

# enterprise europe

## Boletín de Oportunidades de Cooperación:

**Nanotecnologías**

**Industria**

**Construcción**

**Materiales**

**Transporte**

**Boletín nº 148**

**Noviembre 2016**

## **NANOTECNOLOGÍAS**

- Swiss organization offers expertise, specific methodology and tools to enhance the impact, the dissemination and the communication of results of results of research projects
- Low-cost nanocomposite material with enhanced capacitance properties for use in electrodes for batteries and supercapacitors
- Development of polymer membrane producing method with non-heatable nanomaterial additives for manufacturing process.
- Suspended particle device with switchable transmittance for smart window applications
- Element rotation method for transmit/reflect array antennas using microfluidics
- Small pressure sensors for harsh environments.
- Femtosecond laser enabled material processing SME is offering their tools and technologies for custom 3D nanofabrication

## **PRODUCCIÓN INDUSTRIAL**

- Scottish company seeking technology and know-how for recycling waste plasterboard.
- Long-lasting aesthetic coating for latex surfaces

## **TECNOLOGÍAS DE LA CONSTRUCCIÓN**

- SC5-14-2016-2017: A Slovenian research institute is searching for industrial partners and partners from the construction sector to develop innovative...
- Backlit foils for decorative purposes

## **MATERIALES**

- H2020: German consortium seeks industrial partners, especially SMEs, active in the field of production, processing and recycling of fiber composite...
- UK-based university seeks SME consortium partners for H2020 proposal to FOF-07-2017 to develop and incorporate laser technology into multi-material...
- Seeking companies with expertise in thermoplastic composite materials
- Partners sought for next generation superconducting wires drawing at elevated temperatures

## **TRANSPORTES**

- H2020 GALILEO-1-2017: companies/organisations active in railway sector to develop an innovative solution for the maintenance service of rail...
- H2020 call MG-8-5-2017 Part 1 "Shifting from car ownership to sharing" – Coordinator sought.

- Eurostars2: finding an European partner on the development of hardware for multi-functional traffic information collection system using images
- SME Instrument - Space: partners to develop and integrate sensors to be placed on board CubeSats
- Searching partners for further development of synthetic noise generation system for electric vehicles (EVs).



# ***1. NANOTECNOLOGÍA***

## Technology Offer

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### **Swiss organization offers expertise, specific methodology and tools to enhance the impact, the dissemination and the communication of results of research projects**

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#### Summary

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*A Swiss non-profit organization offers specific expertise, methodology and know-how in the dissemination and communication of project results to maximize the project's impact, fill the gap between research and industry and foster the application of results to societal development in ICT & micro-nanotechnologies. Research cooperation agreement with project partners looking for a dissemination specialist is sought. A service agreement or a technical cooperation agreement would also be considered.*

<b>Creation Date</b>	10 November 2016
<b>Last Update</b>	11 November 2016
<b>Expiration Date</b>	11 November 2017
<b>Reference</b>	TOCH20161110001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/03dbd450-dd75-45e3-a5e0-adf995556472">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/03dbd450-dd75-45e3-a5e0-adf995556472</a>

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#### Details

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##### Description

Communication about innovation projects and dissemination of the results are extremely important to fill the gap between research and industry application and to maximize the impact of a project.

The consortium will profit from the institution's structured dissemination process for innovation projects. The institution proposes project tailored dissemination and communication activities to better exploit research results and to increase their impact by

- making sure that research and results are taken up by decision-makers to influence policy-making
- achieving scientific excellence (take-up and exchange of know-how by the scientific community)
- increasing the competitiveness of industrial companies (making research results available to small and medium-sized enterprises so that they can derive benefit from them; leading to novel technologies, better products, more jobs)
- showing how innovation benefits society (added value, sustainable economy, increased security, better health, ...)

The institution proposes specific methodologies and tools to help consortium to enhance

cooperation in the fields of ICT, FET and micro-nanotechnologies:

- The organization can act as a facilitator of contacts in Switzerland and Europe thanks to its position in the center of an innovation cluster network dealing with ICT, FET and micro-nanotech.
- The organization has strong links to Swiss SMEs in the micro-nano field, by membership or as head of various associations and platforms
- The organization has strong links to European universities, research centers and companies by membership in international conference bodies and as organizer of Europe wide training courses in micro/nanotech.

The institution is interested in cooperation with companies, universities and research centers planning to submit a project proposal. It seeks to join a project consortium as partner specialized in dissemination, communication and training. It is interested in assuming the role of workpackage leader. The organization is also interested in an agreement for dissemination services or a technical cooperation agreement with partners looking for managerial and organizational expertise and know-how in ICT, FET, robotics and micro-nanotechnologies.

## Advantages and Innovations

- Expertise with track record in dissemination and communication of technical project results with the aim to maximize the project's impact and to fill the gap between research results and their applications in industry and society.
- Combined technical expertise in ICT, FET and micro-nanotechnologies with communication/dissemination/training skills to understand the technical content and aims of research projects which guarantees efficient dissemination of the project results.
- Closed relation with an international network of companies, universities and research centers in the field of micro-/nanotechnologies to make benefit the consortium of these contacts.
- Over 20 years Europe-wide leading position for continuing training courses in micro/nanotech targeting engineers and researchers to make benefit the consortium from its experience in setting up and organizing trainings, workshops and international conferences.

## Stage of Development

Already on the market

## IPR Status

Secret Know-how

## Profile Origin

Private (in-house) research

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## Keywords

### Technology

01002001	Micro and Nanotechnology related to Electronics and Microelectronics
01002002	3D printing
01003025	Internet of Things
02002016	Microengineering and nanoengineering
02002017	Micromachining, nanomachining

### Market

08002001	Energy management
08002002	Industrial measurement and sensing equipment
08002003	Process control equipment and systems
08002004	Robotics
08003001	Machine tools, other metal working equipment (excl. numeric control)

## NACE

J.63.9.9	Other information service activities n.e.c.
M.70.2.2	Business and other management consultancy activities
M.74.9.0	Other professional, scientific and technical activities n.e.c.
P.85.4	Higher education

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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :** **Yes**

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## Dissemination

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### Send to Sector Group

ICT Industry and Services

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10



**Year Established**

1978

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English  
German  
French  
Italian

**Client Country**

Switzerland

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**Partner Sought**

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**Type and Role of Partner Sought**

The specific area of activity of the partner:

The institution's domain of activity primarily covers the following domains: ICT, FET, micro-nanotech and robotics. It is open to other fields provided it has the necessary competencies to understand the context.

The tasks to be performed by the partner sought:

The partner sought should be a project coordinator or a project partner looking for a specialist in project dissemination and communication of project results.

The partner sought will participate in collaborative research projects or will enter a service or technical cooperation agreement with the Swiss organization

**Type and Size of Partner Sought**

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

**Type of Partnership Considered**

Services agreement  
Technical cooperation agreement  
Research cooperation agreement



## Technology Offer

# Low-cost nanocomposite material with enhanced capacitance properties for use in electrodes for batteries and supercapacitors

## Summary

*A Spanish university has developed a cost-effective nanocomposite material with improved supercapacitive properties to be employed in electrodes for supercapacitors and batteries. Apart from energy storage, the material also shows a wide range of potential applications in nanotechnology, electronics, or materials science. The research group is interested in license or technical cooperation agreements with companies producing batteries and/or supercapacitors.*

**Creation Date** 20 October 2016

**Last Update** 24 October 2016

**Expiration Date** 21 October 2017

**Reference** TOES20161020001

**Profile link** <http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/ae0674b1-382a-4dae-8f12-264378e20a07>

## Details

### Description

The rapid increase in energy demand in recent years has accelerated the search for low-cost alternatives for energy storage and conversion. Among others, supercapacitors are an important type of energy storage devices since they store high energy density in short periods of time with the ability to repeat many charge-discharge cycles without losing efficiency. The appropriate selection of the electrodes is decisive in this type of device; the selected material must have a high specific surface, precise pore size distributions, thermal stability and stable electrochemical behaviour. Nanocomposite materials for energy storage applications are becoming of great interest due to the properties provided by its different constituents. Among possible nanocomposites that are being currently synthesized, those from layered double hydroxides (LDH) are attracting particular attention, especially carbon and metal oxides nanocomposites due to their potential applications in electrochemical devices such as supercapacitors. However, most new materials investigated turned out to be unfeasible from the commercial standpoint, due to its high cost and complexity of manufacture.

Researchers from a Spanish university have obtained new nanocomposite material with excellent supercapacitive properties by applying a galvanostatic step in the presence of an external magnetic field during the production process which renders a material much more active from the supercapacitive point of view. The nanocomposite is obtained through a simple, one-step and low temperature synthetic process, and from highly available and low cost materials. This material, electrochemically very active, shows an increase of capacitance much higher than those obtained without the application of the magnetic field (almost 600% more). These increases of capacitance are permanent and are still observed even in the absence of a

magnetic field after their generation.

The new nanocomposite material is useful for all those devices that require materials with supercapacitive properties. Supercapacitors (or ultracapacitors) are mainly used for energy storage: "energy smoothing" and momentary-load devices, KERS (Kinetic Energy Recovery System) devices used in vehicles, replacing batteries for specific cases, smaller applications like home solar energy systems, etc. Thus, it has an extremely wide range of potential applications in materials science, electronics, and nanotechnology.

The companies looked for should be active in the fabrication of batteries and supercapacitors. The university is mainly interested in license agreement including testing of applications, adaptation to specific needs, production and marketing. However, the research group are also open to technical cooperation agreement for further develop the material.

## Advantages and Innovations

The most innovative aspect of this invention is that the material shows an increase of capacitance much higher than those obtained without the application of the magnetic field (almost 600% more).

While, the main advantages provided by the developed nanocomposite material are:

- Low cost: chemical process of a single step with a single precursor, at low temperature, and using available, non-polluting and economical materials.
- Supercapacitor application: suitable properties for use in electrodes for batteries and supercapacitors, since it shows 600% more capacitance than materials obtained without the application of the magnetic field.
- Good cyclability: testing in cyclability is promising in terms of electrochemical and mechanical stability. After 10000 cycles only 10% of material degradation has been observed.

## Stage of Development

Under development/lab tested

## IPR Status

Patent(s) applied for but not yet granted

## Comment Regarding IPR status

Spanish patent application

## Profile Origin

Other

## Keywords

### Technology

01002007	Nanotechnologies related to electronics & microelectronics
02007	Materials Technology
04001	Energy storage and transport
04008003	Micro- and Nanotechnology related to energy

### Market

03002	Batteries
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06008 Energy Storage  
08001015 Other speciality materials  
08001023 Other chemicals and materials (not elsewhere classified)

## NACE

C.27.2 Manufacture of batteries and accumulators

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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :** Yes

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## Dissemination

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### Send to Sector Group

Materials

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## Client

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### Type and Size of Organisation Behind the Profile

University

### Year Established

0

### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English  
Spanish

**Client Country**

Spain

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## Partner Sought

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**Type and Role of Partner Sought**

Enterprise in the specific area of advanced materials, nanotechnology, energy storage etc., for licensing the invention, testing of applications, adaptation to specific needs, production and marketing.

**Type and Size of Partner Sought**

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

**Type of Partnership Considered**

License agreement  
Technical cooperation agreement

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## Attachments

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201612R-Prima,H.jpg



## Technology Offer

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# Development of polymer membrane producing method with non-heatable nanomaterial additives for manufacturing process.

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## Summary

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*Researchers from a university in Latvia have developed a method of producing polymer membranes with non-heatable nanomaterial additives for manufacturing process. The resulting membrane is suitable to perform in low and medium hydrogen fuel cells and most likely in future devices for direct conversion of biofuel into electricity. The university is looking for commercial agreement with technical assistance.*

<b>Creation Date</b>	14 September 2016
<b>Last Update</b>	05 October 2016
<b>Expiration Date</b>	05 October 2017
<b>Reference</b>	TOLV20160914002
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d8597e29-4f56-4ba6-bf82-0602a0bfb536">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d8597e29-4f56-4ba6-bf82-0602a0bfb536</a>

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## Details

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### Description

Latvian Researchers have developed a method introducing industrial aspect in research by combining nanotechnologies and innovative approach. It involves combining the polymer (polyetheretherketone) with inorganic nanoparticles (zirconia) and ionic liquids. The resulting basic polymer with inorganic nanoparticles is suitable for methanol fuel cells. The method is adapted for spin-coating type methods or spray methods, because the crystalline polymers are not suitable for traditional hot-pressing methods. The university is looking for commercial agreement with technical assistance.

### Advantages and Innovations

The method is suitable for manufacturing process with non-heatable nanomaterial additives. The strength of the polymer made by this technology is greater than polymers made by classic synthesized methods. It holds a European patent.

### Stage of Development

Available for demonstration

### Comments Regarding Stage of Development

Available for demonstration

### IPR Status



Patents granted

## Comment Regarding IPR status

n/a

## Profile Origin

H2020 – Societal challenges – Secure, clean & efficient energy

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## Keywords

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### Technology

03003	Apparatus Engineering
04	ENERGY
04008002	Fuels and engine technologies
04008003	Micro- and Nanotechnology related to energy

### Market

08005	Other Industrial Products (not elsewhere classified)
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### NACE

P.85.4.1	Post-secondary non-tertiary education
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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

[mariad.guillen.ruiz@juntadeandalucia.es](mailto:mariad.guillen.ruiz@juntadeandalucia.es)

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Intelligent Energy



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## Client

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### Type and Size of Organisation Behind the Profile

University

### Year Established

1919

### Turnover

10 - 20M

### Already Engaged in Trans-National Cooperation

Yes

### Experience Comments

n/a

### Languages Spoken

English

Latvian

Russian

### Client Country

Latvia

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## Partner Sought

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### Type and Role of Partner Sought

The university is seeking partners for commercial agreement with technical assistance e.g. companies/research centres involved in polymer applications, energy efficiency solutions, biofuels etc.

### Type and Size of Partner Sought

>500

### Type of Partnership Considered

Commercial agreement with technical assistance

## Technology Offer

# Suspended particle device with switchable transmittance for smart window applications

## Summary

*An institute from Latvia is offering smart window device for transmittance variation in applied electric field. The main advantage of proposed system is simplicity, stability against corrosion and UV (UltraViolet), as well as reduced price. The scientific institution here is looking for companies interested to buy developed knowledge or R&D projects partners for completion of development or offers. Institute is offering financial, license or research cooperation agreements.*

<b>Creation Date</b>	05 October 2016
<b>Last Update</b>	13 October 2016
<b>Expiration Date</b>	13 October 2017
<b>Reference</b>	TOLV20160919001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/70996b05-6f4a-4662-b99b-170b7bed635c">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/70996b05-6f4a-4662-b99b-170b7bed635c</a>

## Details

### Description

In the scientific institute from Latvia, an alternative design parameters concept that is based on a change in the scattering properties of wide band gap ZnO (Zinc Oxide) nanowire colloids with an order of magnitude lower particle concentrations is being explored. The dispersed nanophase (ZnO nanowires) and the matrix components were chosen in such a way that the dispersed nanowires would have a higher refractive index than the matrix. Changes in the light scattering properties during nongradient orientational transition from chaotic to partially ordered (aligned) phases is achieved through the electrophoretic manipulation of dispersed nanowires. Electric field  $1\text{V}/\mu\text{m}$  has to be used for nanowire alignment. The prepared nanowire colloids are sandwiched between indium tin oxide coated glass plates using  $150\ \mu\text{m}$  thick fluoropolymer spacers. Applying electric field results in 40% decrease in transmittance of colloid film in the middle of the visible spectral range.

Institute is offering financial, license or research agreement to other interested parties in order to integrate the secret know-how in building systems or partnership for improvement of the device. Institute is offering financial agreement with set out terms on how the parties would like to divide their financial resources if cooperation on device improvement would be considered, license agreement if interested party would want the right to produce and sell goods, apply a brand name or trademark, or use patented technology, or research agreement if both parties decide to work together on common project, exchanging experience and information in order to improve the device.

### Advantages and Innovations

The main advantages of proposed system are reduced price compared to average price for such devices in market and enhanced UV or cycling stability, as well as simplicity (ZnO

nanowire colloids in widely accessible polymer matrix are used).

A prepared prototype smart window device exhibited 40% switch in transmittance, spontaneous restoration of transmittance, persistent electro-optical performance, and temporal stability against nanowire sedimentation and agglomeration.

## Stage of Development

Prototype available for demonstration

## IPR Status

Secret Know-how

## Profile Origin

Private (in-house) research

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## Keywords

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### Technology

02002009	Machine Tools
02003001	Process automation
02007005	Composite materials
02007012	Optical Materials
02007024	Nanomaterials

### Market

08005	Other Industrial Products (not elsewhere classified)
09007002	Manufacture of construction materials, components and systems

### NACE

C.23.1.9	Manufacture and processing of other glass, including technical glassware
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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : **Yes**

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## Client

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### Type and Size of Organisation Behind the Profile

R&D Institution

### Year Established

0

### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English

Latvian

Russian

### Client Country

Latvia

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## Partner Sought

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### Type and Role of Partner Sought

The institute is looking for SME's, R&D institutions and other organisations that would be interested in further development of technology or involving it in ready made systems. Institute is offering financial, license or research agreement.

### Type and Size of Partner Sought

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

### Type of Partnership Considered

License agreement

Financial agreement

Research cooperation agreement

## Technology Offer

# Element rotation method for transmit/reflect array antennas using microfluidics

## Summary

*A Turkish academician has patented an element rotation method for transmit/reflect array antennas using microfluidics. Movement of the liquid metal in a microfluidic channel integrated with the antenna provides 360 degree linear phase shift range in the transmitted or reflected field. The academician is looking for joint venture, licensing or research agreement.*

<b>Creation Date</b>	08 December 2015
<b>Last Update</b>	24 October 2016
<b>Expiration Date</b>	24 October 2017
<b>Reference</b>	TOTR20151203001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/9c2a6430-c791-486f-964c-4f9d3c61aeba">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/9c2a6430-c791-486f-964c-4f9d3c61aeba</a>

## Details

### Description

A Turkish academician has patented an element rotation method for transmit/reflect array antennas using microfluidics. Movement of the liquid metal in a microfluidic channel integrated with the antenna provides 360 degree linear phase shift range in the transmitted or reflected field.

The technology offers a dynamic phase tuning mechanism for reconfigurable transmit/reflect arrays. There is a need for an alternative method for tuneable antenna arrays complementing parabolic reflectors used in telecommunications requiring high antenna gain. Moreover, wearable and flexible antennas are important for military applications. Combining microfluidics and antenna technologies enables implementing flexible and wearable antennas which can adapt to the wearer.

The main advantages can be listed as:

- Compact and Low-cost: No metallic lines and bias circuitry required.
- Minimized parasitic radiation:  
No need for metallic bias lines causing parasitic radiation.
- Scalable: Use of micromachining enables adjustable size and so operation frequency.
- No tear or wear: Does not wear to tear due to its fluidic actuation nature.
- Flexible and wearable: Utilizing microfluidics and flexible substrates enable wearable antennas and antenna arrays

The academician is looking for joint venture, licensing or research agreement.

## Advantages and Innovations

The transmit array element and phase tuning mechanism comprise nested ring-split ring elements where the rings are in the form of microfluidic channels. The liquid metal is confined in these channels. Changing the position of the split along the channel by rotating the liquid metal realizes the rotation of the element.

## Stage of Development

Prototype available for demonstration

## Comments Regarding Stage of Development

Technology Readiness Level 3

## IPR Status

Patent(s) applied for but not yet granted

## Comment Regarding IPR status

PCT/TR2013/000103

## Profile Origin

Private (in-house) research

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## Keywords

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### Technology

01001001	Automation, Robotics Control Systems
01002001	Micro and Nanotechnology related to Electronics and Microelectronics
01002003	Electronic engineering
01006006	Radar

### Market

01006001	Defence communications
01006005	Other communications (not elsewhere classified)
08002004	Robotics
09001005	Motor vehicles, transportation equipment and parts

### NACE

C.28.9.9	Manufacture of other special-purpose machinery n.e.c.
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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

**Phone Number**

+34 955 00 74 78

**Email**

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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**Dissemination****Send to Sector Group**

ICT Industry and Services

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**Client****Type and Size of Organisation Behind the Profile**

Inventor

**Year Established**

1999

**Turnover**

<1M

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English

**Client Country**

Turkey

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**Partner Sought****Type and Role of Partner Sought**

The academician is looking for joint venture, licensing or research agreement.

- Type of partner sought: SME's and companies for joint venture agreements, licensing agreements. R&D Institutions, universities and R&D companies for licensing or research cooperation agreements.



- Specific area of activity of the partner: SMEs and companies active in security, communication and automotive sector or universities/research organizations active in researching in the same area.
- Task to be performed by the partner sought: License agreement for developing the product. Joint venture agreement or research cooperation agreement for increasing the technology readiness level. The details are negotiable.

## **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**

License agreement  
Joint venture agreement  
Research cooperation agreement

## Technology Offer

### Small pressure sensors for harsh environments.

#### Summary

*A Belgian company has developed a specific know-how in designing and fabricating very small pressure sensors for harsh environments. The company would like to license the mentioned technology to an industrial partner willing to create a new product or to integrate the technology in to their own products.*

<b>Creation Date</b>	18 October 2016
<b>Last Update</b>	20 October 2016
<b>Expiration Date</b>	20 October 2017
<b>Reference</b>	TOBE20160929002
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/670271c5-653b-4086-b657-8a077922f350">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/670271c5-653b-4086-b657-8a077922f350</a>

#### Details

##### Description

The pressure sensor market is very large for standard environment and measurement. Once the requested environment & measurement becomes more and more specific, the number of manufacturers is very small and sometimes the needed sensors do not exist.

The technology has the following advantages:

- Very small size (down to 1.2mm diameter)
- Shape factor easily adaptable
- Very large bandwidth (50 kHz or more)
- Harsh environment (temperature till 200°C)
- Pressure level from 1 to 6 bars

The Belgian company offers its service and know-how to industrial partners and is seeking to establish a licensing agreement

The interested partner will receive a technical support for possible technical upgrades of the technology.

##### Advantages and Innovations

The way to integrate an existing off-the-shelf components is done to ensure this technology can sustain harsh environment and in the same time remain adaptable in term of shape factor, protection against different fluids (i.e: acid) and protection for different environments (i.e: biocompatibility).

The developed technology is manufactured internally with on off-the-shelf electronic components selected by the design team. The company is thus able to provide support for development and small quantities production and helps the enterprise to select the best partner for higher volume.

## Stage of Development

Already on the market

## Comments Regarding Stage of Development

The technology has already proved its performances in one particular market. Different users of the technology could be available for feedback and discussion.

## IPR Status

Secret Know-how, Design Rights

## Profile Origin

Other

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## Keywords

### Technology

01002001	Micro and Nanotechnology related to Electronics and Microelectronics
01002003	Electronic engineering
01002004	Embedded Systems and Real Time Systems
01002010	Printed circuits and integrated circuits

### Market

09003001	Engineering services
09003007	Other services (not elsewhere classified)

### NACE

M.74.1.0	Specialised design activities
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## Network Contact

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Creative Industries

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

0

### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English

French

### Client Country

Belgium

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## Partner Sought

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### Type and Role of Partner Sought

Partners sought: any industrial partners.

The technology is suitable for pressure measurement with a need of very large bandwidth or high temperature environment (200°C)

Possible applications fields:

- motor preparer (car, motorbike, plane) , turbo-machine
- biotechnology, medical field.

Role of the partner: integrate the technology in his product or develop new products

### Type of Partnership Considered

License agreement

## Technology Offer

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# Femtosecond laser enabled material processing SME is offering their tools and technologies for custom 3D nanofabrication

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## Summary

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*A Lithuanian SME with operational expertise in laser micromachining, polymerization and optics solutions is offering tools and technologies for true 3D laser fabrication with custom design components at micro and sub-micro scale – nanofabrication labs and devices for acquisition under commercial agreement with technical assistance; services for manufacturing complex custom microstructures in glass and polymers as well as micro-engraving in glasses and precious metals under services agreement.*

Creation Date	21 October 2016
Last Update	31 October 2016
Expiration Date	31 October 2017
Reference	TOLT20161020001
Profile link	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/617921e0-e24e-4dd3-883d-c1140a6473fc">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/617921e0-e24e-4dd3-883d-c1140a6473fc</a>

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## Details

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### Description

This company is a spin-off from a Lithuanian university with operational expertise in laser micromachining, polymerization and optics solutions. The company is currently working in several promising areas of femtosecond laser enabled material processing in micro and sub-micro scale:

- Laser assisted etching in glasses;
- Three-dimensional polymer micro and nanofabrication technology based on ultrafast laser initiated polymerization reaction;
- Direct laser writing inside transparent materials;
- High throughput laser cutting and micromachining;
- Fast manufacturing and replication of microstructures by UV lithography and soft lithography.

For the potential partners the company is offering nanofabrication labs and devices for acquisition, complex custom microstructure manufacturing services in glass and polymers as well as micro engraving services in glasses and precious metals.

The laser nanofabrication labs and devices are of high definition, customized according to specific customer needs and come with management software developed by the company. Key characteristics of the setups available for acquisition are multiple positioning stages, possibility of adding a galvanoscanner, easily adjustable focusing conditions, multipurpose sample holder, full laser harmonic and power calibration integration, software for setup control. Technical parameters and image of a nanofabrication setup can be found in attachments.

Complex custom 3D microstructures can be fabricated in glass and other hard transparent materials by etching. These structures, for example, can be applied in microfluidics or may act as primary sources for soft lithography.

Complex custom 3D microstructures with intricate internal geometries and features with sizes of up to hundreds of nanometers can be fabricated from polymers or inside transparent materials by direct laser writing. Wide array of materials is available for this method – from standard lithographic and hybrid materials to elastomers and biopolymers. The structures can be customized and used for a wide variety of direct applications or they may be integrated in other objects such as micro-channels or fibre tips.

The method of fast and flexible micro-engraving in glass and precious metals that are offered by the company allows to produce explicit, high quality and high contrast marks without impacting the strength of the material. 2D and 3D images can be produced, laser marking does not cause any bruising or distortion of the material.

Commercial agreements with technical assistance or services agreements are sought with partners requiring the setups or services mentioned above – this technology can be applied in sectors of transparent material processing, watch element production, nanostructures in medicine, micro-robotics, space exploration and etc.

## Advantages and Innovations

The main innovative aspect of the technology of the company is employing an ultrashort pulse laser – method of direct laser writing – allowing to manufacture true 3D milli-sized structures with nano-sized features in polymers.

The method of etching also exhibits certain advantageous characteristics:

- Scalability to high velocity using lasers with high large repetition rates;
- High energy efficiency is achieved by using melting instead of vaporization;
- High material efficiency is achieved by performing cuts with extremely narrow width;
- High precision in three dimensions – 1 micron focus without debris.

## Stage of Development

Already on the market

## IPR Status

Secret Know-how

## Profile Origin

Other

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## Keywords

### Technology

05003002

Optics

05005

Micro- and Nanotechnology

### Market

03005

Laser Related

04017

Micro- and Nanotechnology related to Biological sciences

## NACE

M.72.1.9

Other research and experimental development on natural sciences and engineering

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## Network Contact

---

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

---

**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Nano- and Microtechnologies

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2012

### Turnover

<1M

### Already Engaged in Trans-National Cooperation

Yes



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## Languages Spoken

English  
Lithuanian

## Client Country

Lithuania

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## Partner Sought

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### Type and Role of Partner Sought

Commercial companies and research institutions in the fields like (not limited to) transparent material processing and manufacturing, watch element production, nanostructures in medicine, micro-robotics, cell culture research, space exploration and etc. can take advantage of the offer.

Partners that are interested in acquisition of nanofabrication setups and devices are sought for commercial agreements with technical assistance. Partners that require services of true 3D laser fabrication with custom design components at micro and sub-micro scale are sought for services agreements.

### Type of Partnership Considered

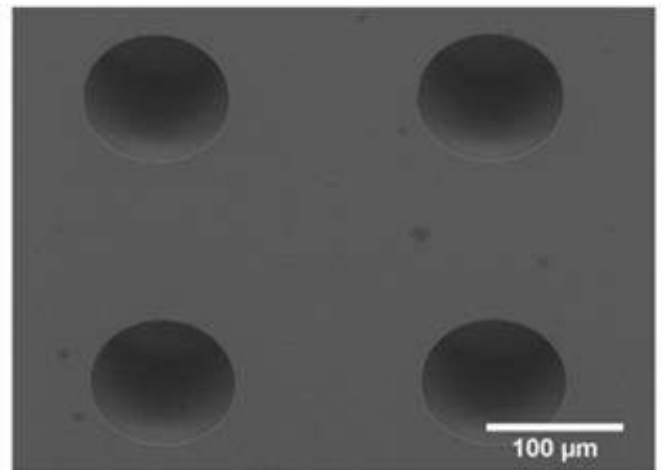
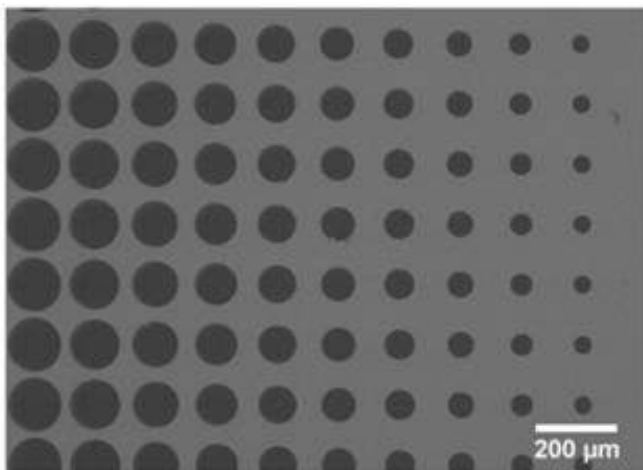
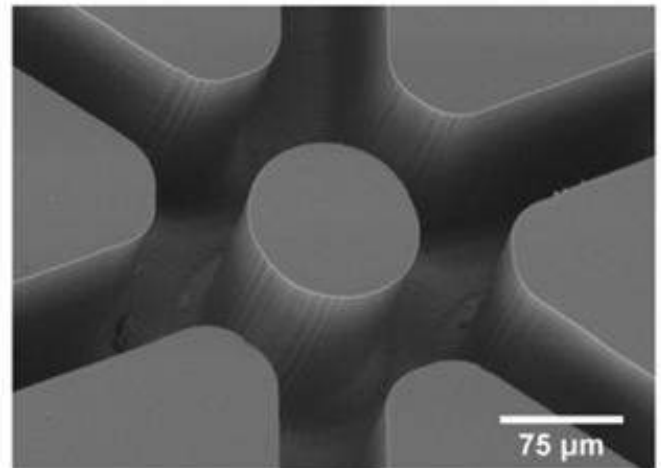
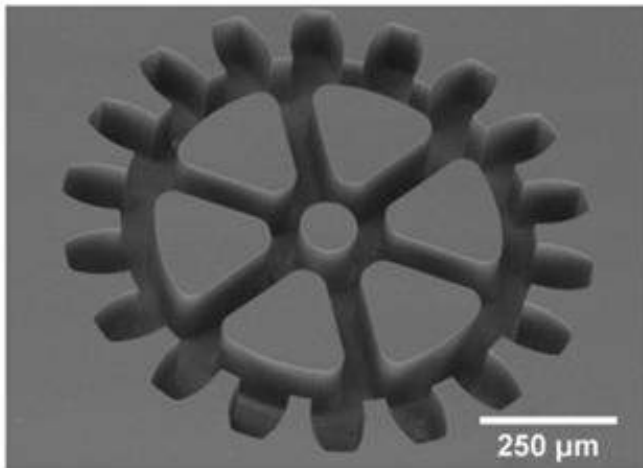
Services agreement  
Commercial agreement with technical assistance

---

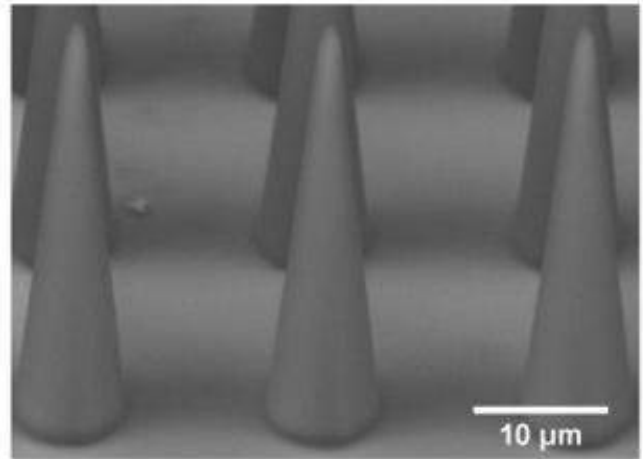
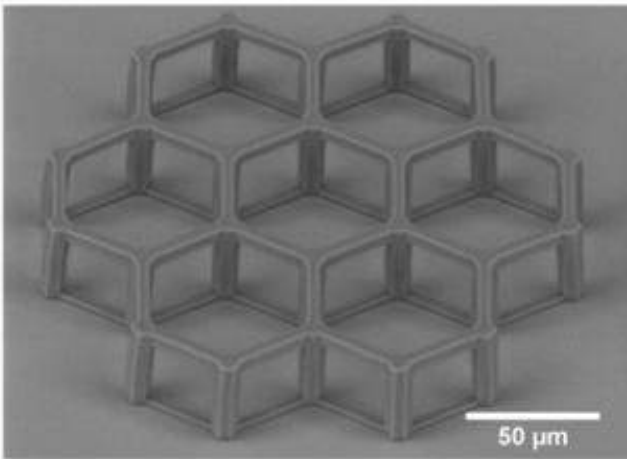
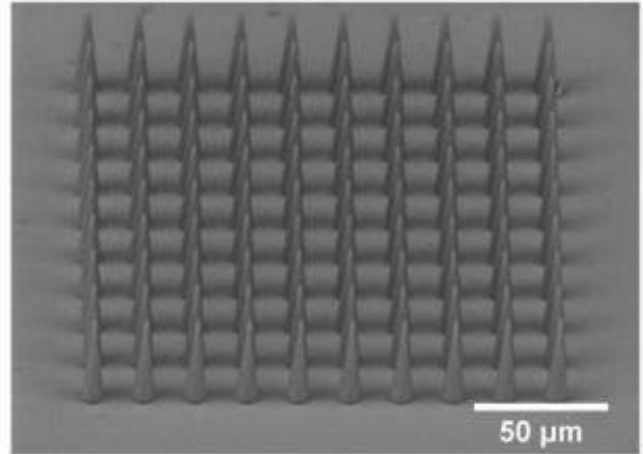
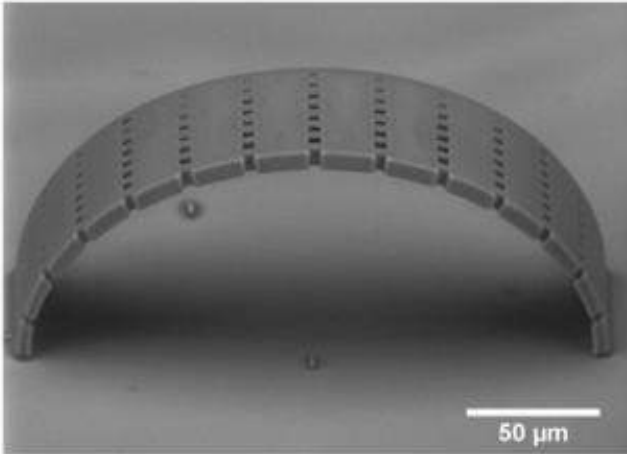
## Attachments

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glass\_microstructures.PNG



3D\_polymer\_structures.PNG



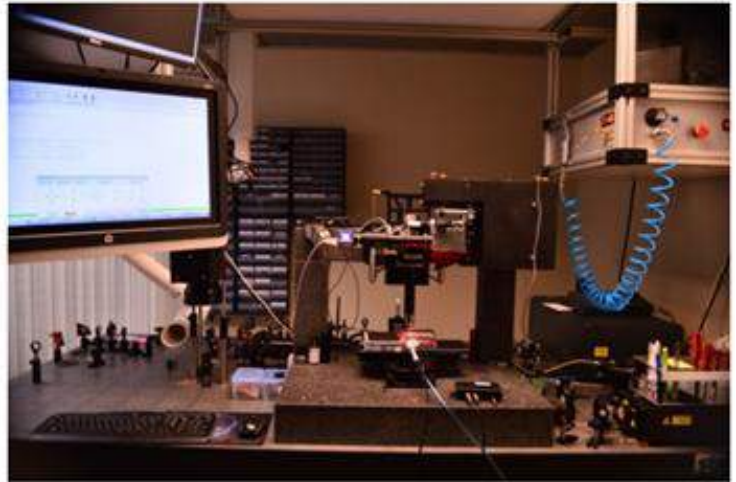
micromarking.PNG



nanofabrication\_lab.PNG

## Technical parameters:

- Transversal feature size (nm) -  $\leq 150$ ;
- Processing Speed (mm/s) (max.) - 350;
- Working Field Area (mm) - 160 x 160;
- Positioning Accuracy (nm) -  $\pm 300$ ;
- Repeatability (nm) -  $\pm 75$ ;
- Laser source: NIR femtosecond laser  
(1030 nm, 515 nm, 343 nm, 258 nm)
- Max. Average power (W) - 15
- Pulse duration range - < 290 fs -10 ps
- Software package:





**2.**

***PRODUCCIÓN  
INDUSTRIAL***

## Technology Request

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### Scottish company seeking technology and know-how for recycling waste plasterboard.

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#### Summary

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*A Scottish SME specialising in waste recycling has developed a process for recycling used plasterboard from building projects to provide a lime product which can be used in agriculture. They are seeking to enter into a commercial agreement with technical assistance with an industry partner who can share best practice and supply them with, or help them to develop, a compact machine which will enable them to carry out the recycling efficiently at a local level.*

<b>Creation Date</b>	04 October 2016
<b>Last Update</b>	10 October 2016
<b>Expiration Date</b>	10 October 2017
<b>Reference</b>	TRUK20161004001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/3955c9d3-a86e-45a5-ba56-e7b30c71f2e5">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/3955c9d3-a86e-45a5-ba56-e7b30c71f2e5</a>

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#### Details

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##### Description

Current legislation around the disposal of used and waste plasterboard has resulted in it becoming a major expense for companies in the building trade. A Scottish SME which operates within the recycling industry has been experimenting with a method of separating the component parts of waste plasterboard in order to make a lime product which can be used in the agriculture sector as a fertiliser. This is not a new concept and there is strict legislation governing the amount of the waste product which can be applied, its use as either a fertiliser or a soil improver and its proximity to water courses.

Having identified a local market for the product, the SME is looking to exchange knowledge and best practice with other businesses within the recycling industry who may have used a similar process. They are seeking either an existing machine which would be suitable for this process or an industry partner who could help them develop such a machine. They envisage working with an industry partner under a commercial agreement with technical assistance.

##### Technical Specification or Expertise Sought

The company is looking to source or develop a machine capable of separating out the component parts of plasterboard so that the plaster core can be ground down and used as fertiliser in the agriculture industry.

They require a compact machine which can be used at a local level to provide a service for small companies working in the construction sector.



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## Keywords

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### Technology

02006001	Materials, components and systems for construction
03002	Process Plant Engineering
10003004	Recycling, Recovery

### Market

08001022	Agricultural chemicals
08004002	Chemical and solid material recycling

### NACE

A.01.6.1	Support activities for crop production
C.23.5.2	Manufacture of lime and plaster
F.43.9.9	Other specialised construction activities n.e.c.

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## Network Contact

---

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

---

**Open for EOI :**    **Yes**

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## Client

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### 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

## Client Country

United Kingdom

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## Partner Sought

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### Type and Role of Partner Sought

They are seeking industry partners working in the field of recycling or the supply, design and manufacture of machinery. The role of the partners will be to share best practice and knowledge on the recycling process and to supply or develop an appropriate machine which the SME can use in its process.

### Type of Partnership Considered

Commercial agreement with technical assistance

## Technology Request

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### Long-lasting aesthetic coating for latex surfaces

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#### Summary

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*An Austrian company produces latex products for babies. They are looking for a new coating possibility to improve the permanent aesthetic surface. The new coating shall guarantee a shiny look and a slick surface, withstand repeating boiling/dish washing cycles, have no chemical smell, shall be easy to use, the color shall not change and the coating process should be below 80 degrees Celsius. They are open for technical, research, manufacturing, commercial or licensing cooperation agreement.*

<b>Creation Date</b>	28 October 2016
<b>Last Update</b>	03 November 2016
<b>Expiration Date</b>	03 November 2017
<b>Reference</b>	TRAT20161028001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/8e2ed98d-cb2e-47f1-99bd-f0559e24dabc">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/8e2ed98d-cb2e-47f1-99bd-f0559e24dabc</a>

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#### Details

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##### Description

A large industrial company based in Austria with international presence in more than 50 countries is manufacturing day-to-day baby care products.

So far the company provides a shiny and slick look to their latex product surfaces by using silicone oil. But this silicone-oil layer disappears after being boiled or dish-washed (for sterilization purposes) by the consumer. As a consequence, the products lose their glossy look they have in the supermarket shelves through home use. The company is interested in a solution for a permanent shiny/glossy look by a coating.

The coating process can be done either during the wet stage of production of the latex product or on the fully dried product. The latex product wall thickness is around 1.5-1.8 mm.

The coating solution would be of interest for the production of 2.5 million latex baby products per year.

The company is primarily interested in collaborating with a company that has already developed this coating and/or process through a commercial, technical or licensing agreement, so as to incorporate it in its in-house production facilities and its product development. Also a manufacturing agreement by coating at the partners' facility is possible. However, the possibility of a joint venture on a new coating process or a research development project is also welcome and considered interesting.

#### Technical Specification or Expertise Sought

- The coating should be clear/transparent and withstand repeated boiling/ dish-washing cycles.
- The colour/transparency of the coating should not change during or after the boiling/dishwashing process.
- It should be food contact approved and have no chemical smell.
- In addition, the coating process temperature should be below 80 degrees Celsius.

## Stage of Development

Already on the market

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## Keywords

### Technology

02002002                      Coatings

### Market

07006                              Other Consumer Related (not elsewhere classified)

### NACE

C.22.1.9                              Manufacture of other rubber products

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## Network Contact

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

---

**Open for EOI :**    **Yes**

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## Client

### Type and Size of Organisation Behind the Profile

Industry >500

**Year Established**

0

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English  
German

**Client Country**

Austria

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## Partner Sought

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**Type and Role of Partner Sought**

- Type of partner sought: partners from the research sector and industrial partners, regardless of size;
- Specific area of activity of the partner: field of coatings and materials, production of food-grade products, food supply chain, including food packaging and contact materials;
- Task to be performed:
  - a) incorporating the coating process inhouse through a commercial agreement, licensing, technological or manufacturing agreement with industrial partners;
  - b) manufacturing agreement - the coating can also take place in the facilities of the partner.
  - b) research, testing and bringing to the production a new coating process with research partners envisaged for research cooperation agreements or new joint ventures with industrial partners.

**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**

License agreement  
Manufacturing agreement  
Commercial agreement with technical assistance  
Technical cooperation agreement  
Joint venture agreement  
Research cooperation agreement



**3.**

***TECNOLOGÍAS DE LA  
CONSTRUCCIÓN***

## Research & Development Request

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### **SC5-14-2016-2017: A Slovenian research institute is searching for industrial partners and partners from the construction sector to develop innovative pilot actions**

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#### Summary

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*Research organisation active in the construction sector, from Slovenia, is seeking to form a consortia, in the role of coordinator, with partners from industry and the construction sector to establish a project proposal for Horizon 2020 SC5-2016-2017 to demonstrate innovative pilot actions*

Creation Date	25 October 2016
Last Update	08 November 2016
Expiration Date	08 November 2017
Reference	RDSI20161003001
Profile link	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1090463b-dbd8-4288-9f29-a00844729ee7">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1090463b-dbd8-4288-9f29-a00844729ee7</a>

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#### Details

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##### Description

The research organisation is looking for partners from industry and the construction sector to create a consortium for a project in Horizon 2020 SC5-2016-2017 in the first quarter of 2017. The expected project duration will be 48 months.

The project will be addressed towards the efficient, safe, environmentally sound and innovative use of resources hidden in different waste streams with practical implementation through pilot demonstrations to support market uptake.

The project proposal will be aimed at enhancing know how of existing recycling and reuse practices and optimizing them by improving their efficiency and applicability with special emphasis applied to critical raw materials relevant to the EU economy. The project is in the stage of conception.

The organisation is looking for partners in industry, which have identified by-products and waste streams that could find application in the construction sector; as well as partners from the construction sector, where organisations are wishing to improve their sustainability and test solutions in pilot demonstrative actions.

The organisation has a good track record and much experience as partner and lead partner in both scientific research and applied sciences. This experience is linked with day to day activities relevant for:

- fundamental and applied research in the fields of building materials and structures,
- development of new methods of testing and measurement,
- certification and attestation of conformity of products, materials and executed works,

- training of research and technical staff in particular technical fields,
- participation in the preparation of technical codes and standards.

In recent years it has been especially active in the preservation and reuse of materials from waste, and testing products with regard to their applicability in construction. They back this with life cycle analysis to support transition from a linear to a circular economy.

The organisation has experience in the management and support of demonstrative pilot actions, leading to more efficient waste material reuse and recycling in industry and in the construction sector, which are crucial aspects of a circular economy.

The organisation is targeting their project proposal on the call for SC5-14-2016-2017: raw materials innovation actions opened on the 8th of November 2016.

Expression of Interest: Deadline 20 th of December 2016  
Call deadline: 7th of March 2017

## Stage of Development

Concept stage

## IPR Status

Other

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## Keywords

### Technology

02003006	Prototypes, trials and pilot schemes
02006001	Materials, components and systems for construction
02006006	Construction engineering (design, simulation)
10003004	Recycling, Recovery

### Market

08004004	Other pollution and recycling related
09007002	Manufacture of construction materials, components and systems
09007004	Engineering and consulting services related to construction

### NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering
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## Network Contact

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO



**Contact Person**

Maria Dolores Guillén Ruiz

**Phone Number**

+34 955 00 74 78

**Email**

mariad.guillen.ruiz@juntadeandalucia.es

---

**Open for EOI :**   **Yes**

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**Dissemination**

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**Send to Sector Group**

Environment

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**Client**

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**Type and Size of Organisation Behind the Profile**

R&D Institution

**Year Established**

1992

**Turnover**

<1M

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English  
Slovenian  
German  
Italian

**Client Country**

Slovenia

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**Partner Sought**

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## **Type and Role of Partner Sought**

The organisation is seeking partners from industry and the construction sector to perform demonstrative pilot actions relevant for a transition towards a circular economy.

Partners need to be seeking more sustainable waste management practices and have staff available to work on the project.

The partners need to be looking for new economically viable solutions for existing waste streams and their market uptake with an objective to upcycle and make their own contribution towards the needed societal transition to a circular economy.

Along with the innovative pilot actions the partners need to be willing to present their experience and good practice in training activities anticipated in the project to disseminate project results.

## **Type and Size of Partner Sought**

>500 MNE, 251-500, >500

## **Type of Partnership Considered**

Research cooperation agreement

## Technology Request

### Backlit foils for decorative purposes

#### Summary

*A Czech SME active in large-format printing, graphics and exhibition systems is looking for backlit foils for advertisement and decorative purposes. The sought backlit foils should generate steady white uniform light. The solution sought should be already available on the market. The company is searching for partners for commercial agreement with technical assistance.*

<b>Creation Date</b>	03 November 2016
<b>Last Update</b>	08 November 2016
<b>Expiration Date</b>	08 November 2017
<b>Reference</b>	TRCZ20161103001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a5ae32b4-483f-4850-956f-e68ce04dfb2d">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a5ae32b4-483f-4850-956f-e68ce04dfb2d</a>

#### Details

##### Description

The company is Czech firm active in large-format printing, graphics and exhibition systems. The backlit foils should be suitable for an indoor advertisement and decorative purposes. The company is seeking backlit foils with background lighting for exhibiting large-format photographs, where each detail is very important. The company is seeking backlit foils able to be easily shaped in almost any style by a cutting knife, scissors or a cutting plotter to various dimensions. The backlit foils must allow gluing various photo-papers (standard photo paper, glossy photo-paper etc.) to its surface. The company expect to use the backlit foils for indoor prints only. Currently available competing solutions are based on the illuminated panels having thickness over 12 mm and more, which is not of the interest. The company is searching for products already available on the market based on commercial agreement with technical assistance.

##### Technical Specification or Expertise Sought

The backlit foils thickness should be less than 2 mm and it should be possible to cut the backlit foils from dimensions e.g. 1000×1000 mm to dimensions requested by a customer. The power adapter could be 12V as well as 220V. Backlight is requested white colour only. The idea is to use steady uniform white backlight having temperature 5000°K or less, with an intensity of backlight around 500 candela/m<sup>2</sup>, thickness up to 2 mm and dimensions 1000x1000 mm (optionally) or at least A0 format (that is 841x1189 mm).

##### Stage of Development

Already on the market

##### Comments Regarding Stage of Development

The company is looking for a product already available on the market, which could be very easily adapted for its market needs.

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## Keywords

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### Technology

02006004	Installations related to construction (energy, lighting, ...)
02007019	Lightweight materials
04007002	Lighting, illumination

### Market

07004008	Other consumer products
09004002	Office furniture and other professional furnishings

### NACE

C.27.4	Manufacture of electric lighting equipment
G.46.4.7	Wholesale of furniture, carpets and lighting equipment

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## Network Contact

---

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

---

**Open for EOI :**    **Yes**

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2004

**Turnover**

<1M

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English  
Czech

**Client Country**

Czech Republic

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**Partner Sought**

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**Type and Role of Partner Sought**

- Type of partner sought: Industry
- Specific area of activity of the partner: Manufacturing and delivery of lighting foils according to specifications
- Task to be performed by the partner sought: Delivery of backlit foils for further adaptation to specific needs based on commercial agreement with technical assistance

**Type and Size of Partner Sought**

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

**Type of Partnership Considered**

Commercial agreement with technical assistance



**4.**

# ***MATERIALES***

## Research & Development Request

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### **H2020: German consortium seeks industrial partners, especially SMEs, active in the field of production, processing and recycling of fiber composite materials**

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#### Summary

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*A German university chair of management accounting is setting up a consortium for the call CIRC-01-2016-2017. The aim of the project is to develop new processes in order to use old buildings as a resource pool for materials. The consortium is looking for industrial partners, especially SMEs, who are experts in the production, processing and recycling of composite materials (e. g. fibre reinforced plastic).*

Creation Date	09 November 2016
Last Update	10 November 2016
Expiration Date	09 November 2017
Reference	RDDE20161109001
Profile link	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d55a0166-0aab-44a9-b156-eeb27291af4f">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d55a0166-0aab-44a9-b156-eeb27291af4f</a>

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#### Details

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##### Description

The chair of management accounting at a German university is looking for research cooperation partners complementing the consortium for a project in Horizon 2020 CIRC-01-2016-2017 (IA, TRL 5-7).

The aim of the proposed project is the development of an innovative recycling economy in construction, which will replace the existing linear business models, ensuring sustainable growth and thus making a significant contribution to improving resource efficiency in the sector. The idea of the project application is to use old buildings as a resource pool, rather than completely demolish and treat as waste. New, sustainable processes have to be designed to easily separate the old building material. In addition, new technologies have to be developed to prepare the recovered building materials and to ensure a required quality, which is documented consistently. Furthermore new intelligent designs could enable an easy way of effortless assembly and disassembly of building structures (cradle to cradle® principle).

The project is in the concept stage. Until now, the consortium consists of the German university as well as of a German institute specialised on textile technologies. Within the project, the German university would deal with the controlling of the value part while the institution offers its expertise on textile construction. Furthermore, the German university has already contacted a Danish technological institute to coordinate the project. Additional companies and institutes from different countries have already been requested to participate in the project. A first workshop will take place at 25.11.2016 in order to intensify the discussions and to clarify more details.



In order to complement the consortium, the company is looking for industrial partners, especially SMEs, who are active in the field of composite materials (e. g. fibre reinforced plastic). The partner should have experiences in the production, processing and/or recycling of these materials. Within the consortium, the partner would cooperate with universities and SMEs to design new intelligent constructions and to develop a new circular economy based on its product.

Research cooperation agreements are sought.

Call: CIRC-01-2016-2017: Systemic, eco-innovative approaches for the circular economy: large-scale demonstration projects,  
Deadline: 07 March 2017,

The German Chair would like to conduct a workshop with all potential partners of the consortium on 25 November 2016.

A final workshop will take place in February 2017.

Expressions of interest (Eols) can be submitted until the end of January 2017.

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## Keywords

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### Technology

02006001	Materials, components and systems for construction
02007002	Building materials
02007005	Composite materials
02007014	Plastics, Polymers
03005007	Textile fibres

### Market

08001004	Fibre-reinforced (plastic) composites
08004004	Other pollution and recycling related
09007001	Construction companies
09007002	Manufacture of construction materials, components and systems
09007004	Engineering and consulting services related to construction

### NACE

E.38.2.1	Treatment and disposal of non-hazardous waste
E.38.2.2	Treatment and disposal of hazardous waste
E.38.3.2	Recovery of sorted materials
F.41.1.0	Development of building projects

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## Network Contact

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## Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

## Contact Person

Maria Dolores Guillén Ruiz

## Phone Number

+34 955 00 74 78

## Email

mariad.guillen.ruiz@juntadeandalucia.es

---

**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Environment

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## Client

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### 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

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## Partner Sought

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### Type and Role of Partner Sought

The German university is looking for industrial research cooperation partners, especially SMEs; in order to complete the consortium.

The industrial research partners should be active in the area of fiber composite materials and should have expertise in the fields of:

- technologies for the production of fiber composite materials
- process technologies for the for the processing of fiber composite materials
- recycling technologies for fiber composite materials

The industrial partner could be

- a manufacturer or user of fibre composite materials
- related to the construction sector
- interested in new intelligent product designs
- interested to realize a circular economy based on its product
- interested in new business models (e. g. leasing of building products/ structures)

## **Type of Partnership Considered**

Research cooperation agreement

## Research & Development Request

# UK-based university seeks SME consortium partners for H2020 proposal to FOF-07-2017 to develop and incorporate laser technology into multi-material product manufacturing

## Summary

*A UK-based university is submitting a proposal to Horizon 2020 call topic FOF-07-2017: Integration of unconventional technologies for multi-material processing into manufacturing systems. The project will develop and incorporate laser technology into multi-material product manufacturing to reduce costs and production time. The university seeks SMEs working in multi-material manufacturing and factories of the future space to join the consortium. The partnerships will be research collaborations.*

Creation Date	14 October 2016
Last Update	17 October 2016
Expiration Date	17 October 2017
Reference	RDUK20161014001
Profile link	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/8ff68655-5901-4765-b9bd-28f1032ea0f2">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/8ff68655-5901-4765-b9bd-28f1032ea0f2</a>

## Details

### Description

The production of differentiated and high added value products efficiently and sustainably is important for the competitiveness of European manufacturing. Often such products are multi-material and require as high product quality adding a level of complexity to manufacturing that has to be squared with minimised time to market and reduced production costs.

The incorporation of laser technology into the manufacturing processes for multi-material products has the potential to reduce production time, production costs as well as reducing wastage in both materials and energy. However there are several barriers to the incorporation of laser technology that need to be overcome, such as the lack of standardisation with regard to surface modifications, long process cycles, lack of automation and the perception of lasers as a 'dark art'.

A UK-based university is proposing a project that aims to overcome these barriers and incorporate laser technology into multi-material product manufacturing. This project aims to develop laser technologies for carbon fiber (CFRP) / metal processing, develop and utilise process monitoring and real time Non-destructive testing (NDT) for multi-materials, develop 'cloud manufacturing' for hybrid structures as well as laser engineering concepts for hybrid structures and flexible automation with associated inspection and control processes. The university is proposing this project to the Horizon 2020 call topic FOF-07-2017: Integration of

unconventional technologies for multi-material processing into manufacturing systems and are looking for SMEs to join the consortium.

They are looking for SMEs working in the Factories of the Future field with experience of working in the multi-material processing as well as cloud infrastructure and metrology.

Expressions of interest from SMEs in the following areas are especially welcome:

1. End user in the aerospace sector with a strong composite focus
2. End user in the automotive sector with a strong composite focus
3. End user in the marine sector with a strong composite focus
4. A systems integrator that will build the demonstrator (modular design concept)
5. Cyber Security Company protecting the control of the system in the cloud.
6. Inline non destructive testing and sensor process control of the demonstrator (Micro Epsilon)
7. A company involved in simulation of the manufacturing cycle focusing on hybrid structures and developing new manufacturing system. (composite/ metals)

The partnerships will take the form of a research collaboration agreement.

Deadline for EOIs: 02 December 2016

Call deadline: 19 January 2017

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## Keywords

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### Technology

02007005 Composite materials

### Market

08001015 Other speciality materials

08002007 Other industrial automation

### NACE

M.71.2.0 Technical testing and analysis

M.72.1.9 Other research and experimental development on natural sciences and engineering

P.85.4.2 Tertiary education

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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

[mariad.guillen.ruiz@juntadeandalucia.es](mailto:mariad.guillen.ruiz@juntadeandalucia.es)

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**Open for EOI :**   **Yes**

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## Dissemination

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**Send to Sector Group**  
Materials

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## Client

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### Type and Size of Organisation Behind the Profile

University

### Year Established

0

### Already Engaged in Trans-National Cooperation

Yes

### Languages Spoken

English

### Client Country

United Kingdom

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## Partner Sought

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### Type and Role of Partner Sought

The UK-based university is seeking SME partners to join the consortium. In particular they are looking for SMEs working in the Factories of the Future field with experience of working in the multi-material processing as well as cloud infrastructure and metrology.

The university especially would like to partner with SMEs in the following areas:

Expressions of interest from SMEs in the following areas are especially welcome:

1. End user in the aerospace sector with a strong composite focus
2. End user in the automotive sector with a strong composite focus
3. End user in the marine sector with a strong composite focus
4. A systems integrator that will build the demonstrator (modular design concept)
5. Cyber Security Company protecting the control of the system in the cloud.
6. Inline non destructive testing and sensor process control of the demonstrator (Micro Epsilon)
7. A company involved in simulation of the manufacturing cycle focusing on hybrid structures and developing new manufacturing system. (composite/ metals)

The partnerships will take the form of a research collaboration agreement.

## Type of Partnership Considered

Research cooperation agreement



## Technology Request

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# Seeking companies with expertise in thermoplastic composite materials

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## Summary

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*An Italian enterprise working in aerospace, rail and automotive field is developing a new type of aircraft pax floor, made up of thermoplastic composite material. Company are looking for a partner working in the composite material sector to realize a prototype. They are seeking manufactures to sign a technical cooperation agreement.*

<b>Creation Date</b>	23 June 2016
<b>Last Update</b>	01 November 2016
<b>Expiration Date</b>	01 November 2017
<b>Reference</b>	TRIT20160623002
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/873d967b-58ef-432c-88f4-0bf541710aa0">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/873d967b-58ef-432c-88f4-0bf541710aa0</a>

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## Details

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### Description

The company, established in Italy in 2004, works in aeronautics, rail and automotive sector. They offer to customers, engineering services and general support about components for mechanical industries. In 2007 the enterprise obtains both quality certification and aerospace certification.

The core business is represented by the following activities:

- Project engineering and support to the production
- Stress analysis (linear and non-linear static analysis)
- Dynamic analysis (normal modes, frequency response and transient analysis)
- Fatigue analysis
- Industrial research

They are now developing a new kind of aircraft pax floor. The main company goal is the design, realization and testing the novel concept. The innovation is about extensive usage of composite materials, realized with a thermoplastic matrix reinforced by carbon fibers.

The expected advantages are the following:

- High mechanical performance
- Lighter than the current materials used
- Lower environmental impact and cheaper than classic solutions because the thermoplastic composite can be always reworked and recycled

The company is looking for a partner with expertise in manufacturing composite material,

especially in thermoplastic one, to sign a technical cooperation agreement. The partner must realize the prototype of the pax floor, in order to help the enterprise to continue the development of the concept through specific tests.

## Technical Specification or Expertise Sought

The company are looking for partners with expertise in composite materials, realized with a thermoplastic matrix reinforced by carbon or glass fibers.

The ideal partner should possess the following competences:

- Expertise and know-how in manufacturing structural elements, such as beams and stanchions.
- The capability to realize big structure in thermoplastic composite material.
- Experience in aeronautical field.

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## Keywords

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### Technology

02007005	Composite materials
02007014	Plastics, Polymers
02007019	Lightweight materials

### Market

08001004	Fibre-reinforced (plastic) composites
08001009	Speciality/performance materials: producers and fabricators

### NACE

M.71.1.2	Engineering activities and related technical consultancy
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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Materials

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## Client

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### 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  
French  
Italian

### Client Country

Italy

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## Partner Sought

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### Type and Role of Partner Sought

Type of partner sought: manufactures.

Specific area of activity of the partner: composite material, especially thermoplastic one.

Task to be performed by the partner sought: realization and test the prototype.

### Type and Size of Partner Sought

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

### Type of Partnership Considered

Technical cooperation agreement

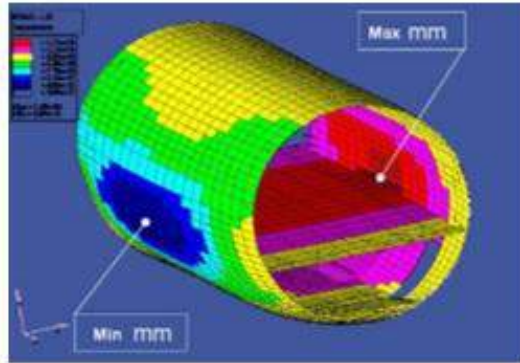
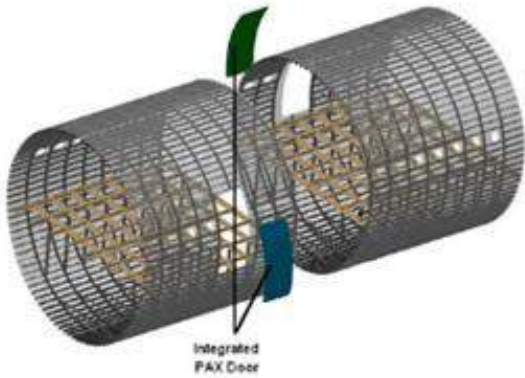
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## Attachments

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Pax floor.jpg

# Partnering Opportunity



## Technology Request

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# Partners sought for next generation superconducting wires drawing at elevated temperatures

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## Summary

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*A Swiss SME involved in the industrial development of the next generation superconducting wires seeks a partnership enabling industrial wire drawing at elevated temperatures. Medical Magnetic Resonance Imaging (MRI) and Nuclear Magnetic Resonance (NMR) devices for life sciences are the most important applications. A joint venture agreement under an exclusive license, including technical cooperation and manufacturing to further develop the drawing process are sought.*

<b>Creation Date</b>	20 October 2016
<b>Last Update</b>	10 November 2016
<b>Expiration Date</b>	10 November 2017
<b>Reference</b>	TRCH20161020001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/7a5b561e-4b96-4cf8-9868-863ecd9566e0">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/7a5b561e-4b96-4cf8-9868-863ecd9566e0</a>

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## Details

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### Description

A Swiss SME is looking for a technical collaboration for the development of Ternary Molybdenum Chalcogenide (TMC) superconducting wires to generate magnetic fields up to the 40/50 Tesla range, which is more than twice in comparison to conventional superconductors.

After about 15 years of R&D, TMC superconducting wires are now considered to be ready for industrial development. Furthermore, they are economically competitive already at magnetic fields above 10 Tesla.

The most important application of superconducting magnets is medical Magnetic Resonance Imaging (MRI) and Nuclear Magnetic Resonance (NMR) spectroscopy for life sciences (e.g. proteomics and drug development), as well as biotechnology, chemistry and materials science.

The Swiss company developed a new manufacturing process of TMC wires and is looking for industrial partners for finalizing the wire process as followed:

- Modeling of extrusion and wire drawing at elevated temperatures and its validation.
- Development of extrusion and wire drawing manufacturing at elevated temperatures and on industrial scale.

The Swiss company is looking for an industrial partner with appropriate manufacturing infrastructure for wire drawing at elevated temperatures. Under an exclusive license from the Swiss SME, this partner will conduct the final development of the extrusion and wire drawing process and produce a superconducting TMC wire with typically 1 to 2 mm of diameter and in lengths above 1 km, which can be commercialized. If possible, the wire drawing process at high temperatures should be modeled before practical work starts.

## TMC technology

A TMC wire consists of a stainless steel matrix (AISI 316L) and several TMC filaments surrounded by a molybdenum diffusion barrier. Individual TMC filaments are manufactured within a first process step for a monofilamentary TMC wire (extrusion and wire drawing, figure2).

During an earlier R&D program, wire drawing with a stainless steel- molybdenum-TMC composite was successfully carried out. Lengths of up to 1 km were achieved. However damage of the TMC was observed below about 500°C deformation temperature.

The Swiss SME will carry out the manufacturing of TMC bulk material with 100% mass density. It also brings its know-how. Molybdenum (powder and tubes) for the TMC superconducting wire project will be provided by an existing partner.

The Swiss SME has already contact with most of the potential clients and can take over commercialization. However, other scenarios are possible.

Ideally, a joint venture under exclusive license is sought for the final development and production of the superconducting TMC. Other possibilities - technical cooperation and manufacturing agreement to further develop and model the drawing process - for collaboration are also welcome and considered interesting.

## Technical Specification or Expertise Sought

The cooperative partner must have the required infrastructure for wire drawing at elevated temperatures or must be willing to adapt its machinery to the needs:

- Starting dimensions of the TMC wire after extrusion: OD = 20 to 40 mm, depending what is possible with the extrusion process, total length up to 6 m.
- Preheating of the TMC wire up to the 1000°C range, presumably under a protective atmosphere, or gas heating under a reducing atmosphere. Temperature control according specification from modeling.
- Preheating of the drawing dies according specifications from modeling.
- Drawing force: not specified.
- At higher diameters, the TMC wire must be drawn on a straight drawing bench. For the production of a mono-filamentary TMC wire the final OD = 22 mm with a hexagonal cross section (key width 19 mm) and a length of about 25 m.
- At smaller diameters, the TMC wire may be bent but specification is not yet available.
- Typical end diameters are in the range between 1 to 2 mm, yield above 1 km (for OD 2 mm).
- During the total drawing process quality must be controlled by appropriate means, e.g. eddy current methods or others.

During the development phase, the manufacturing of three mono-filamentary and multi-filamentary TMC wires are scheduled per year.

## IPR Status

Patent(s) applied for but not yet granted

## Comment Regarding IPR status

Manufacturing process of TMC superconducting wire is protected by a PCT patent application

## Keywords

## Technology



02002 Industrial Manufacture  
02002014 Extrusion  
02007005 Composite materials

## Market

05002005 Other medical imaging  
05004005 Diagnostic equipment  
08001012 Speciality metals (including processes for working with metals)

## NACE

C.25.9.9 Manufacture of other fabricated metal products n.e.c.

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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Nano- and Microtechnologies

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established



0

## Already Engaged in Trans-National Cooperation

No.

## Languages Spoken

English  
German  
French

## Client Country

Switzerland

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## Partner Sought

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### Type and Role of Partner Sought

The specific area of activity of the partner:

Wire manufacturer with drawing equipment enabling the deformation process at elevated temperatures up to the 1000°C range or ready for upgrading the existing installations.

The tasks to be performed by the partner sought:

- Development of the wire drawing process of a mono-filamentary and multi-filamentary TMC superconducting wire at elevated temperatures. (joint venture under exclusive license, manufacturing agreement)
- If possible: modeling of the wire drawing process of a TMC superconductor at elevated temperature and validation by experimental means, e.g. stress/strain vs. temperature. (technical cooperation agreement)

### Type and Size of Partner Sought

251-500, >500

### Type of Partnership Considered

Manufacturing agreement  
Technical cooperation agreement  
Joint venture agreement

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## Attachments

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TMC superconducting wire.PNG

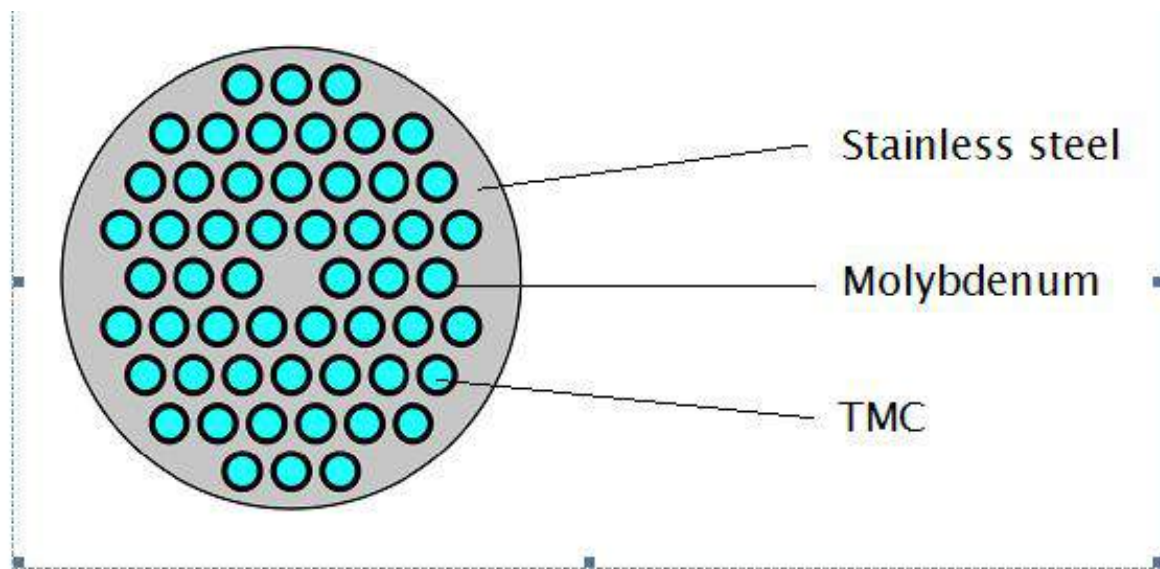


Figure 2. Possible layout of a 54 filament TMC superconducting wire



**5.**  
***TRANSPORTES***

## Research & Development Request

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# Eurostars2: finding an European partner on the development of hardware for multi-functional traffic information collection system using images

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### Summary

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*A Korean SME active in road and railroad transportation business has been developing software and SI (system integration) for multi-functional traffic information collection system. Under this topic, the company has already formed a Korean consortium and is seeking a European research partner who could develop hardware for the system as well as build and manage the system accordingly by meeting European standards. Eurostars2 (EUREKA) project is considered to apply for, targeting March 2017.*

<b>Creation Date</b>	27 October 2016
<b>Last Update</b>	01 November 2016
<b>Expiration Date</b>	31 October 2017
<b>Reference</b>	RDKR20161027001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/57ddb581-76ae-4ea5-a4f4-18bc59946be4">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/57ddb581-76ae-4ea5-a4f4-18bc59946be4</a>

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### Details

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#### Description

A traffic information collection system that is installed on roads usually consists of a camera, pole, controller, and network. The systems that are installed on some roads in cities need multiple functions, which ends up spoiling the beautiful landscape of the city, causing inconvenience to pedestrians, resulting in high cost for maintenance.

In case of measuring the speed of cars, generally more than two detectors buried in the road are needed. However, this system can be damaged by distortion or destruction of the road. Therefore, there is a rising need for speed measuring device that is not buried under the ground.

To meet this need, the Korean SME active in road and railroad transportation business has been focusing on the development of software and SI for multi-functional traffic information collection system.

The system has a 2.3 mega resolution capability that can be processed 40 times per second. In addition, it enables to accurate recognition of licence plate numbers regardless of various camera angles and distances. Other than speed measuring, this multi-functional software can be also applied to 'detection of cars', 'detection of speed of driving cars', 'tracking of cars', and 'detection of colours of cars'

Utilizing this technology, the company would like to develop further advanced software that can be adjusted and adapted in European market by managing the overall R&D project. Korean consortium is already formed consisting of two different companies. Also, the roles for each company have set up.

A European research partner specializing in manufacturing camera systems (in part of CCTV

and surveillance) should be able to develop and manufacture hardware for the system at any meteorological conditions (weather and climate) by meeting European standards.

Goals of R&D

- Basic performance of the system should reach as follows.

1) Recognition rate of license plate numbers : accuracy of higher than 90%

2) Car detection rate : higher than 95%

3) Error rate of speed detection :  $\pm 10\%$

Depending on the kinds of license plates, standards may differ.

The project duration is expected for 2 years including commercialization. EUREKA or

Eurostars2 project is considered targeting March, 2017. Therefore, deadline of EOIs

(expressions of interest) for this profile will be at the latest end of February, 2017.

## Advantages and Innovations

The results of the R&D includes :

- Effective and simplified traffic system by the replacement of traffic information collection system previously installed thoughtlessly on the road

- minimization of road infrastructures

- easy installation and low maintenance since there is no need for the detectors buried on the road

- satisfaction for the market demands as well as customers' needs

- high accuracy of collecting information using only cameras

- reduction of traffic accidents by detecting speed and licence plate numbers of the cars moving at a high speed

- contribution to road safety in general

- realization of technology that can be applied to multiple lanes not only for a single lane in case of using a high resolution camera (5 Mega)

## Stage of Development

Field tested/evaluated

## IPR Status

Secret Know-how

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## Keywords

### Technology

02008006 Traffic Engineering / Control Systems

### Market

09001 Transportation

09001006 Airfield and other transportation services

### NACE

C.30 Manufacture of other transport equipment

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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**   **Yes**

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## Dissemination

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### Send to Sector Group

ICT Industry and Services

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME 50-249

### Year Established

0

### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English

### Client Country

South Korea

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## Partner Sought

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## Type and Role of Partner Sought

- Type of partner sought: companies
- Specific area of activity of the partner: a partner in the area of information & communication or able to manufacture the related system of traffic information collection system
- Task to be performed : research and develop hardware together with the Korean entity for application and commercialization of the development result in Europe

## Type of Partnership Considered

Research cooperation agreement



## Research & Development Request

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### SME Instrument - Space: partners to develop and integrate sensors to be placed on board CubeSats

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#### Summary

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*Portuguese technological company, established in 2014, acting in the field of space and aerospace is looking to establish a research cooperation agreement to develop and integrate sensors to be placed on board CubeSats. Currently it is preparing a proposal for SME Instrument Phase 2 for H2020 Framework Program engaging SMEs in Space Research and Development. The objective of the project is to collect different data during space missions, such as temperature, electron density, and magnetic field.*

<b>Creation Date</b>	12 September 2016
<b>Last Update</b>	13 October 2016
<b>Expiration Date</b>	13 October 2017
<b>Reference</b>	RDPT20160912001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/33b62115-4fe7-4dd6-a690-602978432409">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/33b62115-4fe7-4dd6-a690-602978432409</a>

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#### Details

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##### Description

The upper stages of the atmosphere are also the most unknown ones to the scientific community. Data collection around this area is mostly based on remote sensing, the only methods for collecting in-situ data presents different barriers such as geographical limitation, and development costs and time.

The company is specialized in smart commissioning and decommissioning systems, optimizing spacecraft's operations and value. Its system enables spacecraft to perform precise manoeuvres for decommissioning, mainly for re-entry to the atmosphere, allowing identifying the footprint on Earth.

This technology potentiates the usage of the satellite's re-entry trajectory in order to select a time and location when it can be possible, through the integration of miniaturized sensors on board of the satellite, collect upper atmosphere in-situ data.

The company is currently searching for partners with expertise in the areas of the upper atmospheric layers, as well as partners that have previous expertise in the development of sensors that can be flown on board nanosatellites and collect data accurately.

The company is preparing a proposal for SME Instrument Phase 2 for H2020 Framework Program engaging SMEs in Space Research and Development. The objective of the project is to collect different data during space missions, such as temperature, electron density, and magnetic field:

EOI deadline: 18th November, 2016  
Call deadline: 18th January, 2017  
Expected duration of the project: 2 years

## Advantages and Innovations

The Mesosphere and Lower Thermosphere are the most poorly known stages of the Earth's atmosphere. This system provides an innovative approach based on nanosatellite technology that promises to deliver in-situ real-time data on any geographical area of the Mesosphere and Lower Thermosphere by taking advantage of predetermined and precise re-entry trajectories. The solution is scalable and easily upgradable to extend the sensors' capabilities and thus enter in different "big data" market.

Based on the capability to follow a precise trajectory to re-enter the atmosphere from any low Earth orbit, this technology enables the collection of data in pre-determined places. Currently existing technologies are based on sounding rockets, which are expensive and limited in location of launch. Advantages of this solution are the elimination of geographical restrictions, shorter development times, and increased cost-efficiency.

This technology also allows for a greater flexibility in terms of the sensors that can be put on board, as Commercial Off-The Shelf components are increasingly available, allowing for increased modularity of the nanosatellite. Launch opportunities also increase as the result of using CubeSat technology, as launch slots are getting increasingly frequent and its cost is lowering considerably.

## Technical Specification or Expertise Sought

As an expert in decommissioning services, the company is currently searching for partners with expertise in the areas of the upper atmospheric layers, as well as partners that have previous expertise in the development of sensors that can be flown on board nanosatellites and collect data accurately.

## Stage of Development

Proposal under development

## Comments Regarding Stage of Development

The project has received funding to perform a feasibility study; in parallel the team is undergoing a technology demonstration mission where it will be possible to collect an initial set of data. This mission used Commercial Off-The Shelf sensors and its main objective is to validate collected data and test market acceptance. Further development of the project will include the sourcing and development of the most efficient sensors to be used on board nanosatellites in upcoming missions.

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## Keywords

### Technology

02011005                      Space Exploration and Technology

### Market

01005004                      Microwave and satellite components

### NACE

J.61.3.0

Satellite telecommunications activities

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## Network Contact

---

### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**   **Yes**

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2014

### Turnover

<1M

### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English  
Portuguese

### Client Country

Portugal

## Partner Sought

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### Type and Role of Partner Sought

The company is looking for a research cooperation agreement. It is currently searching for partners with expertise in the areas of the upper atmospheric layers, as well as partners that have previous expertise in the development of sensors that can be flown on board nanosatellites and collect data accurately.

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

# H2020 GALILEO-1-2017: companies/organisations active in railway sector to develop an innovative solution for the maintenance service of rail infrastructure

## Summary

*Italian company active in communication & security is writing a project proposal to be submitted under H2020: GALILEO-1-2017 call. The project is aimed at enabling an innovative solution to improve the maintenance service of rail infrastructure. The company is looking for European partners active in the railway sector to be involved. Universities, as academic supervisor are also sought.*

Creation Date	07 October 2016
Last Update	12 October 2016
Expiration Date	12 October 2017
Reference	RDIT20161007001
Profile link	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/32880038-2559-498e-8281-304755200870">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/32880038-2559-498e-8281-304755200870</a>

## Details

### Description

The RAIM project aims at enhancing the operation of vehicles maintenance in railway infrastructure.

The main idea is to propose a innovative solution to improve the maintenance service of rail infrastructure. All the fleet will be based on a wireless network that will allow collecting the data of vehicles employment and will be written a forecast about the length and timely replacement of the components. The objective is to move from a cyclical maintenance to a predictive one.

The system, in compliance with regulation 445/2011, will be implemented by a wireless network, used to link to the machine employed, and consisting of an installed diagnostic box on the vehicles used to collect data that will be sent to the operations center. The central server will act as a node between the operating switching machine and the maintenance operators.

The access to the system will be multilevel and will be managed by four profiles:

- System administrator which coordinates the service functions and establish all the user rights and activities
- Fleet Manager which supervises the distribution of vehicles and their retrieval when they have to be repaired or refurbished
- Maintenance developer, which will manage the service documentation and procedures on the basis of statics and data processed by RAIM's elaboration software
- Operational manager, which will execute the technical activities on the vehicles retrieved for

maintenance and will draw up the related working reports.

RAIM project is mainly oriented to the European maintenance companies of railway networks, but the major machine manufacturer will be also involved.

The company is mainly looking for rails companies, railway builders and makers of maintenance way vehicles to perform the test phase. Companies with expertise in project coordination in the field of railways are also sought.

A university with supervising role is also needed.

Call identifier: H2020 (GALILEO-1-2017)

Types of action: Innovation action

Deadline of the call: 01-03-2017 (March 1st 2017)

Deadline for EOIs: 26-11-2016 (November 26th 2016)

Some information about the Italian company behind this profile:

Since 1960 it has been involved in designing, manufacturing and managing high tech radio-communication systems both for public administration and private use, in Italy or abroad.

It has thus gained particular, specific expertise in designing microelectronic devices, where small dimensions, low power consumption and high reliability are the key factors to satisfy the customer's requirement.

## Advantages and Innovations

Nowadays there are advanced technologies for railway diagnosis but some solutions for geolocation and control of the means of intervention have not been developed, yet. RAIM system aims to spread a solution for the management of these vehicles. The innovation advantages are:

- Remote monitoring of the vehicles
- Tracing of all working operations
- Prediction of failures and early warning generation
- More accuracy of localization due to Galileo network
- Indoor location of vehicles
- Less time for repairing interventions
- Increase of staff safety
- Fuel cost savings
- Maintenance costs reduction
- Improvement of working area due to video surveillance

## Technical Specification or Expertise Sought

The company is mainly looking for end-users ( i.e . rails companies, railway builders and makers of maintenance way vehicles) to perform the test phase thanks to their relevant fleet.

Universities with supervising role and partners with project coordination expertise in railway sector are also sought.

## Stage of Development

Proposal under development

## IPR Status

Secret Know-how

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## Keywords

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## Technology

01003014	Internet Technologies/Communication (Wireless, Bluetooth)
01003021	Remote Control
02008004	Railway Transport
02009003	Railway Vehicles
02010003	System and transportation

## Market

09001007	Other transportation
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## NACE

C.26.3.0	Manufacture of communication equipment
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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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## Dissemination

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### Restrict Dissemination to Specific Countries

Austria, Belgium, Bulgaria, CzechRepublic, Denmark, Estonia, Finland,  
France, Germany, Hungary, Lithuania, Netherlands, Norway, Poland,  
Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland,  
UnitedKingdom,

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## Client

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## Type and Size of Organisation Behind the Profile

Industry SME 11-49

## Year Established

1960

## Turnover

10 - 20M

## Already Engaged in Trans-National Cooperation

Yes

## Experience Comments

Other certifications: - qualified for the execution of public works (SOA)

## Certification Standards

ISO 9001:2000

## Languages Spoken

English  
Italian

## Client Country

Italy

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## Partner Sought

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### Type and Role of Partner Sought

Rails companies, railway builders, and makers of maintenance way vehicles will be in charge of testing the prototype for a year by making available their own fleet. The involvement of companies (also consultancy ones) able to provide coordination advice and support in the field is also envisaged.

Universities will be given the role of academic supervisor.

### Type of Partnership Considered

Research cooperation agreement

## Research & Development Request

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### H2020 call MG-8-5-2017 Part 1 "Shifting from car ownership to sharing" – Coordinator sought.

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#### Summary

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*A German-based international non-profit organisation, specialized in sustainable life style and behavior business models seeks a coordinator with expertise in mobility and further partners for a project proposal "Shifting from car ownership to sharing" in the H2020 call MG-8-5-2017. The objective is to gain new insights on user preferences, to guide policy making and to analyse prospects. Research and industrial partners are sought for this research cooperation.*

<b>Creation Date</b>	02 November 2016
<b>Last Update</b>	07 November 2016
<b>Expiration Date</b>	04 November 2017
<b>Reference</b>	RDDE20161102001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/412d5373-5d2d-485c-b1ff-12612ab6ca7b">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/412d5373-5d2d-485c-b1ff-12612ab6ca7b</a>

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#### Details

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##### Description

The overall objective of the project will be to contribute to sustainable transportation by guiding enabling policy making, route planning and automobile industry development, based on provided new knowledge on future mobility preference and their potential sustainability impacts.

The task is to compare the existing trends and forecasts across the EU and to identify the factors (economic/social/demographic/spatial/cultural aspects), that influence the varied implementation of such schemes in different countries/regions/cultures including the growing use of app-based services and to compare and benchmark existing business models, social innovations and identify possible new ones.

Furthermore the implications of car sharing schemes for the European car industry (impact on foreseen sales of conventional and electric cars, other revenues, etc.) should be assessed as well as the the potential impact on emissions, noise and congestion, especially in urban environments, as well as on safety of potential users.

An international non-profit organisation with expertise in sustainable lifestyles, behaviour, business models and scenario development based in Germany, would like to team up with a competent leading partner with expertise in mobility, including expertise in analysis of mobility trends and impacts and scenario building based on socio-economic, demographic and cultural aspects for this call.

In the project they would like to deal with

- Contributing to new insights on user preferences and their sustainability impact assessment in car sharing

- Guiding evidence-based policy making for sustainable mobility
- Contributing to a forward-looking analysis of the prospects of the European car industry market

The non-profit organisation offers to contribute the following:

- Development of a holistic framework for the analysis of the drivers and sustainability impacts of lifestyles, and interconnection of lifestyle areas like mobility, housing, food etc.
- Conducting of desk research and expert interviews to analyze lifestyle trends, behavior drivers and their impacts
- Development of lifestyle scenarios to project future behavior
- Analysis of the link between consumer behavior and mobility trends and services
- Facilitation of collaborative innovation discussion among the industry
- Stakeholder dialogues to develop systematic overview on sharing economy development and joint actions needed
- Development of policy suggestions for enabling sustainable lifestyles in mobility

The organisation from Germany would like to invite interested organisations to open discussion on a possible mutually benefiting research collaboration for a joint submission to this call.

Partners sought are research institutes or industrial partners. Currently the focus is on finding a project coordinator with expertise in mobility issues to shape the ideas together first. Based on this further partners will be sought.

Work Programme Part: Smart, green and integrated transport

Call : H2020-MG-2016-2017

TOPIC : Shifting paradigms: Exploring the dynamics of individual preferences, behaviours and lifestyles influencing travel and mobility choices

Part 1 "Shifting from car ownership to sharing"

Type of action: RIA Research and Innovation action

Deadline model: single stage

Deadline for submission of proposal: 01 February 2017

Deadline for expressions of interest: 2 December 2016

## Stage of Development

Concept stage

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## Keywords

### Technology

02008005	Road Transport
02010	Traffic, mobility
04007	Energy efficiency
10002004	Climate Change mitigation
11001	Socio-economic models, economic aspects

### Market

07005005	Travel agencies and services
07005006	Other consumer services (including photo processing)
09001	Transportation

## NACE

M.72.2	Research and experimental development on social sciences and humanities
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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Environment

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## Client

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### Type and Size of Organisation Behind the Profile

Other

### Year Established

0

### Already Engaged in Trans-National Cooperation

Yes

### Languages Spoken

English

**Client Country**

Germany

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## Partner Sought

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### Type and Role of Partner Sought

Partners sought are research institutes or industrial partners. The non-profit organisation is currently mainly looking for a project coordinator to shape the ideas together first. Based on this they will search for further partners.

The coordinator should have expertise in mobility, including expertise in analysis of mobility trends and impacts and scenario building based on socio-economic, demographic and cultural aspects for this call.

### Type of Partnership Considered

Research cooperation agreement

## Technology Request

# Searching partners for further development of synthetic noise generation system for electric vehicles (EVs).

## Summary

*A Turkish engineering SME working on noise, vibration and harshness of vehicles is searching partners in component, electrical vehicle development, manufacturing and electrical board design for further development of their synthetic noise generation system for electrical vehicles. The company intends to make a research cooperation agreement or technical cooperation agreement.*

<b>Creation Date</b>	03 November 2016
<b>Last Update</b>	11 November 2016
<b>Expiration Date</b>	11 November 2017
<b>Reference</b>	TRTR20161103001
<b>Profile link</b>	<a href="http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/39730390-040b-499c-9ad9-c257064b77a4">http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/39730390-040b-499c-9ad9-c257064b77a4</a>

## Details

### Description

Electric vehicles (EVs) radiate almost no audible noise from the idle condition to around 30kph. Therefore, various countries started preparing legislations for the min. radiated sound levels of EVs. These legislations also provide spectrum requirements and minimum sound levels which should be met. Since these systems will be used on EVs, power consumption levels should also be considered as a requirement.

A Turkish engineering SME working on noise and vibration, system dynamics and computational fluid dynamics has developed a prototype sound generator system to meet these requirements. However, there are many points available for further development;

- 1) The system changes the frequency spectrum in case if a similar frequency is available around the vehicle (ambient/environmental sound level and spectrum – 1/3 octave bands) to make sure that the vehicle is detectable and not to increase ambient sound level by further increasing the coincident octave band. This decision making process should also include vehicles available in the vicinity (car2car communication) so that different brands with different spectrums should not cause a constant shift between frequencies.
- 2) Depending on the rpm (revolutions per minute) level, each octave band frequency shifts to higher frequencies to generate the change of speed feeling. Unfortunately, most patents and available solutions use flash memory on the circuit to dump in pre-defined sounds and playback depending on the rpm. As a result of this, dynamic sound change can only be achieved by playing around with available noises. The noise generation could be mixed with flash data and dynamic sound generator (on card) so that depending on the rpm and environmental frequency change a better characteristic sound could be generated. Cooperation for further development would be useful.
- 3) Sound amplification on circuit is another issue. Since the speakers are mounted in some part of the vehicle (generally 2 front, 1 back) and needs to meet >55- 60 dB at some octaves at a given distance, the circuit should provide the necessary power. Or an alternative may be to use

vehicle body parts or components as speakers. There is a need for finding a method for hybrid solution of playing and generating the sounds.

4) Generated sound according to legislations is mostly perceived as white noise and very hard to give a feeling of vehicle approaching. Therefore, different sound types according to legislations should be provided. New sound types (not copied from internal vehicles) must be generated.

5) Testing and further development requires working on electric vehicles and getting customer feedback.

The Turkish SME is looking for partners for further development of its sound generator for overcoming the issues stated above. The potential partners shall be working on vehicle and /or component development and on electronic board design as well as working on EVs. The company intends to make a research cooperation agreement possibly to be funded under an international research and development program such as EUREKA, Eurostars or H2020 or a technical cooperation agreement.

## Technical Specification or Expertise Sought

Technical specifications / expertise required for the topics listed in the description;

- 1) Vehicle and/or component development companies working on car2car communication with technologies like Bluetooth, Zigbee vs.
- 2) Companies experienced in electric board design and component selection would be required to fulfill this topic.
- 3) Similar to topic no.2.
- 4) Vehicle/component development companies required to work on the design of sound (with alternative tools – Pure data etc.) so that alternative sound types could be generated and a platform for designing sound for EVs could be generated.
- 5) Vehicle manufacturers are required to provide a platform for testing of the products and provide feedback on generated sounds.

## Stage of Development

Prototype available for demonstration

## Comments Regarding Stage of Development

The prototype of the sound generation system is developed, however there is need for further development with a partner.

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## Keywords

### Technology

01002003	Electronic engineering
02009001	Design of Vehicles
02009002	Hybrid and Electric Vehicles
02009012	Automotive engineering
02009014	Automotive electrical and electronics

### Market

03001007	Circuit boards
03004003	Other electronics related equipment
03008004	Other electronics related (including alarm systems)



## NACE

M.71.1.2                      Engineering activities and related technical consultancy

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## Network Contact

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### Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

### Contact Person

Maria Dolores Guillén Ruiz

### Phone Number

+34 955 00 74 78

### Email

mariad.guillen.ruiz@juntadeandalucia.es

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

Automotive, Transport and Logistics

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

2009

### Already Engaged in Trans-National Cooperation

Yes

### Languages Spoken

Turkish  
English  
Russian

### Client Country

Turkey

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## Partner Sought

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### Type and Role of Partner Sought

The partner is sought for cooperation in co-development of the prototype sound generation system preferably through a research cooperation agreement or technical cooperation agreement.

Potential partners shall be working on vehicle and/or component development sector, on electrical board design or must be manufacturers of electrical vehicles.

### 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  
Research cooperation agreement