PRESS RELEASE

THE QUANTUM COMMUNICATION INFRASTRUCTURE THAT WILL PROTECT SENSITIVE DATA IN EUROPE HAS BEEN PRESENTED IN TURIN

INRiM is the coordinator of the QUID project (Quantum Italy Deployment), which has the ambitious goal of starting the deployment of the Quantum Communication Infrastructure (QCI) in Italy. The infrastructure will protect sensitive data by adding a layer of security based on quantum physics.

Turin - October 16, 2024

The "*EuroQCI Italy - for the Italian and European Quantum Strategy*" event, organized by the National Metrology Institute of Italy (INRiM) to present the quantum communication infrastructure in the context of the Italian and European quantum strategy, ended today in Turin. The event was attended by representatives of Italian and European institutions and the main industrial and academic entities involved in the development of secure quantum communication.

The initiative is part of the **EuroQCI** (*European Quantum Communication Infrastructure*) program, a project of the European Commission involving all 27 EU Member States and the European Space Agency (EASA), with the aim of creating a secure quantum communication infrastructure at European level. The EuroQCI will be a key element of the European strategy for the security of communications, as well as an integral part of the EU's new **secure space communication system IRIS²**.

During the event, the results of the European project **QUID** (*Quantum Italy Deployment*) on the Italian territory were presented.

QUID is coordinated by the National Metrology Institute of Italy with the mandate of the Ministry of University and Research and supported by the **Digital Europe Programme**. QUID represents the implementation of EuroQCI in Italy, through the development of a quantum communication network in Italy.

The project, involving 18 partners from public and private entities, aims to integrate the quantum distribution of cryptographic keys (QKD) technology with current telecommunications fiber optics networks ensuring greater security in communications and supporting the technological innovation of Italy.

During the day, stakeholders, major industrial players and researchers from the universities and institutes underlined the strategic importance of EuroQCI for Italy and Europe, confirming once again the central role of Italy in the development of quantum technologies.

« *Italy plays a leading role in the construction of the European quantum communication infrastructure and, through the QUID project, has laid the foundation for full development in both research and industry, starting from secure connections protected by Quantum Key Distribution.*

The project partners have created an ecosystem capable of creating real-world QKD connections in 9 different cities in the country, with national geographic coverage, from north to the south. Other highly positive aspects include the use of national infrastructures such as the Italian Quantum Backbone of INRiM, or INCIPICT of the University of L'Aquila, the adoption of of nationally produced quantum communication technologies , the involvement of public and private institutes linked to the space segment of the EuroQCI, not only to the terrestrial one, and the presence of telecommunications operators for future development of quantum services » comments **Davide Calonico**, Coordinator of the QUID Project.

«Research on quantum technologies is one of the most important research topic for INRiM. Quantum physics has contributed a lot to the science of measurements in terms of primary standards of measurement units and improvements in accuracy and sensitivity in the measurements themselves. At the same time, INRiM and the international metrology community, contribute both to research, with

internationally recognized results, and to the methods to test and standardize such technologies.

INRiM pursues collaborations with both academia and industries active in the quantum field. In fact, research must be followed by a connection with society that allows industrial and economic development, as is in fact happening, both for Quantum Communications (in which the QUID project is involved), and for sensors and computation based on quantum physics» underlines **Pietro Asinari**, Scientific Director of INRiM.

***

INRiM, the **National Metrology Institute of Italy**, with venues in Turin, Florence and Matera, is the public scientific research body for the **development of metrological science and technology,** and its application for the **benefit of industry and society**. INRiM is one of the world's leading institutions for quantum metrology and contributes with its quantum standards to the progress of the Country System. It created the research infrastructure of the Italian Quantum Backbone (IQB), 1850 km of optical fiber that extends across Italy from north to south, for the distribution of certified time of its cutting-edge atomic clocks in the world, distributed sensors and quantum communication.

QUID CONSORTIUM

- **National Metrology Institute of Italy (INRiM)**
- **National Research Council** (CNR);
- **Italian Space Agency** (ASI);
- **Cohaerentia**;
- **Thales Alenia Space - Italia**;
- **QTI**;
- **Leonardo**;
- **ThinkQuantum**;
- **TIM;**
- **Telsy**;
- **Telespazio**;
- **TOP-IX Consortium**;
- **Politecnico di Milano**;
- **University of L'Aquila**;

- **University La Sapienza**;
- **University of Napoli Federico II**;
- **University of Padova**;
- **University of Trieste**.

INRiM SCIENTIFIC REFERENT

Dr. Davide Calonico – Istituto Nazionale di Ricerca Metrologica

PRESS CONTACT

INRiM Communication

Barbara Fracassi (manager)

Email: comunicazione@inrim.it

Phone: +39 011 3919 546

This document is written within the QUID project (*QUantum Italy Deployment*), funded by the European Commission in the Digital Europe programme, under Grant Agreement No. 101091408.