

### Strategic Advisory Board (SAB)

SAB consists of 12 prominent researchers from the field of QT and representatives of industry. It provides advice on matters such as: the thematic scope of the QuantERA Call 2017 and potential future funding actions, the scientific aspects of QuantERA activities such as outreach or cooperation with non-European countries, new developments and issues related to research in quantum technology that may have a strategic impact on QuantERA activities.

## Scientific Background

Quantum technologies form a new and fast developing scientific field that originated only 30 years ago when it was realized that quantum physics opens up radically new ways of quantum information processing and communication with no analogue in classical Information Technology. These discoveries represented only the beginning of totally new quantum technologies, which have the potential to bring qualitatively new approaches in many areas of science and technology by using specifically quantum effects such as superpositions and entanglement. Exemplary prospective applications include sensors, in particular for detecting extremely small forces and displacements, quantum imaging, especially in biological systems, enhanced-precision operation of atomic clocks, quantum simulators, and communication protocols guaranteeing unconditional security.



Research funding organisations from Europe and beyond are warmly invited to join QuantERA and participate in some of the network's activities. If your organisation is interested in joining QuantERA, please contact:

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- ◆ QuantERA is a new European Research Area Network (ERA-NET) in the field of Quantum Technologies (QT) established as an answer to the growing need for collaborative endeavours and a common funding scheme in this field of research.
- ◆ Through joint efforts of research funding organisations QuantERA encourages transnational collaboration and leverages Europe's competitive advantage in the field of QT.
- ◆ QuantERA aspires to unlock the widely recognized industrial potential of QT in response to current societal needs and for the benefit of the public at large.

# Era-Net Cofund in Quantum Technologies

[www.quantera.eu](http://www.quantera.eu)

## QuantERA Network

QuantERA is a consortium of 32 organisations from 26 countries, coordinated by the National Science Centre, Poland. With a budget of over EUR 34 M, including co-funding from the European Commission, QuantERA will support international research projects in the field of QT.

### 32 Partner Institutions from 26 Countries

<b>Poland (Coordinator), NCN</b> National Science Centre	<b>Greece, GSRT</b> General Secretariat for Research and Technology	<b>Portugal, FCT</b> Foundation for Science and Technology
<b>Austria, FWF</b> Austrian Science Fund	<b>Hungary, NKFIH</b> National Research, Development and Innovation Office	<b>Romania, UEFISCDI</b> Executive Agency for Higher Education, Research, Development and Innovation Funding
<b>Austria, FFG</b> Austrian Research Promotion Agency	<b>Ireland, SFI</b> Science Foundation Ireland	<b>Slovakia, SAS</b> Slovak Academy of Sciences
<b>Belgium, FNRS</b> Fund for Scientific Research	<b>Israel, MATIMOP</b> Israel Industry Center for R&D	<b>Slovenia, MIZS</b> Ministry of Education, Science and Sport
<b>Belgium, FWO</b> Research Foundation Flanders	<b>Italy, MIUR</b> Italian Ministry for Education, University and Research	<b>Spain, MINECO-AEI</b> Ministry of Economy and Competitiveness
<b>Bulgaria, NBSF</b> Bulgarian Science Fund	<b>Italy, CNR</b> National Research Council	<b>Sweden, VR</b> Swedish Research Council
<b>Czech Republic, MEYS</b> Ministry of Education, Youth and Sports	<b>Latvia, VIAA</b> State Education Development Agency	<b>Switzerland, SNSF</b> Swiss National Science Foundation
<b>Denmark, IFD</b> Innovation Fund Denmark	<b>Netherlands, NWO</b> Netherlands Organisation for Scientific Research	<b>Turkey, TUBITAK</b> Scientific and Technological Research Council of Turkey
<b>Finland, AKA</b> Academy of Finland	<b>Norway, RCN</b> Research Council of Norway	<b>United Kingdom, EPSRC</b> Engineering and Physical Sciences Research Council
<b>France, ANR</b> French National Research Agency	<b>Poland, NCBR</b> National Center for Research and Development	<b>United Kingdom, InnovateUK</b> Technology Strategy Board
<b>Germany, BMBF</b> German Federal Ministry of Education and Research		
<b>Germany, VDI/TZ</b> Technologiezentrum GmbH		

## QuantERA Call(s)

QuantERA funding will be distributed among the best international research teams following the forthcoming Co-funded Call(s) for proposals to advance the research in the areas of:

- ◆ Exploitation of quantum phenomena such as entanglement and superposition to achieve new or radically enhanced functionality
- ◆ Critical analysis of the advantages offered by quantum-enabled or quantum-enhanced technologies in comparison to other available options based on conventional paradigms
- ◆ Exploration of QT in areas with scientific, industrial and societal potential



## Additional Activities

Call(s) for proposals will be complemented by a range of additional activities aimed at:

- ◆ Exploring the possibilities of additional joint funding initiatives and future developments in the QT field
- ◆ Building industry leadership and developing industry connections to the QT research
- ◆ Responsible research and innovation in the QT
- ◆ Enhancing cooperation with other countries and stakeholders
- ◆ Mapping the development of public policies in QT throughout Europe and worldwide

## Spreading Excellence

QuantERA aims at spreading research excellence across ERA by encouraging consortia to include partners from the widening countries participating in the network: Bulgaria, Czech Republic, Hungary, Latvia, Poland, Portugal, Romania, Slovakia, Slovenia, Turkey.

