European Road Safety Charter

Call for Good Practices - to enter the selection for the:

Excellence in Road Safety Awards 2017

Deadline to submit nominations: March 31st, 2017

Submit to charter@paueducation.com

SECTION 1: INFORMATION ABOUT YOUR ORGANIZATION

	Please fill in here		**Instructions**
Name of the organization	SERNIS, Soluções Tecnológicas, LDA.		
Type of organization	SME	x	Please tick one box
	Large business		
	Association		
	Education/Research institution		
	Local/regional authority		
Organization main activity	Road Safety – Electronic Engeeneer – Road Studs. iTS, Flexible Bollards, LED Traffic Lights, Controllers, Variable Message Signs		Activity field
Country	Portugal		Country of the organization
Website	www.sernis.com		Organization website
Contact person	Fernando Afonso		For the follow-up of the application
Contact person's position	CEO		
Contact person's email address	fafonso@sernis.com		
Contact person's phone number	00351 253 300 440		

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Partners in the initiative	Câmara Municipal de Braga (Braga Municipality)	Your main partners in delivering the road safety activity

SECTION 2: DESCRIPTION OF THE INITIATIVE

	Please fill in here	**Instructions**
Date of start and end of the initiative	2014 until the present day.	The initiative can be new or the continuity of already existing activities. It can have ended recently or be still in process.
Departments/persons involved internally	Innovation Department; Research and Development Laboratory; Quality Management	In the case of persons, indicate their positions.
Geographical scope of the activities	Braga - Portugal	Indicate where the activities were implemented.
Summary of the initiative	SERNIS developed the Intelligent Pedestrian Crossing System to reduce significantly the number of roads accidents in crosswalks using real time image processing and managing automatically the activation of a set of warnings through vertical signs and road studs to alert drivers in a safe and effective way and worked a pilot case study in Braga with the support of Braga Municipality. Braga Municipality had been identified some crosswalks zones with serious safety problems, such as, specialy high rate of accidents and SERNIS had a system that could help reduce this problems. The SERNIS Intelligent Pedestrian Crossing System (SR-IPCS) can reduce significantly the number of roads accidents in crosswalks.	Describe the initiative indicating the subject, its aims and the main activities it involves. Max: 100 words

	Some Characteristics:	
	- Sensor and camera in the same housing	
	- Detection distance: 2 lanes	
	- Accurate and editable zone positions	
	- Reliable operation 24/7	
	- Detection of pedestrians in the crosswalk area	
	- Easy installation – above ground sensor	
	- Cost – effective solution	
	- Powered by solar or electric energy.	
	SERNIS started to install 2 SR-IPCS and in the space of 1 year had 3 more installed.	
	Crosswalks that usually had accidents – some of them with high percentage of pedestrians' injuries – have registed ZERO accidents since the date of the installation of the system.	
Innovative character	When SERNIS started the development of this project the real-time image technology was a new thing and its integration in road safety almost did not exist. This technology could read the number of cars in the street but SERNIS wanted to use it to increase the safety in the streets. The presence of a crosswalk isn't enough to ensure a pedestrian's safety on the road. Many use the crosswalk incorrectly or fail to comply by the provided traffic signals. That's why it's not just important for there to be a crosswalk in place, but that the pedestrians using it are mindful of crosswalk safety precautions. According to a report by the National Highway Traffic Safety Administration, in 2006 21 percent of accidents occurred in roadways in which a crosswalk was available.These could be because the	If applies, describe to what extend the proposed initiative will lead to new approaches and practices in road safety. Max: 100 words

	pedestrians failed to look both ways, or they walked before the signals indicated they could do so, or there wasn't enough light for the driver to see them. This study also showed that pedestrians younger than 16 and older than 45 are the most at risk for getting hit and that the most dangerous time of a day for a pedestrian to be on the road is between 8 p.m. and 4 a.m. On the weekend, it's even more hazardous during those times. So SERNIS decided to develop a system that would detect the pedestrian crossing the crosswalk and awared the driver to that fact. The SERNIS Intelligent Pedestrian Crossing System (SR-IPCS) can reduce significantly the number of roads accidents in crosswalks. The SR-IPCS detects pedestrians at crosswalks by real time image processing, managing automatically the activation of a set of warnings through vertical signs (dynamic signals where developed to make the signs more visible) and road studs to alert drivers in a safe and effective way. When pedestrians are crossing the street (the systems alerts the drivers during all the cross – not only in the begin like other systems), the colors of LED signs and road studs changed into red to capture driver's attention. Warnings for both sides of the road in all traffic lanes. The SR-IPCS is reliable day and night, even in adverse weather conditions, reducing the risks of accidents in crosswalks.	
Issues that are addressed with the initiative	World Health Organization study show that without action, road traffic crashes are predicted to result in the deaths around 1.9 million people annually by 2020.	Describe the issues identified leading to implement the

At the present time, 1.24 million road traffic deaths occur every year. The number of people sustain non-fatal injuries lies between 20 and 50 million. Most pedestrian collisions happen when pedestrians are crossing the road, rather than walking or standing alongside the road.

Worldwide, a high percentage of pedestrians' deaths and injuries occur when lighting conditions are low, during dusk, dawn and night.

The presence of a crosswalk isn't enough to ensure a pedestrian's safety on the road.   Many use the crosswalk incorrectly or fail to comply by the provided traffic signals.   That's why it's not just important for there to be a crosswalk in place, but that the pedestrians using it are mindful of crosswalk safety precautions.

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Had been identified in Braga some crosswalks zones with serious safety problems, such as:

- High rate of accidents

- Static signs in bad conditions

- Insufficient warning systems

	- Inappropriate behavior of road infrastructure users The most critical places are roads with high traffic and school zones.	
Activities developped	Braga Municipality had been identified some crosswalks zones with serious safety problems, such as: high rate of accidents, static signs in bad conditions, insufficient warning systems and inappropriate behavior of road infrastructure users and SERNIS had a system that could help reduce this problems. The Intelligent Pedestrian Crossing System (SR-IPCS) was the ideal solution to reduce significantly the number of road accidents at crosswalks. Main Characteristics: - Dynamic warning system - Efficient alert signals - Low power consumption - Low maintenance costs Intelligent Pedestrian Crossing Systems were installed at locations where a safety risk has been identified.	Describe all the activities involved in the inititative, and where appropriate indicate the arrangement for each partner's participation. Max: 600 words

Genesis	Most pedestrian collisions happen when pedestrians are crossing the road, rather than walking or standing alongside the road. Worldwide, a high percentage of pedestrians' deaths and injuries occur when lighting conditions are low, during dusk, dawn and night. When SERNIS started the development of this project the real-time image technology was a new thing and	Describe the reasons why you have chosen this initiative. Max: 100 words

	its integration in road safety almost did not exist. It could read the number of cars in the street but SERNIS wanted to use it to increase the safety in the streets. The presence of a crosswalk isn't enough to ensure a pedestrian's safety on the road. Many use the crosswalk incorrectly or fail to comply by the provided traffic signals. That's why it's not just important for there to be a crosswalk in place, but that the pedestrians using it are mindful of crosswalk safety precautions.	
Transferability and multiplier effect	The Intelligent pedestrian crossing system detects pedestrians at crosswalks by real time image processing, managing automatically the activation of a set of warnings through vertical signs and road studs to alert drivers in a safe and effective way. This system encourage responsible driving and increase the drivers attention focused on traffic, helping to keep the roads safe. As showed in Braga case-study, after the installation, it has been verified a clear improvement in road traffic safety: road accident rate declined sharply and the number of victims with serious injuries decreased. This happened in Braga, it would happen in every city in the world.	Describe to what extent the proposed initiative will allow the transfer, dissemination or application of the results, experience and knowledge gained as well as the good practices on a larger scale. Max: 200 words
Promotion and dissemination	SERNIS and Braga Municipality website and social media, newsletters, PR events, media attention.	Describe whereby the initiative will be publicised (publications, events, websites, CD-ROM, etc.). Max: 100 words
Continuity	SR-IPCS have been installed in all over the world – in countries like Slovenia, United Kingdom and Netherlands.	Indicate if there is a plan to continue

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	SR-IPCS is now called SR-TICS (Thermal Intelligent Crossing System) due to its technologic developments. The Thermal Intelligent Crossing System is a thermal technology based system that detects pedestrians at crosswalks by real time image processing, managing automatically the activation of a set of warnings through vertical signs and road studs to alert drivers in a safe and effective way. The SR-TICS have a thermal camera that don't see sun glare responding only to the heat signature, detecting and giving you 24-hour detection of vehicles regardless of the amount of light available, reducing the risks of accidents in crosswalks.	some activities in the coming years. Max: 100 words
Evaluation of the activities	After the installation of Intelligent Pedestrian Crossing System it has been verified a clear improvement in Road Traffic Safety: - Road accident rate declined sharply - Increase of drivers attention focused on traffic - Effective reduction in the number of crashes - Decrease of victims with serious injuries - Vehicles lower average speed - High increase of pedestrians' safety level	If relevant, describe the proposed evaluation method and the performance indicators in relation to the expected objectives. Max: 100 words
Other important aspect that you want to underline		Any information that could help the jury to evaluate your initiative. Max: 100 words