EARTO INNOVATION AWARDS 2019

attributed to

Fraunhofer - Radiotherapy

&

CEA - rSOC Solution

Brussels, 8 October 2019

The EARTO Innovation Awards 2019 were given today to EARTO members **Fraunhofer** and **CEA** during a ceremony held at the Royal Museum of Fine Arts of Belgium in Brussels. Fraunhofer received the award in the Impact Delivered category for the development of the **Multi-Criteria Optimisation (MCO) software tool** to support the radiotherapy treatment for cancer, which contributes to improved long-term survival rates, fewer side effects and better quality of life for patients. CEA received the award in the Impact Expected category for the development of the **Smart Energy Hub**, a hybrid energy storage and co-generation system, enabling buildings to use their own clean and local energy supply.

Fraunhofer – Radiotherapy

Targeting better cancer care

Fraunhofer

Improving cancer treatment plans and quality of life for patients

About **50%** of all cancer patients could benefit from Fraunhofer's new radiotherapy planning tool.

The new tool reduces treatment planning time by up to **80%** and increases plan quality by up to **30%**.

Radiotherapy planning is carried out on an estimated **36,000 planning devices worldwide**.

To date, **Fraunhofer has received revenue of more than € 8.5M** from worldwide sales of the tool.

CEA – rSOC Solution

Energy transition on the move

cea

Enabling the energy transition with first local clean energy storage system

The Smart Energy Hub makes it possible to get **100% of a building's energy** directly from local and sustainable energy production.

The Smart Energy Hub enables a **65%** decrease of primary energy consumption in buildings.

In tests, CO_2 emissions were reduced by **26%** for an office building in France and **70%** for residential buildings in Germany.

The global market for the new system is estimated to be **€ 10B** by 2020.

Created in 2009, the EARTO Innovation Awards highlight the various areas of RTOs' activities and illustrate RTOs' concrete contributions to innovation with high societal impact through the two categories: "Impact Delivered" and "Impact Expected". The Awards' independent jury chose the best innovations of the year. Our Jury Members this year were:

Peter Dröll
Director, DG Research & Innovation, European Commission

Simon Edmonds
Director Manufacturing, Materials & Mobility, Innovate UK

Christian Ehler
Member of the European Parliament

Jana Kolar
Member of the Governing Board, EIT

Ernst Kristiansen
Vice-President Research, SINTEF

Juan Antonio Tébar
Director, CDTI

On the same day, EARTO has published the 2019 edition of its **Innovation Awards** brochure, a collection of twenty-five innovations featuring EARTO members, which gives a flavour of the wide range of RTOs' work. Such innovations demonstrate RTOs' capacity to support Europe's innovation performance and their focus on solving today's challenges and delivering impact. The brochure includes articles on all RTOs that took part in this year's competition with a special focus on the 6 finalists which are, in addition to the two above-mentioned winners:

IMPACT DELIVERED – 2ND PRIZE

TNO – LeydenJar Technology, a pure silicon anode that "traps" up to 10 times more lithium ions, making batteries 50% denser in energy, but also smaller and cheaper.

IMPACT DELIVERED – 3RD PRIZE

RISE – T Rex, a fixed fire-fighting system that reduces fire spread, explosion risk and tunnel damage, at low costs, and is set to become a part of new international standards.

IMPACT EXPECTED – 2ND PRIZE

FEDIT CIT UPC - PICEO, a new technology for Photonic Integrated Circuit manufacturing, that reduces cost and energy consumption by 50% with many possible applications (e.g. LED lighting, sensors, etc.).

IMPACT EXPECTED – 3RD PRIZE

TECNALIA - NanoSeed, a production process for a concrete hardener, which uses nanoengineered particles from industrial waste to double cements' hardening speed at half the cost without reducing final strength.

Full EARTO Innovation Awards 2019 brochure available **here**.
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EARTO Innovation Awards are given since 2009 to illustrate RTOs key contribution to innovation. Two categories have been created: Impact Delivered and Impact Expected. The Impact Delivered Award is given to an innovation already in the market and which has proven its impact on Europe's economy and/or society, while the Impact Expected category rewards an innovation which is not yet on the market but has great potential.

RTOs - Research and Technology Organisations: From the lab to your everyday life. RTOs innovate to improve your health and well-being, your safety and security, your mobility and connectivity. RTOs' technologies cover all scientific fields. Their work ranges from basic research to new products and services development. RTOs are non-profit organisations with public missions to support society. To do so, they closely cooperate with industries, large and small, as well as a wide array of public actors.

EARTO - European Association of Research and Technology Organisations: Founded in 1999, EARTO promotes RTOs and represents their interests in Europe. The EARTO network counts over 350 RTOs in more than 20 countries. EARTO members represent 150.000 highly-skilled researchers and engineers managing a wide range of innovation infrastructures.

The Fraunhofer-Gesellschaft is a leading research and technology organisation with 72 institutes and research units throughout Europe. It employs a staff of around 26,600 who work with an annual research budget totalling €2.2B, 70% of which is generated through collaborative research with industry and publicly-funded projects. The Fraunhofer Institute for Industrial Mathematics ITWM specialises in modelling, simulation and optimisation.

The CEA – Alternative Energies and Atomic Energy Commission – is a partially state-funded French RTO and a prominent player in the ERA. The CEA is active in four main areas: low-carbon energies, defence & security, information technologies and health technologies. The CEA maintains a cross-disciplinary culture of engineers and researchers, building on the synergies between fundamental and technological research.