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ANDALUCÍA

Boletín nº 175 de Oportunidades de Cooperación:

Nanotecnologías, Tecnologías de Producción, Construcción, Materiales, Transporte

(Abril 2019)

een.ec.europa.eu

Agencia Andaluza del Conocimiento
CONSEJERÍA DE ECONOMÍA, CONOCIMIENTO, EMPRESAS Y UNIVERSIDAD

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NANOTECNOLOGÍAS

Technology Requests

- An Italian company is looking for high resolution photomasking techniques for imprinting customised chromed glass lenses

TECNOLOGÍAS DE PRODUCCIÓN

Technology Requests

- Spanish large company looking for solutions to reduce costs in construction and rehabilitation in dense urban areas

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Technology Offers

- Digital twin technology for planning and monitoring cities and construction
- Composite Thermal Insulating Material
- Innovative fire control system for building

Technology Requests

- Dutch rail infrastructure manager is looking for innovative solutions to prevent flooding in tunnels at railway stations after extreme rainfall
- Spanish large industrial company is looking for innovative solutions to enable circular economy in the construction industry.
- Spanish large company looking for solutions to reduce costs in construction and rehabilitation in dense urban areas.
- Spanish SME seeks partners providing a railway track section in Germany, United Kingdom or Ireland to run pilot tests of its innovative railroad …

MATERIALES

Technology Requests

- Waterproof and biodegradable material technologies sought for horticulture application

TRANSPORTE

Technology Offers

- High reliability sun sensors for space and terrestrial applications that can be cost effectively produced in larger quantities
- Drivetrain integrated DC-DC converter for multiple voltage level vehicles
- Patented drill-reamer for drilling the latest composite materials

Technology Requests

- Spanish SME seeks partners providing a railway track section in Germany, United Kingdom or Ireland to run pilot tests of its innovative railroad environment monitoring device under technical cooperation agreement.

1.
NANOTECNOLOGÍA

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Partnering Opportunity

Profile Status: Published

Technology Request

An Italian company is looking for high resolution photomasking techniques for imprinting customised chromed glass lenses

Summary

An Italian company offers advanced lighting solutions and services for architectural light projections and various events, by using dedicated projectors and special lenses, varying in size, materials and design. The company is looking for a high resolution photomasking technique for finely imprinting customised lenses of chromed glass. The company is interested in existing solutions, possibly to be further customised or developed jointly, under a commercial or technical agreement.

Creation Date	12 March 2019
Last Update	22 March 2019
Expiration Date	22 March 2020
Reference	TRIT20190312001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/4cf9ba4f-3c78-4616-b086-1f2363609dee

Details

Description

An Italian SME, founded in 2002, has reached a remarkable position in a niche market for architectural and event lighting.
The company is able to customise high quality and reliable solutions for indoor and outdoor decorative scenes for events, brand promotion, etc. by using a large catalogue of standard lenses (more than 1000 types, grouped by themes) as well as customised setting and lenses that are designed, created and verified starting from users' on-line requests with very short-term deliveries. The company is already operating in the Italian, French, German and US market.

Currently, the design and customisation of the lenses is done using a clean laser-etching process on dichroic filters, with quality materials and digital manufacturing techniques ensuring high brightness, fidelity and colour brilliance, no imperfections and unwanted reflections and

with a low environmental impact.

In order to satisfy a growing demand for customised lenses, the company is looking for a very high resolution "printing" technique, i.e. photomasking at 5 micrometres, which should work on chromed glass plates, with thickness from 0.2 to 1 mm. Photomasking is used in photolithography techniques on micro and even nano scale (integrated circuit fabrication) for microfabrication of patterns on a given film / substrate.

The company is looking for industrial or research partners that are able to identify a suitable technical solution to be customised and adopted under a commercial agreement with technical assistance.
If the solution requires a more intense development, the company will collaborate under a technical cooperation agreement in the design and test of the new machine while the other partner will carry out the technical development.

Technical Specification or Expertise Sought

Partners are expected to have access to a solutions that is in line with the company requirements and have an extensive experience on photomask techniques, including surface preparation, cleaning, and handling, with automated or semi-automated processes.

The main technical specifications of the request are:
- resolution: 5 micrometres
- plates: borosilicate glass with chrome coating, thickness from 0.2 to 1 mm
- size: from small diameter up to 240x240mm

Keywords

Technology

02002016	Microengineering and nanoengineering
02007007	Glass
02007012	Optical Materials
05003002	Optics
05005	Micro- and Nanotechnology

Market

03004001	Semiconductor fabrication equipment and wafer products
03005	Laser Related
07001002	Amusement and recreational facilities
07001007	Other leisure and recreational products and services

NACE

C.26.7.0	Manufacture of optical instruments and photographic equipment

R.93.2.9 Other amusement and recreation activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Nano- and Microtechnologies

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

Yes

Languages Spoken

English
French
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

Partners sought: industrial or technological partners with a proven know-how on photolitographic technologies for microfabrication and related industrial applications.

Partners are expected to provide a thourough analysis of the issue and identify a suitable technical solution.

In case of an existing or easily customisable solution, the companies will establish a commercial agreement with technical assistance.

Alternatively, the companies will collaborate under a technical cooperation agreement in the design and test of the new machine while the partner will carry out the tecnical development.

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement

2. PRODUCCIÓN INDUSTRIAL

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Partnering Opportunity

Profile Status: Published

Technology Request

Spanish large company looking for solutions to reduce costs in construction and rehabilitation in dense urban areas.

Summary

A Spanish company working in the construction industry is looking for innovative technologies and tools to improve efficiency in construction processes shortening timelines and reducing costs in construction and rehabilitation projects in dense urban areas. They are looking for providers of solutions interested in a technical cooperation agreement. This request is part of an open innovation challenge.

Creation Date	13 March 2019
Last Update	13 March 2019
Expiration Date	13 March 2020
Reference	TRES20190313001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/15b364fb-4b12-43c2-ab37-75312ad1120a

Details

Description

A Spanish large company working in the sectors of technology and water engineering, services, construction and materials is interested to promote cleaner and more sustainable industry.

Social housing urban landscape is fast evolving with new generations wanting to live in densely populated urban areas (density, ease of social interaction, diversity of spaces), with a wide range of cultural and leisure activities (artistic, sports, social), and with public transport. Housing affordability plays a key role in this paradigm shift, thus construction companies need to use new technology, construction processes, and materials to adapt to the new demands.

The Spanish company is looking for innovative technologies and tools to shorten project timelines, reduce costs and promote cleaner and more sustainable industry, thus driving down

the cost of construction and rehabilitation in dense urban areas and making housing more affordable for all.

Specific solutions sought that could help to achieve these goals include, but are not limited to:

• Offsite prefabrication
• Modular construction
• Alternative building materials
• Building Information Modelling
• 3D printing
• Mobile based solutions

This technology request is an innovation challenge and is published on an open innovation platform until 29/03/2019. If an organization does express interest before that date, it will be guided towards this open innovation platform to apply directly.

After that date, the Spanish company will select the companies with whom they would like to cooperate. The cooperation will be in the framework of a technical cooperation agreement. Other types of cooperation could be considered.

Once the challenge is closed, expressions of interest for this technology request will be treated in the traditional way.

Technical Specification or Expertise Sought

The solution sought should be a product, or functional prototype, mature enough to be integrated and validated.

Stage of Development

Prototype available for demonstration

Keywords

Technology

01003020	Building Automation Software
01004008	ERP - Electronic Resources Planning
02001001	3D printing
02006001	Materials, components and systems for construction
02006007	Management of construction process & life

Market

02002008	3D
02007011	Manufacturing/industrial software
09007001	Construction companies
09007004	Engineering and consulting services related to construction

Network Contact

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry >500

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

The Spanish company is looking for start-ups and other companies able to provide solutions for the construction industry to shorten project timelines, reduce costs and promote cleaner and more sustainable industry.

The partner sought should have a minimum viable product (MVP) and be interested in scaling up their solution (process, product, or business model) to industrial grade with mutual collaboration and knowledge sharing with the Spanish company. The cooperation type desired is a technical cooperation agreement.

Type and Size of Partner Sought

SME 11-50,SME <10,SME 51-250

Type of Partnership Considered

Technical cooperation agreement

3.

TECNOLOGÍAS DE LA CONSTRUCCIÓN

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Partnering Opportunity

Profile Status: Published

Technology Offer

Digital twin technology for planning and monitoring cities and construction

Summary

A German company with expertise in virtual and augmented reality (VR/AR) and web application development offers a digital twin technology solution for the construction industry and smart cities. It renders it possible to digitally design, simulate, engineer and monitor sites or entire cities, thus saving time, cutting costs and reducing waste. Partners are sought for licensing, commercial agreements with technical assistance or research agreements.

Creation Date	28 March 2019
Last Update	29 March 2019
Expiration Date	29 March 2020
Reference	TODE20190328010
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1e649906-3c8f-4eef-92a1-a2ecc613e81c

Details

Description

In terms of automated production and level of digitalization, the construction industry is still significantly behind other industries. Megatrends like big data or the Internet of Things (IoT) offer great opportunities for the future development of the construction sector.

A young German company with vast experience in virtual and augmented reality (VR/AR) is specialized in optimizing and planning processes in the construction industry with the support of a digital twin. A digital twin is a virtual representative of a physical object or system across its lifecycle, using real-time data to enable understanding, learning and reasoning. They are used to understand, predict, and optimize performance in order to achieve improved business outcomes. The digital twin technology consists of three components: a data model, a set of analytics or algorithms, and knowledge. The solution processes historical context and performance data to understand the past, use direct and indirect data to view present conditions, and apply machine learning and knowledge to predict the future.

The German company offers a digital twin technology that enables users to design construction sites or the entire city digitally and to simulate their characteristics virtually. Any site can be planned, simulated and engineered digitally. Furthermore the performance of real infrastructure of, e.g., buildings, bridges, tunnels etc. can be evaluated in real-time and thus be continuously optimized.

The software solution offered is specifically designed for smart cities. It lifts blueprints from 2D drawings or scans the environment to create a virtual environment that can be explored before the infrastructure is even constructed. In such an environment, one person can wear a headset to experience a particular design virtually, while colleagues in the room or in remote can watch the scenes on a big screen or witness in real-time virtually what the person is looking at.

A monitoring application can substitute live streaming, e.g. in traffic or pedestrian monitoring, where simulation as opposed to video filming does not cause issues with data protection.

The German company seeks partners for licensing and commercial agreements with technical assistance. The partner, e.g. a municipality or service provider for municipalities would implement the solution with the support and advice of the German company.
There is furthermore an interest to join consortia working on topics where the German company could contribute their respective expert know-how.

Advantages and Innovations

The innovation lies in the algorithm and the holistic approach.

Applying such methods to cities will reveal new insights and possibilities for improving urban systems and give government officials tools they have not had before to make decisions for the benefit of residents, businesses and the natural environment, offering among others the following advantages compared to conventional methods:

• 3D visualisation can vastly shorten time to market, while reducing the cost of development.
• By reducing waste this system contributes to the goals of the circular economy.

The German company's solution is set to play an increasingly important role in the creation of smart cities around the world and in addressing major public health, safety and environmental issues. The digital twin will not only allow the city to react in real time to, e.g., freak weather events, but also to test an infinite number of potential future emergencies. The solution thus has the potential to be immensely valuable for planners and city authorities.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

The solution is ready to be implemented

IPR Status

Trade Marks

Profile Origin

Private (in-house) research

Keywords

Technology

01003012	Imaging, Image Processing, Pattern Recognition
01003016	Simulation
01005006	Visualisation, Virtual Reality
02006005	Construction maintenance and monitoring methods & equipment
02006006	Construction engineering (design, simulation)

Market

02007014	Other industry specific software
08002005	Machine vision software and systems
09007001	Construction companies
09007004	Engineering and consulting services related to construction

NACE

F.43.9.9	Other specialised construction activities n.e.c.
J.62.0.1	Computer programming activities
J.62.0.2	Computer consultancy activities
J.63.1.1	Data processing, hosting and related activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German
Spanish

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

The German company offers licenses to municipalities who would like to implement the solution in their activities, be it planning or monitoring. Partners could also be planning offices or service providers for municipalities who would like to extend their portfolio and offer comprehensive digital services. The German company would transfer the necessary know-how.

The above organisations could also be partners in commercial agreements with technical assistance. The partner would integrate the tool in their planning and monitoring activities. The German company would adjust the solution to the respective application and requirements and offer advice and consultancy and related services.

The German company is furthermore interested in research cooperation. They would be interested in joining research projects and consortia where they can bring in their know –how in VR/AR and web enterprise application development for construction, smart city and manufacturing industry.

They are open to discuss further types of co-operation.

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance
Research cooperation agreement

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

Composite Thermal Insulating Material

Summary

Non-combustible, waterproof, sound- and thermal-insulating composite material on silicate basis has been developed in Bulgarian research institute. Product is ecological, durable and resistant to temperature fluctuations. The material is prepared from granules made of glass waste. Research cooperation will increase the potential of the material to be applied for sound- and thermal-insulating panels for non-supporting partition walls and would extend the product scope of the building materials.

Creation Date	11 February 2019
Last Update	08 March 2019
Expiration Date	08 March 2020
Reference	TOBG20190211002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/e6f6f309-2435-485d-8f6c-7118796cb160

Details

Description

Bulgarian research unit has produced a prototype ready for demonstration of composite material. The composite material consists of expanded glass granules (diameter 5 - 20 mm), glued together by self-bonding water dispersed colloid system on silicate basis. The material has thermal conductivity coefficient α = 0.050 - 0.055 W/mK, sound absorption 30 – 40 dB, bulk density from 180 to 220 kg/m3 and compressive strength 4 – 5 MPa. The composite material is produced in blocks, of which the needed element is cut out by conventional tools. It can be applied to isolate the spaces around windows and doors to ensure fire security as per the applicable regulations.
The technology for producing products of expanded glass granules is simple and cheaper than the classical expanded glass. A variety of products with different shape and function can be obtained: plates, pipes, blocks, panels, etc.
The technology consists of three stages – preparation of the raw material of glass waste, expanding of the granules in horizontal furnace or inclined rotary furnace, production of the final elements.

The institute seeks for research and development cooperation partner in order to improve the material and to increase the potential to be applied for sound and thermal-insulating panels for non-supporting partition walls.

Advantages and Innovations

The technology is simple and cheap and easy to be applied.

Stage of Development

Prototype available for demonstration

IPR Status

Patent(s) applied for but not yet granted

Profile Origin

National or Regional R&D programme

Keywords

Technology

02006001	Materials, components and systems for construction
02007007	Glass
04007004	Thermal insulation
10001003	Fire Safety Technology
10003004	Recycling, Recovery

Market

06006001	Thermal insulation
08004002	Chemical and solid material recycling
09007002	Manufacture of construction materials, components and systems

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Bulgarian
Russian

Client Country

Bulgaria

Partner Sought

Type and Role of Partner Sought

- The institute is looking for industrial partners;
- Specific area of activity of the partner: partner sought related to the production of construction thermal insulation;
- Task to be performed: research cooperation agreements for testing of the prototype.

Type of Partnership Considered

Research cooperation agreement

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

Innovative fire control system for buildings

Summary

A Spanish SME, devoted to the design and manufacture of installations for all types of fluids, has developed an innovative and effective fire protection system in buildings based on a technology that controls the spread and temperature of the smoke. This solution has been successfully implemented in different buildings and it is complementary to other existing solutions. The company is looking for insurance companies to reach commercial agreements with technical assistance.

Creation Date	01 March 2019
Last Update	26 March 2019
Expiration Date	26 March 2020
Reference	TOES20190301002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0d70b58c-7581-42ab-9048-93700090ca09

Details

Description

A Spanish SME, working in the design and manufacture of installations for all types of fluids such as air, hot, cold and superheated water, steam, heating oil, compressed air, with applications in both the household and in the commercial and industrial sector, has developed an innovative fire protection system for buildings. This system has to be integrated in the air conditioning system of the building that can be devoted to offices, industrial or residential uses.

Smoke inhalation causes more deaths than burns in building fires. As a fire grows inside a building, it consumes most of the oxygen, generating toxic gases or heating gases which temperature is lethal for the respiratory tract. This innovation offers a complementary solution integrated in the air conditioning system that automatically controls the temperature of the smoke once a fire is produced and extracts the smoke safely to the outside of the building.

When the system detects the presence of a fire by means of its built-in detection sensors, the control system sets up the air conditioning to extract the smoke and at the same time measure its temperature and introduce air at low temperature in the area of the fire in order to control the

temperature and stop the spread of the fire throughout the installations.

As a result, the system prevents the spread of the smoke to adjacent areas like stairs and controls the temperature of the smoke and the visibility at the height of the persons, so that they can see, breath and therefore escape easily from the fire, and firefighters can enter quickly and safely to extinguish the fire, which has been restricted to its focus.

The automatic reconfiguration of the air conditioning system, the automatic fire control systems and the monitoring of the smoke temperature make this solution a complete system whose efficiency has been already tested in several installations.

The company offers commercial agreements with technical assistance to big companies interested in the incorporation of this technology in its own portfolio of fire control solutions. This technology can be of special interest to insurance companies since it dramatically reduces the risk of human and material damage.

Advantages and Innovations

Current solutions available in the market as system of fumes gates in large enclosures or industrial warehouses, systems of stairs or evacuation routes or smoke extraction system for garages do not guarantee the control of the fire nor the smoke in the building since they do not consider all possible air inlets, nor the air or smoke movement.

Unlike these solutions, this system guarantees the elimination of smoke from a burning area, also preventing this smoke from spreading into any other areas of the building. The system allows for a specific temperature to be maintained, both in the burning space and in the rest of the building, in the event of a fire.

Other advantages are the following:

- Automatic control of the temperature of the smoke.
- It can be installed in any type of buildings.
- Enables both self-evacuation and entrance of firefighters in a quick and safe manner.
- Cost-effective technology, compatible with existing solutions.
- It can be integrated into existing buildings.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

02006004	Installations related to construction (energy, lighting, …)

10001003	Fire Safety Technology

Market

09002001	Insurance related
09003001	Engineering services
09007005	Facility management companies

NACE

F.43.2.2	Plumbing, heat and air conditioning installation

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

Year Established

0

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Industry.
- Specific area of activity of the partner: Fire control services, insurance companies.
- Task to be performed: The company offers a commercial agreement with technical assistance so that the interested companies can incorporate this technology and install it in their clients' premises. This technology can be of special interest to insurance companies since it dramatically reduces the risk of human and material damage. The technical assistance comprises accompaniment and assessment of potential implantations, transfer of know-how and initial training of technicians.

Type and Size of Partner Sought

>500 MNE,>500

Type of Partnership Considered

Commercial agreement with technical assistance

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Request

Spanish large company looking for solutions to reduce costs in construction and rehabilitation in dense urban areas.

Summary

A Spanish company working in the construction industry is looking for innovative technologies and tools to improve efficiency in construction processes shortening timelines and reducing costs in construction and rehabilitation projects in dense urban areas. They are looking for providers of solutions interested in a technical cooperation agreement. This request is part of an open innovation challenge.

Creation Date	13 March 2019
Last Update	13 March 2019
Expiration Date	13 March 2020
Reference	TRES20190313001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/15b364fb-4b12-43c2-ab37-75312ad1120a

Details

Description

A Spanish large company working in the sectors of technology and water engineering, services, construction and materials is interested to promote cleaner and more sustainable industry.

Social housing urban landscape is fast evolving with new generations wanting to live in densely populated urban areas (density, ease of social interaction, diversity of spaces), with a wide range of cultural and leisure activities (artistic, sports, social), and with public transport. Housing affordability plays a key role in this paradigm shift, thus construction companies need to use new technology, construction processes, and materials to adapt to the new demands.

The Spanish company is looking for innovative technologies and tools to shorten project timelines, reduce costs and promote cleaner and more sustainable industry, thus driving down

the cost of construction and rehabilitation in dense urban areas and making housing more affordable for all.

Specific solutions sought that could help to achieve these goals include, but are not limited to:

• Offsite prefabrication
• Modular construction
• Alternative building materials
• Building Information Modelling
• 3D printing
• Mobile based solutions

This technology request is an innovation challenge and is published on an open innovation platform until 29/03/2019. If an organization does express interest before that date, it will be guided towards this open innovation platform to apply directly.

After that date, the Spanish company will select the companies with whom they would like to cooperate. The cooperation will be in the framework of a technical cooperation agreement. Other types of cooperation could be considered.

Once the challenge is closed, expressions of interest for this technology request will be treated in the traditional way.

Technical Specification or Expertise Sought

The solution sought should be a product, or functional prototype, mature enough to be integrated and validated.

Stage of Development

Prototype available for demonstration

Keywords

Technology

01003020	Building Automation Software
01004008	ERP - Electronic Resources Planning
02001001	3D printing
02006001	Materials, components and systems for construction
02006007	Management of construction process & life

Market

02002008	3D
02007011	Manufacturing/industrial software
09007001	Construction companies
09007004	Engineering and consulting services related to construction

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry >500

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

The Spanish company is looking for start-ups and other companies able to provide solutions for the construction industry to shorten project timelines, reduce costs and promote cleaner and more sustainable industry.

The partner sought should have a minimum viable product (MVP) and be interested in scaling up their solution (process, product, or business model) to industrial grade with mutual collaboration and knowledge sharing with the Spanish company. The cooperation type desired is a technical cooperation agreement.

Type and Size of Partner Sought

SME 11-50,SME <10,SME 51-250

Type of Partnership Considered

Technical cooperation agreement

Partnering Opportunity

Profile Status: Published

Technology Request

Spanish large industrial company is looking for innovative solutions to enable circular economy in the construction industry.

Summary

A Spanish large construction industry is interested to move towards circular economy models. They are looking for innovative technologies, processes and tools to minimise waste and increase material recovery and reuse in the construction process and at the end-of-life of buildings, ensuring building deconstruction. They are looking for providers of solutions interested in a technical cooperation agreement. This request is part of an open innovation challenge.

Creation Date	13 March 2019
Last Update	13 March 2019
Expiration Date	13 March 2020
Reference	TRES20190313002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1eda8abb-bb3a-49ab-b3fa-14ccd6d3db30

Details

Description

A Spanish large company working in the sectors of technology and water engineering, services, construction and materials is interested to move towards circular economy models in the construction sector.

The construction industry is a highly material-intensive sector, generating a large amount of waste. To date, circular economy efforts have been largely focused on recycling construction and demolition waste (CDW) with little attention on the reuse of products and the subsequent decrease in reclaimed materials for reuse.

In order to move towards a more sustainable and efficient industry, the Spanish company is looking for innovative technologies, processes and tools to increase material reuse and reduce

waste.

They are interested in specific solutions that could help to achieve the following goals:

1. Construction:
- Minimise waste
- Procure reused materials
- Procure recycled materials
- Off-site construction

2. In use and refurbishment:
- Minimise waste
- Minimal maintenance
- Easy repair and upgrade
- Adaptability/flexibility

3. End of life deconstruction
- Reuse of products and components
- Closed-loop recycling
- Open-loop recycling

This technology request is an innovation challenge and is published on an open innovation platform until 29/03/2019. If an organization does express interest before that date, it will be guided towards this open innovation platform to apply directly.

After that date, the Spanish company will select the companies with whom they would like to cooperate. The cooperation will be in the framework of a technical cooperation agreement. Other types of cooperation could be considered.

Once the challenge is closed, expressions of interest for this technology request will be treated in the traditional way.

Technical Specification or Expertise Sought

The solution sought should be a minimum viable product (MVP), a product, or functional prototype, mature enough to be integrated and validated.

Stage of Development

Prototype available for demonstration

Keywords

Technology

02006001	Materials, components and systems for construction
02006007	Management of construction process & life
02007002	Building materials
10002015	Life Cycle Assessment
10003004	Recycling, Recovery

Market

08004002	Chemical and solid material recycling
08004004	Other pollution and recycling related
09007002	Manufacture of construction materials, components and systems

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry >500

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

The Spanish company is looking for start-ups and other companies that can provide solutions to increase material reuse and reduce waste in the construction industry.

The partner sought should have a minimum viable product (MVP) and be interested in scaling up their solution (process, product, or business model) to industrial grade with mutual collaboration and knowledge sharing with the Spanish company. The desired cooperation type is a technical cooperation agreement.

Type and Size of Partner Sought

SME 11-50,SME <10,SME 51-250

Type of Partnership Considered

Technical cooperation agreement

Partnering Opportunity

Profile Status: Published

Technology Request

Dutch rail infrastructure manager is looking for innovative solutions to prevent flooding in tunnels at railway stations after extreme rainfall

Summary

The Dutch rail infrastructure manager has to cope with more periods of heavy rainfall due to climate change. To keep their train stations accessible they need to find innovative and sustainable solutions to prevent tunnels from flooding. A technical or research cooperation agreement is aimed for. The company is kept to public procurement but creative solutions can contribute in defining requirements. This request refers to an innovation challenge published on an open platform.

Creation Date	04 March 2019
Last Update	07 March 2019
Expiration Date	07 March 2020
Reference	TRNL20190219001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/6f97acad-10e8-4408-b100-066e22fea2d1

Details

Description

Nowadays extreme rainfall occurs more frequently because of climate change. In a short time a lot of water can fall down and has to find its way. But there also periods of drought and very high temperatures due to the climate change when there is a need for water.

During and after heavy rainfall a lot of water has to be drained or collected to prevent nuisance and keep the train stations accessible. The combination of the two phenomena, increasing frequency and higher intensity of heavy rainfall, is increasing the need to find solutions how to deal with flooding.

At present the fire department and the incident unit are using the pumps of the fire department to clear the tunnels after flooding. But pumps have their disadvantages: Their use of energy,

they are expensive and complex to fit in existing situations. And it would be preferable to reuse the water.

The rail infrastructure manager is looking for solutions to prevent tunnels from flooding to keep their train station accessible. To help them achieve their sustainability goals they are especially interested in low tech and out of the box solutions that lower their CO2 emissions and energy requirement and are made of circular materials.

The company is kept to public procurement but creative solutions that show great potential will be in the running for realization. They are looking for cooperation with partners that can help find sustainable solutions with a clear proof of concept that is cost-effective. Cooperation with partners such as institutes, universities and companies would be in the frame of a research or a technical cooperation agreement.

IMPORTANT: This Technology Request refers to an innovation challenge published on an internet platform. If an organization expresses interest before closing date, it will be guided towards this open innovation platform. After registration participants can browse free through other submissions and engage in discussions. All submissions will get feedback by the company on this open platform. The challenge closes on April 26th, 2019. Mind that posts on this platform are not confidential.
Beside open discussions on the platform, sharing of confidential information will be made possible on demand. After that, the firm will select the SME's with whom they would like to cooperate in the development of a solution. Once the challenge is closed, Expressions of Interest for this technology request will be treated in the traditional way.

Technical Specification or Expertise Sought

The company strives to be adaptable to climate change and help preventing this by lowering their CO2 emissions and energy requirement, but they need the help of others to find innovative solutions. Together they want to find new ways to avoid tunnels from flooding by collecting, draining or reusing water in a smart and innovative way.

Comments Regarding Stage of Development

There should be a clear proof of concept which is ready to be further developed for this purpose. The company has to stick to public procurement but innovative solutions can contribute to stretching the extent of solutions.

Keywords

Technology

02006002	Construction methods and equipment
02006006	Construction engineering (design, simulation)
10002007	Environmental Engineering / Technology
10004011	Flood Management
10004013	Underground infrastructure

Market

09007001	Construction companies

09007004	Engineering and consulting services related to construction

NACE

F.41.1.0	Development of building projects
F.42.1.2	Construction of railways and underground railways
F.42.1.3	Construction of bridges and tunnels
F.42.9.9	Construction of other civil engineering projects n.e.c.

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry >500 MNE

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

Netherlands

Partner Sought

Type and Role of Partner Sought

The company is especially looking for companies experienced in construction of buildings or infrastructure in the utility sector. Developers and designers of bridges and tunnels or other civil engineering projects are kindly invited to share their ideas to contribute in finding solutions.
The Dutch rail infrastructure manager has to stick to public procurement but specific innovative solutions can contribute in defining requirements. On the long term companies can get a benefit out of their contribution.

Type and Size of Partner Sought

SME 11-50,University,Inventor,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Attachments

entrance railway station

passenger tunnel at railway station

tunnel

flooded passenger tunnel at railway station

Partnering Opportunity

Profile Status: Published

Technology Request

Spanish SME seeks partners providing a railway track section in Germany, United Kingdom or Ireland to run pilot tests of its innovative railroad environment monitoring device under technical cooperation agreement.

Summary

Spanish beneficiary of SME instrument phase 2 is developing a measurement device, which records geometrical parameters of railroad lines and seeks partners able to provide a railroad stretch to carry out pilot tests in Germany, United Kingdom or Ireland. A technical cooperation scheme is intended, whereby the SME could both get a valuable feedback from the field experience of the partner and gather requirements of infrastructures helping the technological development of the device.

Creation Date	25 March 2019
Last Update	26 March 2019
Expiration Date	26 March 2020
Reference	TRES20190325001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a10ee791-2647-4242-a0d4-d9758e83511a

Details

Description

Spanish company, beneficiary of SME instrument phase 2, is endorsed by more than 45 years of experience in engineering and construction fields applied both to the industrial and the railway sector, including the design and installation of overhead line equipment (OLE) and energy supply networks, electric substations, signalling and communication systems in Spain and abroad. Supported by this wide knowledge of the railway infrastructure, one of the company's big bets is innovation.

As a result of this innovative approach, the company is currently developing a measurement equipment which records, in real-time, on-site, ease-of-use and the recording speed the key geometrical parameters of the railroad environment.

The device can help companies involved in the construction, maintenance or refurbishment of infrastructures, because the device measure the main critical parameters to be supervised and corrected. So it is possible reducing significant associated costs for these companies.

The product is conceived as a portable, lightweight and easy-to-handle device. Several sensors are integrated in the trolley, responsible of data collection, providing the inputs needed by the software. Up-to-date and machine-learning adapted algorithms treat the data recorded and give the user the chance to visualize the defined measurements in the embedded software, with no need of later office post-processing.

At this stage of the project, the Spanish SME is looking up to raise awareness of the measurement device, for this reason the company is looking for technological partners interested in performing pilot tests related to the railway sector and infrastructure administrators. The company has scheduled several demos of the device in Spain and the United States.

As Germany, United Kingdom and Ireland are also considered key markets according to the company's business plan, a technical cooperation agreement is requested with a partner offering deep knowledge of railways in these areas. By giving access to a valid infrastructure to perform the pilot tests, the company's aim is to gather the technical requirements of the infrastructures in these countries which will be used to improve the product and help with the technological development.

As a result of the demo, the company will develop a full report of the pilot test, including descriptions of the works performed, graphics, cross section drawings and photographs which will be sent to the partner to check the results and to transmit the feedback of the product and the service

Technical Specification or Expertise Sought

The measurement device developed by the Spanish SME records the main parameters of the railroad environment: contact wire height, stagger, REFOS (Running Edge to Face of Steel),… while the operator carries the device along the track, thanks to the integration of several sensors, offering the customer a complete solution to support the design, installation, test and maintenance of railway infrastructures.

Although one of the most attractive characteristics of the device is the on-site and real-time treatment of the data and measurements recorded, the company also generates as-built documentation, such as graphics of the contact line geometry and cross sections drawings. This information will be very useful to control the main clearances to check (train gauge, vegetation control, minimal electrical clearances, tunnel surveys...). Also, a 3D point cloud of the track section is recorded during the test, enabling the user to check the previous information at a glance.

The product specifications have been adapted to the infrastructures where pilot tests have been performed, obtaining valuable feedback from the host companies.

For this pilot test, at the current technological stage of the product, the company requires an electrified track section, both outdoors or in a tunnel, between 100m and 5km length. Track

gauges could be metric (1000 mm), standard (1435 mm) or Iberian (1668 mm).The overhead line equipment could be standard, light or rigid. The railroad environment demanded by the company could vary between metro, light rail, tram, conventional or high-speed lines. Railway depots stretches are also an option.

Stage of Development

Prototype available for demonstration

Keywords

Technology

02006002	Construction methods and equipment
02008004	Railway Transport
02009007	Artificial intelligence applications for cars and transport
02009009	Sensors for cars and transport
09001007	Optical Technology related to measurements

Market

02007016	Artificial intelligence related software
08002002	Industrial measurement and sensing equipment
09001007	Other transportation
09007004	Engineering and consulting services related to construction

NACE

F.42.1.2	Construction of railways and underground railways
M.71.1.2	Engineering activities and related technical consultancy
M.71.2.0	Technical testing and analysis
M.74.9.0	Other professional, scientific and technical activities n.e.c.

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Automotive, Transport and Logistics

Restrict Dissemination to Specific Countries

Germany, Ireland, UnitedKingdom,

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

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

The company is looking for German, British or Irish partners from railway sector such as: infrastructure operators, large engineering firms, maintenance service providers, public bodies for infrastructure monitoring, research and development institute or university. The role of the

partner searched would conduct pilot tests in railway infrastructures.
The company is interested in a technological collaboration for improving the device with the expertise and skills of the partner.

Type and Size of Partner Sought

SME 11-50,University,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement

4.
MATERIALES

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Request

Waterproof and biodegradable material technologies sought for horticulture application

Summary

A French SME active in the field of horticulture is looking for new technologies to improve the sustainability of their product. In particular they are interested by a material with waterproof and biodegradable properties to be used for water tanks on the one hand and also by a coating fully natural making wood waterproof. A technical coperation with a partner able to provide relevant material or coating is sought.

Creation Date	15 March 2019
Last Update	27 March 2019
Expiration Date	27 March 2020
Reference	TRFR20190315001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d31a9196-5627-4991-a172-598c6199c368

Details

Description

This French SME is developing and manufacturing different products for the horticulture sector including horticulture containers which one can commonly find in private gardens.

These containers are mostly made out of wood and contain embedded water tanks.
Currently they used recyclable materials made of polypropylene for these small water tanks.

The company is particularly concerned by environmental issues and sustainable development both for societal and marketing purposes. Therefore it would like to improve its product and is therefore looking for two new technologies
- one material technology able to substitute to polypropylene which would be both waterproof and biodegradable (in the longer term)
- one coating technology, fully natural, which would make wood totally waterproof.

The company is looking for already developed material technology which could then be adapted to its product through a technical cooperation.

Technical Specification or Expertise Sought

Substitution material (to Polypropylene) should have the following characteristics :
- biodegradable or compostable
- tear resistant
- waterproof
- based on natural components
- moulded or formable
- with similar production costs as with polypropylene.

The products to be developped with this materials have a cylindric shape with roughly 16 cm diameter and 15 cm height.

The coating sought should have the following characteristics:
- scratch resistant
- made of 100% natural products
- making wood fully waterproof
- food quality compliant
- easy to apply and with no drying time

Treatment processing should be very competitive in price
Surfaces to be treated are concave and have cylindric shape

Stage of Development

Field tested/evaluated

Comments Regarding Stage of Development

The material and coating sought should be already existing and at least field tested and ready to be adapted into products - small water tanks.

Keywords

Technology

02007015	Properties of Materials, Corrosion/Degradation
02007019	Lightweight materials
02007020	Biobased materials
10002013	Clean Production / Green Technologies

Market

07001007	Other leisure and recreational products and services
07004006	Garden and horticultural products

NACE

C.16.2.9	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials

Network Contact

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2007

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

Already exporting in Belgium and Denmark

Languages Spoken

English
French

Client Country

France

Partner Sought

Type and Role of Partner Sought

Type : ideally a company developing new environmentally friendly materials, possibly a research institute

Role : providing the material or coating and co-developping with the company the process to apply for their own product

Type and Size of Partner Sought

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

Type of Partnership Considered

Technical cooperation agreement

5.
TRANSPORTES

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

Patented drill-reamer for drilling the latest composite materials

Summary

The Italian company is specialized in precision cutting tools in solid carbide for automotive and aerospace sector. Their know-how has allowed to develop a innovative carbide tool for drilling, end milling, reaming and countersinking. They are looking for enterprises to sign a services agreement.

Creation Date	08 March 2019
Last Update	26 March 2019
Expiration Date	26 March 2020
Reference	TOIT20190308001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1253ac57-af3b-49bd-9d3f-17ac07984d03

Details

Description

The Italian company working in the automotive and aerospace fields, was founded in 1982 in order to produce cutting tools in solid carbide. Their core business is based on:

• sharpening: standard, special and industrial tools (gun drills, end mills, drills as request), blades (for aluminium, paper, wood and rubber)

• regeneration: mechanical fastening tools , special tools, mandrels, broaches and creators

• coating: all tools can be coated as first generation, second generation in CUD and in nano-coated

The continue research in these fields allowed them to develop a new patented drill-reamer tool, that is the ideal device for drilling the latest composite materials, such as the carbon fiber reinforced polymer. The innovative system is based on the capacity to do drilling, end milling, reaming and countersinking in one-shot operation, guarantying high quality standard, as

required by the aerospace sector.
The benefits for the customer are time savings and cheaper hole cost, as well as higher performance and quality standards, by meeting the tight requirements of the industry.

The company is seeking for enterprises or companies interested in this specific technology, in order to sign a services agreement, with the goal to expand their abroad market.

Advantages and Innovations

The main advantage of the innovation is the capacity to realize in one-shot drilling, end milling, reaming and countersinking, by meeting the tight requirements of the aerospace sector.
The competitors, instead, can reach the same result, but not in one-shot. They need to realize all the steps separately.
Recapping, the advantages are the following:

- time savings
- cost savings
- one-shot solution
- compliance with quality standards

Stage of Development

Already on the market

IPR Status

Patents granted

Profile Origin

Private (in-house) research

Keywords

Technology

02007010	Metals and Alloys
02011001	Aeronautical technology / Avionics

Market

08003007	Other industrial equipment and machinery
08005	Other Industrial Products (not elsewhere classified)

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

Type: company, enterprise or industry.

Activity: automotive or aerospace field.

Role: the partner needs this specific technological service.

Type of Partnership Considered

Services agreement

Partnering Opportunity

Profile Status: Published

Technology Offer

Drivetrain integrated DC-DC converter for multiple voltage level vehicles

Summary

A German university is developing a powertrain integrated DC-DC converter for hybrid vehicles. The new solution has less space requirements and it weighs less than conventional systems. Thus it results in cost savings. Industrial partners are sought to develop the invention to market maturity within technical cooperation and for license agreements.

Creation Date	22 March 2019
Last Update	03 April 2019
Expiration Date	03 April 2020
Reference	TODE20190322002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/4beca25b-412c-4b89-83d7-e53717310e3a

Details

Description

Hybrid vehicles of the new generation use two different voltage networks. The starter and other high power components are primarily powered by the higher voltage (48 V) battery. The low power components are mainly powered by a low voltage (12V) battery. A bidirectional DC-DC converter charges the low-voltage battery and, if necessary, also supplies the high-voltage circuit.
This DC-DC converter causes significant additional costs, as well as additional weight and increased space requirements. The constant cost pressure in the automotive industry requires a system for charging both batteries with significantly reduced effort.

A system that is currently being developed at a German university responds to this need.
The university's novel powertrain integrated DC-DC converter for hybrid vehicles extends the familiar conventional inverter topology for operating the starter with just two power semiconductors and an intelligent controller.

The innovative technology reduces the space requirements, the weight and overall cost of the powertrain and thus has considerable advantages over the previous solutions.

Industrial partners from the battery or automotive field are sought for further development within a technical cooperation and for licensing in order to make use of the technology.

Advantages and Innovations

The innovation lies in the new topology that results in the following advantages:
• Reduction of weight,
• Reduction of space requirement and
• Reduction of costs

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

Proof of functioning

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

A patent has been applied for in Europe and the US.

Profile Origin

Private (in-house) research

Keywords

Technology

01004003	Applications for Transport and Logistics
02009002	Hybrid and Electric Vehicles
02009012	Automotive engineering
04001003	Storage of electricity, batteries
04007001	Energy management

Market

03002	Batteries
06008	Energy Storage
06011	Energy for Transport
09001005	Motor vehicles, transportation equipment and parts

Network Contact

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

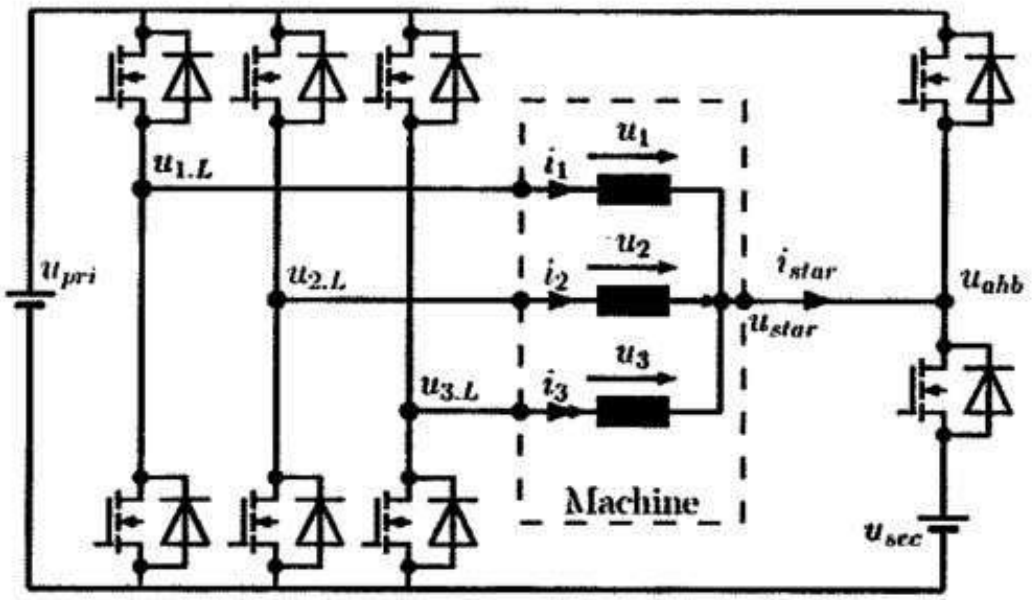
The university offers technical cooperation to companies that are interested in further development to market maturity. Apart from this cooperation, licenses for the invention as well as the intellectual property rights for using the technology may be granted.

Potential partners would be from battery or automotive and transport related industry.

Type of Partnership Considered

License agreement
Technical cooperation agreement

Attachments



Proposed inverter-integrated DC-DC converter topology

Proposed inverter integrated DC DC converter topology

Partnering Opportunity

Profile Status: Published

Technology Offer

High reliability sun sensors for space and terrestrial applications that can be cost effectively produced in larger quantities

Summary

A Dutch SME is specialized in the development and production of sun sensors for spacecraft. Most important advantages of the sun sensor are the cost effectiveness, a high field of view, high accuracy, high radiation tolerance, extended temperature range, meeting all space agency specifications and a high technology readiness level. The SME is interested in commercial agreements with technical assistance to suppliers of attitude & orbit control subsystems for spacecraft and satellites.

Creation Date	25 February 2019
Last Update	11 March 2019
Expiration Date	11 March 2020
Reference	TONL20190225001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a0d0932e-d70b-4408-947e-683be2e9ecef

Details

Description

A Dutch SME develops and produces sun sensors for space and terrestrial applications.

A sun sensor is a rugged, highly reliable device designed to detect sunlight in a near hemispherical field of view (FOV). The sun sensor is used in attitude control applications where reliability of sun acquisition is desired and medium accuracy is acceptable.
Sun sensors deliver coarse information about the position of the sun relative to the spacecraft. This information is used for coarse maneuvering of the spacecraft and to inform the spacecraft about the position of the sun when it is in a safe mode of operation or during the launch and early orbit phase (LEOP).

The sun sensor is designed to deliver individual detector outputs to a satellite control subsystem, called Attitude & Orbit Control System (AOCS). This approach enables the AOCS to derive solar aspect angles needed to know how to de-spin the satellite and where to point the solar panels.

A sun sensor is a critical sensor for a spacecraft as sun pointing is needed during LEOP and safe mode operations to avoid battery drainage. For missions with a low pointing accuracy demand a sun sensor can serve as the prime attitude sensor but most commonly the sensors are used for:
• Accurate sun position determination.
• Satellite solar panel positioning.
• Attitude failure alarm (anomaly detectors).

The Dutch SME is interested in a commercial agreement with technical assistance involving manufacturers of Attitude & Orbit Control Systems (AOCS).
The core capabilities of the Dutch SME are the modelling, design for manufacturing, quality control and optimization of the sun sensor. Discussions about interface electronics and other design specifications are part of technical assistance.

The partner is desired to be the supplier of the Attitude & Orbit Control System (AOCS) for satellites. Although the sun sensors are ideally suited for satellites more than 10 kilogram, the sensors can be used on smaller satellites (CubeSats, NanoSats, PicoSats).

Advantages and Innovations

At this moment there are not many suppliers of sun sensors that meet all specifications for space applications. For that reason the Dutch SME develops and produces sun sensors for spacecraft.

Most important advantages and innovations are:
• High field of view (> 58±2 degrees on X and Y axis; >±66.1±2 degrees diagonal).
• High accuracy (<0.5 degrees 3 sigma using calibration tables; < 2 degrees using specific correction parameters; < 3.5 degrees without calibration).
• High radiation tolerance (1016 1MeV electrons).
• Extended temperature range (-125 Celsius to 125 Celsius).
• High technology readiness level (TRL 9).
• Fully compliant to all specifications of the big space agencies.
• In house availability of dedicated assembly, calibration and test equipment.
• Space grade commercial of the shelf delivery.
• Zero power consumption passive devices.
• Ready for cost effective production in larger quantities.
• Perfect sun sensor for platforms more than 10 kilogram.
• First flight contracts for spaceflights signed.
• Almost three decades of accumulated experience in space applications.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin
Other

Keywords

Technology

02011001	Aeronautical technology / Avionics
02011004	Satellite Navigation Systems
02011005	Space Exploration and Technology
02011007	Guidance and control

Market

01005002	Satellite ground (and others) equipment
01005005	Other satellite/microwave
08005	Other Industrial Products (not elsewhere classified)

NACE

C.30.4.0	Manufacture of military fighting vehicles
C.30.9.9	Manufacture of other transport equipment n.e.c.
J.61.3.0	Satellite telecommunications activities
U.99.0.0	Activities of extraterritorial organisations and bodies

Network Contact

Issuing Partner
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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Aeronautics, Space and Dual-Use Technologies

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2012

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

Netherlands

Partner Sought

Type and Role of Partner Sought

Type of partner:
Industry, research connected to space industry

Partners:
Manufacturers of the Attitude & Orbit Control System (AOCS) for the satellites (including CubeSats, NanoSats, PicoSats).
The desired partner(s) should be interested in a cost effective, robust, high quality, high accurate sun sensor. The sun sensor is ready for cost effective production in larger quantities.

Role of the partner:
The partner is desired to manufacture the sub-system AOCS with key hardware like reaction wheels, magnetorquers, magnetometers, frictionless magnetic bearings and software for

attitude estimation algorithms, control loop design and system testing.

The Dutch SME offers the sun sensor and the accommodation and interfacing expertise and is interested in a commercial agreement with technical assistance.

Type and Size of Partner Sought

SME 11-50,University,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Commercial agreement with technical assistance

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Request

Spanish SME seeks partners providing a railway track section in Germany, United Kingdom or Ireland to run pilot tests of its innovative railroad environment monitoring device under technical cooperation agreement.

Summary

Spanish beneficiary of SME instrument phase 2 is developing a measurement device, which records geometrical parameters of railroad lines and seeks partners able to provide a railroad stretch to carry out pilot tests in Germany, United Kingdom or Ireland. A technical cooperation scheme is intended, whereby the SME could both get a valuable feedback from the field experience of the partner and gather requirements of infrastructures helping the technological development of the device.

Creation Date	25 March 2019
Last Update	26 March 2019
Expiration Date	26 March 2020
Reference	TRES20190325001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a10ee791-2647-4242-a0d4-d9758e83511a

Details

Description

Spanish company, beneficiary of SME instrument phase 2, is endorsed by more than 45 years of experience in engineering and construction fields applied both to the industrial and the railway sector, including the design and installation of overhead line equipment (OLE) and energy supply networks, electric substations, signalling and communication systems in Spain and abroad. Supported by this wide knowledge of the railway infrastructure, one of the company's big bets is innovation.

As a result of this innovative approach, the company is currently developing a measurement equipment which records, in real-time, on-site, ease-of-use and the recording speed the key geometrical parameters of the railroad environment.

The device can help companies involved in the construction, maintenance or refurbishment of infrastructures, because the device measure the main critical parameters to be supervised and corrected. So it is possible reducing significant associated costs for these companies.

The product is conceived as a portable, lightweight and easy-to-handle device. Several sensors are integrated in the trolley, responsible of data collection, providing the inputs needed by the software. Up-to-date and machine-learning adapted algorithms treat the data recorded and give the user the chance to visualize the defined measurements in the embedded software, with no need of later office post-processing.

At this stage of the project, the Spanish SME is looking up to raise awareness of the measurement device, for this reason the company is looking for technological partners interested in performing pilot tests related to the railway sector and infrastructure administrators. The company has scheduled several demos of the device in Spain and the United States.

As Germany, United Kingdom and Ireland are also considered key markets according to the company's business plan, a technical cooperation agreement is requested with a partner offering deep knowledge of railways in these areas. By giving access to a valid infrastructure to perform the pilot tests, the company's aim is to gather the technical requirements of the infrastructures in these countries which will be used to improve the product and help with the technological development.

As a result of the demo, the company will develop a full report of the pilot test, including descriptions of the works performed, graphics, cross section drawings and photographs which will be sent to the partner to check the results and to transmit the feedback of the product and the service

Technical Specification or Expertise Sought

The measurement device developed by the Spanish SME records the main parameters of the railroad environment: contact wire height, stagger, REFOS (Running Edge to Face of Steel),… while the operator carries the device along the track, thanks to the integration of several sensors, offering the customer a complete solution to support the design, installation, test and maintenance of railway infrastructures.

Although one of the most attractive characteristics of the device is the on-site and real-time treatment of the data and measurements recorded, the company also generates as-built documentation, such as graphics of the contact line geometry and cross sections drawings. This information will be very useful to control the main clearances to check (train gauge, vegetation control, minimal electrical clearances, tunnel surveys...). Also, a 3D point cloud of the track section is recorded during the test, enabling the user to check the previous information at a glance.

The product specifications have been adapted to the infrastructures where pilot tests have been performed, obtaining valuable feedback from the host companies.

For this pilot test, at the current technological stage of the product, the company requires an electrified track section, both outdoors or in a tunnel, between 100m and 5km length. Track

gauges could be metric (1000 mm), standard (1435 mm) or Iberian (1668 mm).The overhead line equipment could be standard, light or rigid. The railroad environment demanded by the company could vary between metro, light rail, tram, conventional or high-speed lines. Railway depots stretches are also an option.

Stage of Development

Prototype available for demonstration

Keywords

Technology

02006002	Construction methods and equipment
02008004	Railway Transport
02009007	Artificial intelligence applications for cars and transport
02009009	Sensors for cars and transport
09001007	Optical Technology related to measurements

Market

02007016	Artificial intelligence related software
08002002	Industrial measurement and sensing equipment
09001007	Other transportation
09007004	Engineering and consulting services related to construction

NACE

F.42.1.2	Construction of railways and underground railways
M.71.1.2	Engineering activities and related technical consultancy
M.71.2.0	Technical testing and analysis
M.74.9.0	Other professional, scientific and technical activities n.e.c.

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Automotive, Transport and Logistics

Restrict Dissemination to Specific Countries

Germany, Ireland, UnitedKingdom,

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

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

The company is looking for German, British or Irish partners from railway sector such as: infrastructure operators, large engineering firms, maintenance service providers, public bodies for infrastructure monitoring, research and development institute or university. The role of the

partner searched would conduct pilot tests in railway infrastructures.
The company is interested in a technological collaboration for improving the device with the expertise and skills of the partner.

Type and Size of Partner Sought

SME 11-50,University,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement