



PhotonHub™



PHOTONICS<sup>21</sup>

PHOTONICS PUBLIC PRIVATE PARTNERSHIP

## DISCOVER HOW YOU CAN

- ✓ **Provide secure communications** by using Photonics Integrated Circuits and earth observation spectroscopy
- ✓ **Improve forensic capabilities** using photonics-enabled quantum encryption and optical detection
- ✓ **Enhance threat detection** with multi-spectral and infrared imaging warning systems

Explore all possibilities  
on [photonhub.eu](https://photonhub.eu)

Avail of a  
**free initial  
assessment  
by top experts**  
for European  
SMEs

Delve into how your business could minimise the risk and expense of deep technology innovation through "test-before-invest" support from PhotonHub.

PHOTONICS IN  
SAFETY, SECURITY & SPACE

# EXAMPLES OF COMPANIES SUPPORTED WITH PHOTONICS INNOVATION PROJECTS

FIND MORE ON PHOTONHUB.EU

## REAL-TIME CORRECTION OF ATMOSPHERIC DISTURBANCES USING ADAPTIVE OPTICS WITH DEFORMABLE MIRRORS

Officina Stellare, an Italian company, specialises in the design and manufacture of optomechanical instruments for professional applications. The company developed an adaptive telescope for laser communications. To further develop the product, they partnered with Consiglio Nazionale delle Ricerche from Italy (CNR-IFN) to replace the secondary mirror of a telescope with a deformable mirror and test it under various outdoor conditions.

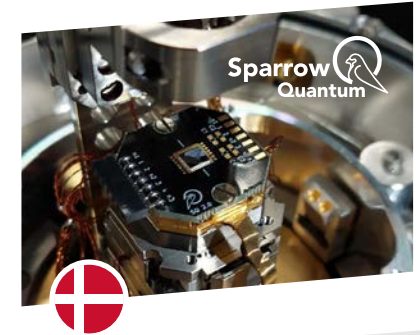


## STRENGTHENING MOBILE DOCUMENT SECURITY WITH FLUORESCENT INK ANALYSIS

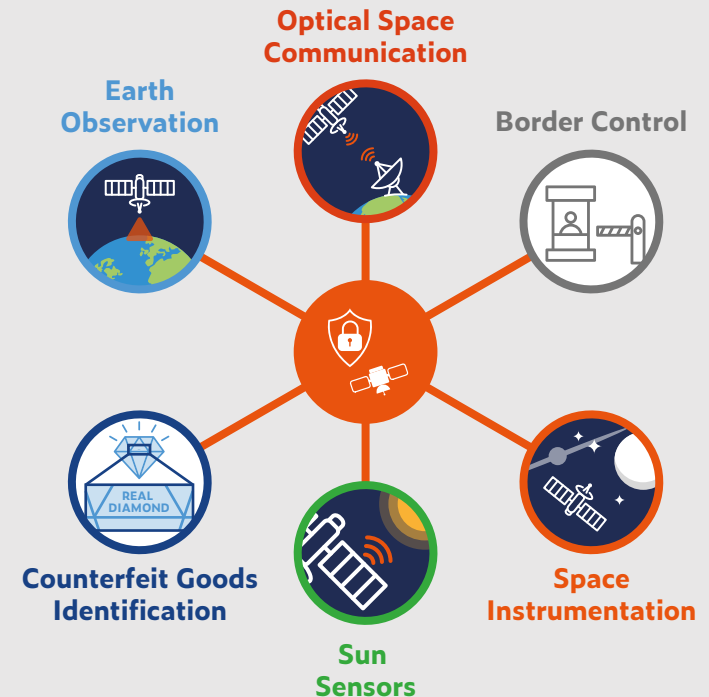
CharismaTec OG, based in Austria, has developed a mobile device that can verify passports, ID cards, and other documents in just 30 seconds, identifying counterfeits with high accuracy. This device now incorporates a low-cost optoelectronic component to detect the decay time of fluorescent security inks, increasing its reliability and effectiveness for border protection worldwide. To achieve this, they received support from Joanneum Research (JR) in Austria.

## ON-CHIP SINGLE PHOTON SOURCE FOR SECURE CRYPTOSYSTEMS AND QUANTUM TECHNOLOGIES

Sparrow Quantum from Denmark designs high-fidelity 930 nm Quantum Dot-based Single Photon chips and systems. They collaborated with the Technical Research Centre of Finland (VTT) to leverage photonic packaging expertise. Together, they developed a cryogenic-compatible photonic integration system, enhancing the efficiency and performance of their single-photon chips, advancing quantum cryptosystems, computing, and simulation.



## PHOTONICS INNOVATION: REACHING THE SKY — AND BEYOND



# HOW PHOTONICS CAN **SUPPORT YOU**

Photonics offers essential enabling technology solutions for keeping citizens protected and making them feel safe.

The space industry relies on photonics for earth and space observation, satellite communications, manufacturing, and quality control.

Photonics enable fast and secure acquisition, communication, processing and displaying of data, especially through quantum photonics in encryption, computation, and communication.

**Start your photonics innovation journey with our support.**



## **DEMO & EXPERIENCE CENTRES**



In addition to providing innovation support, PhotonHub partners across Europe provide both onsite and online training for industry. This extensive training offering is presented as a single online catalogue of the European Photonics Innovation Academy.

### **ONSITE TRAINING OPPORTUNITIES AT DEMO AND EXPERIENCE CENTERS**

Discover and become fully immersed in photonics through in-person training delivered at the Demo & Experience centers listed below. The schedule of upcoming training can be found at [photonhub.eu](https://photonhub.eu) or by scanning the QR code.



IMEC



HiLASE



CNRS



III-V LAB



LZH



CNIT



CNR



Łukasiewicz IMiF



WUT



RISE

### **FREE ONLINE INTRODUCTORY TRAINING OPPORTUNITIES**

Half-day online sessions are delivered throughout the year.

View our complete training schedule and register your interest at [photonhub.eu](https://photonhub.eu) or by scanning the QR code.



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