

Photonics²¹ and Photonic Integration

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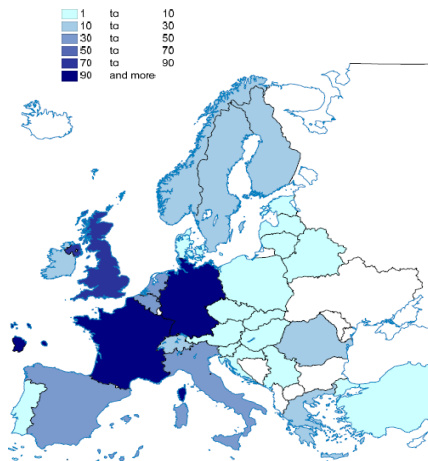
Director Active Products Research, Oclaro

Presented at 3rd European Photonic Integration Forum, Eindhoven, 21st June 2011

Photonics21 in a nutshell

Photonics21 ...

- One of the European Technology Platforms (ETPs)
- Represents photonics stakeholders along the whole economic value chain
- Open to all at no cost
- Has over 1700 members today



Objectives

- Unite the European photonics community and speak with one voice (individuals, universities, small/large companies)
- Establish strategic links and align common efforts between industry, science base and political spheres
- Define a common medium to long-term photonics strategy for Europe, including priorities for public financing
- Increase the awareness of photonics for the future of Europe

Photonics21 – selected milestones

April 2006



First European Strategic Research Agenda published and handed over to Commissioner Viviane Reding



FP7 funding: 50% growth for photonics research compared to FP6

Establishment of a Photonics Unit within the European Commission



Political Mirror Group agreed on a joint European call on Broadband Access (EUR 30M)



Photonics Economic impact report published



Photonics21 Strategic Research Agenda 2010

European Commission identifies Photonics as **key enabling technology** for Europe



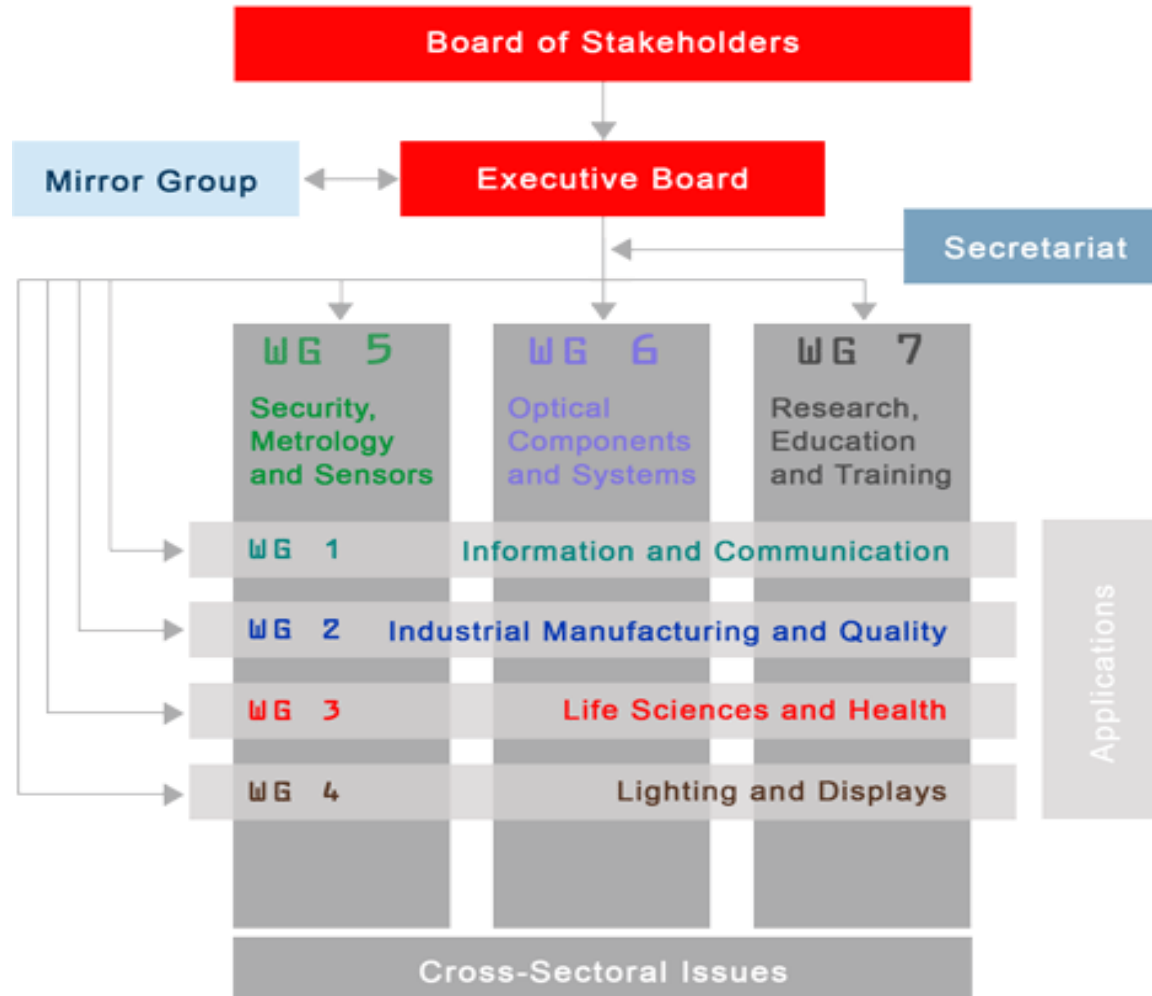
Vision Paper delivered to Commissioner Neelie Kroes

Foundation Photonics21

Photonics21 “research priorities” input into European Commission FP7/CSF

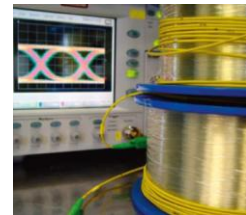
2005 2006 2007 2008 2009 2010 2011

Structure of Photonics21



The Strategic Research Agenda (SRA)

- Research strategy for boosting the European economy in the short, medium and long term
- A major effort by the European photonics community
- 17 work group sessions conducted all over Europe
- More than 450 photonics participants
- Broad consultation throughout the membership
- Editorial board consisted of more than 50 photonics experts from all fields
- The second Strategic Research Agenda was published during the Photonics²¹ Annual Meeting in January 2010
- Research agenda is basis for specific recommendations on FP7 work programme
- Photonic Integration has been prominent throughout, identified by application-specific WGs and WG6



Vision Paper

PHOTONICS –

Our Vision for a
Key Enabling Technology
of Europe

- Present a large-scale vision of what is needed in the next Framework programme and why
- Preliminary version presented to Commissioner Neelie Kroes at Photonics²¹ Annual Meeting, Feb. 2012



Vision Paper – Major themes from WG6

- Our vision is of a European industry that is strong at every level, from devices and components through to systems, also embracing manufacturing equipment and methodologies.
- We therefore emphasize the importance of a European supply chain in strategically important areas of component and systems technology, embracing high-volume manufacturing as well as high-value, specialized components.
- We perceive major opportunities to build and sustain a vibrant manufacturing industry in Europe based on advanced technology, best-in-class design and innovative manufacturing techniques.

WG6 Vision – Major Areas of S&T Work

- Photonic integration, including the development of generic integration platforms and foundry models;
- Technologies for cost-effective manufacturing of components and subsystems;
- Integration of photonics with microelectronics at the chip, board and system levels;
- Semiconductor optical device technology, with particular reference to semiconductor lasers;
- Exploitation of new materials, including new semiconductors and nanophotonic materials (for example, metamaterials & plasmonics), multifunctional fibres, and their associated fabrication technologies.

Photonic Integration also identified as priority by applications-oriented WGs, especially WG1 (Communications)

Thank you for your attention!

Please join us and help build a framework for success in photonics in Europe

You can find further information on the Photonics21 website:

www.photonics21.org

For further information please contact secretariat@photonics21.org

I look forward to working with you in Photonics21!

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