



**PhotonHub
Europe®**

PHOTONICS INNOVATION HUB
FOR EUROPE



PHOTONICS²¹

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

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 & DEFENCE**

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.



OFFICINASTELLARE
OUR WORLD, YOUR SPACE



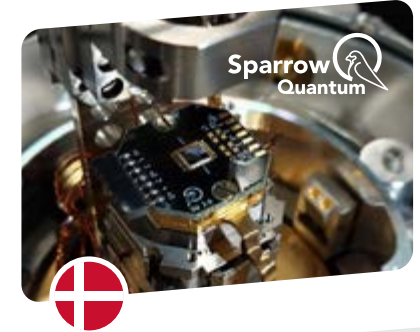
STRENGTHENING MOBILE DOCUMENT SECURITY WITH FLUORESCENT INK ANALYSIS

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.

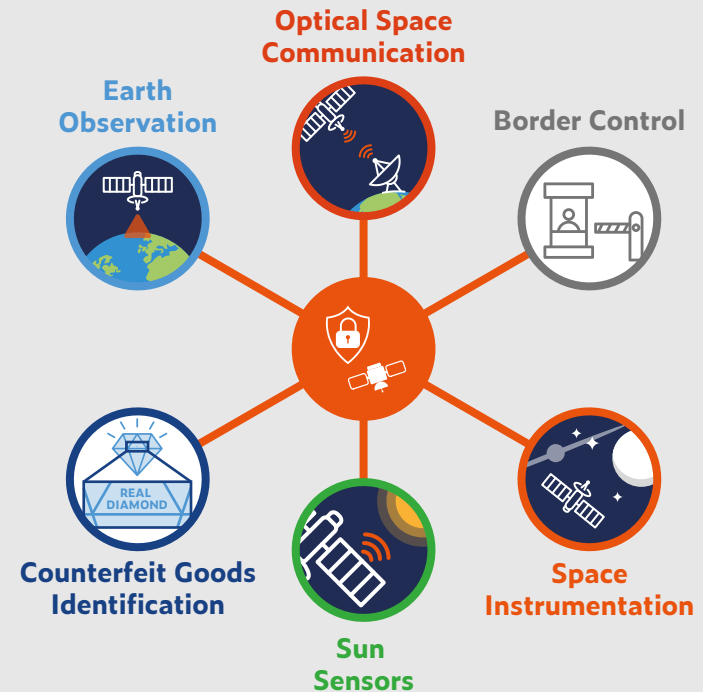


ON-CHIP SINGLE PHOTON SOURCE FOR SECURE CRYPTOSYSTEMS AND QUANTUM TECHNOLOGIES

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 Europe acts as a one-stop-shop matchmaker between European SMEs and the existing European ecosystem of photonics training providers. This extensive training offering is presented as a single online catalogue of the European Photonics Innovation Academy.

ONSITE TRAINING OPPORTUNITIES

Discover photonics at the one-day Demo Centres and become fully immersed at the three-day hands-on Experience Centres situated across Europe.

Spectral Imaging and Its Applications

Demo Centre by Photonics Finland



Quantum Communication Applications

Demo Centre by CNR-INO



Optics and Freeform Optics

Experience Centre by VUB B-PHOT



FREE ONLINE INTRODUCTORY TRAINING OPPORTUNITIES

Half-day online sessions are delivered throughout the year.

View our complete training schedule and register your interest at ecosystem.photonhub.eu or by scanning the QR code.

DISCOVER
how PhotonHub
can support your
business with
photonics

