



## Photonics: Indispensable technology vital to innovation, new report shows

A new report by [Tematys](#) has confirmed the vital role photonics plays in innovation.

Assessing 794 Horizon 2020 projects from 2014 to April 2019 for their photonics content, Tematys has demonstrated the enormous impact on innovation photonics is having in important sectors, like Automotive, Agro-food, Security & Defense, and Biomedical industries.

Highlighting the impact photonics has on mega markets and application areas, the survey shows light technologies are now an inextricable part of Personalised Healthcare, Industry 4.0., Smart Farming, and Secure Digital Society.

The results come from a survey *Exploration of Photonics Markets* and published by the [Photonics21](#) group. Tematys examined projects funded in part by the EU and private enterprises where: photonics played a major role or where photonics was a technology enabler.

Photonics21 Executive Board member Professor Roberta Ramponi said: "The results of the survey have confirmed our belief that photonics is an indispensable technology vital to innovation in most end-user markets."

"At an estimated €90 Billion per annum, the European Photonics market continues to support making Europe's economy more competitive, and is essential to global market growth."

"Things that matter to everyday users in industries like healthcare or producing clean food from farm to fork are all benefitting from the rapid, accurate and non-invasive manner in which light can detect and measure. It is quite clear to see the enormous impacts on innovation light technologies are having."

"While these technologies will create new jobs over the next three years in the photonics sector alone as a direct result of our PPP projects, most megamarkets will benefit from the creation of new high-tech jobs in their respective fields from photonics," Professor Ramponi said.

Thierry Robin from Tematys said: "Our analysis shows photonics technologies are crucial to new Industry 4.0 applications like the Internet of Things (IoT), Factories of the Future (FoF), Smart Cities, Autonomous Vehicles, and to the need for next-generation biosensors, secure communications, LEDs for smart lighting, and quantum technology."

"Beyond their use in numerous other projects, these exclusive photonics projects are very important because they prepare the introduction of light technologies in application sectors," Robin said.

From 2014 to 2018, the European Commission committed over €445 million to photonics projects in Horizon 2020, which are comprised of 1017 participants, 275 of which are SMEs and 281 big companies.

## **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 defined 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 Belgium law, became the private contract partner in November 2013 in a Public-Private Partnership (PPP) in conjunction with the EU Commission.

Today Photonics21 represents more than 3000 personal members from across Europe and abroad. 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.

With the global photonics market growing from €350 Billion in 2011 to €447 Billion in 2015, Photonics remains a strong industry. The European photonics industry, estimated to be worth €70 billion, has considerable global leadership positions and employs over 300,000 people directly.

With positive growth forecast, current industry trends like digitalisation, resource efficiency, individual and zero failure production will drive the photonics industry further.

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