



## Boletín nº 180 de Oportunidades de Cooperación: Medio Ambiente

(Octubre 2019)



Agencia Andaluza del Conocimiento  
CONSEJERÍA DE CONOCIMIENTO, INVESTIGACIÓN Y UNIVERSIDAD

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# Oportunidades de Colaboración

## 1.-Búsquedas de socios

| Temática                           | Referencia      | Título   |
|------------------------------------|-----------------|--|
| Tecnologías ambientales & Residuos | RDFR20190723001 | H2020-CE-FNR-09-2020 : Technological providers for removal of marine plastic and litter sought |

## 2.- Ofertas Tecnológicas

| Temática                | Referencia      | Título   |
|-------------------------|-----------------|--|
| Tecnologías ambientales | TOES20190912002 | Realtime IoT (Internet of Things) based sensing solutions for automated critical data collection and management in air and water monitoring networks |
| Residuos                | TODE20190904001 | Recyclable cotton yarn   |

## 3.- Demandas Tecnológicas

| Temática | Referencia      | Título  |
|----------|-----------------|---|
| Residuos | TRKR20190827001 | A Korean company is looking for technology for nuclear dismantling and radioactive waste management |

**Medio Ambiente:**  
**Tecnologías Ambientales**

## Partnering Opportunity

### Research & Development Request

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## H2020-CE-FNR-09-2020 : Technological providers for removal of marine plastic and litter sought

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### Summary

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*A French aquaculture and marine resources cluster is looking for companies from Northern, Eastern and Central Europe which are able to develop automatic or remotely controlled wireless devices capable of collecting plastics and other litter from oceans, to complete their consortium for the Horizon 2020 CE-FNR-09-2020 call "Pilot action for the removal of marine plastics and litter".*

**Expiration Date**      30 November 2019  
**Reference**              RDFR20190723001

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### Details

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#### Description

The French cluster will be coordinating a proposal during the next months in order to reply to a topic of the Horizon 2020 working programme Societal Challenge 2 on bio-economy. The topic of interest is the FNR-09: Pilot action for the removal of marine plastics and litter.

The FNR-09 is an innovation action which has to achieve a TRL of 6.

The co-financing rate is 70% for companies (small or large).

An urgent action is needed both for the prevention and for the removal of existing marine litter, notably plastics and microplastics. For this topic, a demonstration of the removal of marine litter and research is being proposed, highlighting how the environment is impacted by the removal, and the corresponding impacts in terms of ecosystem and economic recovery.

The consortium's goal for this topic is to demonstrate approaches and technologies to improve marine spatial planning and conservation (and even restoration) of coastal ecosystems.

EOI deadline: 30th of November 2019.

Call deadline: 22nd of January 2020.

The consortium is looking for companies with automatic or remotely controlled wireless technologies targeting the removal of marine plastic and litter. The proposed solutions must be able to work at the sea surface and on the seafloor/beach.

The solutions will be implemented and it is expected of the project to achieve in treated areas:

- the removal of 90% of macro-plastic litter and a substantial fraction of micro-litter
- 80% reduction of micro-plastics in shellfish
- 80% reduction of micro-plastics and plastics in non-migratory birds species

### Stage of Development

Proposal under development

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## Network Contact

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### Contact Person

Laura Valle Cerezo

### Email

[laura.valle@juntadeandalucia.es](mailto:laura.valle@juntadeandalucia.es)

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## Partner Sought

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### Type and Role of Partner Sought

The French cluster has already built an almost complete consortium that is now looking for targeted technology providers able to develop automatic or remotely controlled wireless devices for litter removal from beaches/seafloor, the ocean surface and shellfish.

In addition to this, companies that have the capacity to develop or that have already developed a solution capable of sorting and reusing the collected plastics are more than welcome to contact the coordinator.

Partners from Northern, Eastern and Central Europe are sought : most current partners are from Southern and Western Europe. Greece is also already strongly represented.

### Type and Size of Partner Sought

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

### Type of Partnership Considered

Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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## Realtime IoT (Internet of Things) based sensing solutions for automated critical data collection and management in air and water monitoring networks

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### Summary

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*A Spanish company has developed customisable solutions (plug and play hardware and cloud technologies) to capture and monitor, even in remote areas, real-time accurate critical data in water and open-air quality. These solutions can easily be integrated into traditional or larger systems and structures. The company offers commercial agreements with technical assistance and technical cooperation agreements to environmental development, research and technology centres or universities.*

**Reference** TOES20190912002

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### Details

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#### Description

A Spanish company, founded in 2014 by a team of engineers, new technologies and software programmers, works to put technology at the service of project efficiency and environmental sustainability. It has developed the only end-to-end system in the market, which combines the most ultra-energy efficient, wireless connectivity, precise and accurate monitoring available solution that can be easily integrated with pre-existent systems.

The company solutions are used worldwide in ambient air quality monitoring systems (AQMS) in 5 continents, water quality monitoring and industrial process applications by industries, businesses, private and public institutions and organizations that need to monitor and control critical parameters in real-time and anywhere. These solutions allow them reduce costs, improve processes, and measure environmental impact. The developed solutions have won several international awards and recognitions.

The company is looking to participate and add value in air and water quality monitoring critical data concerned projects where the need of critical and real time accurate data on air and water quality are a key aspect. They offer:

- commercial agreements with technical assistance, with solutions ready to use. The technical

Ref: TOES20190912002

assistance would allow them to easily implement these solutions in their projects/processes;  
and

- technical cooperation agreements for the customization of these solution according to their needs;

to environmental development, research and technology centres or universities.

### **Advantages and Innovations**

The company's solutions merge IoT (Internet of Things), engineering and software knowledge with deep environment related know-how, and are configured upon the client's requirements. It enables the deployment of data capture networks even in remote and difficult access areas at 20% of the cost of the traditional nets, with the same data quality and accuracy as the most exigent and traditional data capture system, being fully embeddable with pre-existing systems.

Additional characteristics:

- Ultra-efficient energy: entire system designed to consume minimum energy and maintain the ability to interact remotely. It can be connected to solar powered batteries.
- Wireless: unique multi-frequency (simultaneous tri-band) wireless network.
- Precision and accuracy of the measurements.
- Ability to integrate easily with existing systems, with the RESTful Open API (Application Programming Interface). Easy management, calibration and maintenance.
- Plug-and-play installation with easy start-up.
- Portable: the scale of the device and its robustness facilitates its housing in vehicles.
- Working 24/7, 365 days a year, maximum reliability and robustness even without connection to electrical grid.
- Long range, bidirectional, low power consumption, high availability, multi-frequency (tri-band), noise and interferences immune, self-firmware and software error fixing. The system informs about connection times and guarantees the integrity of the information and end-to-end communications.

### **Stage of Development**

Already on the market

### **IPR Status**

Trade Marks

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## **Network Contact**

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### **Contact Person**

Laura Valle Cerezo

### **Email**

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## Partner Sought

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### Type and Role of Partner Sought

- Type of partner sought:

Private or public companies focused on environmental development, research and technological centres or universities.

- Specific area of activity of the partner:

Any activity that would require having accurate and reliable data for process and environmental monitoring, i.e. aeronautics-space-and-dual-use-technologies, agrofood, environment, healthcare, intelligent energy, maritime industry, mobility, sustainable construction, tourism.

- Task to be performed:

To define common goals and value-added chain and processes in order to focus the project and share the expectations from each partner in the project. The Spanish company will assist in solution integration, assembly, initial installation and provide technical consultancy and know-how as well as market and collaboration expertise.

### Type of Partnership Considered

Commercial agreement with technical assistance

Technical cooperation agreement



**Medio Ambiente:**

**Residuos**

## Partnering Opportunity

### Research & Development Request

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### Type and Size of Partner Sought

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

### Type of Partnership Considered

Research cooperation agreement

## Partnering Opportunity

### Technology Offer

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## Recyclable cotton yarn

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### Summary

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*A German university offers a solution to recycle more cotton yarn than can be done today and to make it re-useable for high quality products. This is achieved by adding synthetic fibers that will dissolve again in the recycling process to the cotton. Applications are in the textile industry. Licensees are sought.*

**Reference**                      TODE20190904001

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### Details

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#### Description

Only a small percentage of cotton is currently recycled. The invention of a German university addresses this issue and describes a recyclable cotton yarn.

To date the fiber length of conventional yarns is shortened by the recycling process to such an extent that these yarns can no longer be reused for high-quality textile products. With the invented yarn, a certain proportion of synthetic fibers made from polyvinyl alcohol (PVA) is added to the natural cotton fibers during spinning, which can be dissolved again with hot water during recycling. This means that the yarn loses strength on the textile surface and can then be mechanically disintegrated more gently. The recovered cotton fibers are shortened to a lesser extent by this.

The invention thus makes it possible to spin cotton yarns that can be opened up considerably better into individual fibers. As a result, higher quality products can be produced from expensive raw materials such as cotton. Industrial partners are sought for license agreements to apply the technology. An application in the textile and jeans manufacturing industries, which are concerning themselves with the topic of sustainability and want to get involved there, is conceivable because very large quantities of cotton that is dyed in the same way are used here.

#### Advantages and Innovations

The blending of the yarn with water soluble fibres makes it possible to recycle more cotton than has been possible to date with conventional methods. Higher quality products can be produced. There is an environmental benefit through increased recycling.

Ref: TODE20190904001

### Stage of Development

Concept stage

### IPR Status

Patent(s) applied for but not yet granted

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## Network Contact

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### Contact Person

Laura Valle Cerezo

### Email

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## Partner Sought

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### Type and Role of Partner Sought

Partners from clothing industry, filament yarn industry and spinning mills are sought for license agreements to apply the patent. The partners would contribute to environmental sustainability and resource efficiency by using the technology.

### Type of Partnership Considered

License agreement

## Partnering Opportunity

### Technology Request

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## A Korean company is looking for technology for nuclear dismantling and radioactive waste management

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### Summary

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*A Korean company is looking for technology and technical services for nuclear dismantling and radioactive waste management. The technology will be used for dismantling nuclear power plant and related radionuclide analysis system. The company has a list of technologies they need, including nuclear breakers and pretreatment systems. The company is interested in licensing these technologies or conduct joint R&D with on-site smart laboratory.*

Reference TRKR20190827001

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### Details

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#### Description

A Korean company established in 2003, has years of experience in technical and new materials development in the offshore and nuclear industry. For this technology request, they need technologies related to dismantling nuclear power plant and related radionuclide analysis system. They are looking also for a mobile radionuclide analysis system that can be built on site.

The Korean company has a list of technologies they need, which includes: Fume Hood, Closed system-microwave digestion, furnace, multi-channel analyzer system, low background  $\alpha/\beta$  counter system, and Low-Energy Photon Detector. There are more technologies they need for nuclear dismantling. The technologies will be used in nuclide separation, pretreatment, recovery rate measurement of Sr, Fe, Ni, etc., isotope analysis, recovery rate measurement of Sr, Fe, Ni, etc., radioactivity measurement of  $^3\text{H}$ ,  $^{14}\text{C}$ ,  $^{63}\text{Ni}$ ,  $^{90}\text{Sr}$ , etc., gamma nuclide analysis, radioactivity measurement including  $^{55}\text{Fe}$ ,  $^{99}\text{Tc}$ ,  $^{59}\text{Ni}$ ,  $^{129}\text{I}$ ,  $^{55}\text{Fe}$ , and full alpha.

The Korean company is also interested in acquiring mobile on-site laboratory for waste radioactivity measurement when dismantling a nuclear power plant. In the case of joint development, the premise is to sell to the Korean nuclear dismantling market.

#### Technical Specification or Expertise Sought

ON SITE SMART Laboratory and related technologies

### Stage of Development

Already on the market

### IPR Status

Secret Know-how,Patent(s) applied for but not yet granted,Patents granted

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## Network Contact

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### Contact Person

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## Partner Sought

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### Type and Role of Partner Sought

The Korean company is seeking for partners with technology on nuclear dismantling and radioactivity measurement. The partner has to be open to technology licensing, and in the case of joint R&D, distribution in the Korean market is assumed.

### Type and Size of Partner Sought

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

### Type of Partnership Considered

License agreement  
Technical cooperation agreement  
Research cooperation agreement