Profile Status: Published

Technology Offer

Energy efficiency on-site: a new methodology for urban planning and realization of energy-efficient neighborhoods under the aspects of climate change mitigation and global sustainability

Summary

A group of German engineering companies specialized in geo-techniques and land use planning, developed a new tool for planning and realization of energy efficient neighborhoods. The methodology helps efficiently to optimize urban planning and redevelopment in the neighborhood by minimizing costs, risks and time for investments to mitigate climate change. Partners sought: Municipalities, housing associations, energy suppliers, architects/engineering offices for technical cooperation agreements.

Creation Date	06 April 2017
Last Update	19 April 2017
Expiration Date	19 April 2018
Reference	TODE20170403002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/554dd28a-fc11-42a8-bd2f-274fa2cd9486

Details

Description

The global challenges of climate change require a climate-friendly energy production as well as a sustainable energy consumption. In order to achieve a noticeable reduction in greenhouse gases, it is necessary to increase the share of renewable energy use and energy efficiency in all sectors. The necessary results can only be achieved by the integration of many households and businesses in cities and communities – the so-called neighborhood. Existing planning solutions are either to global and based on the governance of entire cities, or they are sectorally limited for the neighborhood, e.g. only focused on energy or urban planning.
To close this gap a group of small German companies has developed a new tool that enables urban planning of the optimal mix of energy supply in connection with a spatially and functionally sustainable development of the neighborhood. All necessary indicators are brought together and linked to a GIS (Geographic Information System)-based model. 23 defined sets of indicators, which include 142 individual parameters have been determined for the following six key areas:
- Energy and building technology
- Architecture
- Urban planning

- Ecology
- Mobility
- Resources

The selected indictors are essential for a sustainable neighborhood development and allow for an easy and valid evaluation of development scenarios. The evaluation of sustainability is based on the dimensions of ecology, economy and social issues. All spatially stored evaluation criteria and indicators can be combined and clearly visualized with the assistance of the especially developed "sun": The Sun of Sustainability (see image).

By using the tool, the aim of an energetic neighborhood optimization with a high self-sufficiency through renewable energies is achieved. Measures for improvement of energy efficiency and climate protection can be implemented in such a way, that there are no deterioration of all other indicators within the neighborhood. The presentation of all aspects of the integrated neighborhood concept is provided in the neighborhood atlas. The necessary steps for the energetic reconstruction of the neighborhood are shown in a map of measures. In addition, the customer receives recommendations for impulse and key projects. These projects initiate urban development in the respective neighborhood or may help to eliminate immediate weaknesses.

Joint activities with new partners are envisaged under technical cooperation agreements: a regional methodology should be developed further and adapted for trans-regional and international use. The application of the new tool provides municipalities and other users with the benefit of actually responding to the complex challenges of urban redevelopment in their region. It addresses the “neighborhood” as being the right place for future-oriented climate protection projects – from strategic planning to implementation and evaluation.

Advantages and Innovations

The significant innovation of this interdisciplinary planning tool results from the degree of severity of analysis and planning, and from the combination of building planning and urban planning in the field of energy-efficient urban redevelopment.
The new method of sustainability assessment can also be used for certification of neighborhoods.
Further advantages:
- enabling the development of sustainable integrated neighborhood concepts under the consideration of the property-level
- the novel systemic practical approach results in a neighborhood atlas
- enables the allocation of detailed and concrete energy consumption and requirements
- minimizing costs, risks and time for investments significantly
- producing transparency with regard to environmentally and energy-relevant facts

Stage of Development

Prototype available for demonstration

IPR Status

Other

Comment Regarding IPR status

no patent/trademark foreseen

Profile Origin

National or Regional R&D programme

Keywords

Technology

01004006	Environment Management Systems
01004007	GIS Geographical Information Systems
10002004	Climate Change mitigation
10002006	Ecology
10002007	Environmental Engineering / Technology

Market

06010001	Energy for private/domestic housing
06010003	Energy for Industry
09002002	Real estate
09003001	Engineering services
09008004	Other utilities and related firms

NACE

M.71.1.2	Engineering activities and related technical consultancy

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

1992

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Seeking partners from the following fields:
- municipalities
- housing associations
- municipal utilities
- energy suppliers
- citizen cooperatives
- architects and engineering offices

Role:
Above partners should deal with or have strong interest in sustainable urban redevelopment measures in their regions and neighborhood.
Partners are sought for technical cooperation agreements including strategic planning tasks, implementation and evaluation of the tool in other regions/neighborhoods.
Technical support and engineering service will be provided during all stages and processes.

Type and Size of Partner Sought

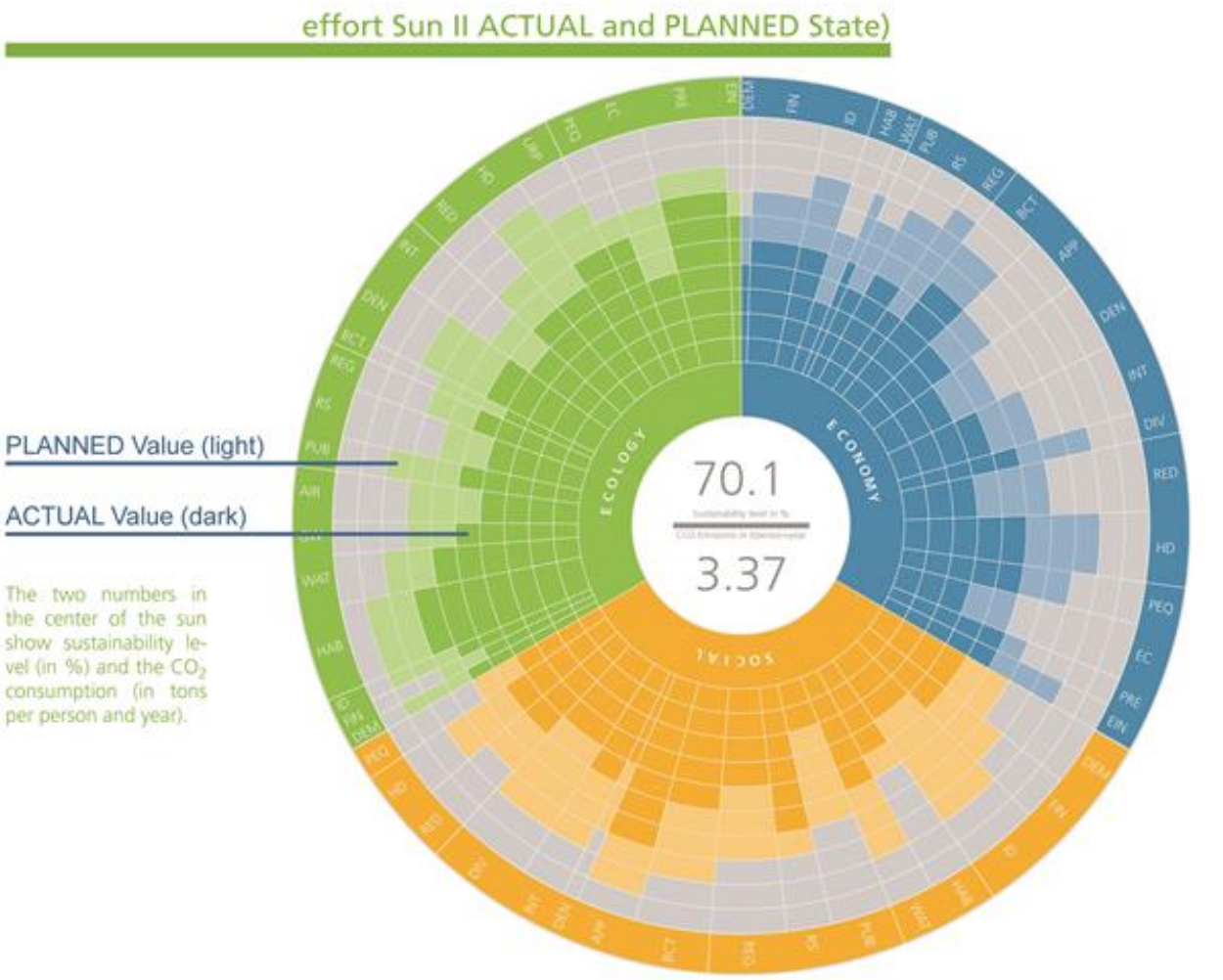
SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement

Attachments

Sun of Sustainability.jpg



The sustainability assessment based on the "effort-Sun of Sustainability" was first presented at "ICSDEC- International Conference on Sustainable Design, Engineering, and Construction" in May 2015, in Chicago IL.

Profile Status: Published

Technology Offer

Technology for inhibiting biofilm formation on the surface of drinking water pipe networks using nanoparticle composite

Summary

A Korean SME has developed anti-microbial nano-composite that can be utilized to keep drinking water distribution network clean. The technology can be applied to plastic and steel water pipes to reduce possibility of biofilm formation, and thus increase the biological stability of tap water. It is cost saving and can be applied to many kinds of fluid-transporting pipes. The company is expecting to cooperate with a partner who is interested in a commercial, financial or joint venture agreement.

Creation Date	27 April 2017
Last Update	14 August 2017
Expiration Date	02 May 2018
Reference	TOKR20170427001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/413f930f-ff73-4965-8108-e49969e6a294

Details

Description

A Korean company develops technologies based on innovation that can improve people's lives on earth, and thus makes the lives healthier and happier. The company has taken out its first step in the field of 'water' and 'in-door air quality'.
By means of its invention, tap water will become safer to drink, and in-door air cleaner and healthier
Enhancing the quality of drinking water is an important issue in Korea as well as other countries for health and safety reasons.

Applying nano-ceramic composite is an effective and economic solution for the wide use of water.
The company's developed technology is patented. Also, stable and safe nano-technology is embedded in the water pipe. The water pipe is a scientifically tested and proven product.

Possible cooperation with this Korean company would be a commercial agreement with technical assistance, financial agreement or joint venture agreement. Entering a European market by collaborating with local partners is the company's goal. Therefore, any companies who could work on sales of the company's product or who would like to apply the company's technology with its own technology is welcomed. The company is open to form a joint venture

company or get a financial investment as well.

Advantages and Innovations

The developed antimicrobial nano-ceramic composite has the following advantages.
- Safe, energy saving and cost effective when applied to pipe network system
- meets the OECD(Organization for Economic Cooperation and Development) regulation
- reduces possibility of biofilm formation on the pipe surface
- increases the biological stability of tap water
- prolongs life-time of the pipes
- can be applied to prevent biofouling in many kinds of fluid-transporting pipes

Stage of Development

Already on the market

IPR Status

Patent(s) applied for but not yet granted,Trade Marks

Comment Regarding IPR status

Korean patent applied for but not yet granted

Profile Origin

COSME

Keywords

Technology

02007005	Composite materials
10002007	Environmental Engineering / Technology
10004	Water Management
10004004	Drinking Water

Market

08001001	Plastic fabricators
08001008	Membranes and membrane-based products
08004003	Water treatment equipment and waste disposal systems
09008002	Water, sewerage, chemical and solid waste treatment plants

NACE

C	Manufacturing
F.42.2.1	Construction of utility projects for fluids
G.46.7.3	Wholesale of wood, construction materials and sanitary equipment

Network Contact

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

South Korea

Partner Sought

Type and Role of Partner Sought

- Type of partner sought : Company
- Specific area of activity of the partner: Environment, Water
- Task to be performed: Investment, Sales and/or co-Production

Type of Partnership Considered

Financial agreement
Commercial agreement with technical assistance
Joint venture agreement

Attachments

Profile Status: Published

Technology Offer

WILDTHING-EEIKO crowdsourcing platform application for alien species control

Summary

A Spanish company, beneficiary of the SME Instrument, is about to deploy into the market WILDTHING, a citizen collaboration-based multiplatform application for the control of Invasive Alien Flora Species. Following 1143/2014 regulation, it allows citizen participation and the validation by civil servants. The company is looking for partners able to carry out pilot tests with some of their customers, either public or private, under a research cooperation agreement.

Creation Date	18 April 2017
Last Update	10 May 2017
Expiration Date	10 May 2018
Reference	TOES20170418002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/33a82e19-2aa5-47ed-b3dc-96a83f5027be

Details

Description

WILDTHING is a Geographical Information Systems (GIS) technology based web platform with two different interfaces:
-Input interface: to inform citizens and to create awareness of the issue, as well as to report the new location of invasive alien species. Based on citizen participation and expert verification on a crowdsourcing basis, this approach is a disruptive innovation in this ecological area of. The platform citizens can use free. To became a new member with the email address is enough. The new locations need a photo, one or more, to put in this interface. This photo is used by the experts to verify the information. If there is a doubt, the experts can contact the people to clarify. After verification, the new locations will be seen on EEIKO website. All the people can see the new locations and to learn with the other data. This database can be shared with other biodiversity platforms, DAISIE, GBIF or similar.
- Output interface: this interface has been designed to use by environmental authority (municipalities, protected natural areas, regional environmental departments, ministry). It is used:
• to carry out invasives alien species control projects,
• keeping the atlas of invasive alien species up to date,
• to prevention the invasion,
• to follow the results of the control invasive actions included the following of the restoration of the damaged ecosystems,
• to have an early detection notifications,
• to determinate emergency measures and rapid eradication at

an early stage of invasions,
• to have a history with the action, atlas, and evolution of invasive species.
• To do inquiries and multiple inquiries to obtain information to do reports.
- It possible to work in the control of IAS with the platform and the same time with different managers, and to share the information or the results. This is very useful to cooperation and coordination between Member States. With the users is possible to determinate which information is possible to see by another managers and which information is private.

The EU is already supporting EEIKO. This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement Nº 743453.

The company is looking for a company, related environment or environmental and natural environment consulting assessment or with customers with problems with alien species or companies that are dedicated to the management of the territory, so that they develop a pilot test with some of their customers, either public or private. It would be available EEIKO tool for a year for free if the company would get HORIZON 2020 instrument's (Phase 2) grant.

Advantages and Innovations

The product offers the following advantages and innovations:
• There are already some Apps in the market that can help you register new IAS locations, but none of them help to manage and control IAS. EEIKO is a perfect help for managers.
• EEIKO works in all countries. It is currently working in Europe but it can easily be adapted to any other place in the world
• You can register new IAS locations from your smartphone and upload their photo (public participation)
• Specialists verify your locations (expert verification)
• These locations can be visualised on a map (surveillance system)
• With this tool you can design and manage eradication actions to control IAS (effective measures)
• It is possible to monitor the effectiveness of these actions including their costs (management measures)
• All new and historic data is immediately available for reports and inquiries (reports and results)
• You receive an email as soon as IAS of your interest is located (early detection notifications)

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

Product ready for a pilot test

IPR Status

Copyright

Profile Origin

H2020 – Industrial Leadership – Innovation in SMEs (incl. SME Instrument)

Keywords

Technology

10002005	Biodiversity / Natural Heritage
10002006	Ecology
10002011	Soil and Groundwater Pollution
10002012	Remediation of Contaminated Sites

Market

01004007	Network test, monitoring and support equipment

NACE

E.39.0.0	Remediation activities and other waste management services

Network Contact

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The company is looking for a company, related environment or environmental and natural environment consulting assessment or with customers with problems with alien species or companies that are dedicated to the management of the territory, so that they develop a pilot test with some of their customers, either public or private. It would be available EEIKO tool for a year for free if the company would get HORIZON 2020 instrument's (Phase 2) grant.

Type and Size of Partner Sought

SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Research cooperation agreement

Attachments