



REPÚBLICA  
PORTUGUESA



EuroQCI PT QCI



**Portuguese National Security Agency - Gabinete Nacional de Segurança**  
**COLONEL Paulo Santos – JAN25**

This project has received funding from the European Union's Digital European Programme under the project "Portuguese Quantum Communication Infrastructure" (PTQCI, grant agreement No 101091730).

# Securing the Future: The Role and Purpose of GNS in the PTQCI Project



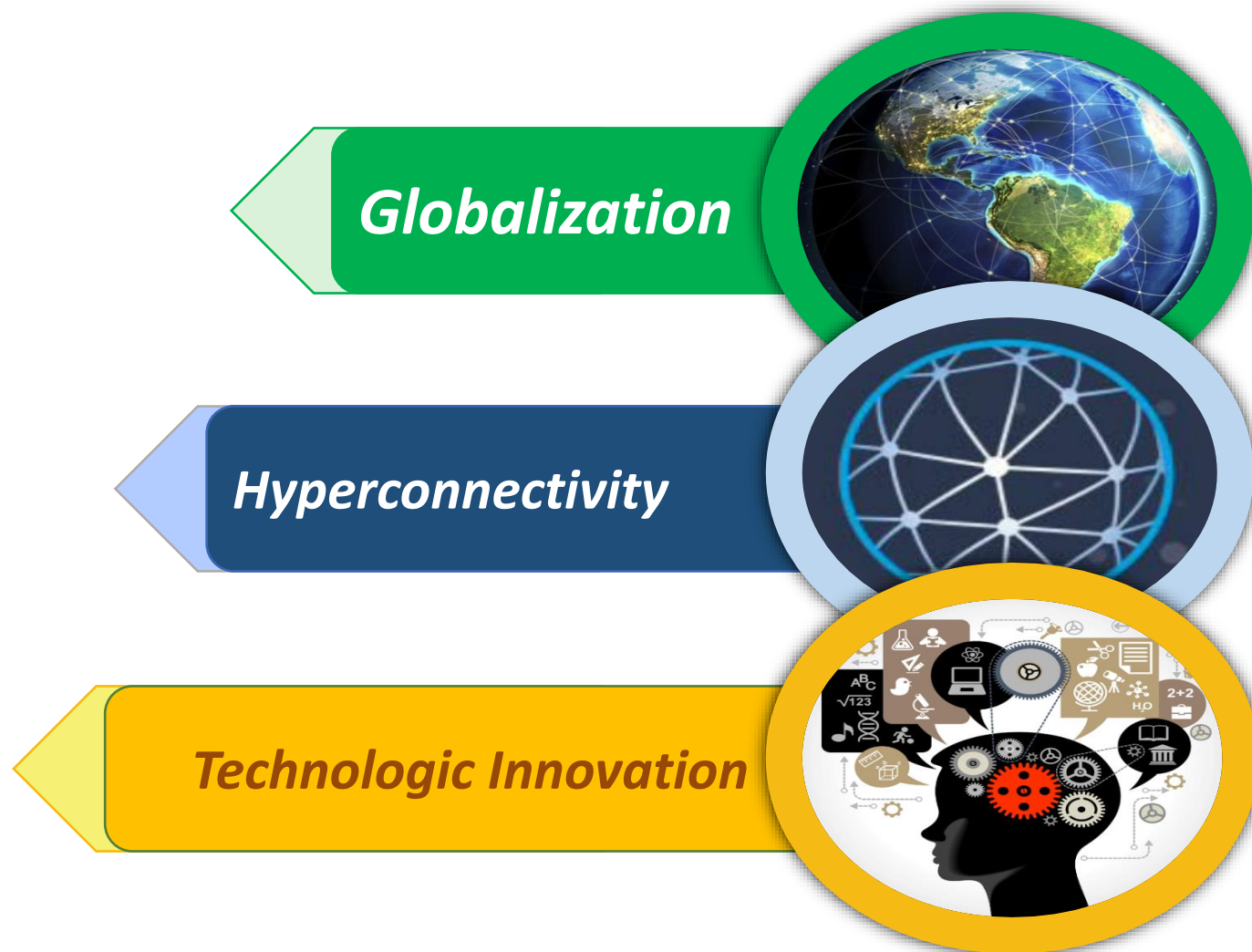
This project has received funding from the European Union's Digital European Programmed under the project "Portuguese Quantum Communication Infrastructure" (PTQCI, grant agreement No 101091730).



# The World in a permanent state of change



# Change & Risks:

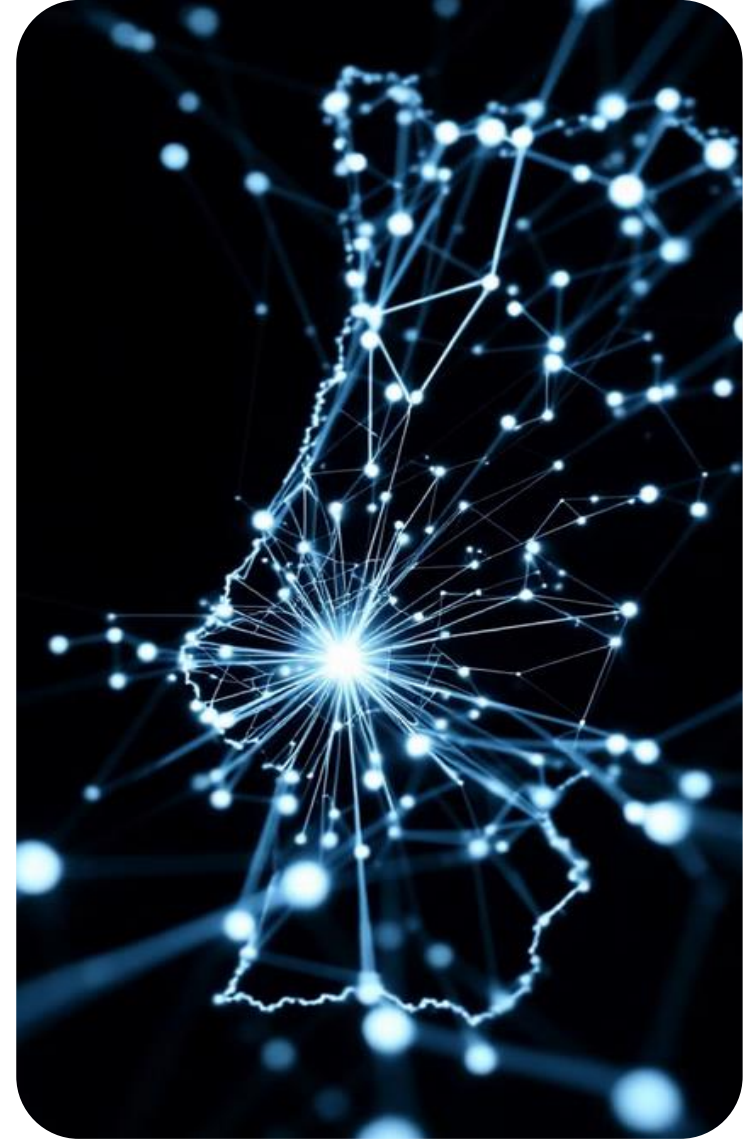






## Portugal Role in EUROQCI

- Portugal participates as a key member state.
- Provide the EU with “EUwide” service for secure communications.
- Future Potential: Quantum Key Distribution (QKD) system could evolve into a complete quantum communication network, including state of the art developments in this technology.





## Implementation of the PTQCI

- Integrated into Portugal's broader cybersecurity framework.
- National Instance of EuroQCI
- Pioneer in establishing the first national quantum communication infrastructure



## Main Roles and Responsibilities of GNS

- Guarantee the security of Classified Information (CI) at the national level and for international organizations.
- Accredite individuals and entities for access to and handling of Classified Information.
- Serve as the accreditation and inspection authority for entities within the State Electronic Certification System — Public Key Infrastructure (SCEE).





## GNS vs PTQCI

- Establishes and achieves strategic goals to enhance the security and efficiency of the Portuguese State.
- The PTQCI network will be created using homegrown European technologies to ensure security, reliability and strategic autonomy.







- Development of a highly resilient network utilizing existing fiber optic infrastructures.
- Plans for expansion beyond mainland Portugal, including the islands.





## Collaboration for EUROQCI Interoperability

- PTQCI designed with significant collaboration with other EU member states, including EUROQCI's Spanish partners.
- Aims to achieve in the future full interoperability of quantum communication systems at the Iberian Peninsula level.



## Enhancing Secure Communications in Europe and Portugal

- Ensure privacy across Europe amid rising cyber threats and data breaches.
- Focus on securing critical infrastructure across various sectors including government and business.
- Integration of cutting-edge quantum solutions to secure data transfer and maintain public trust in digital systems.



## Addressing Cyber Threats with Quantum Communication

- Unprecedented Cyber Challenges
- Evolving Digital Vulnerabilities
- Advancement of Quantum Communication Technologies





## PTQCI Project: Transforming Secure Communications

- Aims to change substantially communication security
- Leverages principles of quantum physics for advanced secure communications.
- Safeguards critical national security data from unauthorized access.



## Addressing Cyber Threats with PTQCI

- The sophistication of cyber threats demands a robust communication infrastructure.
- PTQCI demonstrates Portugal's proactive approach to safeguarding communication networks.
- Changes the landscape of data security, ensuring safer and more reliable communications.







## Broader Implications of the PTQCI

01

Quantum communication technology has diversified potential applications

02

Secure information transmission enhances trust and operational efficiencies across critical sectors

03

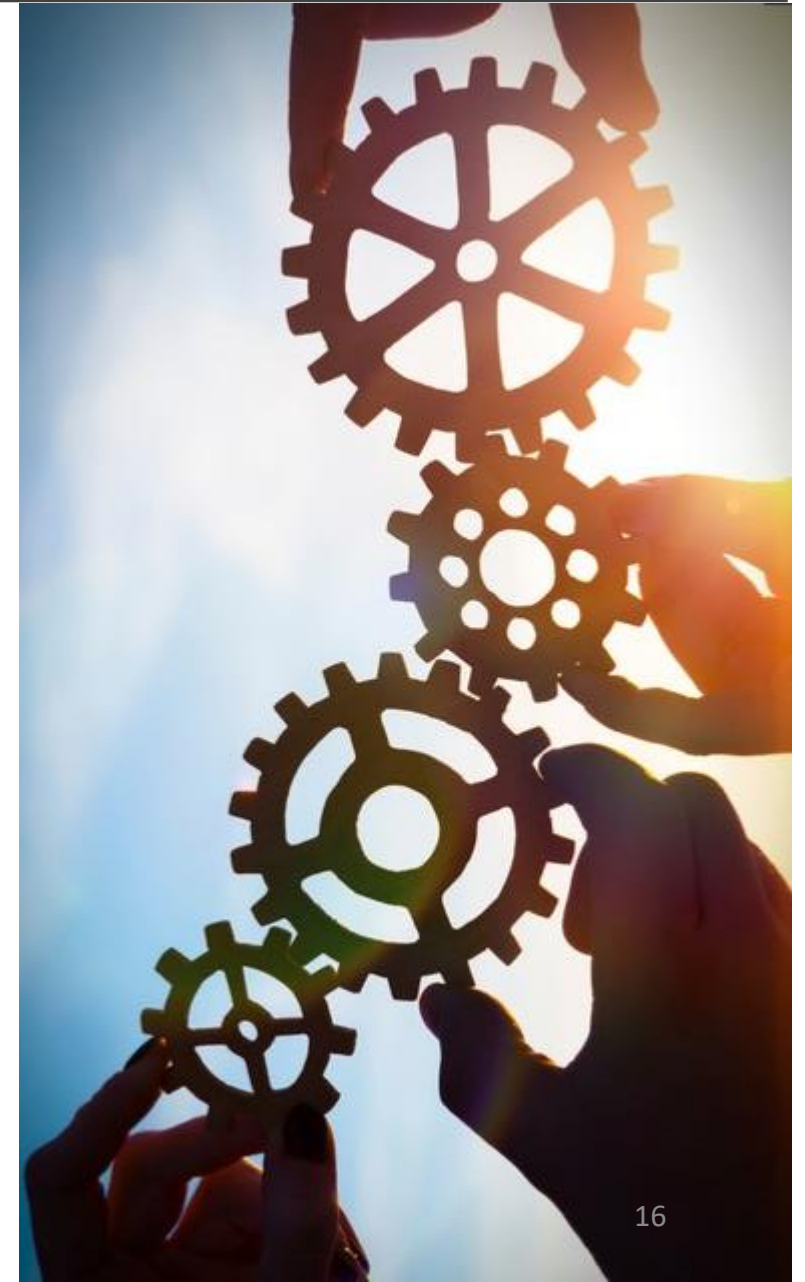
The PTQCI project is about much more than technology; it redefines how security is perceived in our interconnected world

04

Positions Portugal to play a vital role in shaping discussions on the future of secure communications within Europe and beyond.

## Role of the Portuguese NSA (GNS) in the PTQCI Project

- Emphasis on Collaboration
- Stakeholder Engagement
- Harnessing Collective Expertise
- Building a Secure Future
- Promoting R&D in this important field



## Purpose of the Portuguese NSA(GNS) in the PTQCI Project

- Ensure successful implementation and oversight of the PTQCI project
- Alignment with National Security Objectives
- Proactively address and minimize risks associated with the introduction of new technologies
- Provide a clear governance framework





## Risk Management Responsibilities of the GNS in the PTQCI Project

- Understanding Quantum Technology Risks
- Ensuring Infrastructure Resilience
- Development of Mitigation Strategies
- Achieving Security Objectives



## GNS: Fostering Collaboration for the PTQCI Project

- Active Engagement with Stakeholders
- Creating a Comprehensive Approach
- Facilitating Knowledge Exchange
- Incorporating an International Perspective



## Building Trust in Quantum Communications

- GNS's commitment to ensuring national security through advanced technologies
- Stakeholders & Citizens must feel confident that their data is protected
- GNS is dedicated to transparent operations and effective community engagement





## Community Outreach Initiatives for Quantum Technologies

- Building awareness of quantum technologies
- Fostering an Informed Citizenry and Companies
- Enhancing Public Confidence
- Support for Quantum Technology Deployment



## Enhancing Communication for National Security

- Gathering Feedback and Insights
- Addressing Public Concerns
- Creating Shared Responsibility
- Strengthening Commitment to Security



## GNS's Role in Reinforcing National Sovereignty through PTQCI

- Safeguarding National Interests
- Response to Cybersecurity Threats
- Ensuring Independence and Safety
- Secure Management of Sensitive Communications





## GNS Contribution to National Sovereignty via PTQCI

- Alignment with National Security Objectives
- Compliance with EU Standards
- Secure Management of Sensitive Communications
- Preventing External Influences



## Conclusion

- GNS is essential to advancing Portugal's national security goals in the context of evolving communication threats.
- Engages in proactive risk assessments to ensure security and resilience of communications infrastructure.
- Committed to open communication with stakeholders about security initiatives and developments.
- Positions the GNS to effectively protect Portugal's security infrastructure against future challenges through quantum communication technology.



# Securing the Future: The Role and Purpose of GNS in the PTQCI Project

## Thank You

Gabinete Nacional de Segurança  
Colonel Paulo Santos  
[paulo.jorge.santos@gns.gov.pt](mailto:paulo.jorge.santos@gns.gov.pt)  
Tel: +351210403695

This project has received funding from the European Union's Digital European Programmed under the project "Portuguese Quantum Communication Infrastructure" (PTQCI, grant agreement No 101091730).