



Horizon Europe:

Photonics Industry ready to invest up to €100 billion in R&I to work with the European Commission in a new Public Private Partnership in Horizon Europe 2021-2027

Brussels, 17 June 2019

Photonics is a key enabler for Europe's ambitions in Digitalization including Industry 4.0, artificial intelligence, smart farming, 5G, personalized healthcare and many other applications. This enabling technology underpins critical elements of key strategic value chains from the automotive and medical industry to the aerospace and quantum computing/communication sectors.

A resilient photonics capacity is vital to European sovereign security interests. According to the recent European Commission and European Investment Bank report (2018): photonics is one of two essential key enabling building blocks for the digital transformation of Europe, which will be based on deep technologies¹.

"Photonics is a truly European success story," said Photonics21 Vice President Bernd Schulte "the 5000 Photonics SMEs in Europe are highly competitive and have created and will create high-tech jobs every day. However, we experience an increasingly fierce - often state backed - competition from outside Europe."

The China Central government has increased its investment in photonics every year by 40%, to reach €1 billion in 2020. The South Korea government spending in photonics will increase to €2.8 billion p.a. by next year. One recent example from the US is a \$610 million public-private partnership to help strengthen high-tech U.S.-based photonics integrated circuit manufacturing.

"We firmly believe that Europe needs to become more ambitious now and match the aspiring investments from other regions of the world in deep technologies to stay competitive. The Photonics industry is willing to team up with the European Commission and jointly invest in the future of Europe," said Schulte.

"The Photonics SME industry is committed to invest €100 billion in R&I in Europe over the course of the Horizon Europe programme (2021-27) if a Photonics Public Private Partnership is launched by the Commission" Bernd Schulte said.

Photonics21 Vice President Giorgio Anania said:

"We ask the European Commission to facilitate a *Horizon Europe* Photonics Partnership of a significant size, namely to double the European Commission commitment to €200 Mio. per year,

¹ 2018 European Commission and European Investment Bank report on "Financing the digital transformation: Unlocking the value of photonics and microelectronics"

€1.4 billion over the course of Horizon Europe. This investment will be essential to keep Europe at the forefront of this key deep technology. In the current Photonics Public Private Partnership (PPP), we have already demonstrated that every 1 Euro invested by the European Commission is leveraged by 5 Euros from Photonics SMEs. Moreover, an independent expert group of the European Commission rated the Photonics PPP best in class.”

A new successful partnership between the Photonics Industry and the European Commission could result in tripling the Photonics production in Europe by 2030 according to the [Photonics21 Vision Paper](#), but even more important providing key strategic components to future European systems houses and world champions in driverless cars, healthcare, food production, robotics and Industry 4.0.

The global photonics market was USD 527.14 billion in 2016 and is expected to reach a value of USD 865.8 billion by 2022 at a CAGR of 8.0%². The European photonics industry, mainly consisting of SMEs, currently has a considerable global leadership position (#2 after China) and employs over 300,000 people directly.

With this highly innovative industry and four recent Nobel Prizes awarded to European scientists for their work in photonics, Europe is in a very good starting position to accelerate advanced key European initiatives, such as AI, High-Performance Computing, Quantum Communication and Quantum Computing, as well as Smart Cities which all depend on photonics as the key enabling technology.

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About Photonics21

Photonics21 is the European Technology Platform (ETP) for photonics, a technology encompassing all of the products and processes around the emission, manipulation and detection of light. Photonics is integral to a wide range of industries that include the medical, healthcare, transport, manufacturing, and telecommunications sectors.

"Photonics21" was set up in December 2005 to bring the community of photonics researchers and industries together. The European Commission recognized photonics as one of five European Key Enabling Technologies (KET's) in September 2009. Shortly after, the European Research & Innovation Program "Horizon 2020" invited Photonics21 to become a "Public-Private Partnership" (PPP). The "Photonics 21 Association", a legal entity under Belgian law, became the private contract partner in a Public Private Partnership (PPP) in conjunction with the EU Commission. It was ranked first in the recent "Mid-term review of the contractual Public Private Partnerships (cPPPs) under Horizon 2020"³.

Today Photonics21 unites more than 3000 members, representing more than 1700 photonics organisations from across Europe. Our members are experts in the photonics industry, research organisations and universities who actively engage with us to develop a joint photonics strategy for future research and innovation in Europe.

² Global Photonics Market, Mordor Intelligence LLP, Dec 2017

³ European Commission, 2017

Contact

W: <http://www.photonics21.org>

E: secretariat@photonics21.org

T: <https://twitter.com/Photonics21>

L: www.linkedin.com/company/photonics21