
LUXQUANTA
Quantum Cryptography to protect network confidentiality in metropolitan networks
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REDIMadrid, OCT 14th, 2024

LUXQUANTA

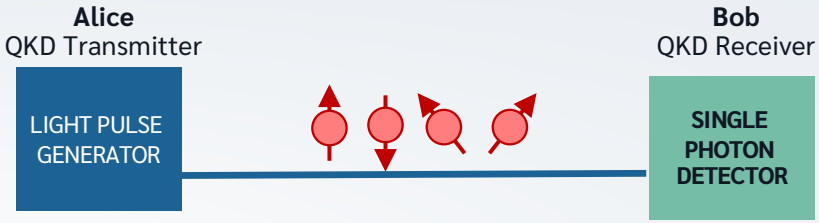
| A FUTURE PROOF SOLUTION AGAINST ML, AI AND QUANTUM COMPUTERS

Quantum Key Distribution (QKD)

| TECHNOLOGY OVERVIEW

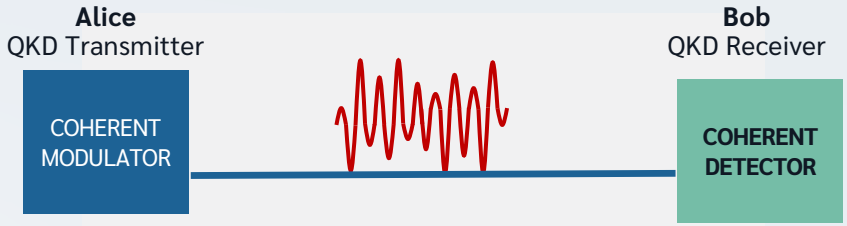
Comparing Continuous Variable (CV-QKD) and Discrete Variable (DV-QKD)

TRADITIONAL SOLUTION
Discrete-**V**ariable QKD (DV-QKD)



The key is encoded in the **photons,**
so the receiver uses **single-photon detection**

NEW SOLUTION
Continuous-**V**ariable QKD (CV-QKD)

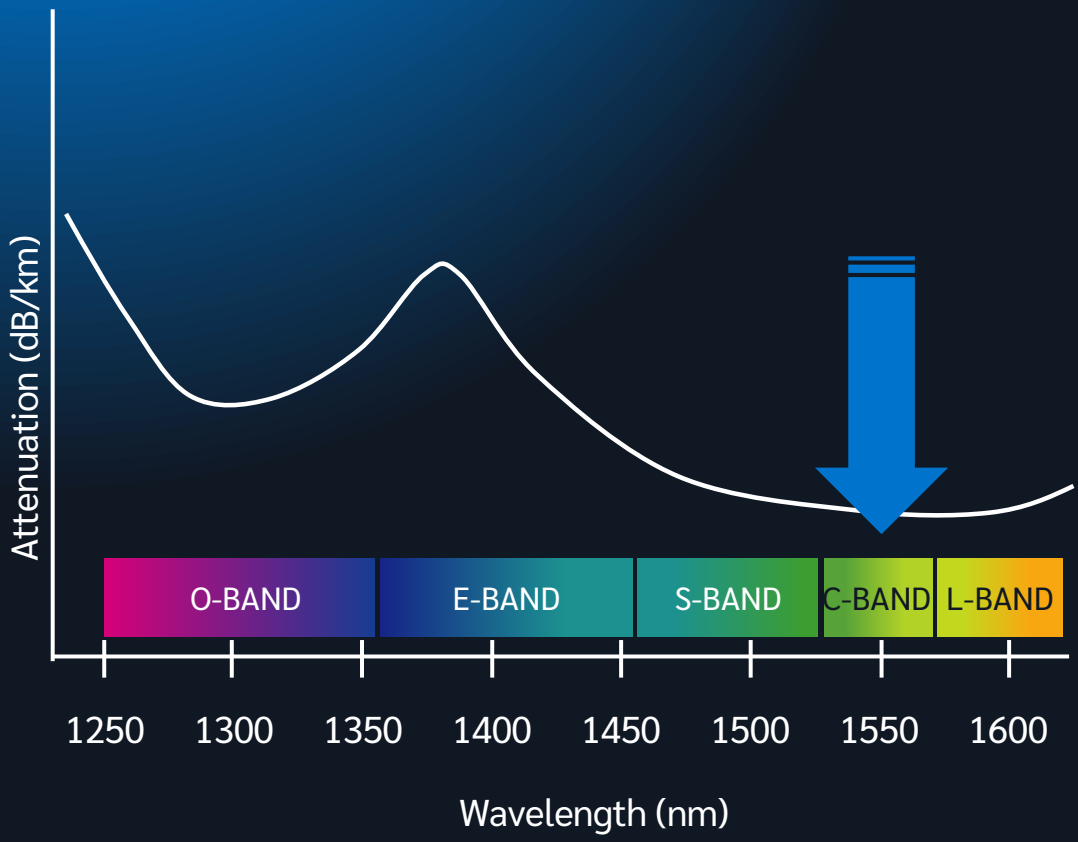


The key is encoded in the **signal,**
so the receiver uses **coherent detection**

| WHY CV-QKD IS SO DISRUPTIVE

Ease of deployment

- QKD signals transmitted in the same optical fibre (and band) as data
- Potential to deliver zero-touch integration



| WHY CV-QKD IS SO DISRUPTIVE

Reliability

- Mature components
- Robust against temperature changes
- High performance for intra-city networks

*"**Reliability** with wide temperature operating ranges (-5 °C to 50 °C) are essential for Quantum Networking Equipment"*

Verizon
OPTICA industry conference, **Apr 2023**

Source: DataCentreKnowledge, 2024

Source: Lancesoft, 2024

| FIRST MATURE CV-QKD SYSTEM IN EUROPE

LuxQuanta® NOVA LQ®

Continuous Variable QKD System

- **Plug & play solution**: easy to deploy, integrates seamlessly in existing optical fibre links
- **Great performance** in metropolitan networks
- **Uses off-the-shelf components**: fast time to market, easy maintenance, reliable and resilient
- **Integrated** with leader industry vendors

aws evolution QooINet
NOKIA merqury cybersecurity

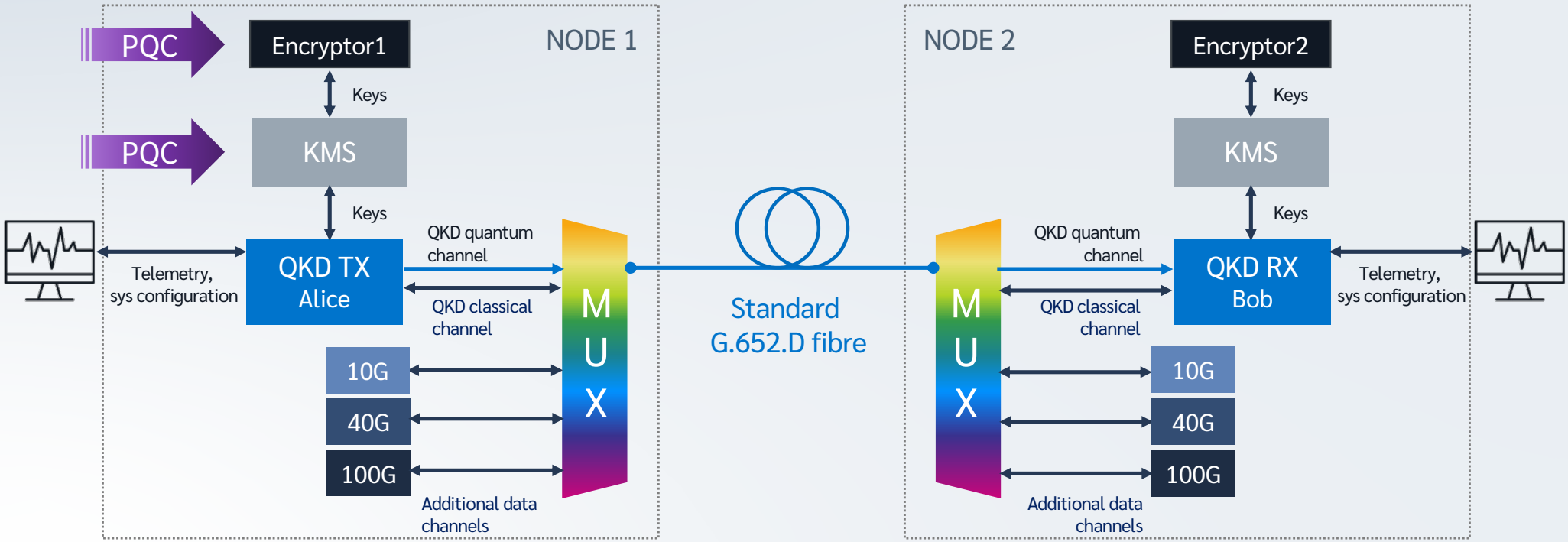
Sold

Technology already deployed by private and public entities across Europe and beyond

Generalitat de Catalunya Government of Catalonia
European Commission | EuroQCI

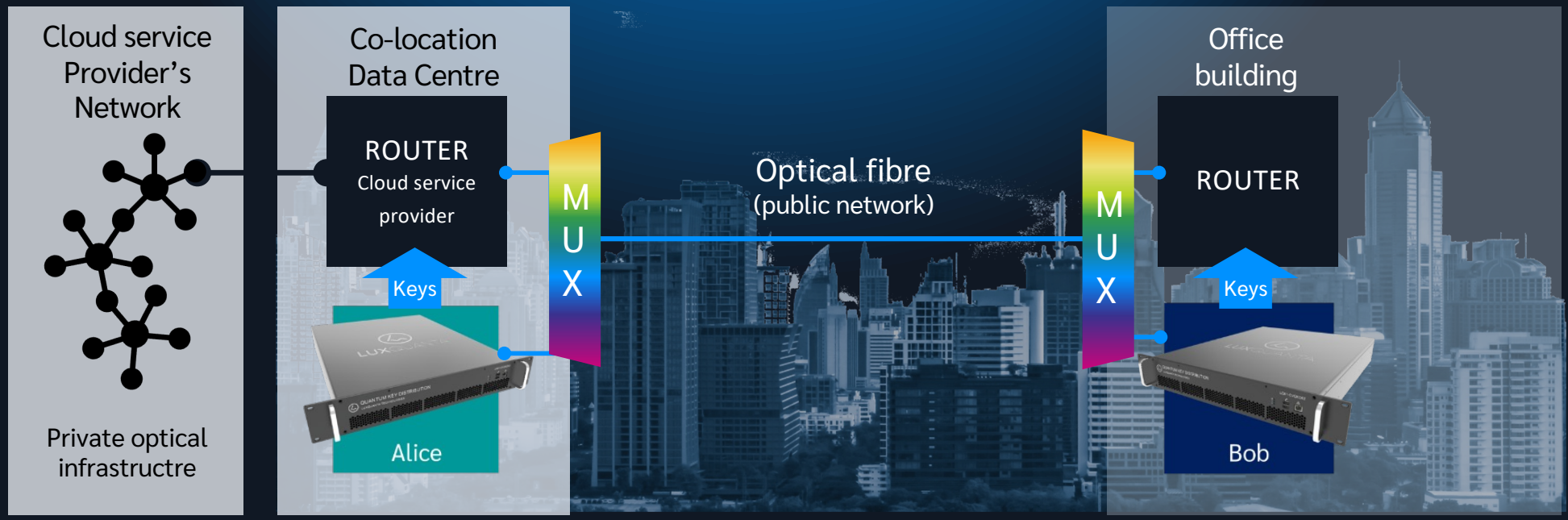
| ARCHITECTURE LAYOUT WITH A DWDM SCHEME

NOVA LQ® in action



| INTEROPERABILITY OF NOVA LQ® WITH AWS

Securing the optical fibre link into the cloud



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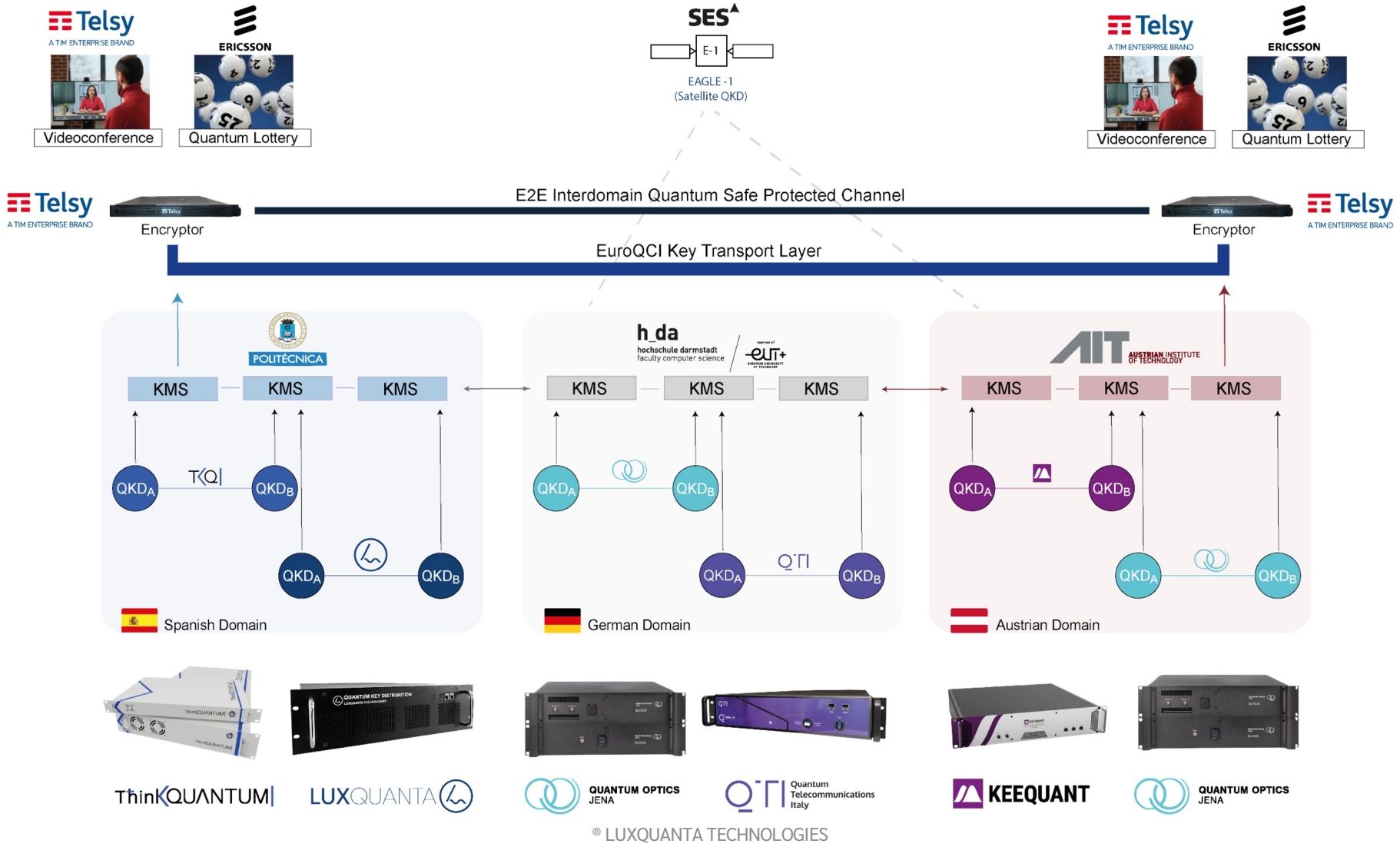
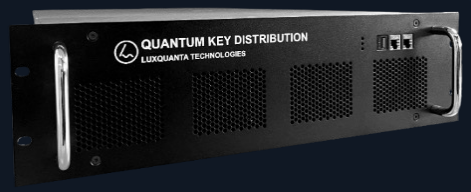


| THE TIME IS NOW

Your leading partner for migration to quantum-safe cryptography

PRODUCT READY



EU manufacturer

TECHNOLOGY PROVEN

European Commission

EuroQCI

Generalitat de Catalunya
Government of Catalonia

TRAILBLAZING INNOVATOR

EU FUNDED

QUARTER

InPULSE

QSN PARTNERSHIP

QU- PILOT