HOW PHOTONICS CAN **SUPPORT YOU**

Fibre optic communication systems are the basis for the internet and modern wireless communication systems. Photonics is also used everywhere in ICT, from optical fibres to photonic integrated circuits (PICs), ultra-compact cameras, laser-machining, smart displays and micro-optics. The smartphone would simply not exist without photonics.

Photonics technologies used for digital infrastructure are being harnessed to reduce power consumption, footprint and cost. This makes their use in other applications very competitive.

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.

Silicon Photonics
Experience Centre by UGent – ePIXfab

Graphene Photonics for mm-Wave Wireless Links
Demo Centre by CNIT

Photonics for Telecom & Datacom Applications
Demo Centre by ICCS

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

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PHOTONICS INNOVATION HUB FOR EUROPE

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PHOTONICS 21

DISCOVER HOW YOU CAN

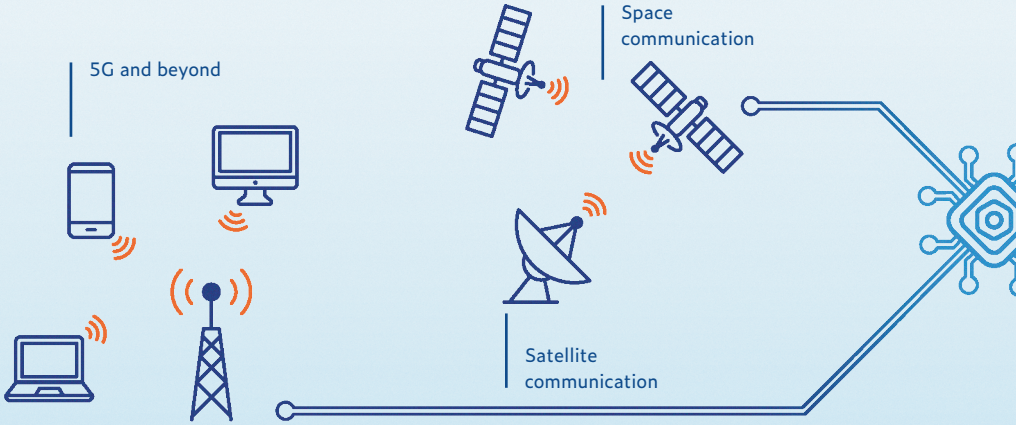
- ✓ **Reduce energy consumption** of digital systems using photonics ICT solutions
- ✓ **Communicate securely** using ultra-broadband optical fibre networks and quantum solutions
- ✓ **Enhance IoT and VR solutions** through photonics sensors and consumer products

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 DIGITAL INFRASTRUCTURE



DIGITAL INFRASTRUCTURE: C

EXAMPLES OF COMPANIES SUPPORTED WITH PHOTO

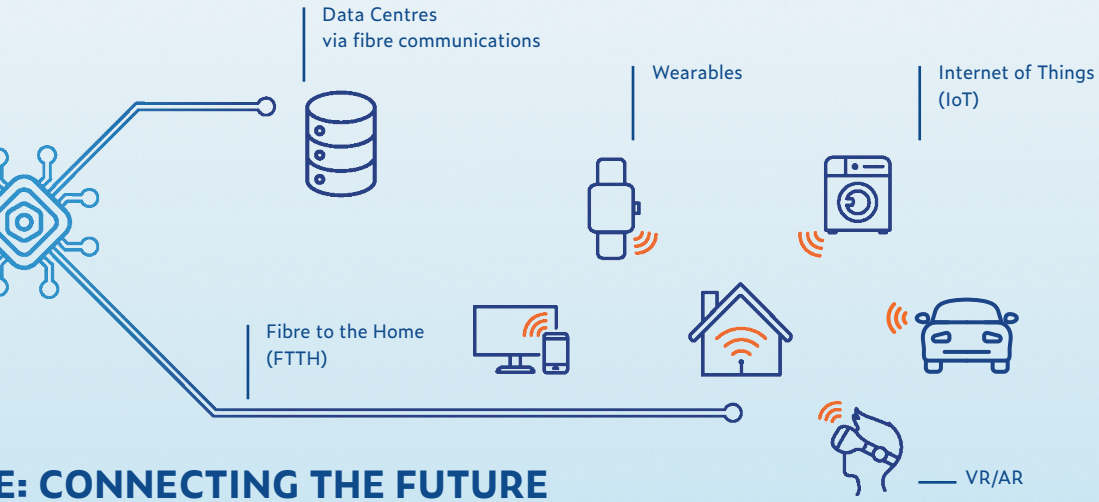
FIND MORE ON PHOTONHUB.EU

NEXT-GENERATION ENTROPY SOURCE FOR SECURE SPACE APPLICATIONS USING QUANTUM KEY DISTRIBUTION

Secure communication is essential in space to protect important data. To meet this need, Antwerp Space is developing an InP-based entropy source for a quantum random number generator. This new entropy source is essential for secure space applications, in particular Quantum Key Distribution (QKD). QKD ensures that communications cannot be tapped by using reliable sources of private randomness. Antwerp Space worked with Eindhoven University of Technology (TU/e) in the Netherlands to design and model this innovative entropy source, which will help secure future space missions.

IMPROVING DATA TRA
LONG DISTANCE TELE

Pilot Photonics worked on develo
and an integrated demultiplexer b
factor high-speed distributed-fee
technology was crucial for fibre o
particularly in high data rate cohe
used in long-haul telecommunica
source and indium phosphide pho
PIC) demultiplexer increased the
data transmission. To achieve this
with Eindhoven University of Tech
Netherlands to design, manufactu
components.



E: CONNECTING THE FUTURE

TONICS INNOVATION PROJECTS

TRANSMISSION IN ELECOMMUNICATIONS

eveloping an optical comb source exer based on high alpha- d-feedback (DFB) lasers. This ore optical communication, coherent transmission systems unication. The optical comb e photonic integrated circuit (InP the efficiency and capacity of e this, Pilot Photonics partnered Technology (TU/e) in the ufacture and package these

ADVANCED OPTICAL SOLUTIONS FOR LIVE SPORTS VIDEO PROCESSING

Digit Arena worked on advanced optical methods for banner advertisement and moving object separation from video signals, crucial for optical data processing in live sports. The project included an image replacement solution using computer vision for object detection and a hyperspectral imaging system for background subtraction in LED advertising replacement. This system addressed the challenge of segmenting objects at close range. Digit Arena partnered with Technical Research Centre of Finland (VTT) for the design, manufacture and packaging of these solutions.