

## EOI: Expression of interest - Romania

Title	<b>Seeking partners to join H2020 bid to deliver a new approach to whole-house, deep energy efficiency retrofitting of residential buildings</b>
POD Reference	RDUK20141029001
Summary	<p>A UK company is seeking partners to join the H2020 call "Integrated approach to retrofitting of residential buildings" (EeB-08-2015) to co-develop a new and more streamlined retrofitting 'tool/process'. They are seeking a range of academic and industrial partners, including a consortium lead, to co-develop and pilot the tool and products. The deadline for expressions of interest in this profile is 7 November 2014 and the deadline for the call is 4 February 2015.</p> <p>The European built environment is responsible for more than a third of greenhouse gas emissions in Europe, with targets to reduce CO2 emissions by 80% and energy consumption by 50% by 2050. In order to achieve these challenging targets, it is necessary to develop innovative, affordable, breakthrough solutions, both at an individual building and district scale that address the energy performance of existing buildings - in addition to building new, lower carbon housing stock. Although a number of tools and techniques are currently available and landlords with large property portfolios are ideally positioned to achieve district-scale improvements to building energy performance, opportunities to do so are often overlooked due to limited time and financial resources in addition to information and skills bottlenecks.</p>
Description	<p>This project seeks to develop and pioneer a new, innovative approach to delivering whole-house, deep energy efficiency retrofit. Conventionally, whole-house retrofit involves the installation of multiple energy efficiency and renewable energy technologies in a property over a compressed time period, involving large initial financial outlay and significant disruption to occupants. The consortium aims to develop a tool that will enable whole-house, deep energy efficiency retrofit to be delivered incrementally over a longer time period, in tandem with existing maintenance and repair processes. This will streamline the retrofitting process, lifting upfront financial barriers and supporting 'cost optimal' and effective solutions. Utilisation of this tool will ensure that opportunities to improve energy efficiency during the course of routine operations are not missed. It will also have a positive impact on occupants, who will be exposed to less disruption and who will receive benefits in terms of increased comfort and reduced energy consumption.</p> <p>The project will focus on developing and piloting this tool. The tool will identify opportunities to combine energy efficiency retrofit with asset management and signpost to appropriate materials, methods and financing opportunities with the intention of delivering a 60% reduction in energy consumption and a return on investment of 7 years or less. It will be piloted with social and private sector landlords with large property portfolios in several European countries, targeting 'hard to treat' older properties (including historic homes) with solid walls, utilising innovative retrofit products and processes. The project will also tackle information and skills bottlenecks in the housing and construction sector and support the development of competences around energy efficiency retrofit.</p> <p>The project has been developed by a steering group of five organisations. They are expected to apply for up to €7 million and envisage that the project will run for 3-4</p>

years. While the deadline for the call is 4 February 2015, the deadline for expressions of interest in this profile is 7 November 2014.

Consortium partners are sought based in a range of European countries with an interest in contributing to or leading on specific work packages, specifically but not necessarily limited to:

- A lead partner to take on overall project management, based in or near Brussels, with good relationships with the Commission and experience of successfully managing other European projects, especially on energy efficiency
- An IT company that is an SME with R&D capacity and that has prior, demonstrable experience of successful software development
- Academic partners with expertise in quantitative engagement with data relating to building energy performance
- Private and public sector landlords with large property portfolios containing significant quantities of older, energy inefficient properties, with established planned maintenance programmes, willing to share the detail of these and willing to allow the piloting of the tool and retrofit products and processes in a sample of these properties.

Stage of Development	Proposal under development
Keywords	Archivistics/Documentation/Technical Documentation Computer Software
Technology Keywords	Databases, Database Management, Data Mining Knowledge Management, Process Management Energy efficiency Applications software Other industry specific
Market Keywords	Programming services/systems engineering Metering and monitoring Thermal insulation
NACE Keywords	F.42.9.9 Construction of other civil engineering projects n.e.c. L.68.2.0 Renting and operating of own or leased real estate
Partner Sought	- Type of partner sought: Academic/industry/public sector - Specific area of activity of the partner: ICT/sustainable housing and energy efficiency/landlords
Type and Role of Partner Sought	- Task to be performed by the partner sought: quantitative engagement with data building/development of new software/provision of sites for testing of prototype
Type and Size of Partner Sought	>500 >500 MNE 251-500 R&D Institution SME <10 SME 11-50 SME 51-250 University
Type of Partnership Considered	Research cooperation agreement

Client	
Type and Size of Client	Industry >500
Already Engaged in Trans-National Cooperation	Yes
Languages Spoken	English
Client Country	United Kingdom
Dissemination	
Sector Group	Sustainable Construction
Programme-Call	
Framework Programme	H2020
Call Name	Call for energy efficient buildings - Integrated approach to retrofitting of residential buildings (EeB-08-2015)
Submission and evaluation scheme	Single-stage submission scheme
Anticipated Project Budget	€7million
Coordinator Required	Yes
Deadline for Call	04 Feb 2015
Project Title and Acronym	OPT4MORE: Optimising Processes To Maximise Opportunities for Retrofit Efficiency

### EOI: Expression of interest - BulgariaRomania

Title	H2020-FET-OPEN: Discovery of novel compounds promoting health beneficial microbiota through metric molecular modelling-looking for partners and coordinator
POD Reference	RDBG20150626001
Summary	<p>Bulgarian University and a R&amp;D company propose for H2020-FETOPEN-2014-2015-RIA to identify and validate novel safe and suitable for mass consumption natural and synthetic compounds for enhancing healthy gut microbiota. Unique platform for quantum molecular modeling will be used to characterize new promoters of healthy microbes and inhibitors of disease-associated microbes. Partners and coordinator are sought in the field of organic chemistry, microbiology and translational animal models.</p> <p>The definitive health outcomes of so-called pre- and probiotics and their mechanisms of effect are gradually uncovered and there is currently much interest in increasing numbers and activities of health beneficial bacteria in the large gut, preferably by suppressing the harmful species.</p> <p>As diet is the main factor controlling the intestinal microflora, it is possible to modulate the composition of the microflora through foods and/or natural products. The project looks for identification and characterization of prebiotic substrates that are selectively utilized by bifidobacteria and lactobacilli of the indigenous gut flora as well as novel compounds and natural products that actively inhibit potential pathogens such as toxin-promoting clostridia, proteolytic bacteroides and toxigenic Esherichia coli.</p>
Description	<p>In this manner, a 'healthier' microflora composition is obtained whereby the bifidobacteria and/or lactobacilli become predominant in the intestine and brings possible health-promoting effects. The substrates, natural products and compounds promoting a healthy microbiome will be discovered using an original quantum similarity approach and other methods developed by the Bulgarian R&amp;D company in the project, while their testing and</p>

characterization will be performed in the collaborators' laboratories. The R&D company's molecular discovery approach is based on iterative, multi-step quantum-similarity procedure for compound identification. The methodology enables discovery of novel active compounds with quantum components representing multiple desired pharmacological properties. Since it uses quantum rather than chemical similarity, it is capable of discovering active compounds outside of known structural classes – molecules, which appear chemically dissimilar may be similar on a quantum level, and vice versa.

Partners and coordinator are sought in the field of organic chemistry, microbiology and translational animal models to contribute to the research and validation activities in the project.

The project will be submitted for the H2020-FETOPEN-2014-2015-RIA call as Research and Innovation Action.

The call supports a large set of early stage, high risk visionary science and technology collaborative research projects is necessary for the successful exploration of new foundations for radically new future technologies.

Deadline of the call: 29 September 2015.

Deadline for EoI: 1 September 2015.

More information about the call:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/11052-fetopen-ria-2014-2015.html#tab1>

Disruptions to the normal microbial balance in the gut have been associated with obesity, malnutrition, inflammatory bowel disease, neurological disorders and cancer. Current studies have suggested that gut bacteria influence mood-related symptoms and even behaviour in humans. The project aims to employ an innovative and original therapeutic strategy that includes (1) a biological strategy that targets entire complex ecological communities and metabolic pathways, and (2) an original platform based on quantum representation of chemical structures and machine-learning fuzzy-decision algorithms.

#### Advantages and Innovations

The R&D company in the project has developed a theoretical framework for systematic small molecule discovery based on well-defined, easily computable, localized molecular attributes (quantum components), and introduces a proper metric (quantum similarity) in the chemical modeling space. As a result, the computational platform has unique capabilities for identification of novel active compounds.

The methodology has been successfully applied and experimentally validated against a variety of targets, discovering structurally novel compounds against blood- and liver stage-malaria; novel, non-toxic, bioavailable modulators of Nrf2 that penetrate the blood-brain-barrier, and others.

#### Technical Specification or Expertise Sought

Stage of Development: Proposal under development

#### Keywords

Technology Keywords: 01004001 Applications for Health  
08001002 Food Additives/Ingredients/Functional Food  
Market Keywords: 02007012 Medical/health software  
04011 Molecular design

07003002 Health food

NACE Keywords M.72.1.1 Research and experimental development on biotechnology  
Q.86.9.0 Other human health activities

Partner Sought Partners and coordinator are sought in the field of:  
- organic chemistry, microbiology and translational animal models to complement the research and validation activities of the discovered healthy compounds as collaborative laboratories.

Type and Role of Partner Sought Partners may be:  
- R&D centres  
- Higher Education Institutes/Universities  
- Companies - Public or Private.

Type and Size of Partner Sought R&D Institution  
SME <10  
SME 11-50  
SME 51-250  
University

Type of Partnership Considered Client Research cooperation agreement

Type and Size of Client Industry SME <= 10

Already Engaged in Trans-National Cooperation Yes

Languages Spoken English

Client Country Bulgaria

Dissemination

Sector Group Healthcare

Programme-Call Framework Programme k H2020  
e

Call Name FET-Open - novel ideas for radically new technologies H2020-FETOPEN-2014-2015-RIA

Coordinator Required Yes

Deadline for Call 29 Sep 2015

Weblink to The Call <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/11052-fetopen-ria-2014-2015.html>

### Technology offer – Romania

<b>Title</b>	<b>Regenerator for heat exchangers</b>
POD Reference	10 RO 75DV 3HQ4

Summary	A romanian company has developed a regenerator for heat exchangers, regenerative type of a fluid preheater. The company is looking for commercial agreement with technical assistance.
Description	The invention refers to a regenerator for heat exchangers, regenerative type of a fluid preheater. The technical problem that is solved by this invention is that the regenerator assures the connectivity of all the straight vertical channels with the horizontal networks of joints, through a maximum number of links, and with only one link to a package of three successive rows. The invention can be used for all heating systems, to increase their efficiency. Current and Potential Domain of Application:
Advantages and Innovations	The advantages of this regenerator are: - assures a maximum efficiency of thermic transfer for the all the structure of the regenerator; - grows the reliability of the regenerator; - it doesn't involve additional human or material efforts for the achievement.
Stage of Development	Available for demonstration
IPR status	Patents granted
Deadline Date	6/28/2013 12:00:00 AM
Keywords	
Technology Keywords	Heat storage Heat exchangers Heating, ventilation
Market Keywords	Energy Conservation Related Other Energy Energy management
Partner Sought	
Type and Role of Partner Sought	- Type of partner sought: company that produces heating systems; - Specific area of activity of the partner: energy; - Task to be performed by the partner sought: the transfer of certain rights from the developer of the technology and know-how to the recipient; co-development of the new product using the expertise of the developer and the production facilities of the partner; advice/training on the use of the new product;
Type of Partnership Considered	Commercial agreement with technical assistance License agreement Technical cooperation agreement
Client	
Type and Size of Client	R&D Institution
Already Engaged in Trans-National Cooperation	No
Client Country	Europe
Contact person	Gabriel Vladut, IPA CIFATT Craiova, Romania, tel: +40 251 412290; +40 251 412775, fax: +40 251 418882, e-mail: <a href="http://www.ipacv.ro">www.ipacv.ro</a> ; web site: <a href="http://www.ipacv.ro">www.ipacv.ro</a>

## Technology Offer – Bulgaria

**Title**                    **Highly specialised medical system designed for examination of the neuro-regulating changes in human organism on earth and in space conditions**

**POD Reference** TOBG20140702003

**Summary**                    A Bulgarian research institute, with over 40 years of experience in R&D of specialised technologies and products, has developed a highly specialised medical system designed for examination of the neuro-regulating changes in human organism on earth and in space conditions measuring many parameters. The institute is seeking to reach commercial agreements with technical assistance.

The technological product is new generation medical measurement device designed for examination of the neuro-regulating changes in human organism on earth and in space conditions. It is a system for intellectual digital processing of bio signals for performing of express analysis and evaluation in real time, correlated with different functional systems of the human organism.

The scientific object of the examinations performed with this system is the research of the neuro-regulating processes in human organism by divided recording of the influence of weightlessness factors and of the vegetative emotional reactions.

The following parameters are measured with the system:

- Electroencephalogram EEG
- Electrooculogram EOG
- Evocated potentials on the basis of EEG and EOG
- Electrocardiogram ECG
- Electromiogram EMG
- Skin temperature
- Arterial blood pressure
- Breathing rate
- Frequency of the basic tone of the speech
- Spreading of the attention by following the pupil of the eye
- Skin resistance
- Mechanical power – dynamometer

**Description**

During the different examination phases audio visual and somato sensor stimulations are performed. The flight configuration of the system includes 48 channels combined on module principle (4 specialized channels in each module).

The system has a unique internal analog-digital interface for communication, supporting the management and the registration of information from the analog amplifiers modules.

The module structure allows the exchange ability of the modules and assemblies and their combination as well by the solving of different problems connected with a measurement of the psychophysiological parameters of man. In order to secure the enough channels for registration of physiological information the devices are designed so that their number can increase up to 128.

The software of the signal processor for proceeding of physiological signals allows a fast and flexible configuration of the system. During the experiment a variation of the number and the parameters of the channels (sample rate, amplification and filter type) is possible. Significant important for the improvement of the leaded signals is that digital filtration is possible. Up to 64 different types of digital filters are set, which can be individually chosen for every channel.

Proceeding of speech is developed on TMS 320C50. With the help of this module a process of identification of fixed number of speech commands (which are used by the

management of the system) is possible. In this way the introduced bio feedback is securing a high effectiveness of the functions and high information value of the data received from the experiment.

**Advantages and Innovations**  
 The highly specialised medical system is unique and has no analogue. It is suitable for examining people performing activities in extreme conditions.  
 The device assesses a vast number of parameters and is adaptive.  
 The system has a unique internal analog-digital interface for communication, supporting the management and the registration of information from the analog amplifier modules.

**Stage of Development** Already on the market

**IPR status:** Secret Know-how

**Profile Origin** Private (in-house) research

**Keywords**

**Technology Keywords**  
 001006002 Electronic engineering  
 006001006 Diagnostics, Diagnosis  
 006001014 Medical Technology / Biomedical Engineering

**Market Keywords**  
 003004003 Other electronics related equipment  
 005 MEDICAL/HEALTH RELATED

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

**Partner Sought**

**Type and Role of Partner Sought**  
 - Type of partner sought: the institute is looking industrial and R&D companies; special purpose industries;  
 - Specific area of activity of the partner: partner sought related to the medical, aero and aerospace sectors; companies involved in medical technologies sector;  
 - Task to be performed: commercial agreements; to integrate the device in their own solutions / processes, receiving the necessary technical assistance from the developer.

**Type and Size of Partner Sought**  
 >500  
 >500 MNE  
 251-500  
 SME <10  
 SME 11-50  
 SME 51-250

**Type of Partnership Considered** Commercial agreement with technical assistance

**Client**

**Type and Size of Client** R&D Institution

**Year Established** 1975

**Turnover (euro)** <1M

**Already Engaged in Trans-National Cooperation** No

**Languages Spoken** Bulgarian, English, Russian

**Client Country** Bulgaria

<b>Contact</b>	Chamber of Commerce and Industry Vratsa Hristo Botev Blv 24, 3000, Vratsa, Bulgaria Tel: 359 92 660271; 660273
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**Technology Request - Romania**

<b>Title</b>	<b>Improving the efficiency of thermal modules for hot water and heating by promoting mixed solutions that use renewable energies as well as modernizing the manufacturing technology.</b>
POD Reference	12 RO 662C 3PXP
Summary	A Romanian company specialized in the field of Energy and District Heating wants to modernize the manufacturing technology for thermal modules for hot water and heating through the development of compact solutions and increasing technical performances. Another aspect is reducing the manufacturing and maintenance costs of thermal modules. Also a CE marking on the improved thermal modules should be obtained. The company is seeking for technical cooperation and manufacturing agreement.
Description	<p>Energy efficiency is a criterion that becomes more and more important in choosing the right system for a certain application. The general trend is to use more of the renewable energy sources or mixed systems that include an upgraded classic module and an environmental-friendly energy source. The energy efficiency in an important factor in analyzing a certain module, system, installation and so on. Thermal modules that are mounted inside the district heating stations use heat as primary input source. Their output consists of heat and hot water. From a structural point of view thermal modules are made of pumping equipment, a heat exchanger, an electrical control installation and a process computer or a PLC. Through this technology request we also aim to increase the efficiency of the thermal modules by upgrading their technical performances as well as modernizing their manufacturing technology. Beside the technical improvements there also will be a cut in the manufacturing costs of thermal modules as well as maintenance costs reduction. The control software that already runs on the manufacturing line must be updated in order to cover the changes in the manufacturing technology. As a future research, in order to increase even more the efficiency of the thermal modules, we aim to use a mixed solution that consists of using a renewable energy source and a standard thermal module.</p> <p>Technical Specifications / Specific technical requirements:</p> <ul style="list-style-type: none"> <li>- Increase the efficiency of thermal modules for water heating.</li> <li>- Modernization of manufacturing technology.</li> <li>- Use of mixed solutions which use renewable energy (solar panels, geothermal energy photovoltaic panels) and improved thermal modules.</li> <li>- Reducing the gauge of the heat modules</li> <li>- Reducing the manufacturing and maintenance charge.</li> <li>- Obtaining CE conformity markin</li> </ul> <p>Current and Potential Domain of Application: Rehabilitation and modernization of centralized heating system.</p> <ul style="list-style-type: none"> <li>- Equipping the modular and fully automated source of distribution.</li> <li>- Increasing energy efficiency of centralized heating systems.</li> <li>- Promoting and embedding in applications which use renewable energy systems.</li> </ul>
Deadline Date	7/25/2013 12:00:00 AM

Keywords

Technology Keywords	Heat transport and supply, district heating Geothermal Energy Solar/Thermal energy Energy management Hydraulics
Partner Sought	
Type and Role of Partner Sought	<ul style="list-style-type: none"> <li>- Type of partner sought: Industry, SME, research institute – hydraulics and electronics. Software developer</li> <li>- Specific area of activity of the partner: Energy management, hydraulic installations, renewable energy systems</li> <li>- Task to be performed by the partner sought: Participation in electro-hydraulic system design and development. Add extra sensors, motors, pumps etc if needed. Participation in system assembly. Run experiments in order to determine the real yield of the new solution. Development of specific software modules.</li> </ul>
Type of Partnership Considered	Financial agreement Manufacturing agreement Technical cooperation agreement
Contact person:	Gabriel Vladut, IPA CIFATT Craiova, Romania, tel: +40 251 412290; +40 251 412775, fax: +40 251 418882, e-mail: <a href="http://www.ipacv.ro">www.ipacv.ro</a> ; web site: <a href="http://www.ipacv.ro">www.ipacv.ro</a>

## Technology Request – Bulgaria

### Details

Title	Seeking new technologies and knowledge in the manufacturing of industrial equipment for water treatment
POD Reference	TRBG20141007001
Summary	<p>A Bulgarian engineering company with significant expertise in the water industry is looking for novel water and wastewater treatment technologies for deployment in its projects. The company seeks commercial agreements with technical assistance and/or technical cooperation and/or research cooperation and/or license.</p>
Description	<p>The company specializes in the field of waterworks and waste water treatment, as well as oil and gas industry. The company provides advanced solutions for the construction of wastewater treatment plants, high quality products for the water supply and the oil and gas industry. The product range includes valves, pumps, dosing equipment, electric actuators, hydrodynamic couplings, etc., incl. their delivery, assembling and maintenance on site. Currently the company continues its business development by investing in the construction of a new factory for technological and industrial equipment, designed and built in full compliance with the latest requirements of Good Manufacturing Practice (GMP). The manufacturing process includes design, engineering, analysis, fabrication and testing of stainless steel machines employed for waste or primary water treatment plants. The factory is equipped with strip cutting machine, guillotine shears, conventional lathe and milling machine, welding machine (MIG / MAG, TIG), with SAP ERP software under implementation.</p> <p>The manufacturing plant has a total area of 3311 m<sup>2</sup> with production hall dimensions 54,4/60,4 m. and is located on international highway to Greece (Sofia – Kulata).</p>

For this new project the company seeks to deploy novel water and wastewater treatment technologies and knowledge and is ready to offer commercial agreements with technical assistance and/or technical cooperation and/or research cooperation and/or license to such providers.

Keywords

Technology Keywords 02002010 Machining (turning, drilling, moulding, planing, cutting)  
 02002015 Surface treatment (painting, galvano, polishing, CVD, ..)  
 02004 Plant Design and Maintenance  
 03002 Process Plant Engineering

Market Keywords 08004003 Water treatment equipment and waste disposal systems

NACE Keywords G.46.6.9 Wholesale of other machinery and equipment

Partner Sought

Type and Role of Partner Sought The company is looking for manufacturing companies of any size experienced in production processes and supply chain management for mechanical waste water treatment equipment, as well as R&D institutions, universities, individual inventors, etc. Their role in the partnership would be to provide technological knowledge and know-how for the manufacturing processes.

Type and Size of Partner Sought >500  
 >500 MNE  
 251-500  
 Inventor  
 R&D Institution  
 SME <10  
 SME 11-50  
 SME 51-250  
 University

Type of Partnership Considered Commercial agreement with technical assistance  
 License agreement  
 Research cooperation agreement  
 Technical cooperation agreement

Client

Type and Size of Client Industry SME 50-249

Year Established 1995

Turnover (euro) 1 - 10M

Already Engaged in Trans-National Cooperation No

Certification Standards ISO 14001:2004  
 ISO 9001:2008  
 OHSAS 18001:2007

Languages Spoken English  
 German

Client Country Bulgaria

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