



Horizon 2020 Photonics Projects To Create 3,500 New High-Tech Jobs

3,500 high-tech jobs will be created in Europe thanks to Horizon 2020 Photonics projects

A new survey found the 100 Photonics projects, established in Horizon 2020 from 2014 to 2018, will create directly 3,500 jobs in Europe over the next three years.

The European photonics industry that currently employs over 300,000 people, expects to add new high-tech positions to its workforce such as Optical Engineers, Chemistry Engineers, Physicists, Physics Engineers, Electronic Engineers, IT & Computer Scientists, Data scientists, Material Scientists and Specialists in Quality and Certification, according to [Tematys](#).

The new jobs will also include positions for PhD students and Post-Doctorates, as well as roles in academic and technical skills.

While the survey shows the photonics projects are on track to create more than 1500 new positions in big companies, and nearly 2,000 in SMEs, this could be a conservative estimate given that 80% of the SMEs and only 40 % of the big companies interviewed have declared their intention to create jobs.

Highlighting the impact photonics has on mega markets and application areas, the study shows light technologies have become an indispensable to personalised Health Care, Industry 4.0., and Secure Digital Society, for example.

Photonics21 Executive Board Member, Professor Roberta Ramponi said: "We are delighted to create more jobs in an exciting industry that is adding great value to the economic success of Europe."

"Part of the PPP's long term growth strategy is generating opportunities for smart, talented individuals, particularly in the fields of semiconductors and photonics."

R&D In-Demand

The survey discovered positions such as R&D are most in-demand with 80% of respondents requiring researchers as a follow up to the project.

"Roles in quality control," Professor Ramponi continued, "safety, product management and marketing and sales are areas of opportunity for any photonics practitioners of the future."

"The survey also highlights areas with certain skill gaps: over 50 % of the project participants interviewed claim that training skills and curricula need to be established, enlarged or updated," said Ramponi.

Published by the Photonics21 group and conducted in partnership with Tematys, the survey examined 100 photonics-based consortia funded in part by the EU and private enterprises.

"Not only will the immediate deep technologies benefit but non-photonics end users will see great innovation in their products," Professor Ramponi said.

Thierry Robin from Tematys said: "Our analysis shows the economic impacts the Horizon 2020 projects funded by the photonics PPP are having. Not only are the projects creating new jobs, but also new technologies as well, with around 330 new systems and devices developed from the 100 projects."

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.

Estimated to be worth about €90 billion (2019), the European photonics industry has considerable global leadership positions in sectors such as Production Technology, Machine Visions, Digital Infrastructure, Optical Components and Medical Technology and a proven track record in an Innovation spending quota of 14% of sales.

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.

In September 2009 the European Commission defined photonics as one of six European Key Enabling Technologies (KET's). Shortly after, the European Research & Innovation Program "Horizon 2020" invited Photonics21 to become a "Public-Private Partnership" (PPP).

Photonics21 was set up in December 2005 to bring the community of photonics researchers and industries together. 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.

According to a 2018 European Commission and European Investment Bank report, 'Financing the Digital Transformation', "Photonics is one of these essential key enabling

building blocks for the digital transformation of Europe, which will be based on deep technologies.”

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 work collectively 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 and a long-term growth rate twice that of global GDP, Photonics remains a strong industry.

The European photonics industry, estimated to be worth about €90 billion (2019), has considerable global leadership positions in Production Technology, Machine Visions, Digital Infrastructure, Optical Components and Medical Technology and a proven track record in an Innovation spending quota of 14% of sales.

With positive growth forecast, current industry and societal trends like digital transformation, resource efficiency, CO₂ reduction and real-time quality control for zero failure production will drive the photonics industry further.

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