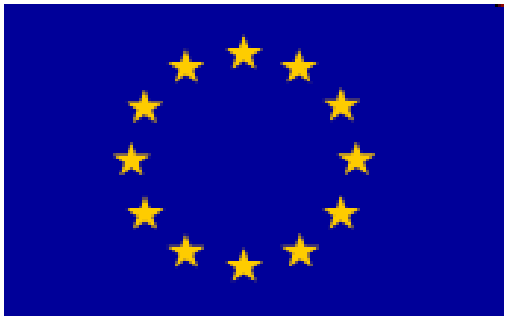
PHOTONICS21

The European Technology Platform Photonics21



PHOTONICS 21

About Photonics21

Situation in 2005, before Photonics21 was established:

- *European photonics community was not existing*
- *Photonics was not perceived as a strategically relevant technology by the European Commission or member state governments*

- The European Technology Platform **Photonics21** was founded in 2005 to unite the European photonics community and to speak with a single voice.
- Photonics21 is built on personal membership and free of charge.
- Photonics21 unites the European photonics industry and research institutions.

PHOTONICS 21

General objectives

- Establish strategic links and align common efforts between industry, science and politics in photonics R&D;
- Align public financing with industry-perceived priorities
- Better transform knowledge into leading-edge technologies and products which are competitive on a global scale;
- Define a common medium to long-term photonics strategy for Europe;
- Provide for the necessary research environment capable of accelerating photonics research in Europe;
- Unite the community at all levels (individuals, universities, small/large companies);
- Increase the awareness of photonics for the future of Europe.

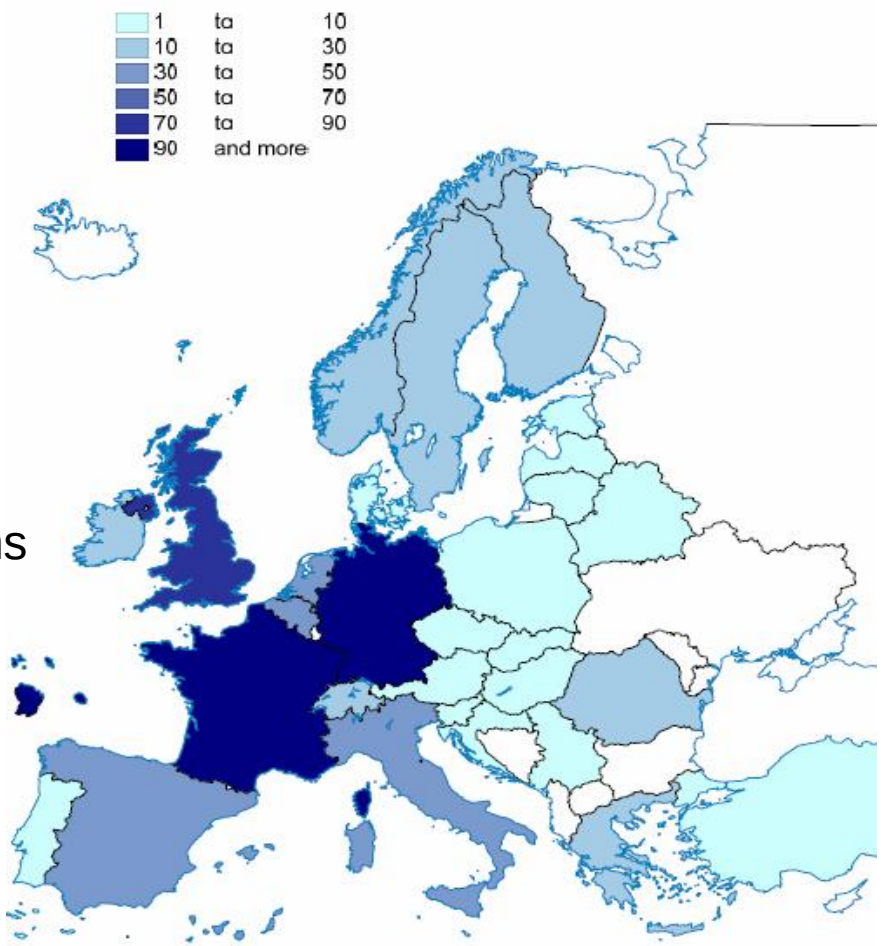
Photonics21 members

Photonics21 members represent leading photonics stakeholders along the whole economic value chain throughout Europe...

§ Over 1500 members from all the EU countries

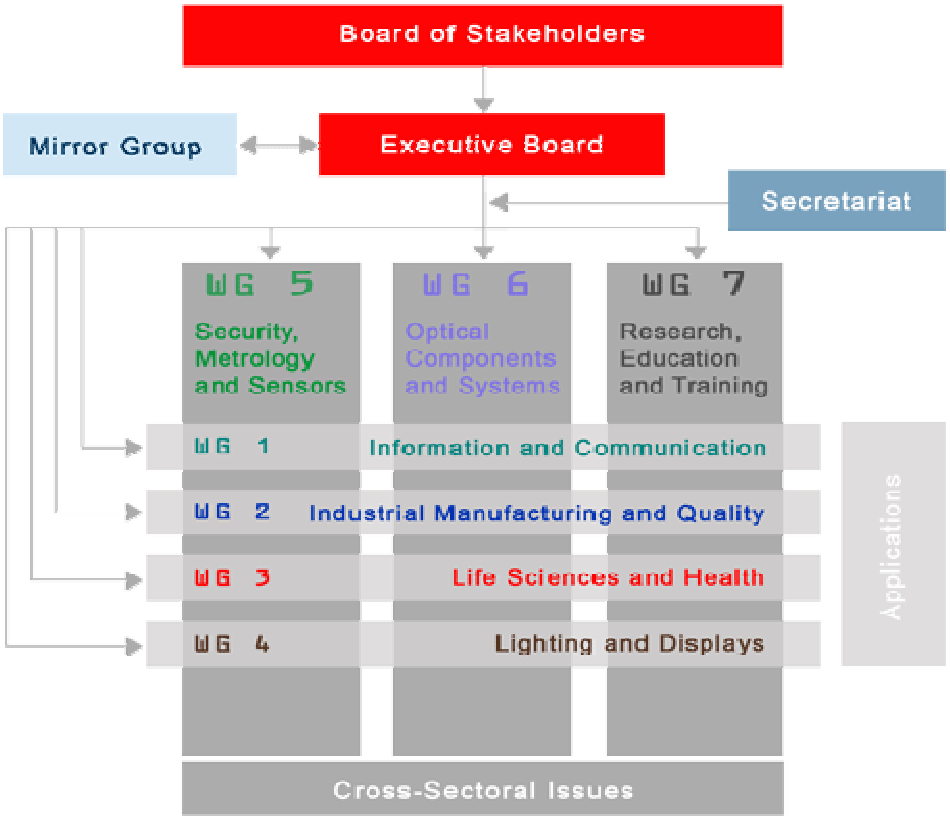
§ Broad, representative membership composition

- § University-science-industry-associations
- § Multiple markets (telecommunication, lighting, manufacturing, health)
- § Throughout the value-chain (components-systems)
- § Most main industrial companies



PHOTONICS 21

Structure of Photonics21



PHOTONICS 21

Photonics21 Executive Board

President: Martin Goetzeler, CEO Osram

Vice Presidents: Bernd Schulte, COO Aixtron

Malgorzata Kujawinska, Warsaw University of Technology

Giorgio Anania, Chairman Cube Optics

Work Group Chairs:

Information and Communication	Industrial Production/ Manufacturing & Quality	Life Science & Health	Lighting & Displays
Alfredo Viglienzoni, Head Optical Products Ericsson	Eckhard Meiners, CEO Trumpf Laser Marking Systems	Ulrich Simon, CEO & President Carl Zeiss MicroImaging	Klaas Vegter, CTO Philips Lighting

Security, Metrology & Sensors	Design & Manufacturing of Components & Systems	Photonics Research, Education & Training
Jean-Francois Coutris, Vice President SAGEM DS	Mike Wale, Director Active Products Research Oclaro	Roberta Ramponi, Professor Politecnico di Milano

Photonics21 – selected milestones

Foundation Photonics21

April 2006

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

Establishment of a Photonics Unit within the European Commission

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

Photonics Economic impact report published

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

January 2010

Photonics21 Strategic Research Agenda 2010

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

Photonics21 “research priorities” input into European Commission FP7

2005 2006 2007 2008 2009 2010

EC: Photonics as a Key EnablingTechnology

“COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

Preparing for our future: Developing a common strategy for key enabling technologies in the EU“, September 2009

- § Photonics Key Enabling Technology (KET)
- § European Commission asks for comprehensive European research and industry policy on KETs
- § Photonics21 part of High Level Expert Advisory Group

- Ø 4 years after Photonics21 has been established, photonics is considered as key enabling technology for Europe

Photonics21 activities

Photonics21 Strategic Research Agenda is constantly updated

- § Photonics21 Annual meeting defines the overall strategy
- § 2 work group workshops per year for the determination of strategic research priorities

Set up of Photonics21 Mirror Group for a better coordination with national funding strategies

- § Political mirror group established in July 2007
- § Launch of an ERA-Net Plus on broadband access

Ø Photonics recognized as strategic technology for Europe

- § Recommendations of the Strategic Research Agenda widely considered in the work programmes of FP7 and national funding activities
- § Photonics unit established within the EC

The Strategic Research Agenda (SRA)

A huge effort has been undertaken by the European photonics community

- 17 work group sessions conducted all over Europe
- More than 450 photonics participants
- Broad consultation throughout the 1400 members of the platform
- Editorial board consisted of more than 50 photonics experts from all relevant fields covered by the SRA

- The second Strategic Research Agenda was published during the Photonics21 Annual Meeting in January 2010

PHOTONICS 21

The Strategic Research Agenda (SRA)

Common rationale was to “strengthen the strength” of photonics in Europe rather than to cover everything

Strategic Research Agenda focuses on

- Photonics markets and European market position.
- European societal challenges and how photonics is able to contribute.
- Core research areas with a specific European strength in mid and long term.
- The increasing challenge of securing a highly qualified work force for the photonics industry.
- Actions to be taken by governments, photonics industry and research to make Europe the world leader in photonics.

PHOTONICS 21

Photonics world market & European position

	2005	2008	Growth
World Market Photonics	€226 billion	€270 billion	~ 6% p.a.
European production volume	€43.6 billion	€55 billion	~ 10% p.a.
Employment European Photonics Industry	246 000	290 000	> 40000 additional jobs

Source: Optech Consulting

Respond to major societal & economic challenges

§ Societal challenges such as a low carbon economy, the ageing society and the knowledge society can only be tackled in a joint approach by industry and public authorities

Ø Photonics21 Proposal: Public Private Partnerships - from research and demonstration down to deployment

Proposed actions:

1. ICT - Digital Village
2. Energy - Photonic tools for solar excellence
3. Energy - The European Solid State Lighting Innovation Alliance
4. Life Sciences - Cancer tissue diagnostics for the twenty-first century
5. Security: Sensor Security Networks

Photonics21 Student Innovation Award

description

§ award of diploma and master thesis in photonics which are based on significant industrial-related research

aim

§ support of training & education in photonics
§ closer cooperation between industry and research
§ awareness-raising for photonics

The Photonics21 Student Innovation Award 2010 was handed over to the two winners Natalie Vermeulen (Vrije Universiteit Brussels) and Sedat Nizamoglu (Bilkent University Ankara) during the opening ceremony of the *Photonics Europe* conference in Brussels on the 12 April 2010

Thank you for your attention!

You can find further information on the Photonics21 website:
www.photonics21.org

For any further information please contact:
secretariat@photonics21.org