



A EuroQCI Space to Ground Network Interface

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Co-funded by
the European Union



This project has received funding from the European Union
under Grant Agreement No 101249815



4 EU Member States

Ireland
Luxembourg
Germany
Greece

15 Partners

2 Industry
5 RTOs and RIs
4 Universities
2 National Space Agencies
2 National Ministries

8 Optical Ground Stations

IE Waterford
LU Windhof
DE Erlangen, Jena, Oberpfaffenhofen
GR Helmos, Holomontas, Skinakas

Trans-European Network of Optical Ground Stations for Interconnecting the Space and Terrestrial Segment of EuroQCI



With funding from the:

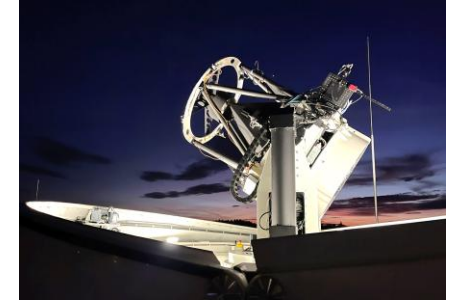




OGS Enablement

Diversity of OGS Sites

- OGS architectures & resources
- OGS operational status
- local terrestrial networks



Roadmap to Interoperability within the EAGLE-1 Mission

- classical OGS interfaces
- quantum receiver
- key management
- validation & certification

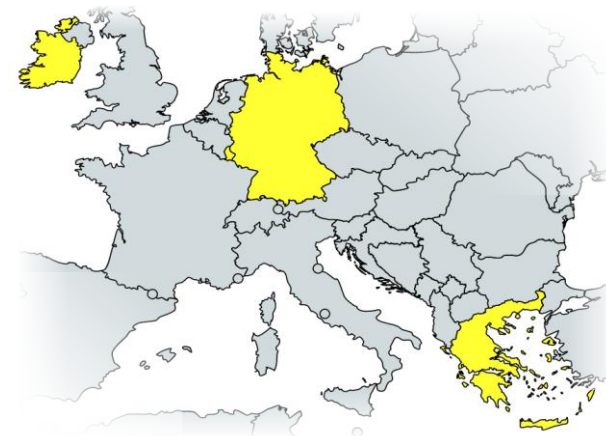




Demonstrations of Interoperability

Diversity of OGS Environments

- island & continental sites
- rural & urban locations
- local climate, seasonal effects, day-night phases



Establish Network Operations in satellite flyover scenarios & network synchronization

- use case development
- demonstrations of interoperability
- comprehensive study of the network

Terrestrial Network

Framework: EuroQCI DEP

Project: IrelandQCI

Operator: IrelandQCI

OGS
SETU

✓ Partner
in IrelandQCI



Optical Ground Stations

- ✓ South East Technical University
*Walton Institute for Information and
Communications Systems Science*

OGS SETU

Waterford & Mobile OGS
pre-construction

sites under evaluation:

Athlone, Dublin, Galway, Waterford

- MBRYONICS Ltd

StarGate OGS

Mobile OGS

Under construction



MBRYONICS 





Greece

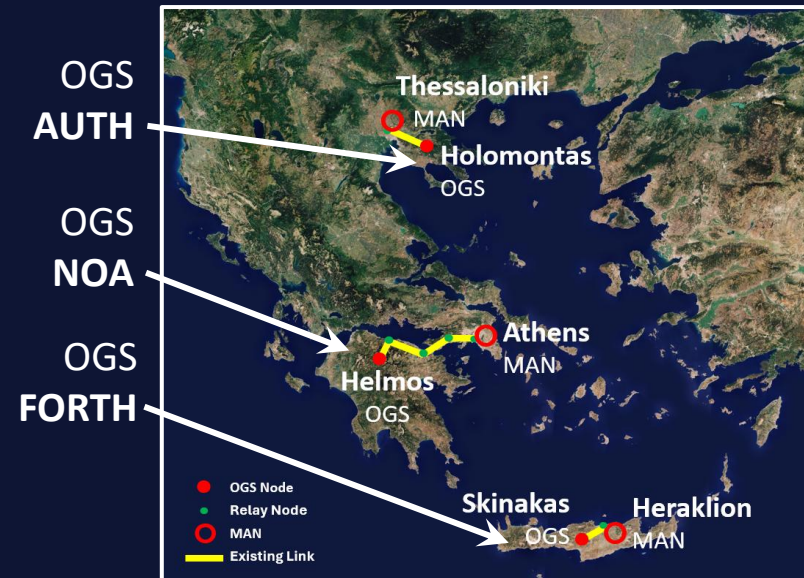
Terrestrial Network

Framework: EuroQCI DEP

Project: HellasQCI

Operator: GRNET

✓ Partner in HellasQCI



Optical Ground Stations

✓ GRNET - National Infrastructures for Research and Technology

✓ National Observatory of Athens

OGS NOA - Helmos

early pre-operational

✓ Aristotle University of Thessaloniki

OGS AUTH - Holomontas

under construction

✓ Foundation for Research and Technology - Hellas

OGS FORTH - Skinakas

under construction

• Hellenic Space Center

✓ Ministry of Digital Governance and Artificial Intelligence



➔ for all OGS: QKD readiness under Greek Obs2OGS ESA Project (4000143384/24/NL/EG)

Terrestrial Network

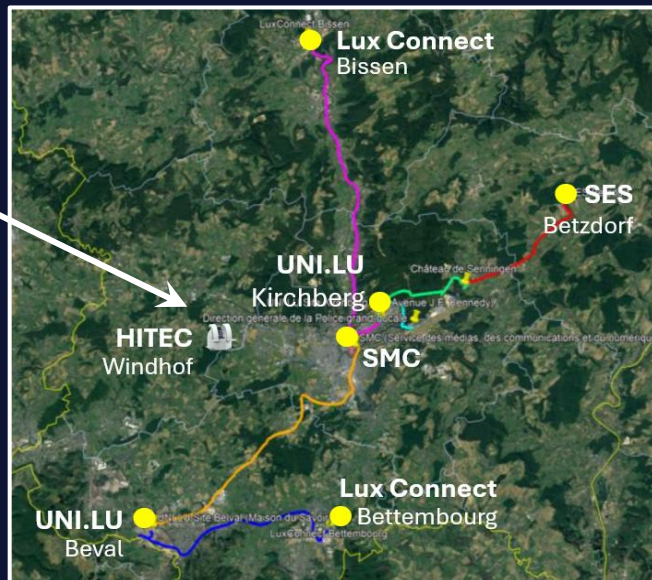
Framework: EuroQCI DEP

Project: Lux4QCI

Operator: UNI.LU

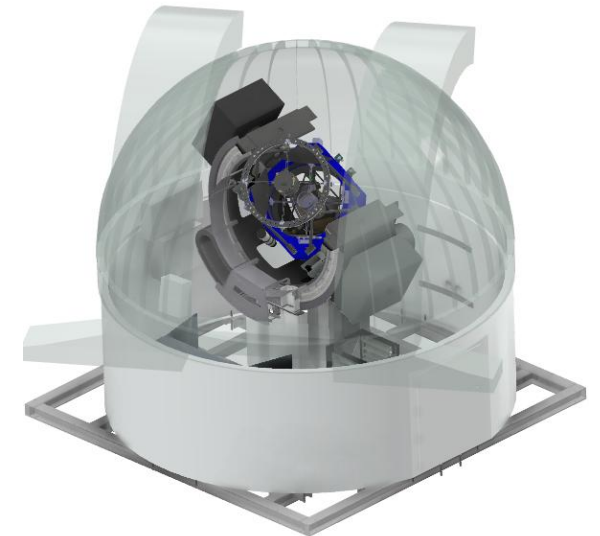
✓ Partner in Lux4QCI

OGS
HITEC



Optical Ground Stations

- HITEC Luxembourg SA
OGS HITEC - Windhof
under construction
- ✓ University of Luxembourg (UNI.LU)
Interdisciplinary Centre for Security, Reliability and Trust (SnT)
SIGCOM Group
- ✓ Fondation Restena
- ✓ Ministry of State
Department of Media, Connectivity and Digital Policy (SMC)



Germany

Terrestrial Network

Framework: EuroQCI DEP

Project: Q-Net-Q (---)

Framework: QuNET Regional (---)

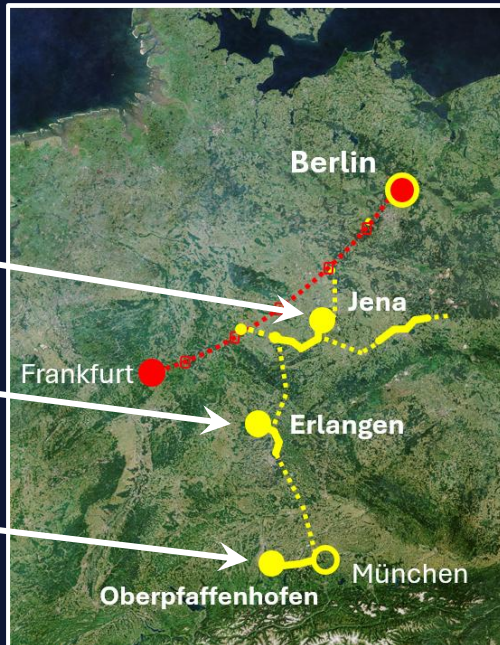
Operators: IOF (TH), QuKomIn (BY)

☑ Partner
in Q-Net-Q

OGS IOF

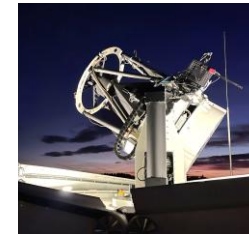
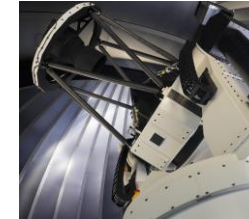
OGS FAU

OGS DLR

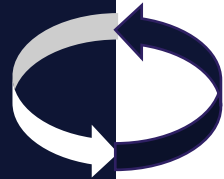


Optical Ground Stations

- Fraunhofer Institute
for Applied Optics and
Precision Engineering (IOF)
OGS IOF - Jena
under construction
- DLR
German Aerospace Center
OGS DLR - Oberpfaffenhofen
early pre-operational
- Friedrich-Alexander University
Erlangen-Nürnberg (FAU)
OGS FAU - Erlangen
pre-construction



Agnostic Enablement



Framework & Collaborations

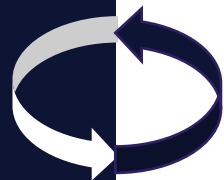
QKD Satellite Missions

- EAGLE-1
- SAGA
- EU Micro-Satellite
- Missions of EU Member States



Network Operations

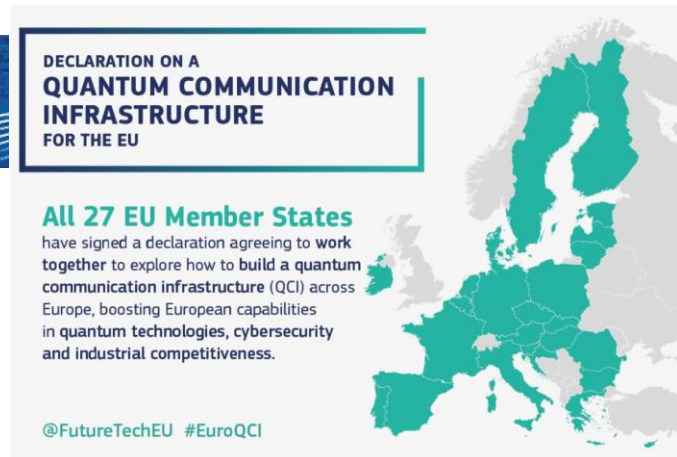
- Analysis
- Correlations
- Extrapolations



Pan-European Ecosystem



- CEF EuroQCI community
- PETRUS² coordination
- IRIS² framework





Berlin, 29.04.2026



Jena, 30.04.2026

OGS Network



IE
OGS SETU
Waterford



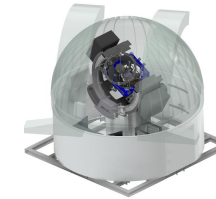
GR
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DE
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OGS DLR
Oberpfaffenhofen



DE
OGS FAU
Erlangen

TransEuroOGS

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LU SMC – Ministry of State
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GR GRNET
Ilias Papastamatiou



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