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## Partner search

Date (14-08-2020)

- (\*) Indicate numbers of relevant topics for Green Deal call:

LC-GD-2-1-2020: Demonstration of innovative critical technologies to enable future large-scale deployment of offshore renewable energy technologies

LC-GD-3-2-2020: Demonstration of systemic solutions for the territorial deployment of the circular economy

LC-GD-4-1-2020: Building and renovating in an energy and resource efficient way

LC-GD-5-1-2020: Green airports and ports as multimodal hubs for sustainable and smart mobility

LC-GD-6-1-2020: Testing and demonstrating systemic innovations for sustainable food from farm to fork

The competences offered in each topic are described in separated documents.

- Quick description of the project

(describe the objectives, activities, partners requested and their skills)

- (\*) Do you intend to apply as ?:

Coordinator: Yes/No  
Participant: Yes

(\*) **Either** Description of the expertise requested (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting*

Xxxxxxxxxx

+ key words :

**Or** Description of the expertise proposed (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting*

LC-GD-3-2-2020: Demonstration of systemic solutions for the territorial deployment of the circular economy

Expertise proposed

- Development of methodologies and ICT tools for the promotion of circular business models, namely industrial symbiosis
- Industrial Symbiosis evaluation potential assessment tools
- Economic and environmental viability and impact assessment through Life Cycle approaches (LCA, LCC)



- Artificial Intelligence, Decision Support Tools, Water and Energy Systems Modelling, Process and Energy System Optimisation and Earth Observation in support to the implementation of local systemic solutions
- Development and demonstration of circular business models involving relevant local and regional stakeholders
- Development of Vocational Education and Training Programs focused on the development and exploitation of innovative solutions, products and services
- Implementation of Responsible Research and innovation (RRI) approaches in the projects

**Targeted expected impacts of the topic:**

- demonstrate the technical and economic feasibility of at least one circular systemic solution per territorial cluster
- identify the economic, social and environmental benefits and challenges of each circular systemic solution;
- promote eco-design, use of secondary raw materials and substitution or circular use of critical raw materials in businesses and value chains based on local resources.
- promote circular practices amongst citizens and increase their participation in these practices; improve consumers' understanding and acceptance of circular products and services;

**+key words:** circularity assessment tools, circular business models, digitalization, eco-efficiency, LCA, citizen science, RRI – “Responsible Research and Innovation”

**Organisation information**

**Organisation and country:**

**ISQ – Instituto de Soldadura e Qualidade (Portugal)**

**Type of organisation:**

Enterprise  SME  Academic  **Research institute**  Public Body  Other: Association

**Former participation in FP European projects?**

**Yes**  No

**Web address:**

**www.isqgroup.com**

**Description of the organisation:**

ISQ is an independent, private, non-profit, technical, scientific and industrial oriented organization founded in 1965 with international presence in 16 countries, covering 4 continents. ISQ's main activities include technical inspections, consultancy, testing, metrology, training and research and development in a wide range of technical areas such as materials, joining technologies, structural integrity and risk assessment, sustainability, eco and energy efficiency, health and safety, quality assurance, production technologies, industrial automation and robotics. ISQ provides support to different industrial sectors such as Manufacturing, Process and Agro Industries, Energy (including renewables) and Oil & Gas, Aeronautical and Aerospace, Automotive, Construction and infrastructures, among others. It is one of the largest Portuguese technological infrastructures. ISQ's know-how is supported by 16 accredited laboratories (accordingly with EN ISO/IEC 17025) and by a large involvement in National, European and International R&D projects, having participated in more than 400 R&D projects, in the last 30 years, in different funding programs (LIFE, LIFE+, RFCS, IEE, FP5, FP6, FP7, H2020), with a strong background of collaboration with a large number of Universities, Scientific Research Institutes, industrial companies and other institutions worldwide. Research and Development at ISQ supports all operational in-house technical areas in the enhancement of existing technologies and new solutions. It also encourages the development of breakthrough technologies and solutions that lead to new products/technologies/methodologies/services, promoting new Business areas and thus contributing to the technological development and competitiveness of the economy. ISQ headquarters are at Porto Salvo, Oeiras, Portugal, with national delegations in Oporto, Castelo



Branco, Loulé and Sines. At international level, ISQ is represented at: Angola, Brazil, Cape Verde, China, French Guiana, Mozambique, Norway, Saudi Arabia, Spain, United Arab Emirates, Turkey, Timor and USA.

ISQ is a leading European Technological Infrastructure of applied research, a strong and reliable long-life partner for industry contributing to its technological development. ISQ has been selected by relevant scientific organizations as a competent and reliable partner to be involved in the main International Scientific projects as LHC-Large Hadron Collider (CERN), International Thermonuclear, Experimental Reactor (ITER), IXV - Intermediate eXperimental Vehicle (ESA) and E-ELT-Extremely Large Telescope (ESO). The large experience and know-how of ISQ staff, allows us to face the future challenges in the ceaseless search for new solutions towards sustainability. ISQ has a long-term relationship with Industry, providing technical expertise, technological transfer, training, thus contributing to the improvement of its competitiveness and sustainability. ISQ participates in a number of International Networks/Associations namely The European Steel Technology Platform (ESTEP); European Technology Platform for advanced Engineering Materials and Technologies (EUMAT); Energy Materials Industrial Research Initiative (EMIRI); Sustainable Process Industry Through Resource Efficiency (SPIRE), National Group for Process Integration (GNIP), The European Virtual Institute for Integrated Risk Management (EU-VRI); European technology platform on industrial safety (ETPIS); Aeronautic, Space and Defense Cluster (AED Portugal), Production Technologies Cluster (PRODUTECH, Portugal) among others.

ISQ has large experience and transversal competences in areas which are very relevant to the Green Deal Call, specifically in the 5 topics identified above, namely in ICT tools development, application of AI technologies and machine learning, design and implementation of i4.0 concepts, digitalization, advanced manufacturing technologies as the additive manufacturing, advanced non-destructive techniques, systems' monitoring and control, interfaces development using virtual, augmented and mixed reality technologies, circular economy (tools, methodologies, business models), eco-efficiency, LCA/LCC, Reliability, Availability, Maintainability and Safety tools, earth observation, energy efficiency, system's simulation and optimization, which are the most relevant.

#### **(\*) Contact details**

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**(\*) –Mandatory**