

Strasbourg, 14 September 2011

Photonics industry commits to more than 5 billion Euros investment in Europe

Photonics industry presents a proposal for a Photonics Public Private Partnership (PPP)/ Overall investment volume of 7 Billion Euros in Europe by 2020 aims to boost economic growth and jobs.

Strasbourg 14 September 2011: Photonics21 has today announced its commitment to a proposed Public Private Partnership (PPP) with the European Commission in research and innovation in photonics. The proposal represents a total investment of 7 Billion Euros of which 5.6 Billion will be provided by the private sector and 1.4 Billion by the European Commission. The announcement was made at a Luncheon in the European Parliament in Strasbourg hosted by MEP Malcom Harbour.

“Photonics are synonymous with a modern and technologically advanced Europe. The proposed 7 Billion Euro partnership between Photonics21 and the European Commission would represent a substantial contribution by this sector towards future growth and job creation, and significantly assist the EU’s continued economic recovery. It will be a major boost for the roll out of the Innovation Union”, MEP Malcolm Harbour (ECR).

The PPP was proposed by Photonics21 following an invitation to do so by European Commission Vice President Neelie Kroes at its Annual meeting in February 2011. The proposal seeks to establish the PPP within the context of the forthcoming European Horizon 2020 programme, which the Commission will present before the end of the year. The aim of the PPP is to provide for a closer alignment of industrial, scientific and public strategies within the photonics sector. By significantly improving the transition from scientific discovery to real world applications the partnership would ensure the fullest exploitation of the economic and employment potential of this sector. Giorgio Anania, Photonics21 Vice President and member of the KET High Level Group, states that “given the magnitude of the gains such an alignment may realise, this proposal represents a significant contribution by the photonics industry towards the improved growth and competitiveness of the EU”.

Key enabling technologies (KETs)

Due to its high innovation potential and its immense contribution to European industrial leadership photonics has been defined as one of only six key enabling technologies (KETs) at European level. The Photonics industry in Europe is worth € 58.5 billion (21 % of the world market) and employs about 300,000 people across 5000 companies. A recently issued study of the European Commission estimates that today already 20-30% of the European economy and 10% of the European workforce depends on photonics as a key enabling technology.

However, like many other sectors the potential of the photonics industry is currently limited by the so called “Valley of Death” in the innovation value chain. Giorgio Anania states that “photonic innovation in Europe tends to fall through in the stage between successful science and pilot scale industrial deployments, the latter being the stage at which jobs can start being created.”

The founding of a Photonics PPP would address these concerns and brings to fruition the recommendation of the recently published KET High Level Group report which calls for forward-driven and long-term strategies involving all stakeholders – private and public – at European, national and regional levels. By building and strengthening bridges between scientific excellence and innovative production the PPP will result in the creation of an additional 70,000 – 100,000 jobs in the photonics industry leveraged to 350,000 to 600,000 new jobs for European industry overall. “What we expect from such a PPP”, Anania said, “is to secure a long-term commitment from both the private and the public sector to investing in photonics research and innovation and thereby creating jobs and economic growth in Europe.”

In a letter to Photonicis21, European Commission Vice President Neelie Kroes, responsible commissioner for the “Digital Agenda” stated her support for a Photonics PPP: “I value the strong commitment from the photonics industry to creating economic growth and jobs in Europe, as well as the proposed four-fold leveraging of the initial public funding and the monitoring of its impact through key performance indicators. I appreciate in particular the clear emphasis on addressing the full research and innovation chain from materials to pilot actions. I conclude that the necessary ingredients are in place to justify the creation of a PPP in Photonics.”

Priorities of the Photonics PPP

- Strengthening European industrial leadership
- Improving Europe’s innovation potential and competitiveness in photonics
- Providing technology solutions to the major societal challenges facing Europe

Application of Photonics

The impact of a Photonics PPP would be profound and wide reaching. Examples of targeted technology development areas where wide impact is expected include:

- The development of a future ultra-high speed communication networks with multi-terabit capacity as backbone for web 2.0 & 3.0 products & internet of things nurturing radically new IT services and business models.
- New laser-based manufacturing processes will allow mass customisation, rapid manufacturing and zero-fault production and ensure competitive manufacturing in Europe.

- New real-time medical photonic diagnostics and new laser-based therapeutic treatments, moving from cost-intensive treatment to early detection and prevention
- The transition from incumbent lighting technology to low-energy consuming Solid-State Lighting technology, using LEDs, OLEDs, sensors and microprocessor intelligence.
- The realisation of 'energy-positive' buildings using organic PV generation devices and digital lighting control systems integrated within the building structure itself.
- Advanced photonic sensing and imaging that enable higher levels of security and safety.

For more information please go to www.photonics21.org

and http://ec.europa.eu/enterprise/sectors/ict/key_technologies/kets_high_level_group_en.htm

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About Photonics21

In December 2005 the European Technology Platform "Photonics21" was set up as an industry driven platform to unify the community in the area of optical technologies. Today, more than 1,800 representatives of industry and science from most European countries are involved in it. Leading companies and research units have joined together to further advance Europe's position in optical technologies. Photonics experts from industry and research are working in seven teams to develop research priorities and recommended procedures for the European Commission as well as strategies and issues to promote European cooperation.

In September 2009, the European Commission defined photonics as one of five European Key Enabling Technologies (KET's). In January 2010 the second Photonics21 Strategic Research Agenda "Lighting the way ahead" was published defining research priorities and the photonics strategy forward. The recent publications "Photonics – Our Vision for a Key Enabling Technology" and "The leverage effect of Photonics Technologies" look into the contribution photonics has – and will have in the course of the next ten years - on the key societal challenges of Europe.

Appendix to Media Release - Additional Information

Main Topics from the Photonics21 Proposal to the European Commission “Towards a Public-Private Partnership on photonics” within Horizon 2020

Industry’s commitment:

- A photonics PPP will ensure future European industrial leadership & competitiveness, fully exploiting the economic and employment potential of photonics.
- The European photonics industry commits itself to transfer results of Horizon 2020 projects into products by further investing downstream in research, development and manufacturing in Europe.
- The European photonics industry will commit to a four-fold leverage of public funding to achieve a total investment of €7 billion. Additionally, there is a strong commitment from the photonics industry for growing its manufacturing base in Europe and creating economic growth and jobs in Europe.
- This would offer an additional 70.000 to 100,000 high level jobs in the photonics industry, leveraged to 350,000 to 600,000 new jobs for European industry overall.

Photonics Market Data*:

- The current global photonics market is estimated to be €300 billion. Europe’s share of this world market is approaching €60 billion, representing 20% of the total market.
- The European photonics industry has many market-leading industrial players and more than 5000 highly innovative SMEs. It employs ~ 300,000 employees directly, with subcontractors employing many more.
- The estimated annual growth rate of the €300 billion global photonics market is now greater than 10%. Between 2005 and 2008 this rapid growth resulted in more than 40,000 new jobs being created in Europe.
- A recently issued study of the European Commission “The Leverage Effect of Photonics Technologies: The European Perspective” estimates that today already about 20-30% of the European economy and 10% of the European workforce depend on photonics as a key enabling technology. In total the leverage of photonics on employment in Europe (PEL) is found to be ~30 million jobs. The leverage of photonics on employment represents ~14% of the total EU employment of 214 million.

*See also the Photonics21 Brochures “The Leverage Effect of Photonics Technologies”, “Our Vision for a Key Technology for Europe” and “The second Strategic Research Agenda – Lighting the Way ahead” you may access via www.photonics21.org

Photonics – Join Forces in a PPP

The proposed Photonics PPP differs from the existing support mechanisms by

- ensuring a closer alignment of industrial and public strategies
- pooling industry and public resources to provide a critical mass of investment to ensure European leadership in this high growth rate market.
- closely monitoring the effectiveness with key performance indicators
- providing a clear industrial commitment of a four-fold leverage of the initial public funding

Main Priorities of the proposed PPP:

- Strengthen European industrial leadership and improve Europe's innovation potential and competitiveness in photonics – "turning great ideas into great products and creating jobs and economic growth in Europe in the process"
- Provide technology solutions to the major societal challenges facing Europe
- Further unify the photonics sector through the long-term commitment of all parties to a common shared vision,
- Achieving the critical mass necessary for developing a coherent programme defines by the photonics entire community for strengthening RDI capabilities across the full value chain
- Developing an integrated RDI programme that fully meets the needs and priorities of industry, and tackling the 'valley of death' by undertaking large-scale projects.

Photonics impact on European competitiveness and job creation**

- The development of a **future ultra-high speed communication networks** with multi-terabit capacity as backbone for web 2.0 & 3.0 products & internet of things nurturing radically new IT services and business models.
- New **laser-based manufacturing** processes will allow mass customisation, rapid manufacturing and zero-fault production and ensure competitive manufacturing in Europe.
- New real-time **medical photonic diagnostics** and new **laser-based therapeutic treatments**, moving from cost-intensive treatment to early detection and prevention
- The transition **from incumbent lighting technology** to **low-energy** consuming **Solid-State Lighting technology**, using LEDs, OLEDs, sensors and microprocessor intelligence.
- The **realisation of 'energy-positive' buildings** using organic PV generation devices and digital lighting control systems integrated *within* the building structure itself.
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