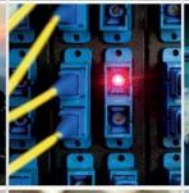
Photonik auf EU-Ebene

Dr. Heinz Seyringer, CEO V-Research

PHOTONICS21

Photonics, the science of light, is a cross-sectional technology that serves many markets and applications

Types of Photonic Systems	Sensors & instruments	Camera & imaging systems	Communication systems	Screens, displays, projectors	LED, OLED, smart lighting	Photovoltaic systems	Laser & production systems
Photonic functions	Measure monitor	Acquire information	Transmit information	Deliver information	Provide light	Collect energy	Manufacture
Examples							
							

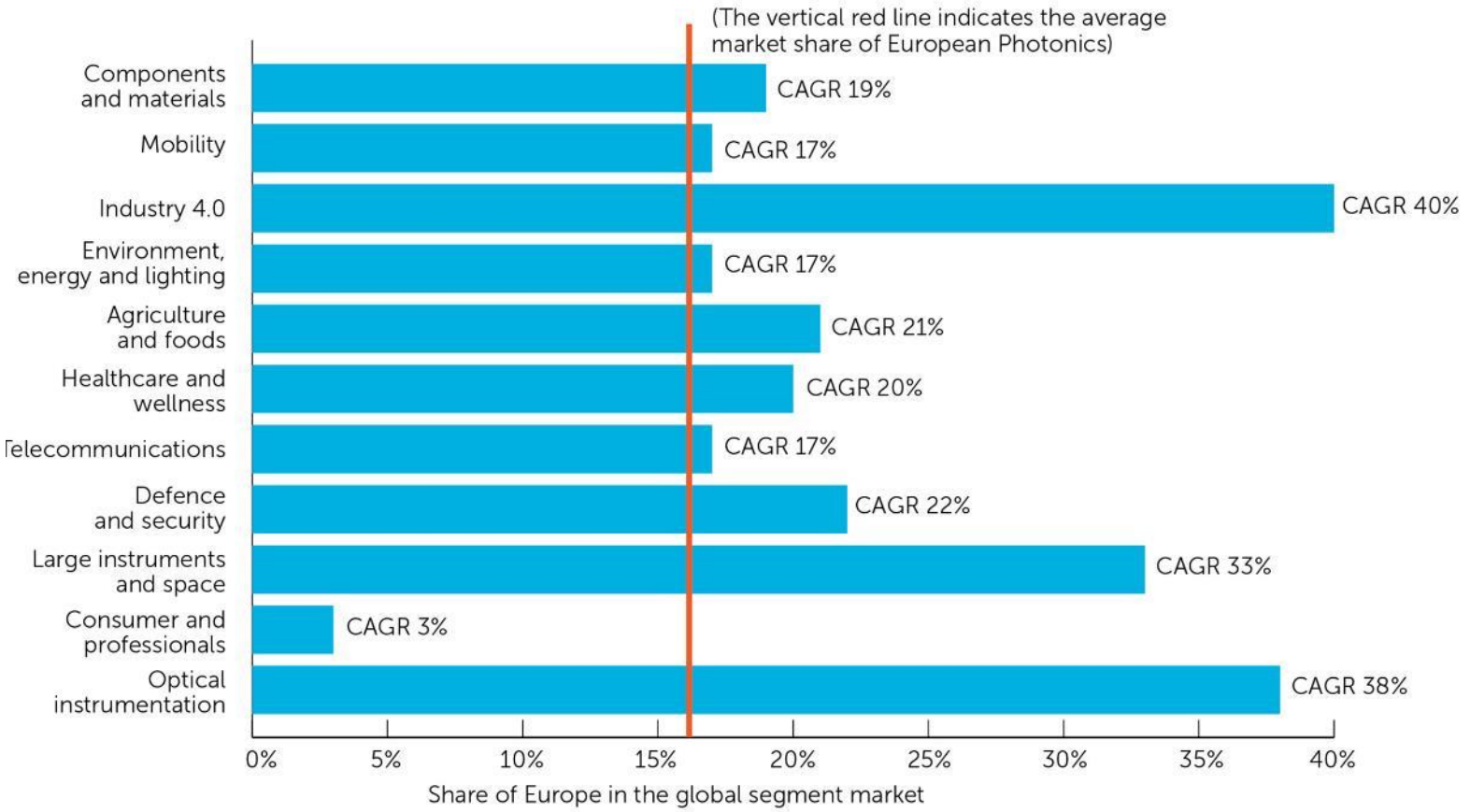
Top row images from left to right: © 4X-image, djedzura, Ceneri, Thomas-Soellner, Sakan Piriyapongsak, vlbentley, Phuchit / iStock.com
Second row images from left to right: © danlogan, atracurium_, BrianAJackson, pixdeluxe, lovelyday12, DiyanaDimitrova, tiero / iStock.com

Data Source: Photonics21 / TEMATYS, Market Study and Industry Report 2020

PHOTONICS21

European Photonics Industry: Global market share by segments compared to the average of European photonics market share

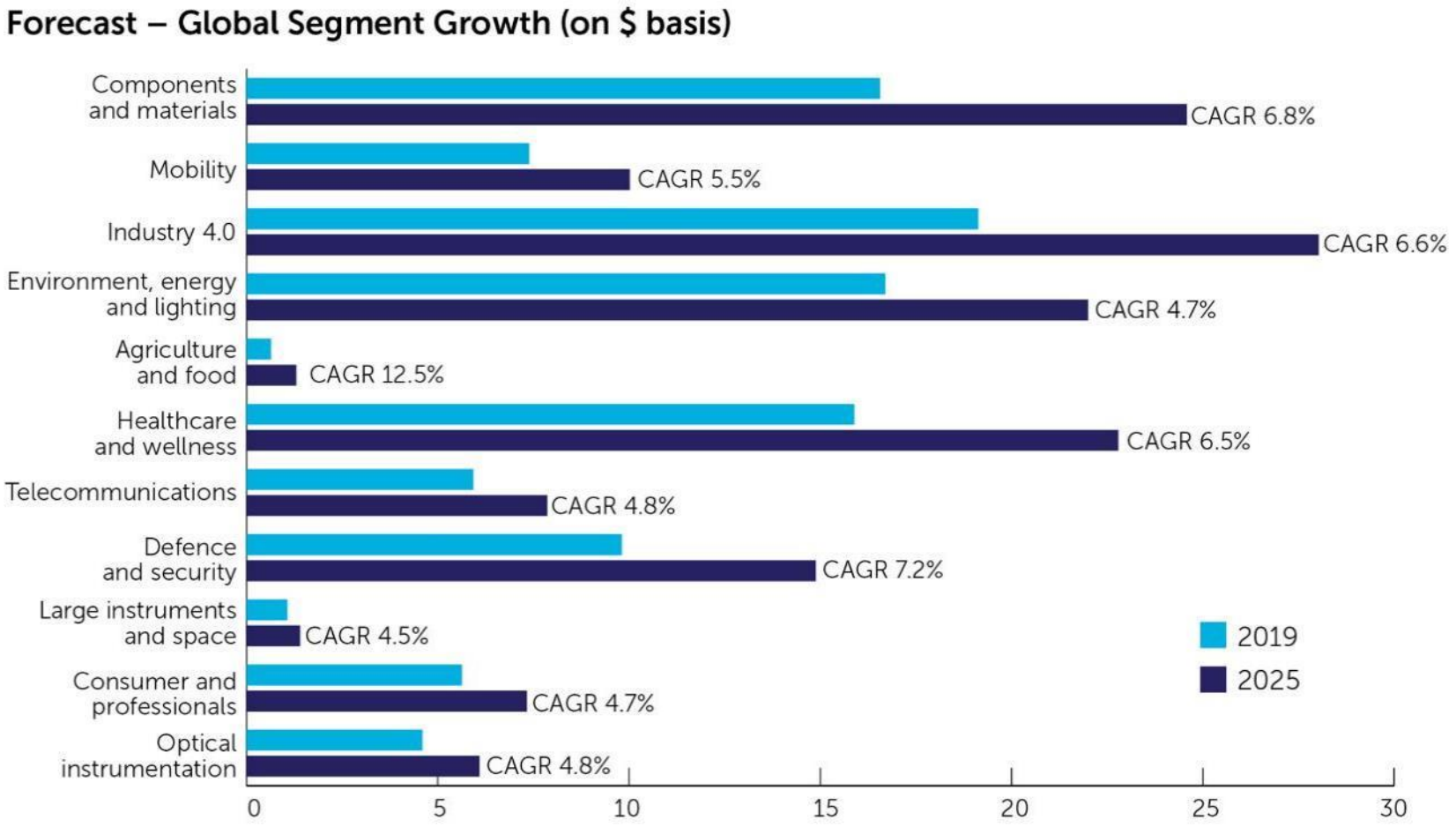
Status 2019



PHOTONICS 21

Data Source: Photonics21 / TEMATYS, Market Study and Industry Report 2020

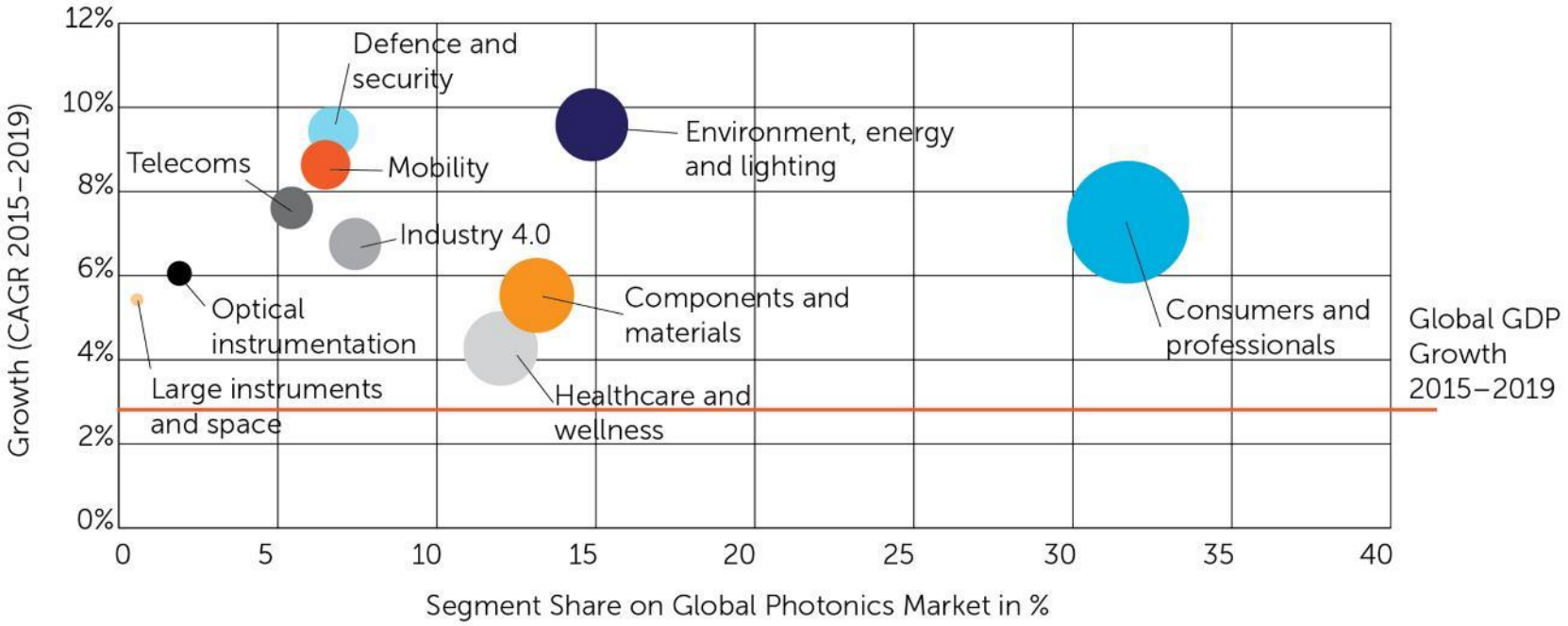
Forecast: European Photonics Industry by segment (2019–2025)



PHOTONICS 21

Data Source: Photonics21 / TEMATYS, Market Study and Industry Report 2020

Global Photonics Segment Growth and Market Share compared to Global GDP Growth (2015–2019)



Note: the surface of the "bubbles" is proportional to the size of the segment in $ billion

PHOTONICS 21

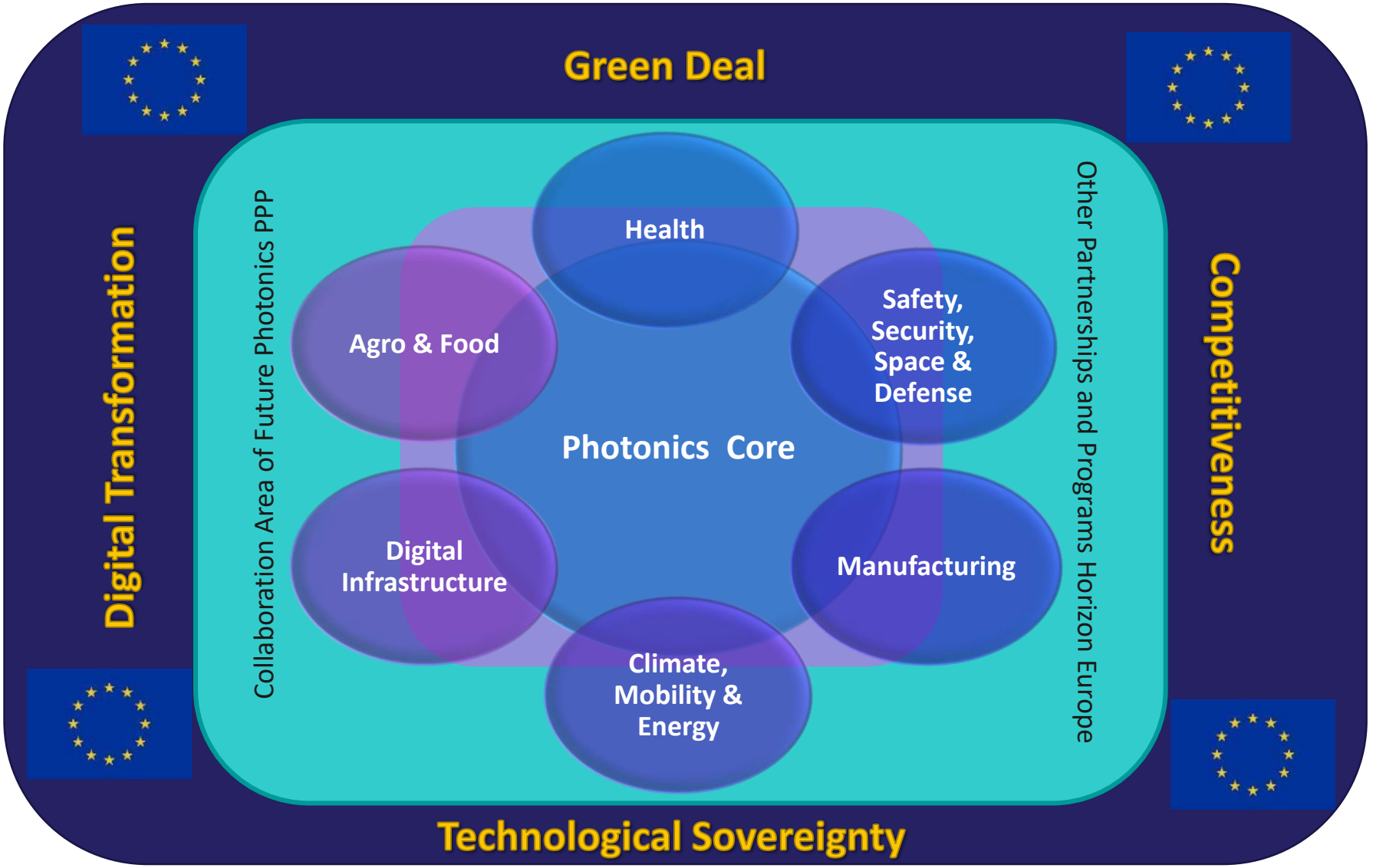
Data Source: Photonics21 / TEMATYS, Market Study and Industry Report 2020

The structure of Photonics21

PHOTONICS 21

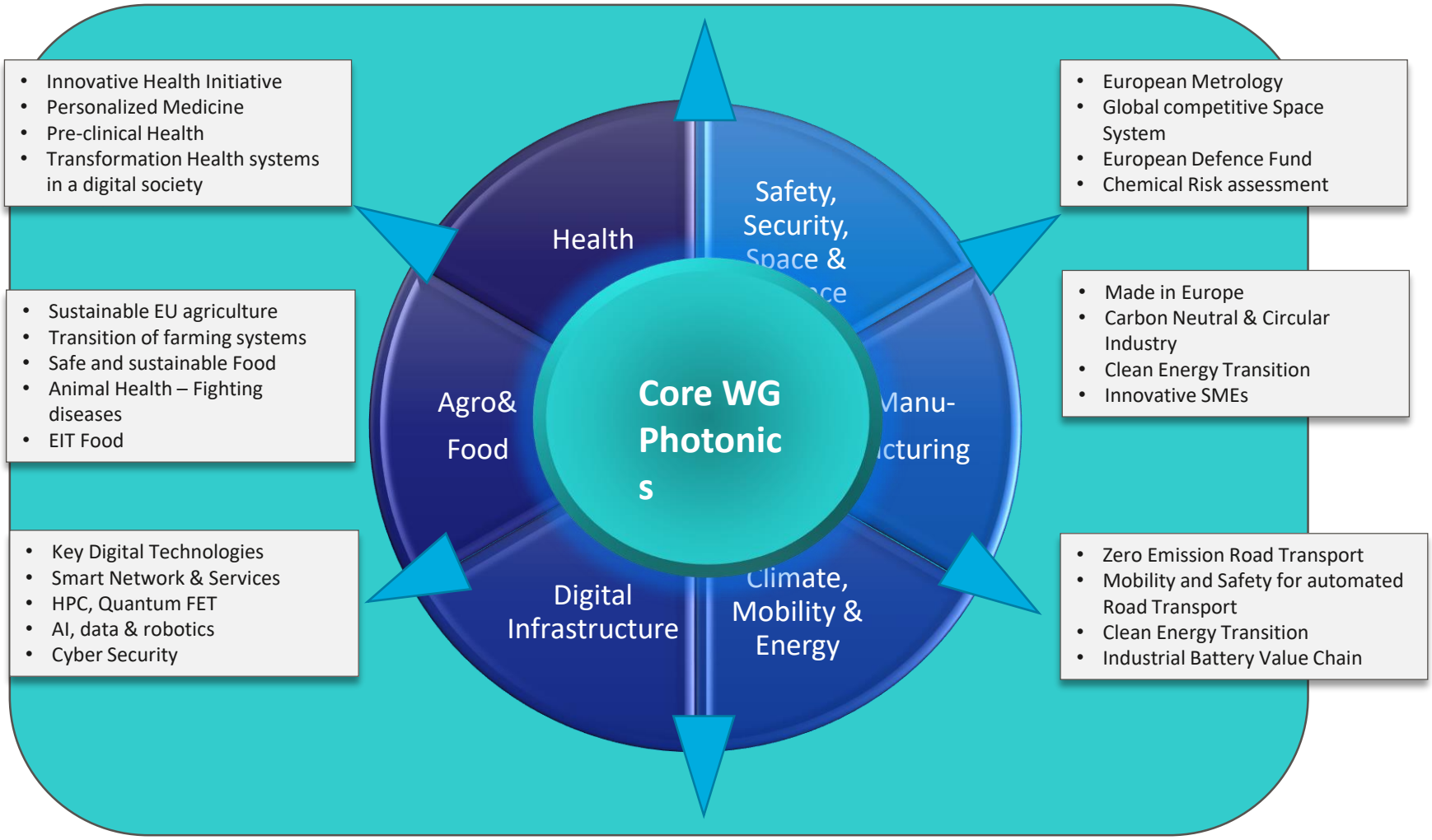
The Future Structure Photonics PPP

New Thematic and Governance Structure is embedded in the new EU Landscape



New Structure: Strong Orientation and set up for Cooperation

Six Application oriented A-WG Chairs work with Partners on MoU and Roadmaps / Core Photonics WG consolidate input and assemble a Core Photonics Programme



Overview of 49 candidate European Partnerships

HORIZON EUROPE PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health

- Innovative Health Initiative
- Global Health Partnership
- Transformation of health systems
- Chemicals risk assessment
- ERA for Health
- Rare diseases*
- One-Health Anti Microbial Resistance*
- Personalised Medicine*
- Pandemic Preparedness* *Co-funded or co-programmed*

CLUSTER 4: Digital, Industry & Space

- Key Digital Technologies
- Smart Networks & Services
- High Performance Computing
- European Metrology (Art. 185)
- AI-Data-Robotics
- Photonics
- Made in Europe
- Clean steel – low-carbon steelmaking
- Processes4Planet
- Global competitive space systems**

CLUSTER 5: Climate, Energy & Mobility

- Clean Hydrogen
- Clean Aviation
- Single European Sky ATM Research 3
- Europe's Rail
- Connected and Automated Mobility (CCAM)
- Batteries
- Zero-emission waterborne transport
- Zero-emission road transport
- Built4People
- Clean Energy Transition
- Driving Urban Transitions

CLUSTER 6: Food, Bioeconomy, Agriculture, …

- Circular Bio-based Europe
- Rescuing Biodiversity to Safeguard Life on Earth
- Climate Neutral, Sustainable & Productive Blue Economy
- Water4All
- Animal Health & Welfare*
- Accelerating Farming Systems Transitions*
- Agriculture of Data*
- Safe & Sustainable Food System*

Institutionalised Partnerships (Art 185/7)
Institutionalised Partnerships / EIT KICs
Co-Programmed
Co-Funded

** Calls with opening dates in 2023-24*
*** Calls with opening dates not before 2022*

PILLAR III - Innovative Europe

EIT (KNOWLEDGE & INNOVATION COMMUNITIES)

- InnoEnergy
- Climate
- Digital
- Food
- Health
- Raw Materials
- Manufacturing
- Urban Mobility
- Cultural and Creative Industries

SUPPORT TO INNOVATION ECOSYSTEMS

- Innovative SMEs

CROSS-PILLARS II & III

- European Open Science Cloud

Pillar II

Budget for clusters & for JRC

in current prices

Cluster 1	**Health**	**€8.246 billion** (including €1.35 billion from NGEU)
Cluster 2	**Culture, Creativity & Inclusive Societies**	**€2.280 billion**
Cluster 3	**Civil Security for Society**	**€1.596 billion**
Cluster 4	**Digital, Industry & Space**	**€15.349 billion** (including €1.35 billion from NGEU)
Cluster 5	**Climate, Energy & Mobility**	**€15.123 billion** (including €1.35 billion from NGEU)
Cluster 6	**Food, Bioeconomy, Natural Resources, Agriculture & Environment**	**€8.952 billion**
	JRC (non-nuclear direct actions)	**€1.970 billion**

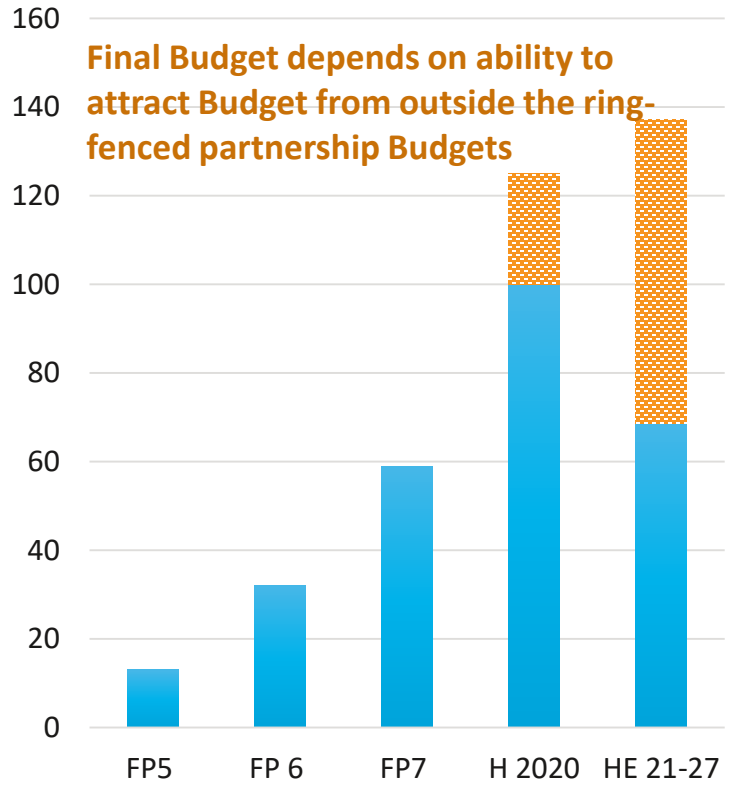
Clusters are including a budget for Partnerships and Missions
NGEU is Next Generation EU programme – Recovery Fund

European Commission

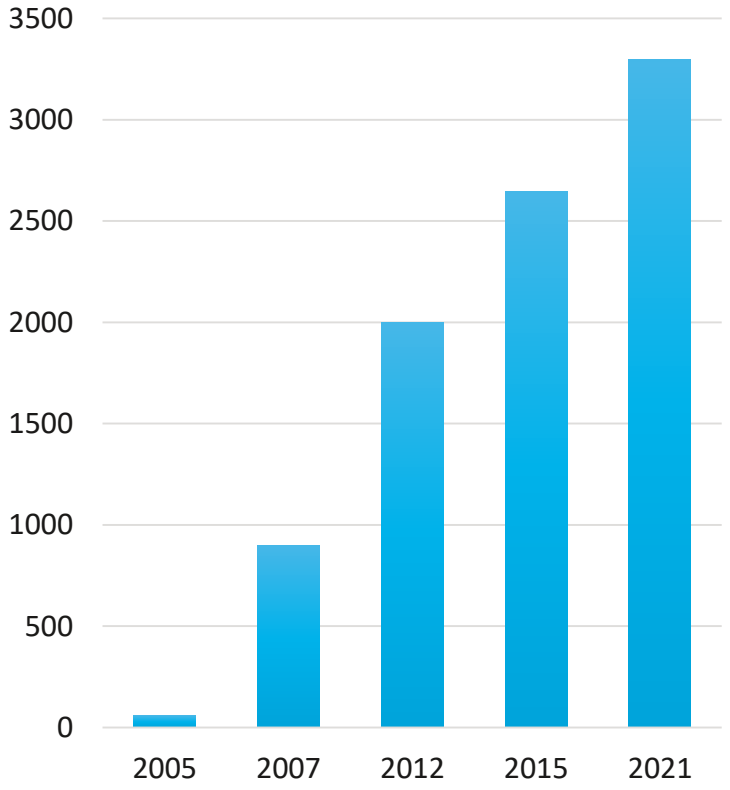
Photonics Partnership at time of Launching Horizon Europe

EU Funding Budget and Membership Development / New approach to only assign 50 % of Budget to Partnerships – other 50 % assigned by missions and impact areas

Yearly EU Funding in € Mio.



Photonics21 Members



PHOTONICS 21

PHOTONICS PUBLIC PRIVATE PARTNERSHIP

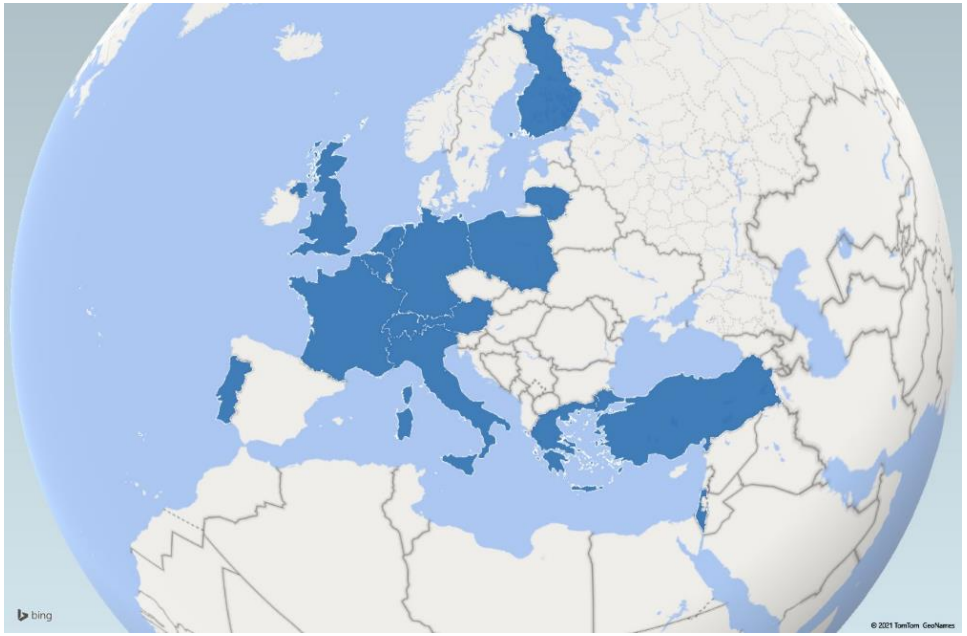
The Photonics21 “Mirror Group”

PHOTONICS PUBLIC PRIVATE PARTNERSHIP

What is the Mirror Group?

- The Mirror Group is composed of representatives from national and regional public authorities and funding agencies involved with the promotion and financing of research and innovation in the field of photonics.

- Its members follow and support the activities of Photonics21, mainly through transnational funding competitions on topics of particular relevance to the participating countries.



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

MIRROR GROUP OF THE PHOTONICS PUBLIC PRIVATE PARTNERSHIP

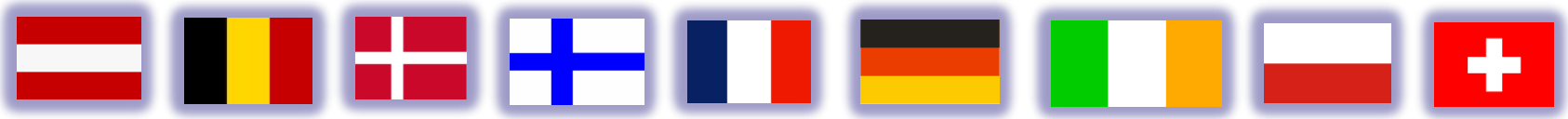
PHOTONICS21

eureka innovation beyond borders

Photonics call 2022

for multilateral R&D&I project proposals on

next generation integrated photonic sensing



Participating countries

- Austria
- Belgium (Flanders)
- Denmark
- Finland
- France
- Germany
- Ireland
- Poland
- Switzerland

Call topics

PICs (photonic integrated circuits):

Projects sought may include work on generic approaches (packaging, connecting, scaling, materials) but are centrally aimed at concrete photonic sensors or sensing systems.

QPICs (photonic quantum sensors):

Projects sought focus on the integration of classical and quantum optics, aiming to use quantum properties or quantum phenomena to perform a measurement or to expand the capability of a sensor.

Hybrid sensing:

Projects sought combine (two) different sensing methods - at least one of which originates from the field of photonics - to enable new sensor applications or to substantially improve existing ones.

MIRROR GROUP OF THE PHOTONICS 21
PHOTONICS PUBLIC PRIVATE PARTNERSHIP

eureka
innovation beyond borders

Timetable of the call

Call opened	**14 April 2022**
Submission deadline for Eureka project proposals	**27 June 2022** (date of receipt)
Feedback to proposers and start of national funding procedures	**October 2022**
Start of projects	**as from November 2022***
*** i. a. depending on the national funding procedures of the countries involved in a project**	

Further information on the EUREKA-call Next Generation Photonics Sensing

FFG website:

https://www.ffg.at/europa/ausschreibungen/eureka-photonics_2022

EUREKA website:

https://www.eurekanetwork.org/open-calls/network-projects-photonics-call-2022

Thank you for your attention!

Heinz Seyringer
heinz.seyringer@v-research.at

PHOTONICS21