

Photonics21 Strategic Research Agenda

Photonics21 Annual Meeting

14th – 15th January 2010
Radisson Blu Royal Hotel Brussels

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



Strategic Research Agenda (SRA)

Common rationale was to “strengthen the strength” of European photonics rather than covering everything

Strategic Research Agenda provides information on

- photonics market and European market position.
- European societal challenges and how photonics will contribute.
- where European research in photonics should focus on in mid and long term.
- increasing challenge of securing highly qualified work force for photonics industry.
- actions to be taken by governments, photonics industry and research to make Europe the world leader in photonics.



Photonics market and European position

	2005	2008	Growth
World Market Photonics	€226 billion	€270 billion	6.3% p.a.
European production volume	€43.6 billion	€55 billion	~10% p.a.
Employment European Photonics Industry	246 000	290 000	

source: Optech Consulting

Key recommendations

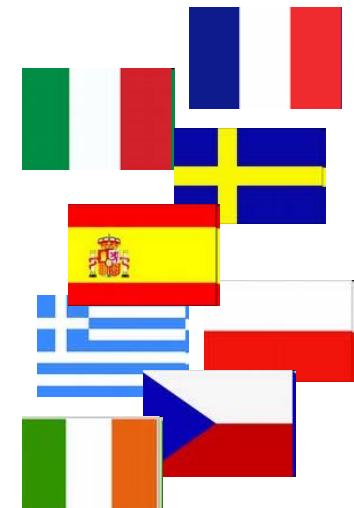
1. We must establish effective instruments for photonics

- The European photonics urgently needs more effective instruments which combine transnational research with demonstrations.
- Strategically relevant areas need a large scale, joint effort between industry, academia and public authorities.



2. EU member states should set up photonics programmes

- The EU member states should increase their investments in photonics.
- Countries like France, Italy and Spain have a strong industrial base but do not address the field as a whole.
- Many member states have world-class scientific excellence in photonics but no national strategies to translate excellence into products.



Key recommendations

3. The European Commission should double its funding for photonics

- Current budget dedicated to photonics does not match the field's strategic importance.
- Budget supports several sectors with significant market potential, but does not achieve the critical mass needed for leadership in any one of these.



4. The photonics industry should invest 10 % of turnover in R&D

- Investment in R&D is essential for European companies to stay competitive.
- The photonics industry should be prepared to increase its investment in R&D to 10 % of its overall annual turnover, or some €5 billion.



Key recommendations

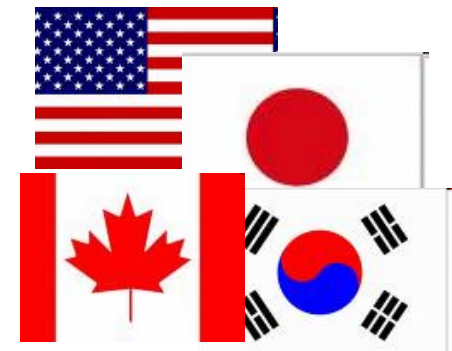
5. SMEs should have access to a capital fund for photonics

- The further development of the photonics industry in Europe depends on improved access to capital markets.
- A dedicated European industrial photonics seed and growth fund will foster growth in industrial photonics.



6. We must cooperate with other parts of the world to develop green photonics

- EU member states and the European Commission should set up a framework for international cooperation.
- Cooperation should concentrate on selected areas in green photonics.
- Close international cooperation will drive further advances in R&D and stimulate the growth of the photonics industry.



Key recommendations

7. We must work together to develop a skilled workforce for photonics

- Europe will need 80 000 new and qualified experts in photonics to cope with rapid industry growth and the retirement of skilled workers.
- EU member states, public authorities and the photonics community should pool their efforts to meet the challenges of the future.

