

# Ultra-secure quantum cryptography to protect metropolitan networks

Vanesa Diaz | CEO

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| ABOUT LUXQUANTA

# The birth of a new company



Spin-off from ICFO, a world-leading institute in Photonic Sciences, where the project was incubated for 4 years



Driven by a team of 22 scientists, developers and tech executives

Co-founders and private investors:



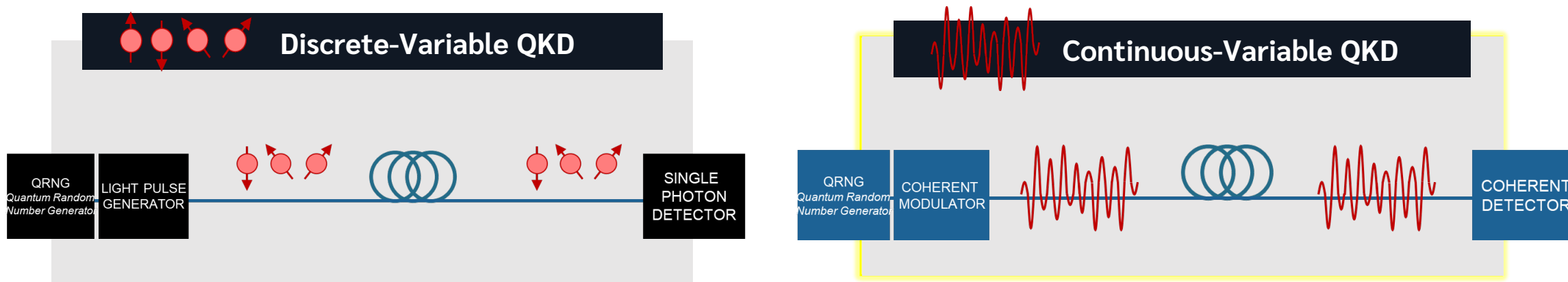
SYSTEM &  
SOFTWARE  
ENGINEERING



Developed a new, disruptive quantum cryptography technology: Continuous Variable QKD

| LUXQUANTA'S SOLUTION

# A new QKD superior technology: Continuous Variable QKD (CV-QKD)



## Why CV-QKD is so disruptive

### 1. Easier & cheaper to install



Co-propagation with data allowed  
Potential for seamless integration

### 2. Low OpEx



Reliability enabled by highly maturity of its components

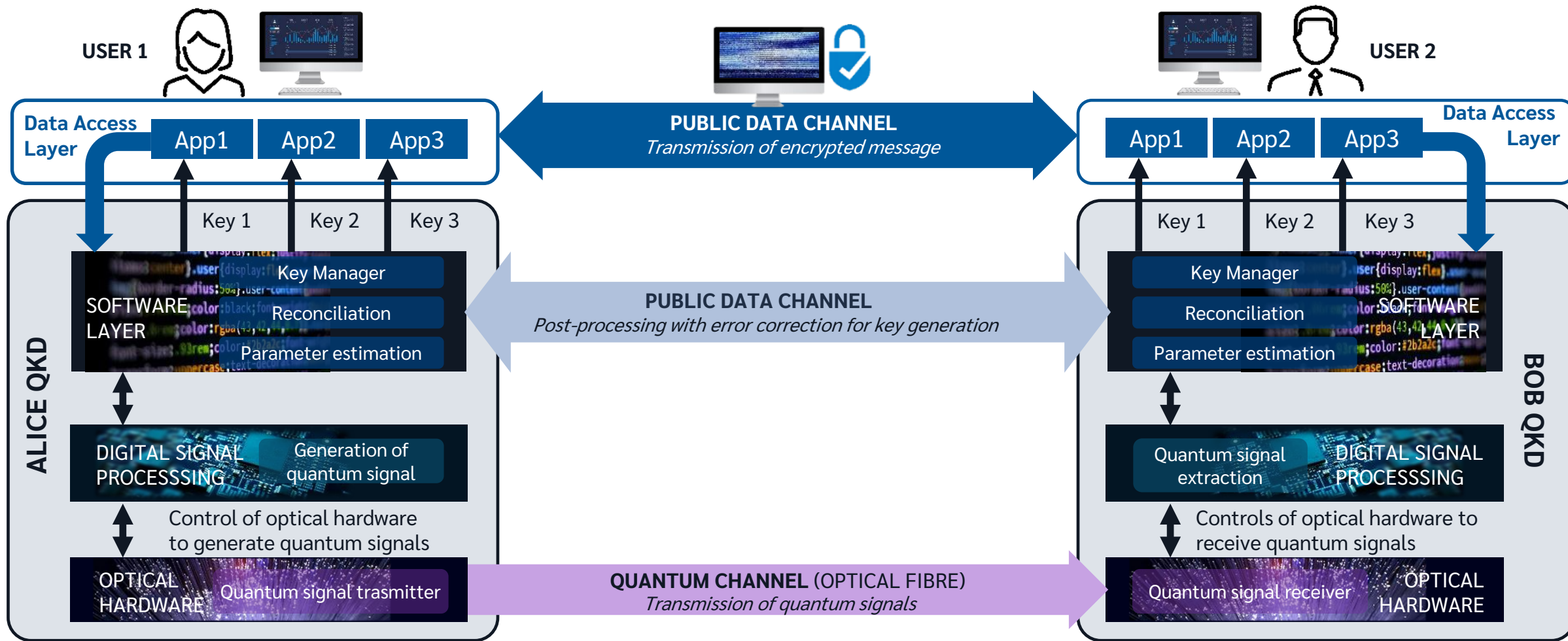
### 3. Scalable



Clear path for full integration as a photonic chip

| UNDERSTANDING THE PRODUCT

# LuxQuanta's QKD technology requires strong expertise in three core layers



| FIRST EUROPEAN CV-QKD SYSTEM  
LuxQuanta<sup>®</sup> NOVA LQ<sup>®</sup>  
Continuous Variable QKD



- Chassis suitable for 19' racks
- C-band tunability
- High DWDM coexistence capabilities
- Fully automated
- Real-time error correction
- FPGA-based DSP and parameter estimation
- Standardized interfaces for user applications
- Distance up to 40 km (8 dB)

Easy to deploy



Reliable & Resilient



Fast



# First successful customer trial accomplished on Sep 9<sup>th</sup> 2022



30 km optical fibre link  
Between the Government of Catalunya and ICFO  
1st step towards the Barcelona QuantumRing



The event gathered important presence from Government, press and industry

LuxQuanta's technology protected a video conference between the President of the Government of Catalonia and ICFO



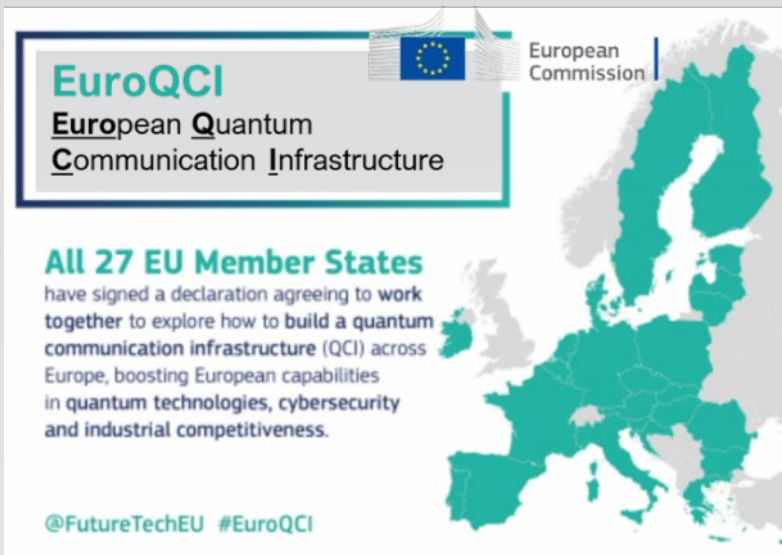
| DIGITAL EUROPEAN PROGRAM & QUANTUM KEY DISTRIBUTION (QKD)

In Jan this year, LuxQuanta and its consortium received over 7M eur from the Union



*Quantum Cryptography Technology for Europe*

- Consortium led by LuxQuanta
- Objective: QKD readiness and security standards for deployment in the EuroQCI project
- **10.8M eur** total budget
- **7M eur** in non-dilutive funds from the EU
- **2.9M eur** allocated to LuxQuanta



**EuroQCI**  
European Quantum Communication Infrastructure

All 27 EU Member States have signed a declaration agreeing to work together to explore how to build a quantum communication infrastructure (QCI) across Europe, boosting European capabilities in quantum technologies, cybersecurity and industrial competitiveness.

@FutureTechEU #EuroQCI

**EuroQCI** targets a secure QKD backbone by 2027 all over the EU

**Intensive public funding from the EC**  
> **€ 670 M** allocated for QKD-related projects



| THE BEST PARTNER TO DELIVER QUANTUM-SECURE SOLUTIONS

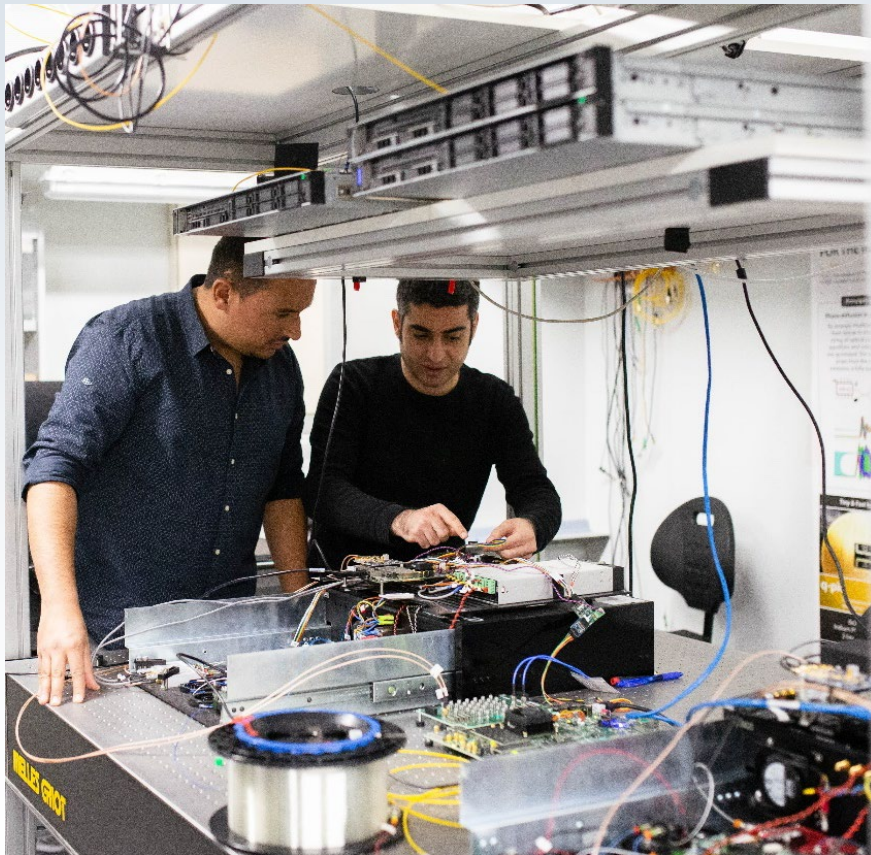
# Let's Talk

## Solid R&D expertise

LuxQuanta's team is made of engineers, each with decades of experience in Quantum Technologies, FPGA development, Telecommunications, digital signal processing, microelectronics, software development and optoelectronic components

## Proved know-how

We are constantly seeking scientific collaborations with innovative companies and research institutes through public or private funding, nurturing our technology to ensure that we become worldwide leaders in the QKD industry





Thank you!

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