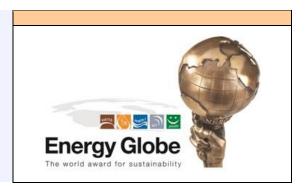
Energy Globe Foundation GmbH Hessenberg 14, 4814 Neukirchen, Austria Email: contact@energyglobe.info

Website: www.energyglobe.info/participation



# PROJECT SUBMISSION CHECKLIST

PART I - GENERAL CONTACT INFORMATION					
1.1 CONTACT DETAILS OF ORGANIZATION  (only relevant if submitted by an institution/company/organization - individuals please complete 1.2)					
Full Name of institution/ company/organization:	PR Krajné, s.r.o.				
Street and street number:	Krajné 874				
Postal code:	916 16	Town:Krajné			
Country:	Slovakia	Official homepage:	www.stered.sk		
Telephone: (including country code; no brackets or slashes)	+421 905 407 066	Official company email: (i.e. info@examplecompany.com)	info@stered.sk		
1.2 INDIVIDUAL CONTACT DETAILS					
Given name:		Family name:			
Academic title:		Gender: (please mark with x)	( ) Male / ( ) Female		
Street and street number:					
Postal code:		Town:			
Country:		Email (of contact person):			
Telephone: (including country code; no brackets or slashes)		Mobile Phone: (including country code; no brackets or slashes)			

PART II - PROJECT INFORMATION — OVERVIEW					
2.1 GENERAL INFORMATION					
Project title:	Climate, energetically active areas based on circular economy				
Category: (please mark with x, choose only one category)	( ) Earth ( ) Fire ( ) Water ( ) Air ( ) Youth special category: ( x ) Energy for All	Status of implementation: (please mark with x)	( ) Planned ( x ) Implemented project or ongoing project		
Country of implementation: (choose only one)	Slovakia	Optional: additional countries of implementation:	Czech Republic, CANADA		

# 2.2 PROJECT SUMMARY

Please summarize ( $\sim$ 10-15 lines,) what the project is about and what major outcomes have been achieved (please state concrete figures), especially any relevancy in regard to environmental protection, improvement of living and/or economic conditions, awareness creation, emission reduction, renewable energy, energy and resource efficiency, counteracting climate change, etc.; Please use a formal writing style as this summary will be published in our online database (use your/your organization's name in the text and do not use expressions like We, I, our company, etc.).

**Climatic, energetically active areas** are essentially common, purpose-built areas, such as roofs of residential and office buildings, production and storage halls, sidewalks, parking areas, which, by appropriate treatment, turn into areas with repeated water retention and re-evaporation to environment. (water retention and water vapor function).

**They become energetically active** by the fact that the energy from the environment is used to evaporate the water.

1 m3 of water for its evaporation consumes up to 650 kWh of energy from the surrounding space.

At the same time, this service can advantageously be fulfilled not only withholding rainwater but also with gray water (purified water from WWTP, wells on plots with high groundwater status, process water running off).

Such surfaces then act as active energy consumers, cool the ambient air, increase air humidity and reduce its dustiness, reduce heat transfer through the roof and cladding, thereby reducing the need for cooling in buildings or buildings. reduce the cost of producing cold from cooler air.

# PART III - DETAILED PROJECT INFORMATION

Please provide a complete and proper description at the jury's request.

# A) INITIAL SITUATION AND CONTEXT OF THE PROJECT/INITIATIVE

Please provide information (max half a page, 2000 characters) on the initial situation (problems, challenges) before the project was implemented. Depending on the type of project, please include the environmental, ecological, economic, social, energy or other relevant context of your country.

In addition to economic and social growth, the growing development of automobile production in the Slovak Republic brought with it also disadvantages.

The built-up areas have significantly expanded, and the ability of the original country to retain rainwater has decreased.

The growth of this industry has thus negatively reinforced the effects of climate change.

The production of new cars is accompanied by the production of technological waste. Technology for the recycling and recovery of synthetic textile waste has not been known so far, the waste is landfilled.

# **B) DESCRIPTION OF PROJECT OBJECTIVE AND MOTIVATION**

What was your overall motivation to start this project and what have been the project's objectives? (max half a page, 2000 characters)

Offering high-quality technological waste of mixed synthetic technical textiles from the production of new cars, but also from end-of-life vehicle processing (ELV) was an opportunity to create STERED technology. (Hereinafter referred to as 'auto-textile')

There was a possibility that the "autotextile" did not end up in landfills, but could serve further.

The new STERED product has proven to be an innovative, exceptional product for repeated water retention and evaporation applications and is suitable for the creation of climatic, energetically active areas.

This has created a bridge between turning waste into a new function for mitigation and adaptation measures to climate change.

The automotive industry itself contributed to the remedy of what it itself created through its expansion.

"Proven quality automotive materials for a new quality environment"

## C) SCOPE AND IMPLEMENTATION ACTIVITIES

Please describe in more detail (max half a page, 2000 characters) the scope of the project and the major activities that have been conducted for its implementation.

# Climatic, energetically active vegetation roof STERED - 4 in 1

http://zelene-hospodarstvo.enviroportal.sk/detail/566

- uses active evaporation of water (2-8I / m2 / day, cooling capacity 1.3 5.2 kW / m2 / day)
   ensures the reduction of heat transfer through the roof cladding, reduces the need for cold production for indoor up to 45%.
- Evaporated water above the surface reduces the thermal stress compared to a conventional roof surface.
   a difference of up to 20 ° C, which results in lower energy costs for cooling production

air intake systems

- vegetation stand (SEDUM, mosses, lichens) is a technology of carbon capture and utilization, only 'CCU'),
   photosynthesis consumes - up to 5 kg CO2 / m2 / year
- retention of the surface by retention of rainfall and slowing down of runoff from the surface, at the same time it protects by damages from tidal rains
- up to 80% of the area is made up of recycled products,
- Up to 8000 kg of "autotextile" waste can be recovered per 1000 m2 of area waste from the production of 2600 new cars or separated waste from processing of 260 end-of-life vehicles (ELV)

Partner solutions. MDM Slovakia, Ltd. Skalica www.mdmslovakia.com

Location: roof for AB, VW Br

atislavaDetské kardiocentrim Bratislava, Bratislava

# Climate, energetically active paved area 4in1

http://zelene-hospodarstvo.enviroportal.sk/detail/901

- normal walkway, parking lot with drainage surface (seepage pavement) is changed by inserting the retention board into a climatic, water retention and water vapor area,
- Evaporated water above the surface (2-8I / m2 / day, cooling capacity 1.3 5.2 kW / m2 / day) reduces
- thermal stress compared to hard surface, difference up to 20 ° C, vaporized water prevents heat accumulation in the surface component of the surface, e.g. drainage interlocking paving
- retention of the surface by retention of rainfall and slowing down of runoff from the surface, at the same time it protects by damages from tidal rains
- min. 50% of the area is made of recycled products
- Up to 10 000 kg of "autotextile" waste can be recovered per 1000 m2 of area waste from the production of 3,300 new cars or separated waste from processing of 330 end-of-life vehicles (ELV)

Solution Partner: MDM Slovakia, s.r.o. Skalica www.mdmslovakia.com

Location: pavements and parking, TUZVO, Zvolen, Pavement village Banka, climatic terrace DKC Bratislava,

# Inter-rail noise absorber with water retention function - controlled retention and water vapority in urban rail

http://zelene-hospodarstvo.enviroportal.sk/detail/565

- performs the function of a noise absorber
- controlled water retention and evaporation contributes to cooling the body surroundings lines (2-8l / m2 / day, cooling capacity 1.3 - 5.2 kW / m2 / day)
- surface with vegetation stand becomes active element of CCU (1 km of double track is approx. 6 600)

m2 (absorption by photosynthesis up to 20 - 33 t CO2 / year)

- retention of the surface by retention of rainfall and slowing down of runoff from the surface, at the same time it protects by damages from tidal rains
- up to 80% of the area is made up of recycled products
- up to 165,000 kg of "autotextile" waste are recovered on 1000 running meters of double-track electric line waste from production of 55,500 new cars, or separated waste from processing 5,300 end-of-life vehicles (ELV) and 274,500 kg recycled rubber from old 39200 discarded tires

Solution partner: BRENS EUROPE, a.s. Pilsen, www.brens.cz

Place of realization: tram track Frýdlandské mosty, Ostrava, Czech Republic, Tram line modernization, SNP class, Košice SR

# D) INNOVATION

Please describe the innovative aspects of your project under consideration of the technological standards and conditions (i.e. regional conditions, social conditions, economic conditions or political situation) of your country (max half a page, 2000 characters).

Innovative solutions provided by:

- reducing waste disposal
- -optimization of investments for renewal and building property of cities, municipalities, business operations and energy consumption and active measures to measure the employment in the precision of the following impacts of...

# E) IMPLEMENTATION AND COSTS

- For projects including a technological component: Please describe the technology applied, as well as the costs and economic benefits (max half a page).
- For projects including a social component: Please describe the approach that you have chosen as well as the social impact of your measures had on which target groups. (max half a page, 2000 characters).

The new STERED® product is manufactured using patented technology (EU, CH, Korea). The technology is the result of its own research and development and combines the degree of recycling - converting waste into raw material and recovering - incorporating recycled material into a new product.

STERED technology is the first of its kind not only in Europe.

# F) DESCRIPTION OF ACHIEVED RESULTS

Please describe in detail all direct and indirect results. Depending on your project, please focus especially on environmental and/or social and/or economic impacts resulting from the implementation of your initiative. Where possible, please include figures (i.e. number of people trained or jobs created, tons of CO<sup>2</sup> avoided, m<sup>3</sup> of water treated, MWh of renewable energy provided, energy efficiency before/after renovation, tons of waste collected/reduced, number of trees planted, etc.) or descriptions on how people or environment have otherwise benefitted from your project (max half a page, 2000 characters).

Climatic, energetically active vegetation roof STERED - 4 in 1

per 1000 m2 area

- Up to 8000 kg of "autotextile" waste can be recovered waste from the production of 2600 new cars or separated waste from processing of 260 end-of-life vehicles (ELV)
- CO2 consumption by green photosynthesis is 5 t / year
- the energy saved for the production of cold in the building is 77 kW, which represents a reduction of CO2 production of 2.8 t / year
- the retained water in the area and its evaporation has a cooling effect for the surroundings with an energy of 22 750 kWh

Climate, energetically active paved area 4in1

per 1000 m2 area

- Up to 10,000 kg of "autotextile" waste the waste from the production of 3,300 new cars, or separated waste from processing of 330 end-of-life vehicles (ELV)
- the retained water in the area and its evaporation has a cooling effect for the surroundings with an energy of 22 750 kWh

Inter-rail noise absorber with water retention function - controlled retention and water vapority in urban rail

http://zelene-hospodarstvo.enviroportal.sk/detail/565

per 1000 running meters of double-track electric line (6 600 m2)

- recovery of up to 165,000 kg of "auto-textile" waste 55,500 new car production waste or separated waste from the processing of 5,300 end-of-life vehicles (ELVs) and 274,500 kg of recycled rubber from old tires 39200 discarded tires
- CO2 consumption by green photosynthesis is 30 t / year
- the retained water in the area and its evaporation has a cooling effect for the surroundings with an energy force of 273,000 kWh

<b>G) REPLICATION POTENTIAL (MODEL CHARACTER)</b> Please describe the replication potential of your project in other regions or countries (max half a page, 2000 characters).				
Applications with STERED® products are now used in SK, CZ, CA, F Preparations A, PL, IT, UA., F.				
Demonstrated interest in technology: CA, LU, F, I.				

# **PART IV – PHOTOS AND PROJECT DOCUMENTATION**

Please send 4-6 photos in print quality ( $\sim$ 400 kb - 3 MB per picture) which document your project well. Preferred file format .jpg or .gif You can also upload additional project material.

Upload these materials as part of your online-submission on <a href="https://www.energyglobe.info/participation/">www.energyglobe.info/participation/</a>

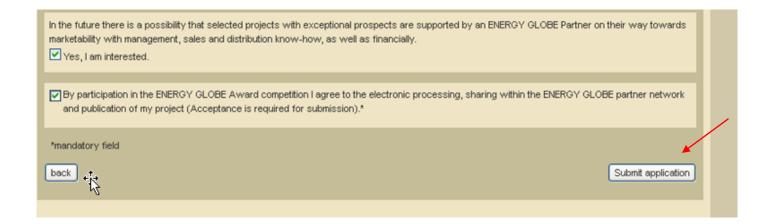
PART V – FINAL INFORMATION AND AGREEMENTS  5.1 HOW DID YOU HEAR ABOUT THE ENERGY GLOBE AWARD? Please mark all answers that apply with x.					
<b>5.2</b> SUPPORT BY ENERGY GLOBE PARTNER In the future there is a possibility that selected projects with exceptional prospects are supported by an ENERGY GLOBE Partner on their way towards marketability with management, sales and distribution know-how, as well as financially. If you are interested in this possibility, please mark the yes field with x.  ( ) Yes / ( ) No					
5.3 STATEMENT OF AGREEMENT (ACCEPTANCE IS OBLIGATORY for submission)  By participation in the ENERGY GLOBE Award competition I agree to the electronic processing, sharing within the ENERGY GLOBE partner network and publication of my project.  I herewith declare, that my statements regarding the submitted project are complete and correct and may in part or in total be published by Energy Globe. Energy Globe shall not be liable for the correctness and completeness of these statements. In case of any law suits or litigation, e.g. regarding copyright or publishing right, the submitter is responsible that Energy Globe shall not be involved in any such law suits or litigations. The submitter shall in any case completely indemnify Energy Globe against all effects resulting from such law suits or litigations. By marking the yes field with x, I confirm agreement with this declaration and the resulting legal consequences (Acceptance is required for submission). Please mark the corresponding field with x.					

# Thank you for completing the required information. We kindly ask you to submit your project information online on <a href="https://www.energyglobe.info/participation/">www.energyglobe.info/participation/</a>

For organizational reasons please do not send this file via email. You can simply copy/paste the entered information with Ctrl-C/Ctrl-V into the online form. Thank you for your support.

After submitting your project online, please check whether we have received it successfully!

- 1. Fill in all required texts and upload all documents and click at the **"Submit application"- Button.** (Please see screenshot below) We do not receive your texts and documents until you click on this button.
- Check your Email-Inbox if you have received an email-confirmation at the email address provided. (also check your Spamfile). <u>Subject of this email:</u> Your project application has been successfully received (ID: AWD0000)
- 3. Email us at <a href="mailto:contact@energyglobe.info">contact@energyglobe.info</a> in case you do not receive the confirmation email.



# Categories:

# EARTH:

Projects relating to agriculture, crops employable for energy, building materials, insulation, solar energy and overall energy efficient construction

### FTRF

Projects relating to energy production, the efficient and sustainable use of energy in all fields of application

### WATER

Projects relating to the use and processing of drinking water, waste water management as well as the preservation of water reserves

### ATR:

Projects relating to air pollution management – indoor and outdoor – improving air quality, overall climate protection and the reduction of CO2

# YOUTH:

All sustainable projects to or implemented in conjunction with young people to improve environmental awareness

# Special category on the issue "Energy for All":

All projects with new technologies that offer the poorest people clean energy with the help of the sun