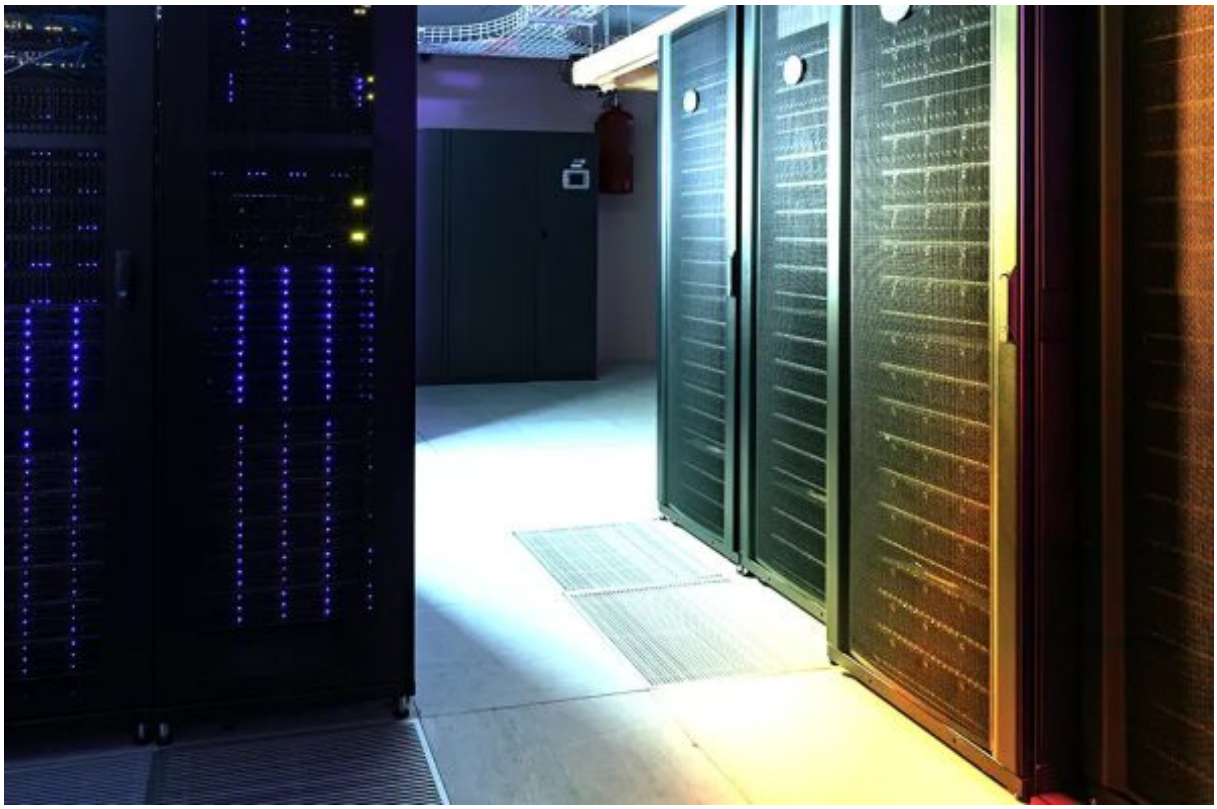


Quantum Excellence Centre for Quantum-Enhanced Applications

Europe Launches Quantum Initiative to bridge Gap between Research and Industry.

June 25, 2026

A new European effort to accelerate the real-world adoption of quantum technologies has been undertaken with the launch of the new initiative Quantum Excellence Centre for Quantum-Enhanced Applications (QEC4QEA). Funded by the EuroHPC Joint Undertaking with an EU contribution of approximately ?4.9 million, the four-year project aims to transform cutting-edge quantum research into practical industrial solutions.

Coordinated by the Jülich Supercomputing Centre, QEC4QEA brings together 19 academi and industry partners from across Europe, including ICFO in Spain, Germany, Italy, an France. The initiative is designed as a unified platform, effectively a i¿½one-stop shopi¿? , to simplify access to quantum-enhanced technologies and serv ces. A central pillar of QEC4QEA is the integration of quantum capabilities into classica HPC workflows. This hybrid approach is expected to unlock new efficiencies in sectors here computational complexity remains a bottle

eck. Key application areas include advanced cryptography and data security, financial mod
ling and crash prediction, machine learning and image analysis, as well as pharmaceu
ical research and materials discovery. By embedding quantum functionalities into exi
ting systems, QEC4QEA aims to make next-generation computing more accessible to indu
try. Within the project, ICREA Prof. at ICFO Antonio Acin and his research group will bring
heir expertise on the design of quantum algorithms for current and near-term quantum dev
ces, as well as methods for the certification and benchmarking of quantum computers. ICFO
will develop solutions to problems in quantum chemistry, optimization, and post-qu
ntum cryptography, and lead efforts in quantum machine lear
ing. By fostering collaboration, expanding access to quantum resources, and investing in s
ills development, QEC4QEA represents a significant step toward strengthening Europe's pos
tion in global quantum innovation and sovereignty. The initiative underscores the EU's br
ader ambition to translate scientific excellence into technological leadership and indus
rial competitiveness.