

Strategic Advisory Board (SAB)

SAB consists of 12 prominent researchers from the fields of quantum technologies and representatives of industry. It provides advice on matters such as: the thematic scope of the QuantERA Co-funded Call 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 QT that may have a strategic impact on Programme activities. SAB will suggest experts for the Co-funded Call Evaluation Panel.

Scientific Background

Quantum technologies (QT) 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.



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The QuantERA Programme will endeavour to advance the field of QT by addressing the following themes in the Co-funded Call:

- ◆ 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 Quantum Technologies in areas with scientific, industrial, and societal potential.

Fet Era-Net Cofund In Quantum Technologies

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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

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

