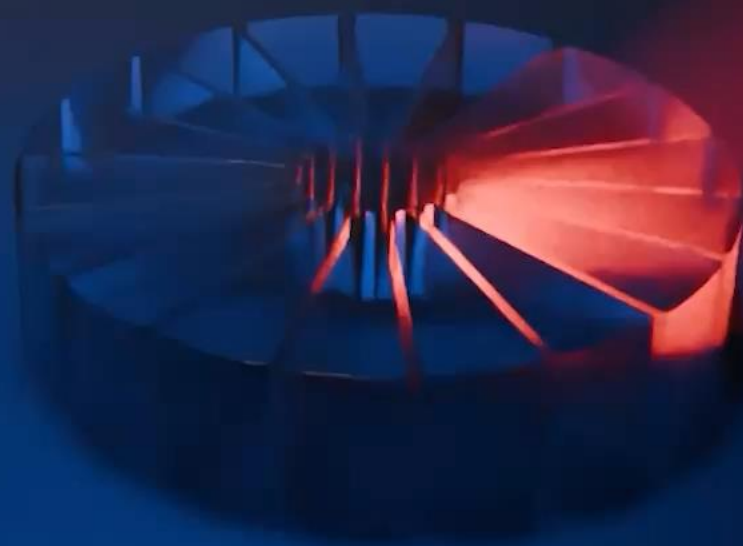




PhotonHub™

PhotonHub PHACTORY

The start of your Supported
Photonics Innovation Journey



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

PHOTONICS²¹



Funded by
the European Union

8 key digital technologies

enabling the processes of discovery, innovation and digitalisation



Photonics



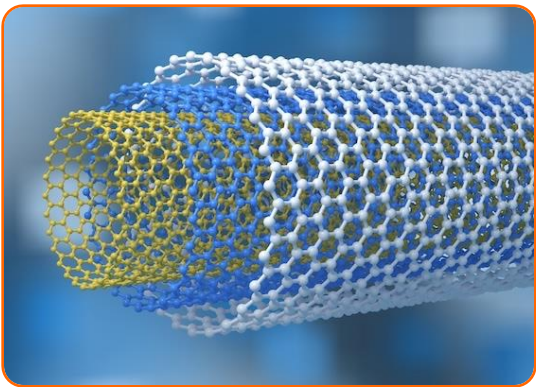
Advanced manufacturing



Biotechnology



Advanced materials



Nanotechnology



Nanoelectronics



Artificial intelligence



Cyber security

8 key digital technologies

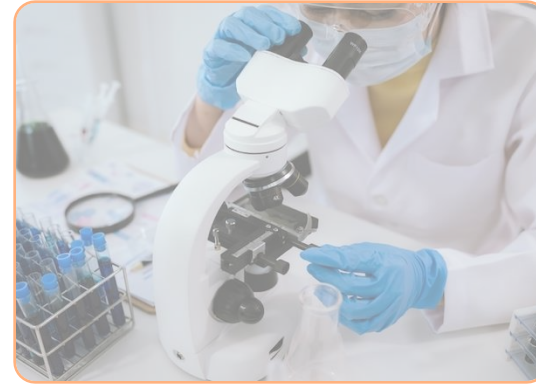
enabling the processes of discovery, innovation and digitalisation

The science and technology that innovates with light

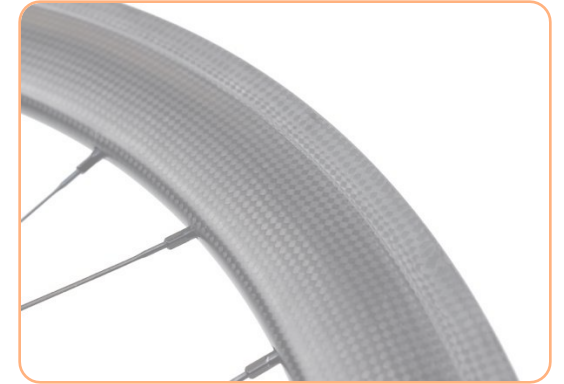
Photonics



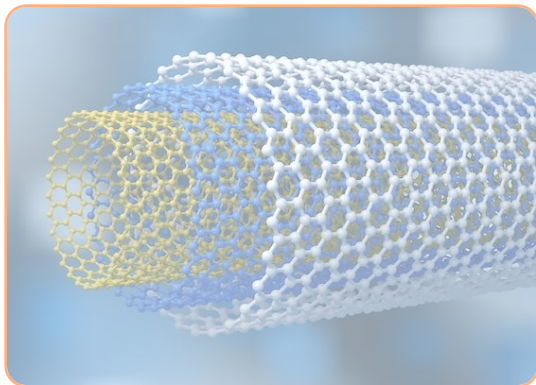
Advanced manufacturing



Biotechnology



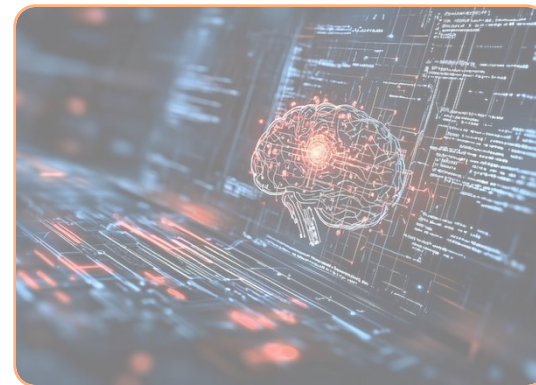
Advanced materials



Nanotechnology



Nanoelectronics



Artificial intelligence



Cyber security

Photonics: an innovative technology

real-world impact to improve the quality of life



LED lighting



Solar energy



Fiber internet



High resolution displays



Lasers in manufacturing



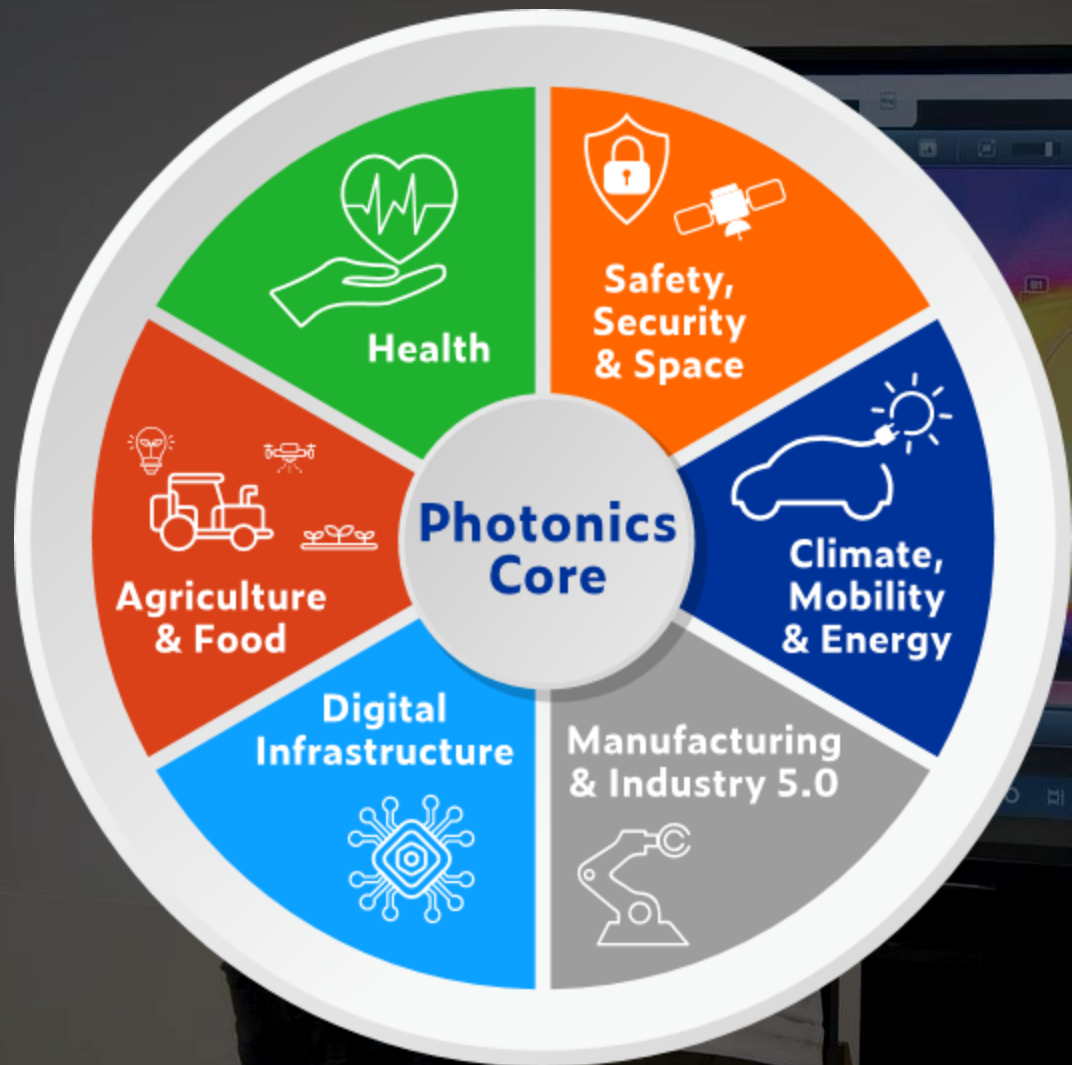
Medical optics



Machine vision



AR and VR



PHOTONICS
driving innovation
across all industry
domains

PHOTONICS IN AGRICULTURE & FOOD

DISCOVER HOW YOU CAN

- ✓ Reduce energy costs
- ✓ Optimise harvest yields
- ✓ Assure food safety

EXAMPLES OF SUPPORTED PROJECTS

**Food quality
and safety
assurance with
light technology
monitoring**



**Soil
monitoring
benefitting
from photonics
technologies**

**Safeguarding
wine quality
thanks to
optical sensors**



PHOTONICS IN CLIMATE & ENERGY

DISCOVER HOW YOU CAN

- ✓ Decrease data carbon footprint
- ✓ Monitor environmental & climate change
- ✓ Boost wind & solar energy

EXAMPLES OF SUPPORTED PROJECTS

Wide-area monitoring
of power grids
through photonic
integrated circuit
(PIC)-based systems



Developing proof-of-
concept components
using electron beam
lithography (EBL)
technology

Improving the
accuracy of
sensing systems
through optical
spectroscopy



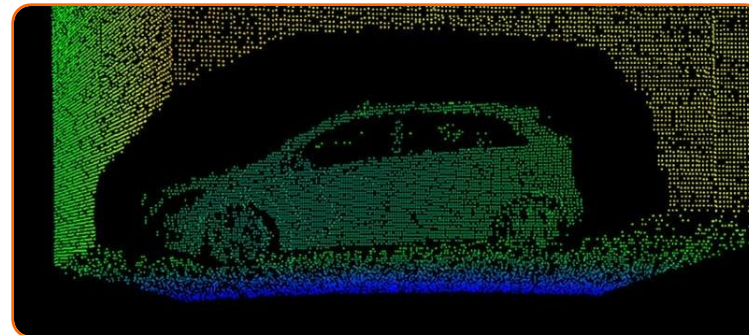
PHOTONICS IN MOBILITY

DISCOVER HOW YOU CAN

- ✓ Achieve smart, durable lighting
- ✓ Improve safety with sensors
- ✓ Enhance autonomous mobility

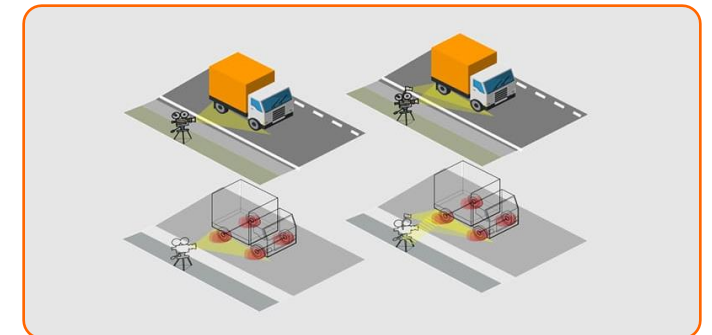
EXAMPLES OF SUPPORTED PROJECTS

**Developing
advanced lens
systems for
autonomous
vehicles**



**Innovative
low-cost LiDAR
systems for
autonomous
vehicles**

**Revolutionising
Road Safety and
Maintenance with
Innovative Sensor
Technology**



PHOTONICS IN DIGITAL INFRASTRUCTURE

DISCOVER HOW YOU CAN

- ✓ Reduce energy consumption
- ✓ Communicate securely
- ✓ Enhance IoT and VR solutions

EXAMPLES OF SUPPORTED PROJECTS

**Next-generation entropy
source for secure space
applications using
quantum key distribution**



**Improving data
transmission in
long distance
telecommunications**

**Advanced Optical
Solutions for Live
Sports Video
Processing**





PHOTONICS IN HEALTH

DISCOVER HOW YOU CAN

- ✓ Boost prevention
- ✓ Diagnose diseases
- ✓ Manage chronic conditions
- ✓ Advance therapy options

EXAMPLES OF SUPPORTED PROJECTS

**Reducing
diagnostic
times through
optical sensors**



**Improving procedure
accuracy through
high-quality
illumination and high-
resolution imagery**

**Assessing post-
operative
recovery using
remote optical
monitoring**



PHOTONICS IN MANUFACTURING

DISCOVER HOW YOU CAN

- ✓ Optimise fabrication yields
- ✓ Increase product quality
- ✓ Reduce overall costs

EXAMPLES OF SUPPORTED PROJECTS

**Lens array for
imaging
systems to
automate
production lines**



**Measurements
with fibre
sensors for the
petrochemical
sector**

**Reducing
waste through
cutting-edge
photonics
technologies**



PHOTONICS IN SAFETY, SECURITY & SPACE

DISCOVER HOW YOU CAN

- ✓ Provide secure communications
- ✓ Improve forensic capabilities
- ✓ Enhance threat detection

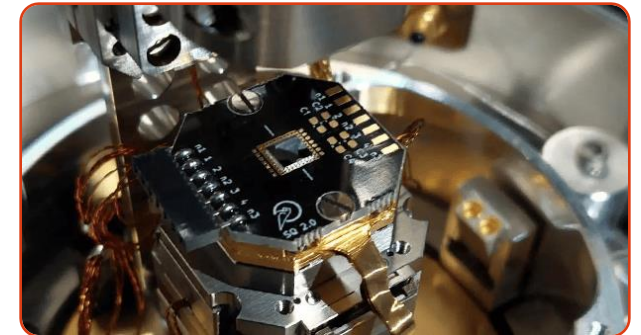
EXAMPLES OF SUPPORTED PROJECTS

**Real-time correction
of atmospheric
disturbances using
adaptive optics with
deformable mirrors**



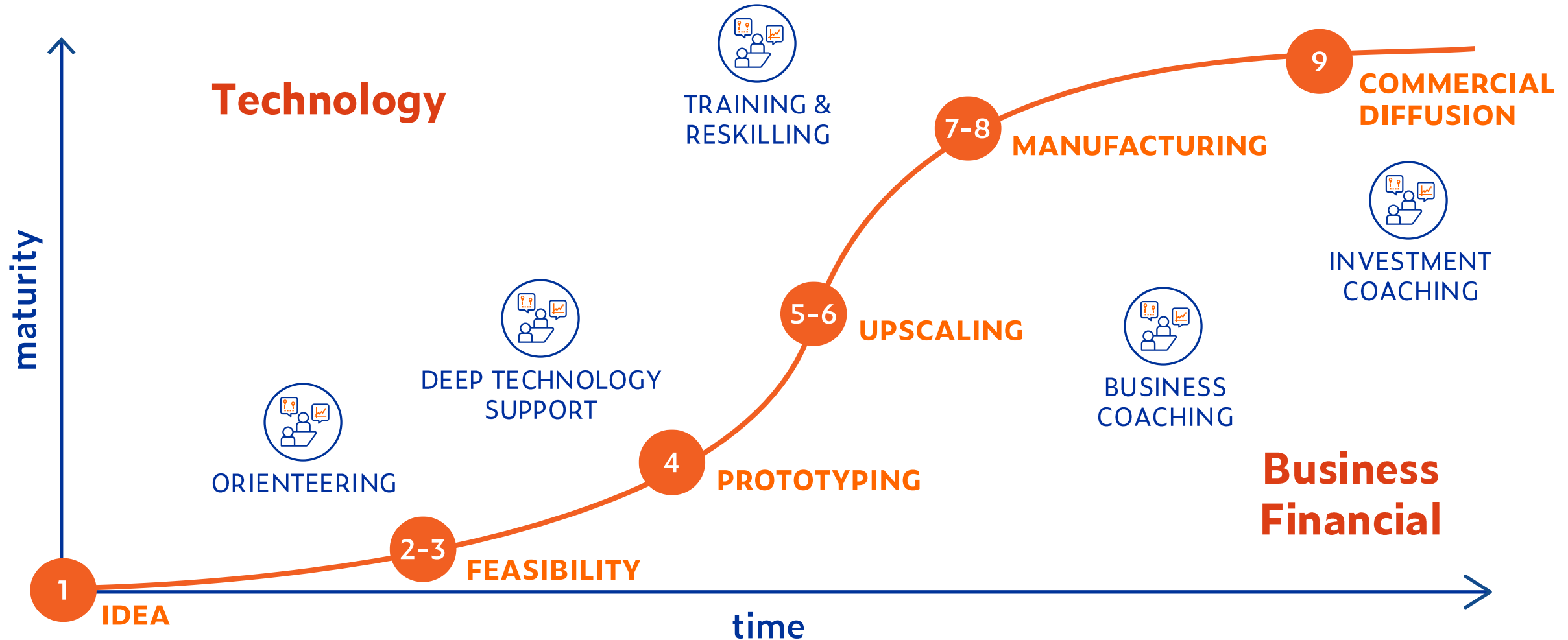
**Strengthening
mobile document
security with
fluorescent
ink analysis**

**On-Chip Single
Photon Source for
Secure Cryptosystems
and Quantum
Technologies**



Empowering companies to innovate with photonics

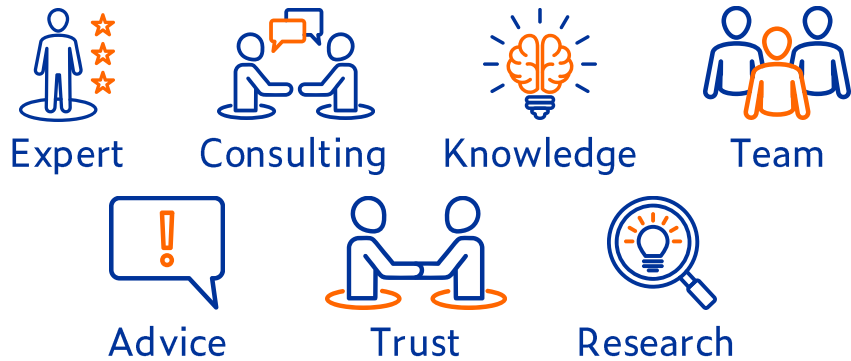
support across the entire innovation valley of death



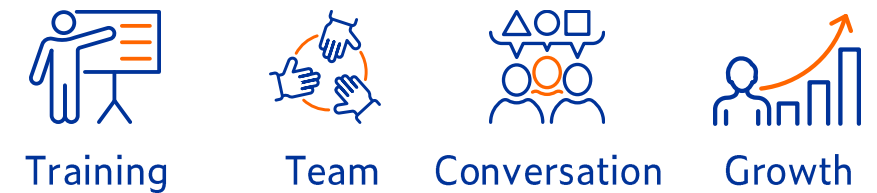
European top experts support your innovation

providing deep tech support and business & investment coaching

Technology Expertise



Business and Investment Expertise



Prototyping Services Pilot Lines and Foundries



Proof-of-concept
(POC)



Prototype



Pilot



Minimum viable
product (MVP)

Introducing the project's partners

30 Technology support partners

3 Business support partners



Partner Categories

★ Coordinator

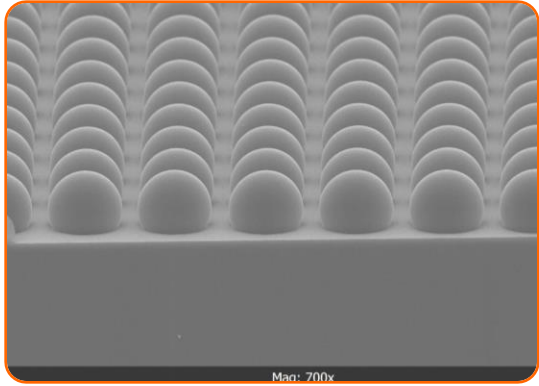
● Technology Support Providers

● Demo & Experience Centers

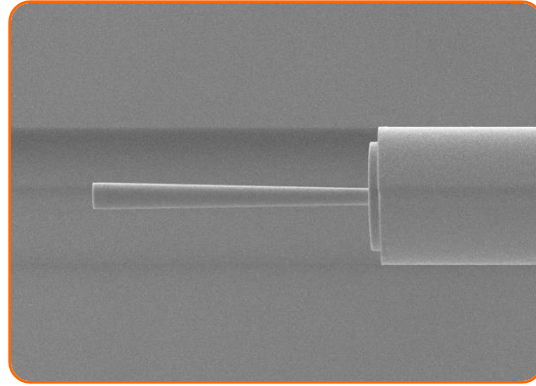
● Business Support Providers

■ Technology Support Providers from Associated Country

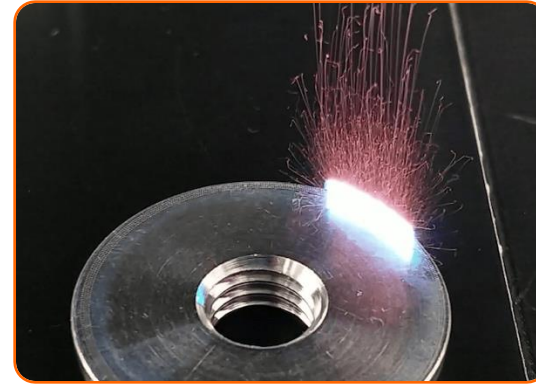
8 technology platforms providing innovation support for prototyping, pilot-line and foundry services



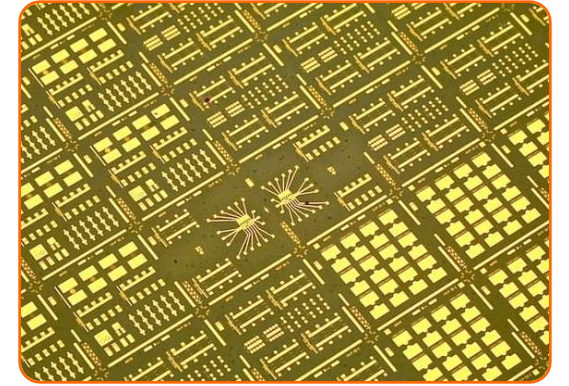
Free-space optics



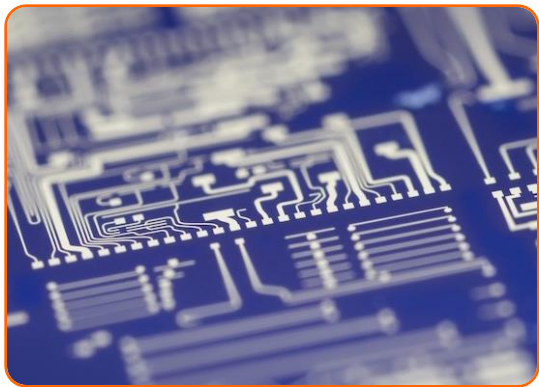
Specialty fibers



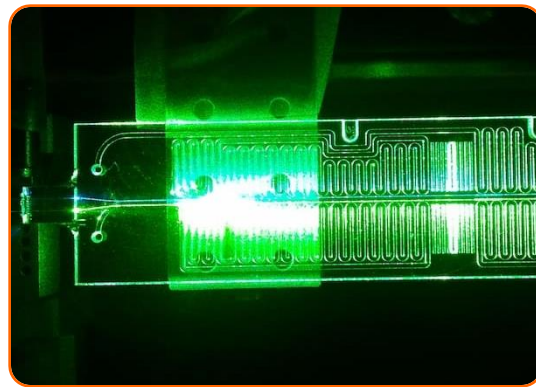
Laser-based manufacturing



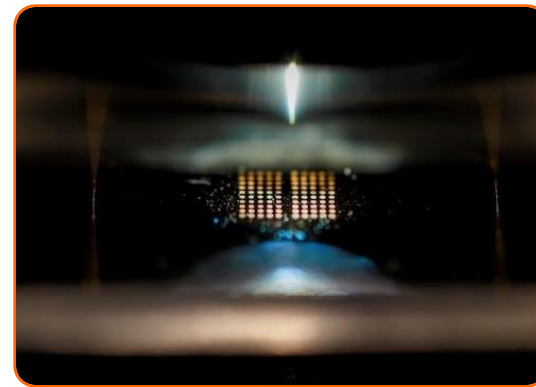
Si/SiN PICs



InP PICs



LNOI PICs



MOEMS



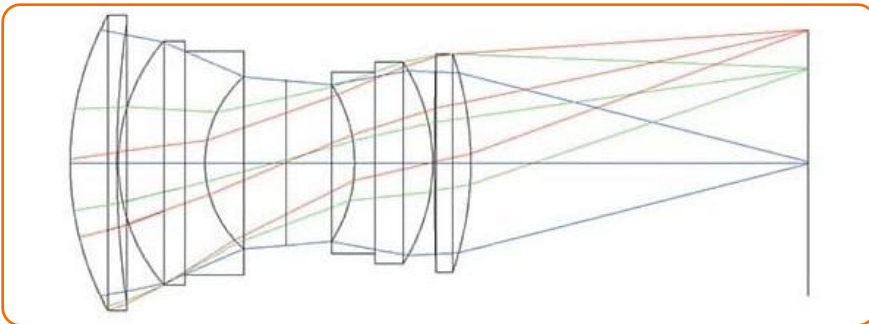
Packaging

From design and prototyping to upscaling

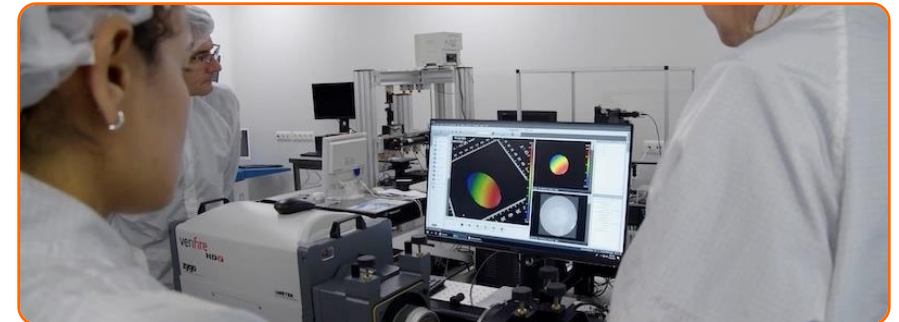
each tech. platform supports the full supply chain with EU manufacturing links



Platform 2
Prototyping and manufacturing



Platform 1
Modelling and design



Platform 3
Metrology and quality control



Platform 4 Proof-of-concept
demonstrators and industrial prototypes

PhotonHub PHACTORY

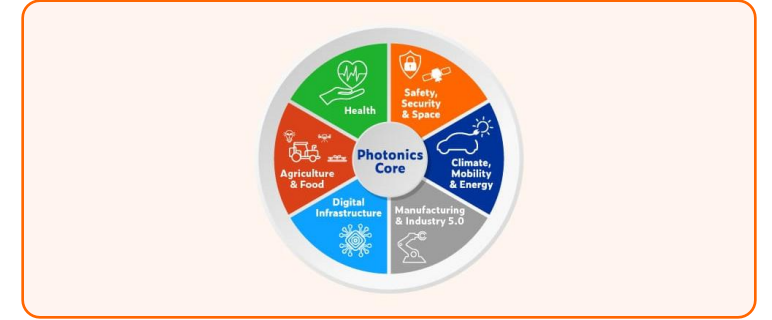
Key Principles



Innovation driven by business need of companies



Innovation support for SMEs & entrepreneurial-minded researchers



Focus on early adopters targeting photonics-first companies



Companies receive innovation support instead of funding



Project funding only to cross-border innovation support



Impact and strategy improvement measured by quantitative KPIs

Strongly subsidised projects up to 85% of the project's budget

**Free initial
assessment
by top experts**

for European
companies

TRL 2-7: Innovation projects



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

PHOTONICS²¹



Funded by
the European Union

Subsidy Levels

First €40k of innovation
project budget fully subsidised;
85% of total budget subsidised
thereafter*

*(*Except for LSCs where it is 50%
of total budget subsidised.)*

Illustrative examples:

Total innovation project budget		Subsidised by PhotonHub		Cash contribution of company
€ 50k	=	€ 48.5k	+	€ 1.5k
€ 100k	=	€ 91k	+	€ 9k
€ 220k	=	€ 193k	+	€ 27k

Strongly subsidised projects up to 85% of the project's budget

IRL 1-9: Business support



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

PHOTONICS²¹



Funded by
the European Union

**Free initial
assessment
by top experts**

for European
companies

Available to EU-companies

- **Entrepreneurially minded Researchers and Start-Ups**
 - ✓ Launch Pad
- **Fast Scaling Ventures**
 - ✓ Scaling Club
- **Photonics-Enabled SMEs and LSCs**
 - ✓ Expert Mentoring

Customised benefits to your company

ONE-STOP-SHOP

Full supply chain of cutting-edge photonics platforms

SEAMLESS SUPPORT

All the way from concept to manufacturing (TLR 3–8) through multiple follow-on projects

SCALING FOCUS

Scaling Club dedicated to guidance on upscaling

CONCRETE RESULTS

TRL advancement of 1–2 TRL levels

FASTER TIME TO MARKET

Projects typically take 6–9 months

BUSINESS ACCELERATION

Customised business and IP coaching to support strategic development

TOP EXPERTS

We select the partners that can best serve your technology needs

6 Steps to launch your photonics innovation



1 SELECT THE SERVICES OF INTEREST AND REGISTER ONLINE



2 TECHNOLOGY ORIENTEERING

We will contact you under NDA to explore your photonics ambition and identify the right technology approach and partners.



3 INITIAL EXPERT ASSESSMENT

Face-to-face expert meeting covering technical and business aspects, followed by a report with next steps (within 2 weeks).



4 PROJECT PROPOSAL

Assignment of a project leader to help prepare and submit your tailored innovation proposal.



5 PROJECT EVALUATION

Reviewing and scoring your proposal, invites you to an online Q&A, and delivers a formal report within one week.



6 CONTRACT SIGNING AND KICK-OFF

Once granted, all partners sign the innovation project agreement and the project kicks off.

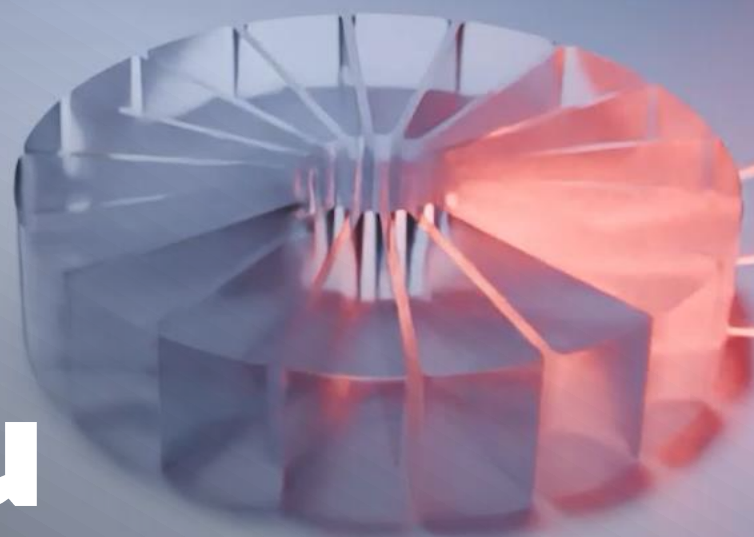


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photonhub.eu

Start YOUR Supported
Photonics Innovation Journey
Apply online – NOW



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

 **PHOTONICS²¹**



**Funded by
the European Union**