EUROQCI SPAIN

QUANTUM CRYPTOGRAPHY FOR A SECURE COMMUNICATION ACROSS SPAIN AND EUROPE

DESIGN · DEVELOP · INTEGRATE · DEPLOY

GOALS

1. Design the preliminary National architecture of EuroQCI in Spain, starting from the nodes in the metropolitan areas of the largest Spanish cities, **Madrid (MAD) and Barcelona (BCN)**, and then extending to more locations.

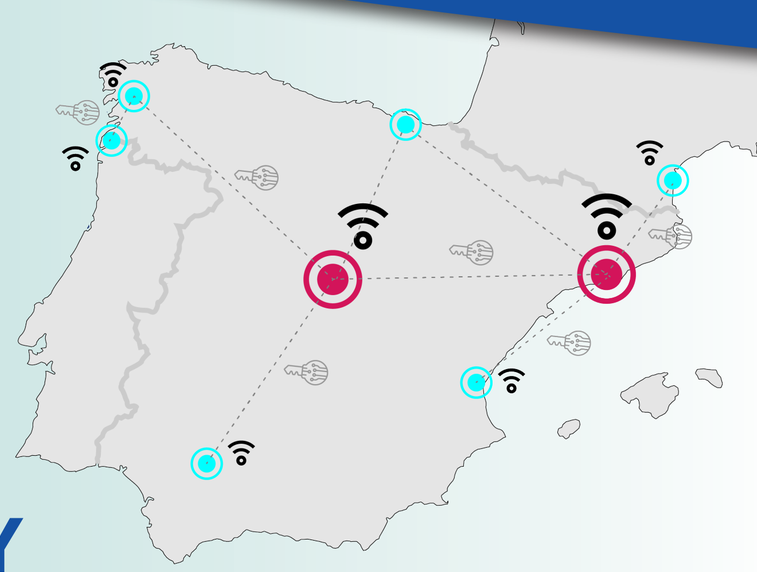
2. Deploy **QKD and cryptographic** systems and demonstrate their functionality in the field, in the BCN and MAD nodes. And design the extension to additional cities.

3. Make quantum networks available first to public authorities and demonstrate **use cases**, developing a **national-based quantum communication ecosystem**, that can also be extended to the private sector in the future.

4. Assess feasibility of **free-space** and **long-distance quantum communication networks** compatible with the EuroQCI architecture, intracity and intercity, the latter in preparation for large-scale deployment of QCI beyond national borders.

5. Prepare for very long-distance links by studying the interface between **QCI space and terrestrial segments**.

6. Cooperate and participate with other Member States in the deployment plan and strategic efforts towards designing and building the **EuroQCI system architecture**.



TECHNOLOGY

QKD, QRNG and QR technology
ICFO

Free Space QKD technology
CSIC

Network Control and Key Management
UPM

Encryption
CIPHERBIT/OESIA

Optical Networking
TELEFÓNICA

Applications
INDRA

Infrastructure
CELLNEX

QKD: Quantum Key Distribution | QRNG: Quantum Random Number Generators | QR: Quantum Repeaters

PARTNERS

ICFO · CSIC Consejo Superior de Investigaciones Científicas · Universidad Politécnica de Madrid · Politécnica · Telefónica · cellnex · indra · cipherbit grupo oesía

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