

Partnering Opportunity

Profile status : Published

Research Development Request

Exemplary actions of urban sustainability for Green Deal call applying an expert system for the design, simulation and monitoring of urban areas (Topic: LC-GD-4-1-2020)

Summary

Andalusian public agency dedicated to urban and housing policy will coordinate a project proposal to be submitted to the H2020 Green Deal call focused on the development of demonstrative interventions incorporating the most advanced and sustainable urban innovations. It looks for partners for the physical execution of the demonstrators. Also with expertise for the design of expert systems, diagnosis methodologies or the cataloguing of good practices regarding energy efficiency in buildings

Creation Date	16 December 2020
Last Update	21 December 2020
Expiration Date	15 January 2021
Reference	RDES20201110001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/03fc495d-427c-4a37-b4df-68ad8e052fda

Details

Description

The project responds to the need to materialize and make visible in an integrated way the most advanced and successful technological, social, financial and management innovations developed in recent years in Europe, through two examples of urban actions that select, integrate and adapt to local particularities these advances, so

that they can be more easily replicated. The actions will be carried out in two different European climate zones, one of them in Spain.

The project will explore all the possibilities of physical intervention in the two urban areas under intervention: rehabilitation, new construction, demolition and rebuilding, re-densification of buildings, collective air conditioning systems, systems for sustainable mobility, etc.

The actions are expected to incorporate measures such as:

- The energy rehabilitation of social housing,
- The construction of a social housing building of almost zero energy consumption by means of industrialized modular construction and the application of BIM methodology,
- The construction or rehabilitation of a non-residential building to equip and furnish the area (community coworking space),
- Energy collective systems,
- infrastructure for sustainable mobility.
- Intervention in public space with bioclimatic measures,
- Agro-ecological gardens

The implementation of the project will involve the development of the following components:

*An innovative toolbox for urban intervention, catalogued according to what requirements must be given for its applicability. The toolbox will include solutions for social innovation, technological innovation, financial and management.

*A methodology and a guide for the diagnosis of urban areas to identify problems and opportunities as well as possible risks and threats, including the effects of pandemic situations and climate change.

*An expert system that allows the identification of possible innovative solutions to be applied, the design of the actions to be executed, the simulation of their effects and behaviour by means of digital twins, and the monitoring of their subsequent operation, offering data on the whole area. This system will take into account both the toolbox and the methodology and guidance for diagnosis.

The project, which is in the phase of idea under development, will be submitted to the Green Deal call. Topic : LC-GD-4-1-2020 (IA): Building and renovating in an energy and resource efficient way.

The Agency, as co-ordinator, is seeking partners to constitute a consortium.

The profiles of the different partners sought, to reach research cooperation agreements are:

- Partner for the physical execution of urban intervention in another European climate area, with the capacity to build, rehabilitate and intervene in an urban area in an integrated manner.
- Partners for the identification, cataloguing and standardization of good practices of urban intervention based on innovation in energy efficiency in building, industrialized construction, financing, management and governance, participation.
- Partners for the design of integral methodologies in the diagnosis of urban areas, identifying potential, weaknesses and risks.
- Partners for the design of expert systems, Building Information Modeling (BIM), digital twins, urban modelling, simulation and monitoring systems.

Call/topic conditions:

Funding Program: Horizon 2020 Framework Programme

Call: Building a low-carbon, climate resilient future: Research and innovation in support of the European Green Deal (H2020-LC-GD-2020)

Topic: LC-GD-4-1-2020 Building and renovating in an energy and resource efficient way

Type of action: Innovation Action

Model: Single stage

Call deadline: 26 January 2021 17:00:00 Brussels time

Deadline for Expressions of interest: 15 January 2021

Advantages and innovations

The proposal will enable the development of a tool capable of optimising the identification, design, simulation, application and monitoring of the most appropriate sustainable urban innovation actions for any urban area.

The pilots to be carried out in two different climatic areas will allow the use of the methodology and system developed and will serve as an example of good practice integrated in the same urban space.

The implementation of the project will involve the development of the following components:

An innovative toolbox for urban intervention, catalogued according to what requirements must be given for its applicability. The toolbox will include solutions for social innovation, technological innovation, financial and management.

A methodology and a guide for the diagnosis of urban areas to identify problems and opportunities as well as possible risks and threats, including the effects of pandemic situations and climate change.

An expert system that allows the identification of possible innovative solutions to be applied, the design of the actions to be executed, the simulation of their effects and behaviour by means of digital twins, and the monitoring of their subsequent operation, offering data on the whole area. This system will take into account both the toolbox and the methodology and guidance for diagnosis.

Stage of development

Proposal under development

Comment Regarding IPR status

Some of the technologies to be used in the project, both for the urban intervention pilots and for the development of the expert system may be subject to intellectual property rights.

Keywords

Technology

01003016

Simulation

02006005

Construction maintenance and monitoring methods & equipment

04005005

Solar/Thermal energy

04007001 Energy management

11006 Citizens participation

Market

02007016 Artificial intelligence related software

02007017 Expert systems

09007004 Engineering and consulting services related to construction

NACE

F.41.2.0 Construction of residential and non-residential buildings

O.84.1.1 General public administration activities

Network Contact

Issuing Partner

ZACHODNIOPOMORSKI UNIWERSYTET TECHNOLOGICZNY W SZCZECINIE

Contact Person

ZEBROWSKI Pawel

Phone number

+48 91 449 43 64

Email

pzebrowski@zut.edu.pl

Open for EOI: **Yes**

Dissemination

Relevant sector groups

Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

Other

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

Type of partners sought: Industry, academia, research centres, municipalities, public agencies

Role of the partners sought: collaboration for the following project activities is required

- Physical execution of urban intervention in another European climate area, with the capacity to build, rehabilitate and intervene in an urban area in an integrated manner.
- Identification, cataloguing and standardization of good practices of urban intervention based on innovation in energy efficiency in building, industrialized construction, financing, management and governance, participation.
- Design of integral methodologies in the diagnosis of urban areas, identifying potential, weaknesses and risks.
- Design of expert systems, Building Information Modeling (BIM), digital twins, urban modelling, simulation and monitoring systems.

Type and Size of Partner Sought

SME 11-50, University, R&D Institution, 251-500, SME 51-250, >500

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

H2020

Call title and identifier

Green Deal call. Topic LC-GD-4-1-2020: Building and renovating in an energy and resource efficient way

Submission and evaluation scheme

Innovation Action (IA)

Coordinator required

No

Deadline for EOI

15 Jan 2021

Deadline of the Call

26 Jan 2021

Weblink to the call

https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1669

Attachments
