



# Funding Opportunities in Photonics – R&I Projects

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# Content

- National Funding
- European Funding
- Funding outside Europe
- EU Funding to support SMEs: PhotonHub Europe Project

# National Funding: SNSF



FONDS NATIONAL SUISSE  
SCHWEIZERISCHER NATIONALFONDS  
FONDO NAZIONALE SVIZZERO  
SWISS NATIONAL SCIENCE FOUNDATION

*The SNSF promotes scientific research in Switzerland. It promotes the international competitiveness and integration of this research as well as its capacity to solve problems.*

## Main funding programs

- *SNSF project funding*
- *Sinergia*
- *Career programmes: Eccellenza, PRIMA and Ambizione*
- *National Centres of Competence in Research (NCCRs)\**
- *National Research Programmes (NRPs)\*\**

\**NCCR Quantum Photonics (2001-2013)*

\*\**NRP 13 "Research in Micro- and Opto-electronics" (ended 1991)*

## SNSF Project Funding

Annual Funding: 1056 MCHF  
Calls/year: 1<sup>st</sup> (Oct & Apr)  
Topic: All  
Success rate: ~ 50%



[LINK](#)

## Innosuisse – Swiss Innovation Agency



### Main funding programmes

- *Innovation project*
- *Innovation cheques*
- *New: Innosuisse Flagship Initiative*
- *NTN\* Innovation Boosters (e.g. Photonics)*

\*Swissphotonics National Thematic Network (2012-2020)

Other relevant programmes financed via Innosuisse:




- Eureka:
  - Eurostars (deadline Nov. 4)
  - Bilateral programmes (e.g. CH-SE)
- ECSEL (Electronic Components and Systems for European Leadership) – Innosuisse info (ECSEL is becoming Key Digital Technologies Joint Undertaking)

### Research Programmes of Swiss Federal

Offices:

- armasuisse
- of Energy (OFEN)
- of Communication (OFCOM)
- of Information Technology, Systems and Telecommunication

# EU-Funding: Horizon Europe

 Some parts unavailable  
 Mostly unavailable  
 Totally closed

## Pillar I Excellent Science

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures

*Swiss Partners can  
access > 90% of the  
collaborative actions*

## Pillar II Global Challenges and European Industrial Competitiveness

### Clusters

- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Non-nuclear direct actions of the Joint Research Centre

## Pillar III Innovative Europe

European Innovation Council

EIC Pathfinder

EIC Transition

(EIC Accelerator)

European Innovation Ecosystems

European Institute of Innovation and Technology

*Swiss Partners  
admitted in CSAs  
exceptionally*

Part: Widening participation and strengthening the European Research Area

And:  
EURATOM

Europe  Defence Fund

Digital Europe ?

# Horizon Europe Call Topics - Photonics

Call Topic ID	Title	# projects	M€/project	Deadline
<a href="#">HORIZON-CL4-2021-TWIN-TRANSITION-01-03</a>	<b>Laser-based technologies for green manufacturing (Photonics - Made in Europe Partnerships) (RIA)</b>	4	5 to 7	23.09.21
<a href="#">HORIZON-CL4-2021-DIGITAL-EMERGING-01-06</a>	<b>Advanced optical communication components (Photonics Partnership) (IA)</b>	6	4 to 6	21.10.21
<a href="#">HORIZON-CL4-2021-DIGITAL-EMERGING-01-07</a>	<b>Advanced Photonic Integrated Circuits (Photonics Partnership) (RIA)</b>	8	3 to 5	21.10.21
<a href="#">HORIZON-CL4-2022-DIGITAL-EMERGING-01-03</a>	<b>Advanced multi-sensing systems (Photonics Partnership) (RIA)</b>	10	3 to 5	05.04.22
<a href="#">HORIZON-CL4-2022-DIGITAL-EMERGING-02-17</a>	<b>New generation of advanced electronic and photonic 2D materials-based devices, systems and sensors (RIA)</b>	1	16.5	16.11.22
...	...			

And many more topics including photonics technologies!...

## US: Mostly defense-related, fundamental and very broad

- Office of Naval Research
  - Electromagnetic Materials - [link](#)
- Air Force Office of Scientific Research
  - Electronics Optoelectronics and Photonics - [link](#)
- Army Research Office (ARO: Broad Agency Announcement for Fundamental Research - [link](#))
  - Photonics Electronic sensing
  - Photonics Optoelectronics
  - Photonics Optics and Fields
- [DARPA](#) (Defense Advanced Research Projects Agency)

## “Asia”:

- Several Asian funding opportunities: China, Japan, South Korea and Singapore.
- Fellowships for exchange programs for students and postdocs are “easier to arrange”
- Collaborative actions are very difficult from a contractual point of view (IP but also other terms and conditions)

Some large companies provide research funding (e.g. Sony and Samsung):

<https://memento.epfl.ch/event/sony-faculty-innovation-focused-research-award-cal/>

[https://www.sait.samsung.co.kr/saithome/about/collabo\\_overview.do](https://www.sait.samsung.co.kr/saithome/about/collabo_overview.do)

# EU-Funding to help SMEs take up photonic technologies

- PhotonHub is THE Digital Innovation Hub for the field of Photonics in Europe
- Largest Photonics EU project ever! (H2020) – 19 M€ grant
- European Commission's aim: spread photonic technologies in innovative SMEs' products
- Comprehensive support to SMEs:
  - Training
  - Test before invest (prototyping/upscaling/manufacturing)
  - More competitive products
  - Find investments



**PhotonHub  
Europe®**

PHOTONICS INNOVATION HUB  
FOR EUROPE

[www.photonhub.eu](http://www.photonhub.eu)





# EU-Funding to help SMEs take up photonic technologies



## PhotonHub Europe®

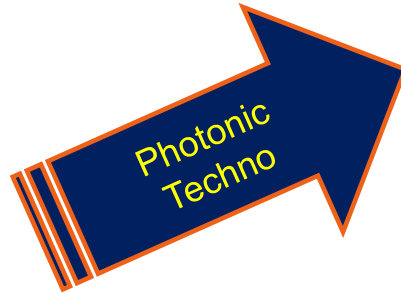
PHOTONICS INNOVATION HUB FOR EUROPE

[www.photonhub.eu](http://www.photonhub.eu)

5000 + photonics SMEs



Associated to 100s of Universities and RTOs



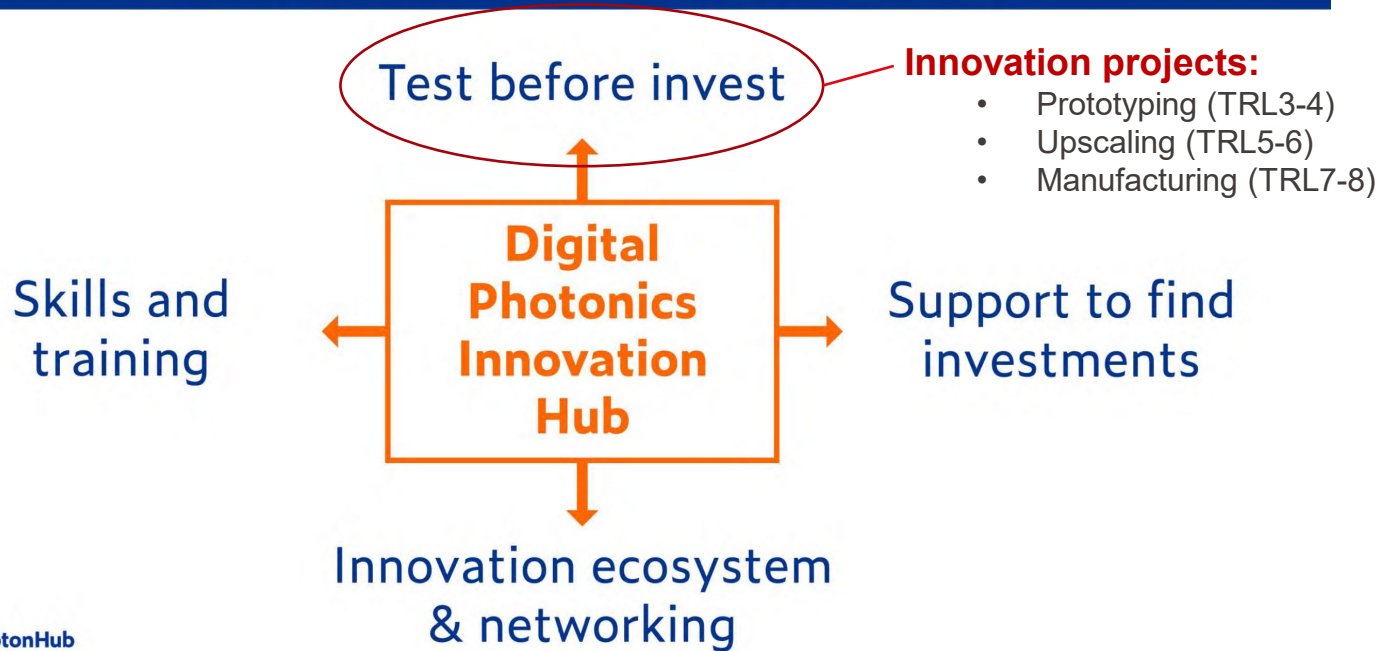
## 260.000 high-potential SMEs for photonics innovation

The SME sector in Europe



**260,000** are classified as Innovative Enterprises by the EC¹.

## Single One-Stop-Shop



# EU-Funding to help SMEs take up photonic technologies

## Innovation projects:

Project Level	Anticipated Average Innovation Project Budget	PhotonHub Subsidy	Max. Subsidy	No. of projects permissible
Prototyping (TRL3-4)	40K€	<b>For SMEs:</b> 100% of the first 30K€; thereafter (incl. follow-on projects) 75% subsidy with the company contributing 25% in-cash <b>For LSCs:</b> 50% subsidy on all costs	100K€ per innovation project	Max. of 1 follow-on project per company at the prototyping level
Upscaling (TRL5-6)	161K€	<b>For SMEs:</b> 50% subsidy for first users & early adopters <u>at this level</u> , with the companies contributing 50% in-cash; 0% subsidy if the company is not a first user or early adopter <b>For LSCs:</b> 0% subsidy on all costs	250K€ per innovation project, of which of which cascade funding can be provided up to a maximum of 150K€	Max. of 1 follow-on project per company at the upscaling level
Manufacturing (TRL7-8)	2K€	100% subsidy for all companies	2K€	1 subsidised engagement only

### Introductory online courses in Photonics Innovation:

<https://www.photonhub.eu/introductory-photonics-innovation/>

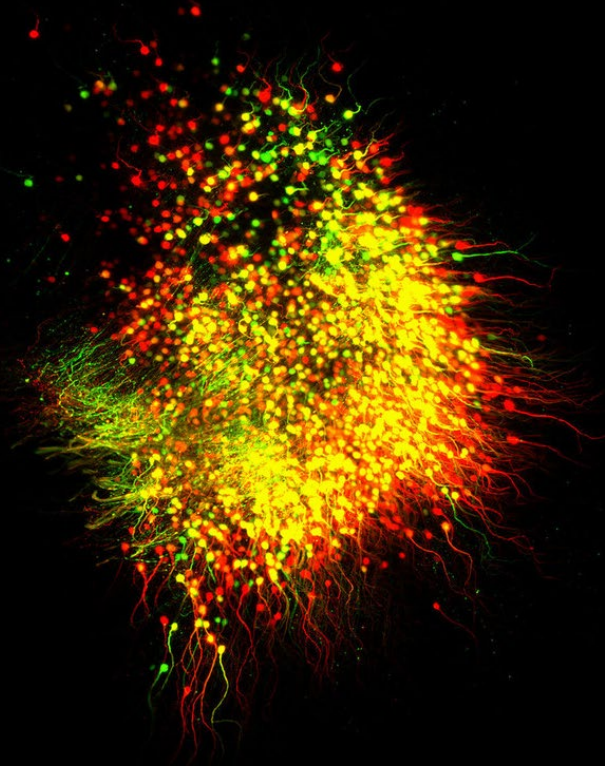
EPFL: Nov.17, 14:00-18:00

Ligentec: Dec. 7, 9:30-13:30

CSEM: Dec. 15, 14:00-18:00

Innovate with the technology of light: Apply [here!](http://www.photonhub.eu) ([www.photonhub.eu](http://www.photonhub.eu))

Contact the EPFL team for guidance, advice & support: [PhotonHub@epfl.ch](mailto:PhotonHub@epfl.ch)



## Some Recommendations

- Submit to Horizon Europe (collaborative)!
  - > 90% of collaborative actions accessible
  - CH partners easy to integrate (paid by CH)
- Small and Medium-Sized Enterprises, (photonics or not):
  - Apply to PhotonHub Europe!