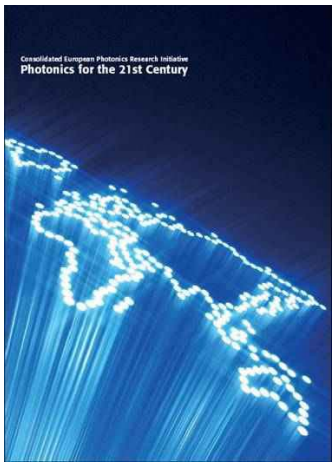
PHOTONICS 21

Background on Photonics21



A high-level group of representatives of research and industry in Photonics as well as user industries and other stakeholders have launched a European initiative to promote Photonics in the European Research Area. A major result of the initiative is the document "Photonics for the 21st century" (www.vdi.de/photonics21) which provides the rationale and the justification for the political process that is needed to implement a coordinated action plan among all stakeholders. The document has been endorsed by 65 personalities covering 16 European countries and furthermore seven European associations. Since then a high-level delegation has met Viviane Reding, Commissioner for Information Society and Media, and Janez Potočnik, Commissioner for Research, to discuss the implementation of an action plan at the European level to establish a Technology Platform (TP) for Photonics and to address priority areas in the specific programme "Cooperation" of FP7.

The creation of the Photonics Technology Platform is recognition of the strategic importance of photonics science, technology, and applications for the development of European society and economy in the 21st Century.

Overview of the already established Technology Platforms: http://www.cordis.lu/technology-platforms/home.html

Steps to set up a Technology Platform

The development of European Technology Platforms is essentially a "bottom-up" process. The Commission began promoting the concept in 2003 and encouraged interested parties to come together and consider setting up platforms at European level. Hence, it are the stakeholders themselves who take the initiative to set up a European Technology Platform, with the support and guidance of the European Commission, as appropriate. In general, European Technology Platforms follow a three-stage process and the successful completion of each is a prerequisite for effective implementation of the subsequent stages (see also commission staff working papers on TP).

Stage 1: Emergence and Setting Up

At this stage, stakeholders are brought together. Industry plays an initiating role in this regard with the aim of achieving consensus on the way forward. The main deliverable is a strategic vision document reflecting this consensus and endorsed by top executives from leading companies in the sector. The vision document explains the strategic importance of the activity and gives an outline of the desired medium and long term development objectives of the European Technology Platform. It also explains why action at European level is required. At this stage, the main principles for the governance of the platform are established.

Stage 2: Definition of a Strategic Research Agenda

The Strategic Research Agenda is the key deliverable of a European Technology Platform. It should set out research and technological development priorities for the medium to long term including measures for enhancing networking and clustering of the RTD capacity and resources in Europe. The definition of a Strategic Research Agenda is commonly co-ordinated by an advisory council (Board of Stakeholder) that includes representation from a wide range of stakeholders. In many cases, the active involvement of Member States is channelled through a "mirror group" that reflects their views as the Strategic Research Agenda takes shape. Steering panels undertake the detailed work of defining the Strategic Research Agenda, often supported by specialised working groups. In parallel with the definition of a Strategic Research Agenda, European Technology Platforms begin to specify a deployment strategy at this stage. The deployment strategy anticipates the key elements required in order to implement the Strategic Research Agenda effectively with the aim of bridging the gap between the current state of development of a given technology and its eventual deployment. It should take into account, for example, the need for mechanisms to mobilise private and public investments, strategies to implement optimal demonstration activities, actions related to education and training and the establishment of an ongoing communication process. It should also capitalise on possible synergies with other European Technology Platforms and address any possible overlap or duplication of activities across platforms.

Stage 3: Implementation of the Strategic Research Agenda

During this phase, the Strategic Research Agendas defined within European Technology Platforms are implemented with the support of Community research programmes as appropriate, where they are compatible with the objectives of European research and competitiveness policies, together with other policies where relevant. At the same time, the Strategic Research Agendas will make an important contribution to the preparation of the Commission's proposals for future research programmes. It is, however, important to stress that the implementation of Strategic Research Agendas is likely to involve support from a range of sources, including the Framework Programme, other sources of European funding, national research programmes, industry funding and third-party private finance.

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Terms of Reference Photonics21[1]

1 Mission

The mission of the Technology Platform Photonics21 is the coordination of research and development activities in Europe among all the contributing partners from education, basic research, applied research and development to manufacturing and all relevant applications. Photonics21 will have the responsibility to determine a strategic research agenda. This agenda will provide the basis for a common strategy to achieve a strong European leadership in Photonics. It will help coordinating research and development investment at the European, national and regional level and will address the funding of research and development for Photonics in FP7.

2 Organisation of the Technology Platform Photonics21

With this document we establish a temporary operational structure that will enable Photonics21 to begin its activities. It will be reviewed by the Executive Board until December 31, 2006 and necessary changes will be proposed to the Board of Stakeholders for approval.

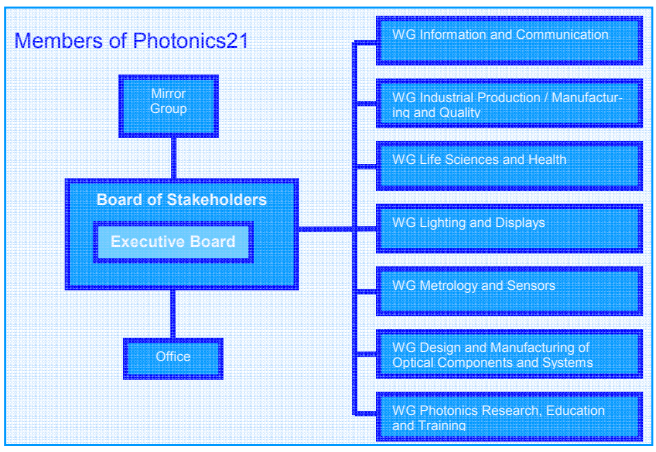
To structure the work of Photonics21 a number of permanent bodies and groupings will be established.

- The **Members** form the basis of the work of the Technology Platform Photonics21 and participate actively in the activities of Photonics21.
- The **Board of Stakeholders** (BoS) is driving the definition and updating of the Strategic Research Agenda, oversees its implementation and ensures a smooth and efficient running of the Photonics21 platform.
- An **Executive Board** (EB) as a smaller and operational representation of the Board of Stakeholders will ensure a dynamic and efficient management and internal communication.
- A **Mirror Group** (MG) will ensure the participation of public authorities at regional, national and European level and will help developing synergies between national programmes and policies.
- For specific predefined tasks permanent or ad-hoc **Working Groups** (WG) will be established. A non-limitative list of proposed WG includes:
    - WG Information and Communication
    - WG Industrial Production/Manufacturing and Quality
    - WG Life Sciences and Health
    - WG Lighting and Displays
    - WG Metrology and Sensors
    - WG Design and Manufacturing of Optical Components and Systems
    - WG Photonics Research, Education and Training

  The working groups themselves may decide to establish sub-working groups (SWG).
- An **Office/Secretariat** provides permanent secretarial, operational and public relations support for Photonics21.
- An **Annual Meeting** provides the means to interact with all stakeholders in the platform and beyond.

2.1 Members

The membership is open to all institutions that employ scientists, engineers or technicians working on photonics –related issues in Europe. Members agree to support and to participate in the activities of Photonics21, e.g. by joining and participating actively in one of the working groups. The membership will form from its ranks a membership committee, the **Board of Stakeholders**. The membership committee will monitor the composition of the membership, and the participation of members in the activities of the platform.



[1] The terms of reference are based on the document which has been sent out to the signatories of the Vision Paper on 11.8.2005. Except minor changes for simplification and to eliminate inconsistencies no changes have been required or made.

2.2 Board of Stakeholders

The **Mission** of the Board of Stakeholders (BoS) is to drive the definition and updating of the Strategic Research Agenda, to oversee its implementation and to ensure a smooth and efficient running of the Photonics21 platform. The initial size of the BoS will be limited to 65 seats and the membership in the BoS will first be offered to all institutions that have signed the strategic vision document. All members of the BoS have equal voting rights.

In line with the industry-driven character of European Technology Platforms, it is recommended that the majority of members of the Board of Stakeholders will, at any time, be from industry.

In representing their organisation, they will take into account the wider interest of the Photonics domain in the European Research Area. Each institution seeking membership will identify the individual within the organisation who will be the primary representative. These individuals should have sufficient standing to be able to provide substantial advice and to be in a position to influence stakeholders in planning RTD programmes, fostering partnerships and leveraging resources. The selection will be made on the basis of the following four criteria:

- Sectoral and technological balance of the Board members
- Importance to the organisation for reaching the objectives of Photonics21
- Standing of the individual proposed
- National balance for European added value

The participation of Public Authorities, SME's and academia through associations and clusters will be promoted.

The members of the Board of Stakeholders accept the terms of reference of Photonics21 and document by their signature.

Members of the BoS agree to commit sufficient time to take an active part in its work and in particular to attend all meetings of the BoS. They contribute to the expenses of the Photonics21 platform. To keep a maximum number of members a rotation of membership will be carried out replacing up to 15 members per year. This rotation will start two years after the kick-off meeting.

The members of the BoS will select a **President up to four Vice-Presidents** from among the own ranks. Photonics21 is represented by the President of the platform. The President and four Vice-Presidents of the platform are appointed by the BoS on the basis of the following requirements:

- Leaders within the European photonics sector
- Capable to contribute guidance and vision at the political, technology, and business levels
- Influential public speakers
- Capable to present and impose Photonics21 at governmental level
- Expert knowledge of the European and world-wide photonics industries at the highest level
- Able and willing to devote time to the task of promoting the platform.

The President and the Vice-Presidents are appointed for two years and can be re-appointed for a second term.

Decisions should always be taken by consensus. Only exceptionally voting might be requested. Decisions will then be subject of a simple majority vote with the President holding the casting vote.

Meetings of the Board of Stakeholders will normally be held twice a year. **Third parties** can only take part on invitation by the Executive Board. They have no voting right and may be requested by the President to withdraw from the meeting for certain items on the agenda.

2.3 Executive Board

The Executive Board, chaired by the President, is responsible for the internal coordination and the day-to-day management of the platform operations, the interface with external bodies and the preparation of the BoS meetings and decisions. The EB will convene meetings as needed to progress initiatives and to coordinate platform operations and shall maintain a record of these meetings. The EB will meet at least four times a year. For decision making, the same principles will apply as in the BoS. The EB consists of:

- the President
- four Vice-Presidents,
- the Chairpersons of each Working Group,
- the Chairperson of the Mirror Group and
- the representative of the Office who has no voting rights.

2.4 Working Groups

For specific predefined tasks, the Executive Board shall establish permanent or ad-hoc temporary Working Groups, as it deems necessary. The mandate of such Working Groups shall be decided by the Executive Board as well as their chairmanship, structure and reporting mechanisms. The composition of a Working Group will be established under the responsibility of its Chairperson, who will report back to the Executive Board and seek their advice where appropriate. The Board of Stakeholders elects the chairpersons of the Working Groups from their own ranks.

Whereas the creation of the Working Groups is the responsibility of the Executive Board, the coordination of their operations and the follow-up and consistency of their activities and scope are the responsibility of the Office.

2.5 Mirror Group

The Mirror Group ensures the participation of Public Authorities at national, regional and European levels in their function as policy makers, regulators and funding bodies. The aim of the Mirror Group is to

- develop synergies between national programmes and policies,
- pool resources to support the implementation of the Strategic Agenda and to
- promote a fertile innovation environment and a state-of-the-art research infrastructure in Europe and its Member States.

2.6 Office/Secretariat

An Office will be created to facilitate and assist the Photonics21 platform and its activities. It will be the responsibility of the Office to:

- Provide organisational, secretarial and operational support to the Board of Stakeholders, Executive Board, Working Groups and Annual Conference as required: organising meetings; preparing agendas and minutes; receiving, publishing and distributing documents;
- Act as an information and communication centre for Photonics21, including the launch and maintenance of a dedicated website;
- Develop and implement a public relations strategy;
- Provide IT support to Photonics21 allowing the platform and its bodies to make efficient use of electronic communication, information exchange and document handling;
- Handle financial matters pertaining to the operations of the Photonics21 platform.

The above activities of the Office will increase gradually, commensurate to the activities of the Photonics21 platform.

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Board of Stakeholders

1.	Alcatel Space	Christian Singer
2.	Aragón Photonics Labs S.L. / Fibercom	Juan Luis Vadillo López
3.	Argelas - Austrian Laser Association	Dieter Schuöcker
4.	BAE Systems	Len Cooke
5.	Barco View	Patrick Vandenberghe
6.	Berliner Glas	Andreas Nitze
7.	Bookham Technology, plc	Giorgio Anania
8.	Cambridge Display Technology	Jeremy Burroughes
9.	Carl Zeiss AG	Michael Kaschke
10.	CEA-LETI	Laurent Malier
11.	CNOP - Louis Pasteur University Strasbourg	Patrick Meyrueis
12.	DaimlerChrysler AG	Hans-Josef Haepp
13.	Dow Corning	Terry V. Clapp
14.	Eblana Photonics Ltd	James O'Gorman
15.	EMVA - European Machine Vision Association	Antonio Ventura-Traveset
16.	EPIC – European Photonics Industry Consortium	Bernd Schulte
17.	EOS - European Optical Society	Peter Markus Seitz
18.	EPS - European Physical Society	Sandro De Silvestri
19.	Fiat Research Centre	Mario Repetto
20.	Fraunhofer Society	Eckhard Beyer
21.	Friedrich-Schiller-University	Andreas Tünnermann
22.	GIE Alcatel Thales III-V Lab	Denis Mazerolle
23.	ICO - International Coalition for Optics	Ari Friedberg
24.	Institute of Electronic Structure and Laser (IESL)	Costas Fotakis
25.	Instituto Superior Técnico, Instituto de Telecomunicações	Adolfo V. T. Cartaxo
26.	INTEC/IMEC – Gent University	Paul Lagasse
27.	Jenoptik AG	Alexander von Witzleben
28.	Jos.L. Meyer GmbH	Jochen Zerrahn
29.	Kista Photonics Research Center	Lars Thylén
30.	Leica Microsystems AG	Wolfgang Vollrath
31.	Linde AG	Wolfgang Danzer

32. LINOS AG	Gerd Litfin
33. Max-Born-Institut	Wolfgang Sandner
34. Modulight Inc.	Petteri Uusimaa
35. National University of Ireland, Galway	Chris Dainty
36. Optotek engineering d.o.o.	Boris Vedlin
37. Osram Opto Semiconductors GmbH	Bernhard Stapp
38. P.A.L.M. Microlaser-Technologies AG	Karin Schütze
39. Philips Lighting B.V.	Peter Stormberg
40. Photonics Task Group Holland	Bart Snijders
41. Polytec GmbH	Helmut Selbach
42. QinetiQ - Malvern Technology Centre	Chris Slinger
43. Rofin Sinar Laser GmbH	Ulrich Hefter
44. Sabanci Universitesi	Aytül Ercil
45. Sagem SA	Jean-François Coutris
46. Schott AG	Ulrich Fotheringham
47. Sifam Fibre Optics Ltd	Andrew Robertson
48. SIRA Electro-Optics	Jon Holmes
49. SPECTARIS	Augustin Siegel
50. SPIE Europe	Eugene Arthurs
51. TRUMPF GmbH + Co. KG	Peter Leibinger
52. Tyndall National Institute	Clivia Sotomayor Torres
53. UKCPO	Allan Boardman
54. UMICORE	Manfred Diehl
55. Universidad Politecnica de Valencia	Javier Marti
56. VBU TW-TONA	Hugo Thienpont
57. VDI – Optical Technologies	Wolfgang Karthe
58. VDMA	Manfred Wittenstein
59. Viscom GmbH	Volker Pape
60. Warsaw University of Technology	Malgorzata Kujawinska
61. WLT	Reinhart Poprawe

PHOTONICS 21

Candidates for the Executive Board

President	**Alexander von Witzleben, CEO Jenoptik**
Vice Presidents	**Bernd Schulte, President EPIC, CTO Aixtron**
	Paul Lagasse, IMEC
	Malgorzata Kujawinska, Warsaw University of Technology
WG1 Information and Communication	**Giorgio Anania, CEO Bookham**
WG2 Industrial Production/ Manufacturing and Quality	**Peter Leibinger, CEO Trumpf Lasertechnik**
WG3 Life Sciences and Health	**Michael Kaschke, CTO Carl Zeiss**
WG4 Lighting and Displays	**Peter Stormberg, CTO Philips Lighting**
WG5 Metrology and Sensors	**Jean-Francois Coutris, Vice President SAGEM**
WG6 Design and Manufacturing of Components and Systems	**Lars Thylen, KISTA/Acreo**
WG7 Photonics Research, Education and Training	**Chris Dainty, European Optical Society**
Secretariat Photonics21	**VDI Technology Centre**