Joint Press Release

A consortium of European digital players to design the future EU quantum internet

Providing ultra-secure communication for critical infrastructures and government institutions

@AirbusDefence, @Consiglio Nazionale delle Ricerche, @EU_Commission, @Istituto Nazionale di Ricerca Metrologica, @Leonardo, @Orange, @PwC_France, @Telespazio

Brussels, 31 May 2021 – The European Commission has selected a consortium of companies and research institutes to study the design of the future European quantum communication network, EuroQCI (quantum communication infrastructure). It will enable ultra-secure communication between critical infrastructures and government institutions across the European Union.

The European consortium led by Airbus is composed of Leonardo, Orange, PwC France and Maghreb, Telespazio (a Leonardo and Thales 67/33 joint venture), the Consiglio Nazionale delle Ricerche (CNR) and the Istituto Nazionale di Ricerca Metrologica (INRiM).

The EuroQCI will integrate quantum technologies and systems into terrestrial fibre optic communication networks, and will include a space-based segment ensuring full coverage across the EU and other continents. Ultimately, this will enable secure Europe's encryption systems and critical infrastructures such as government institutions, air traffic control, healthcare facilities, banks and power grids against current and future cyber threats.

Since June 2019, 26 Member States have signed the EuroQCI Declaration, agreeing to work together with the Commission, supported by the European Space Agency, towards the development of a quantum communication infrastructure covering the whole EU.

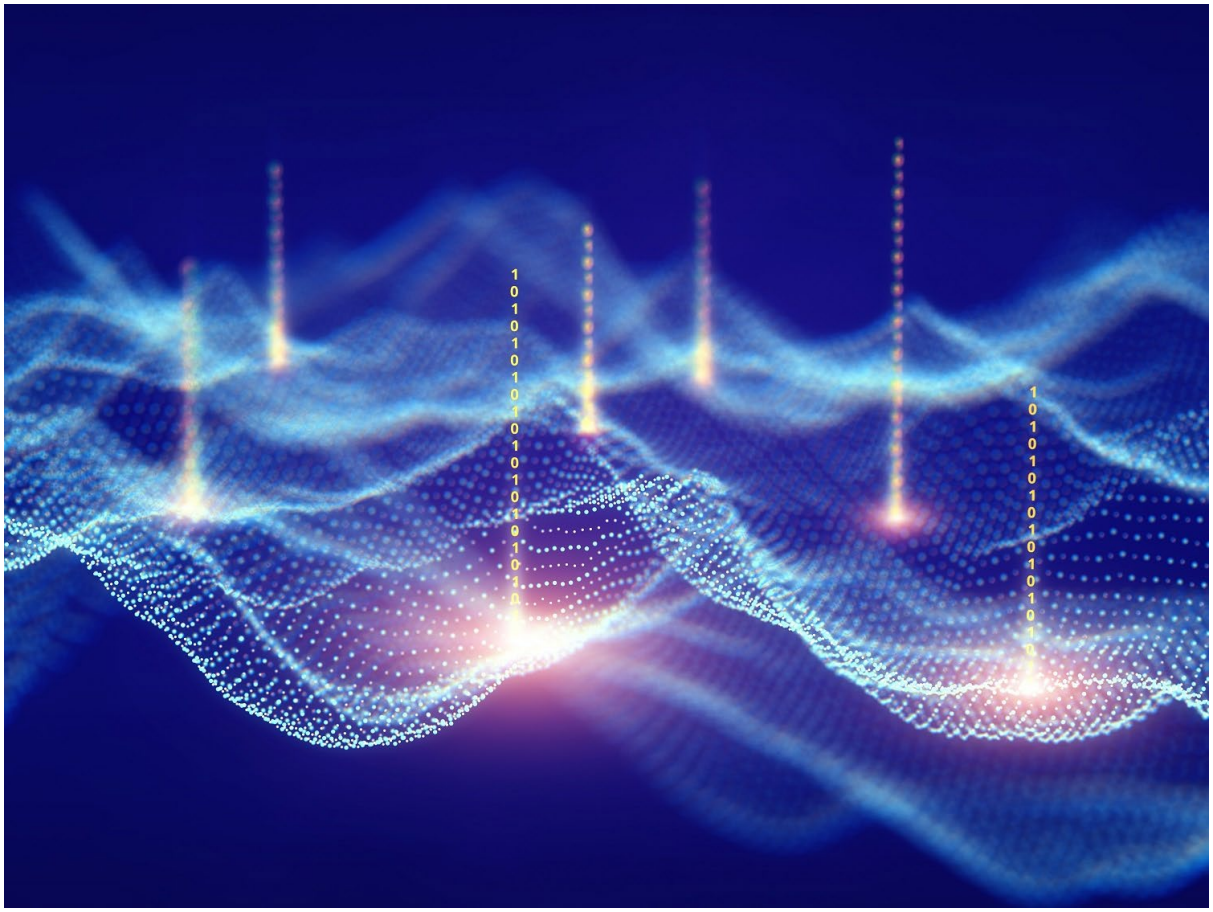
The long-term plan is for the EuroQCI to become the basis of a quantum internet in Europe, connecting quantum computers, simulators and sensors via quantum networks to distribute information and resources with a state of the art security method.

The first service to make use of it will be quantum key distribution (QKD). The QKD service will transmit encryption keys through quantum communication channels on both terrestrial fibre optic and space laser links. Using quantum photon states makes key distribution immune to vulnerabilities unlike the current methods.

The 15-month study will set out the details of the end-to-end system and design the terrestrial segment supporting the QKD service. It will develop a detailed implementation roadmap, including the cost and timeline of each implementation phase. In addition, the study will support

the European Commission in designing an advanced QCI testing and validation infrastructure including standards. The objective is to run a EuroQCI demonstrator by 2024 and an initial operational service by 2027.

The consortium will benefit from the complementarity of its members, which include large system integrators, telco and satcom operators and service providers, along with research institutes. The study will leverage and strengthen the existing contributions in various quantum projects made by each consortium member and will benefit from extensive field experience of the Italian quantum backbone thanks to CNR and INRiM.



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