible to guarantee their long-term sustainable service life and the optimal and continuous provision of ecosystem services, with special emphasis on the Mediterranean climate.



Specific objectives and implementation

1. To characterize the current operation of eight selected BIG projects.
2. To co-design 16 collaborative strategies for (a) Maintenance and (b) Impact Monitoring & Evaluation, integrating xeriscaping, smart technologies, and Community Service-Learning approaches.
3. To partially refurbish currently selected BIG projects that have failed.
4. To install the facilities and smart control systems for those maintenance and monitoring activities that can be automated.
5. Stakeholders' capacity building on BIG systems and their ecosystem services, their maintenance and monitoring, and networking and Community Service-Learning approaches.
6. To apply the maintenance and monitoring plans and to evaluate the positive impact on the selected BIG systems.
7. To draft the two definitive EU framework plans (maintenance and monitoring) that can be replicated in the future in any BIG system.
8. To catalyze the large-scale deployment and application of the BIG4LIFE project achievements, both in the Mediterranean and worldwide.



Ecosystem services improved by BIG systems

Air Quality	BIGs capture urban pollution
Biodiversity	BIGs support urban biodiversity
Climate vulnerability	BIGs contribute to the Urban Heat Island effect reduction and to the urban runoff reduction (diminishing the flood risk)
Employment	BIGs generate new economic opportunities and jobs in the sector of urban gardening (technologies, products, maintenance procedures, etc.)
Energy savings	BIGs provide thermal insulation to buildings
Green House Gases sequestration	BIGs contribute to carbon sequestration
Noise	BIGs contribute to the reduction of urban noise, and they provide acoustic insulation
Participation	BIG systems activate the skin of buildings offering new activities (gardening, education-research, leisure, etc.)
Wellbeing and health	BIGs enhance contact with nature for urban dwellers, which improves their health and wellbeing (biophilia effect)
Renewable energy	Some BIGs can produce renewable energy through solar panels or small windmills
Water efficiency	BIGs can capture rainwater to be reused to irrigate the gardens. Xeriscaping designs reduce the use of water for irrigation
Water quality	BIGs capture heavy metals in water and improve its pH, offsetting the effects of acid rain on urban water bodies
Economic incomes	BIGs can produce direct economic benefits such as food production or space rental for events



Porxos d'en Xifré

