Profile Status: Published

Technology Offer

Innovative platform backed by Blockchain technology for improving the food traceability process

Summary

A Spanish technology-based SME has developed a novel platform backed by Blockchain technology for improving food traceability process. This platform makes possible that agrofood key players (retailers, distributors, producers, restaurants) can record data as well as any transformation and outputs of their products. The SME is interested in getting in contact with final users in the fields of agriculture and food management for commercial agreements with technical assistance.

Creation Date	26 November 2018
Last Update	17 December 2018
Expiration Date	18 December 2019
Reference	TOES20181120001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d219f02c-5f84-4c63-b364-80521f9f8392

Details

Description

According to WHO (World Health Organization) research, it is estimated that around 600 million people become sick due to contaminated food in the world each year - that's almost 1 in every 10 people - and even an estimated 420,000 die from this reason.

Current food registration and traceability processes do not meet the standards of 21st century consumers. The average tracking time of the total journey of a production batch takes around 20 to 29 days.

A Southern Spanish SME has developed an IT platform backed by Blockchain technology to respond in a more efficient way to the food traceability process needs.

Through this solution, the agrofood sector operators can not only record data, but also any transformation and outputs of their products. This can be done with just one device with internet access.

How the systems works

1. The barcode / QR is scanned and it is selected the production batch to find out more information.

2. Discover more information about products, such as nutritional information, allergy information,

discounts, promotions, related products and videos.

3. Check the route of food, the standards and quality certificates used by the participants in the supply chain.

4. Find products and offers near by, using the Smart tags.

The Spanish SME is interested in getting in contact with final users of the Agrofood Industry for commercial agreements with technical assistance. Technical service will be provided for first stage implementation. Afterwards, maintenance and technical support will be given for a right use and exploitation of the technology.

Advantages and Innovations

Advantages
- This technology saves time and resources when taking records and performing audits.
- More information about products can be shared with customers and consumers.
- Full guarantee of authenticity of the product.
- Monetizable thanks to business micro marketing campaigns based on the traceability process through segmented promotions aimed at consumers.

Innovations
- Tracks production batches in real time, from their origin to their destination.
- Thanks to the consensus algorithm, this technology can produce blocks much faster than the competition.
- Used protocol allows to produce free blocks. Currently, most of the competitors have an operating cost of around 10 and 50 cents (€) per share.
- User interface design focuses on the user's experience. This contributes to simplify processes and optimize traceability tasks.
- Companies don´t need to further spend money on modifying packaging, neither will they need to add new barcodes to use this technology. This platform works on the original branding of the product.
- Capability of integration with IoT (Internet of things) devices and other traceability softwares through the API (Application program interface) of this technology.

Stage of Development

Already on the market

IPR Status

Copyright

Profile Origin

Private (in-house) research

Keywords

Technology

01004001	Applications for Health
01004003	Applications for Transport and Logistics
01004004	ASP Application Service Providing
01004017	Work Hygiene and Safety Management

08002004	Traceability of food

Market

07003002	Health food
07005001	Fast food restaurants
07005002	Other restaurants
09005	Agriculture, Forestry, Fishing, Animal Husbandry & Related Products

NACE

J.62.0.1	Computer programming activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Agrofood
ICT Industry and Services

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2017

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The Spanish SME is interested in getting in contact with final users of the agrofood industry like farmers, food retailers, food distributors and restaurants.

The final user will provide information about his specific needs for a right implementation of the technology.The Spanish developer will give maintenance and technical assistance once the technology is deployed and implemented.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance

Profile Status: Published

Technology Request

Spanish industrial company is looking for smart technologies for the digitalization and energy efficiency

Summary

A Catalan construction & engineering company is launching a challenge to collaborate with disruptive start-ups providing solutions in 2 main areas: digitalization of construction and improvement in facility service management. They are looking for solutions based on artificial intelligence, augmented/virtual reality, big data, building information modelling, cloud computing, computer vision, internet of things or robotics. They are interested in a license or a technical cooperation agreement.

Creation Date	17 December 2018
Last Update	17 December 2018
Expiration Date	18 December 2019
Reference	TRES20181217001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/fcdb6b13-0037-456f-a7e3-0c7cb0176a74

Details

Description

A Catalan (Spanish) construction and engineering company is launching a challenge to identify and collaborate with start-ups that can bring a differential value to the construction and facility service management sectors.

The company has presence in more than 20 countries between Europe and Middle East, Africa, Latin America, Australia and operates in the fields of:

• Infrastructure & Industrial Engineering>
• Services & Technologies>
• Concessions & Renewable Energy

They are looking for new solutions based on emerging technologies such as artificial itnelligence (AI), augmented reality (AR), virtual reality (VR), biga data, building information modelling (BIM), cloud computing, computer vision, internet of things (IoT) or robotics to be applied on these activity areas:

• Digitalization of construction : Solutions to plan, design, build and manage buildings and infrastructure more efficiently, improving control over the infrastructure supply chain & supervising all phases of project management and other critical business areas.
• Improvement in facility service mangement : Solutions to ensure optimization of energy

resources: improving facilities' energy efficiency and increasing profitability of facility management services.

This technology request is an innovation challenge and is published on an open innovation platform until 13-01-2019. If an organization does express interest in cooperation with this firm before that date, it will be guided towards this open innovation platform to apply directly.

After that, the Catalan firm will select the start-ups with whom they would like to cooperate in the development of a solution.

After that date, the Catalan company will perform a technical feasibility study to validate the the solution proposals received from the start-ups. Based in this technical validation they will select the start-ups with whom they would like to cooperate in development of business agreements.

The collaboration between the Catalan company and the start-up should suceed via a technical cooperation agreement. The Catalan company will pay the start-up to run a pilot project and will work together with the start-up in the scale-up and industrialization of the project.

Technical Specification or Expertise Sought

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

Keywords

Technology

01003003	Artificial Intelligence (AI)
01003020	Building Automation Software
01003024	Cloud Technologies
01003025	Internet of Things
04007001	Energy management

Market

08002001	Energy management
09007001	Construction companies

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

ICT Industry and Services
Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

Industry >500

Year Established

0

Turnover

>500M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The Catalan company is looking for start-ups working on emerging technologies (artificial intelligence, augmented reality, virtual reality, big data, building information modelling, cloud computing, computer vision, internet of things or robotics.

The partner searched should be constituted as a legal entity or in process of becoming one. Start-ups are invited to share their ideas and propose their solutions. They should have a team fully dedicated to the aim of the project. The start-up will run a pilot project financed by the

Catalan company and afterwards both partners will work together in the industrialization process. The cooperation desired is a technical cooperation agreement.

Type and Size of Partner Sought

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

Type of Partnership Considered

Technical cooperation agreement

Profile Status: Published

Technology Offer

Mobile laboratory for investigation, diagnosis, monitoring and restoration of heritage components

Summary

A group of Romanian researchers has developed a mobile laboratory for the investigation, diagnosis, monitoring and restoration of heritage components, which performs in a short period of time a set of measurements and analyses on movable or immovable art objects, historical buildings, archaeological sites and other heritage objects. The Romanian team is looking for interested SMEs, universities and research centers for cooperation based on services and/ or research cooperation agreement.

Creation Date	10 December 2018
Last Update	12 December 2018
Expiration Date	13 December 2019
Reference	TORO20181126001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/7ec67b31-af70-41c3-87a1-2367245347aa

Details

Description

Active in the field of fundamental and applied research in optoelectronics, a group of Romanian researchers has developed a mobile laboratory for the investigation, diagnosis, monitoring and restoration of heritage components, which performs, in a short period of time, a set of measurements and analyses on movable or immovable art objects, historical buildings, heritage objects etc.
Usually the deterioration of the external heritage components is due to urban pollutants, emissions and anthropogenic factors. Regarding the art objects located inside the buildings, the damages are equally determined by particles in the air, contaminants and anthropogenic factors. In both cases, the investigation, diagnosis and restoration of heritage components are carried out in specialized laboratories, but often the transportation of these heritage components to the restoration centres produces delayed intervention and, in many situations, irreversible damages. Thus, the technical problem created by the disadvantages of moving heritage objects in fixed labs is solved by the Romanian invention, because the mobile laboratory has all the necessary equipment in order to perform, in a short period of time, the entire set of measurements and analyses on movable or immovable art objects, historical buildings, archaeological objectives and other heritage objects.
The Romanian invention relates to the development of a mobile laboratory, adapted on a freight minibus chassis, which is composed of two cabins: the minibus cabin, equipped with driver's and companion seats, and the laboratory cabin.
The laboratory cabin is equipped with shelves, supports and work table on the side walls and

the control cabin separating panel, in which the optoelectronic equipment and accessories used for monitoring, investigation, diagnosis and restoration are stored and insured during the transportation. The cabin designed for laboratory purposes is melamine faced and has a sliding door on the right side and two folding doors (180 degree) in the back.
The mobile laboratory uses mainly non-contact, non-invasive or micro-invasive optoelectronic techniques, without sampling and at very high technical level.
The optoelectronic techniques that can be applied using the equipment and accessories installed within the mobile laboratory are the following:
- monitoring of the microclimate, air quality and exposure to light;
- thermal imaging, to quickly detect anomalies and damage;
-3D laser scanning & photogrammetry of large scale heritage components;
- non-invasive and non-contact investigation for qualitative assessment of materials through laser-induced fluorescence (LIF);
- non-contact and micro-invasive investigation for qualitative evaluation of materials via laser induced breakdown spectroscopy (LIBS);
- pH metry;
- Ground Penetrating Radar (GPR) investigations and mapping of archaeological sites and monuments
- vibrometry;
- high-resolution multispectral and hyperspectral investigation;
- colorimetry;
- laser cleaning etc.
The technology is tested and validated as a complex array of advanced optoelectronic methods for investigation-diagnosis and evaluation of the conservation state of the specific materials for different types of tangible heritage, as well as corroboration of the research methods and means to improve decisions and make efficient the current or exceptional interventions.
All the techniques were tested in laboratory, cases were validated and the mobile laboratory that incorporates all the latest techniques is available for demonstration.
The Romanian research team is looking for interested SMEs, universities and research centres for technological services and/ or research cooperation agreement for future development of the mobile laboratory.

Advantages and Innovations

The mobile laboratory ensures complex investigations, analysis and documentations/mappings for any object or monument, in maximum security conditions even without moving the object from his exhibition/storing/conservation environment.
The main advantages of mobile laboratory are as follows:
- no sampling is required for laboratory processing;
- investigations, analyzes and diagnosis are performed in a short period of time, as compared to the succession of classical operations;
- possibility of non-contact, non-invasive or micro-invasive measurements, which is very useful in the case of heritage components with a high level of deterioration.
Due to its flexible design, the mobile laboratory can answer the needs of several categories of users, such as restorers, historical archaeologists, documentaries, etc.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

The mobile laboratory for investigation, diagnosis, monitoring and restoration of heritage components is available for demonstration to potential partners or even to direct customers in order to convince them of the viability of the chosen approach.
The Romanian research team is ready to showcase the possible applications, feasibility and performances of their innovation, the goal of such a demonstration being to introduce potential

partners/ customers to the mobile laboratory in hopes of offering them professional services or for mobile laboratory's further development.

IPR Status

Patents granted

Comment Regarding IPR status

Patent granted by the Romanian State Office for Inventions and Trademarks.

Profile Origin

National or Regional R&D programme

Keywords

Technology

01003002	Archivistics/Documentation/Technical Documentation
01003012	Imaging, Image Processing, Pattern Recognition
01005001	Cultural Heritage
01005006	Visualisation, Virtual Reality

Market

07005006	Other consumer services (including photo processing)
09003001	Engineering services
09003007	Other services (not elsewhere classified)
09007004	Engineering and consulting services related to construction

NACE

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

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Tourism and Cultural Heritage

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1992

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The optoelectronic equipment and accessories installed within the Romanian mobile laboratory are the following (attachment - Figure 1): 1- supports for screens, protective screens; 2- vibrometer; 3- portable pH meter; 4- UV lamp; 5- Portable colorimeter; 6- IR vision thermal camera 7- YAG laser: Nd Q-switched for cleaning operations (Neodymium-doped Yttrium Aluminum Garnet); 8- 3D laser scanner; 9- multi-spectral camera; 10- LIBS (laser induced breakdown spectroscopy) device; 11- GPR (Ground Penetrating Radar) device; 12- LIF (laser-induced fluorescence) device; 13- network of at least 8 sensors for temperature, relative humidity and emissions; 14- laptop for 3D scanning, LIBS and LIF techniques; 15- laser power supply cables; 16- niche with working table with 12 and 220 V sockets; 17- portable digital microscope; 18- central computing unit; 19- portable electric generator; 20- UPS (Uninterruptible Power Supply); 21- tripods.

Certification Standards

ISO 9001

Languages Spoken

English

Client Country

Romania

Partner Sought

Type and Role of Partner Sought

The partner sought could be among SMEs active in the cultural heritage, imaging, documentation or other related sectors, as well as university or R&D centres interested in the onsite technological services offered via the Romanian mobile laboratory; the specific services should be provided on the basis of a long-term services agreement.
R&D collaboration to further develop the complex mobile laboratory dedicated to Heritage Science is also envisaged if any international university or R&D institutions from the specialty optoelectronics and/ or related fields is interested in working together with the Romanian partner for finding or developing new solutions related to the investigation, diagnosis, monitoring and restoration of heritage components to be applied via the mobile laboratory.

Type and Size of Partner Sought

SME 11-50,University,R&D Institution

Type of Partnership Considered

Services agreement
Research cooperation agreement