



Europe's age of light!

Leverage the unbroken innovation potential of Photonics

Photonics – a key digital technology for global mega markets and challenges

-  **Live longer, feel better** – Photonics in life sciences and healthcare
-  **Feed the world** – Photonics for safe, nutritious and affordable food
-  **Keep our traffic flowing** – Photonics for autonomous & connected mobility
-  **Zero emission, less waste** – Photonics for sustainability and a clean environment
-  **Empowering Industry 4.0** – Photonics in manufacturing and production
-  **A new quality of urban life** – Photonics for smart homes and liveable cities
-  **Building our digital society** – Photonics for a secure and resilient IT infrastructure
-  **Linking big ideas** – Photonics as a driver of the digital knowledge society


PHOTONICS²¹

European Photonics – a fast growing SME based industry

- Globally photonics sector **is growing twice as fast** as the global GDP – expected to reach a production volume of **€615 billion in 2020**
- European Photonics Production has increased by **over 62%** over the last 10 years investing roughly **€10 billion** per year in innovation in Europe
- European Photonics is a SME based business with about **5000 companies**
- European Photonics **leads the world** in Production Technology (50%), Measurement & Automated Vision (35%), Optical Components & Systems (32%), Medical Technology & Life Sciences (28%), Defense & Security (26%) and Lighting (24%).

World Leading Economies heavily invest in Photonics

- Public funding for Photonics in South Asia (China, South Korea and Japan) will double from 2014 to 2020 to €4.2 billion
- USA: White House decision to heavily invest in next-generation photonics manufacturing facilities fostering innovation in digital industries.

Towards 'Horizon Europe': What is needed to drive the digital revolution

A Photonics Public-Private-Partnership will unleash the full innovation potential of Photonics

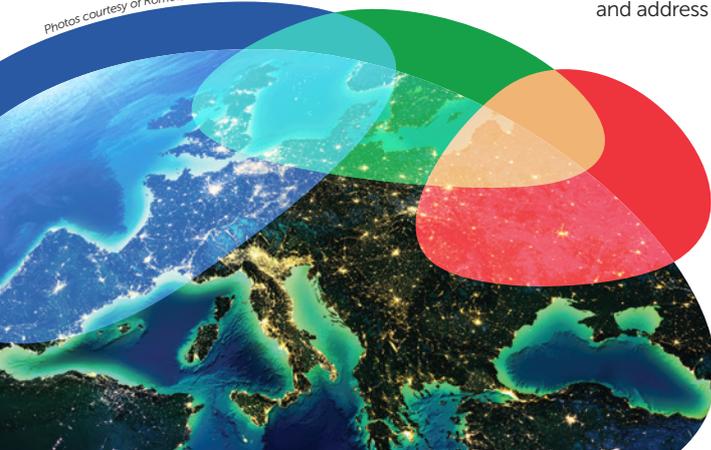
- SME based Photonics industry requires a well-coordinated photonics strategy involving all public and private to effectively push the digitalization of European industry and address global challenges.

- Core photonics technologies leverage many different industries: Only a jointly developed community roadmap can unleash the broad spill-over effects to successfully exploit the wide range of future markets and create jobs in Europe.
- Lean, simple and transparent partnership governance is key for a successful implementation.

Advanced photonic technologies require a dedicated and increased budget – break away from technology and industry silos to broadly digitize European SMEs

- Urge framework programme areas to leave traditional R&I pathways and to start cross sector collaboration
- Speed up the innovation process in "Horizon Europe" – offer fast track from core component and modul development to broader system integration.
- Establish a truly connected European lab-to-fab infrastructure to accelerate uptake of technology and its translation in products.

Photos courtesy of Romolo Tavani, fotoia.com




PHOTONICS²¹

Email: secretariat@photonics21.org www.photonics21.org

Follow us on:  www.linkedin.com/company/Photonics21  [@Photonics21](https://twitter.com/Photonics21)