Thematic Session
Photonics for resource-efficiency and smart transport

Thomas Rettich, Photonics21 Work Group 2 Chair
Brussels, 29 May 2015
Aim of the thematic session

- Start a dialogue with invited representatives of other European Technology Platforms, Public Private Partnerships and private players and increase the understanding of how to jointly contribute to the implementation of the Societal Challenges work programme

- Identify needs in the field of resource-efficiency and green transport where photonics technologies can contribute to these societal challenges

- Identify areas and topics of potential collaboration between the photonics community and the invited ETPs and PPPs representatives, e.g. potential photonics-related research and innovation topics as input to the Societal Challenges work programme or for joint programme activities
Aim of the thematic session

- Excellent Science
- Industrial Leadership
- Societal Challenges

- Photonics
- Public
- Private Partnership

Identify areas and topics for potential collaboration under the Societal Challenges pillar.
**Agenda**

**First part of the session**

**11:30 – 13:00 Introduction and keynote presentations**

- Presentation by the European Commission about current challenges and the Societal Challenges work programme to which photonics might contribute to
- Representatives of the private side will provide a keynote presentation as a first input to the following discussion.

**13:00 – 14:30 Lunch break**

**Second part of the session**

**14:30 – 16:00 Common discussion on potential cooperation areas and photonics topics for efficient energy**

- Brainstorming and dialogue to identify areas and topics for potential collaboration
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 11:30 – 11:40 | **Welcome and introduction**  
Thomas Rettich, Photonics21 Work Group 2 Chair & Head of Research Coordination TRUMPF |
| 11:40 – 11:55 | **How photonics can contribute to resource efficiency in the process industry**  
Sébastien Mortier, Research Programme Officer Unit Advanced Manufacturing Systems and Biotechnologies, DG Research & Innovation, European Commission |
| 11:55 – 12:00 | **Questions and comments** |
| 12:00 – 12:15 | **Opportunities and challenges for resource-efficiency in the process industry**  
Loredana Ghinea, Executive Director Sustainable Process Industry (SPIRE) Public Private Partnership |
| 12:15 – 12:20 | **Questions and comments** |
| 12:20 – 12:35 | **How photonics can contribute to Horizon 2020 Work Programme Smart, green and integrated transport**  
Keir Fitch, Head of Unit Research and Innovative Transport Systems, DG Mobility & Transport, European Commission |
| 12:35 – 12:40 | **Questions and comments** |
| 12:40 – 12:55 | **Opportunities and challenges from sustainable transport**  
Jean-Luc Paola-Galloni, European Road Transport Research Advisory Council (ERTRAC) and EGVIA acting Chairman & Valeo Group Corporate Vice-President Sustainable Development and External Affairs |
| 12:55 – 13:00 | **Questions and comments** |
| 13:00 – 14:30 | **Lunch break** |
| 14:30 – 15:45 | **Discussion on potential cooperation areas and photonics topics for resource-efficiency and green transport**  
All workshop participants |
| 15:45 – 16:00 | **Next steps** |
| 16:00 | **End of the workshop & the Photonics21 Annual Meeting 2015** |
Keynote presentations
Discussion on potential cooperation areas and photonics topics for resource-efficiency and green transport
Questions to be discussed

- What are future needs in the field of resource-efficiency and green transport?

- What could be areas for potential collaboration where photonics technologies can contribute?

- How do the photonics topics as outlined in the Photonics Multiannual Roadmap contribute to future needs for resource-efficiency and green transport?

- How do the photonics research and innovation priorities for Horizon 2020 Work Programme 2016/2017 contribute to the defined needs?

- What could be potential photonics research and innovation topics related to the societal challenges work programme?
Photonics Partnership Board proposal for Horizon 2020 Work Program 2016

2016 Photonics KET

Research Actions
- Moving photonic and spectroscopic imaging devices for in-depth disease diagnosis to the clinic
- Breakthrough in miniaturization of SSL light engines and systems
- Pervasive High-Specificity Sensing
- 2&3D opto-structuring: researching new approaches to optical manufacturing

Innovation Actions
- Optical technologies for ubiquitous mobile and fixed access
- Micro display-based immersive, augmented, and virtual reality in professional and semi-professional applications
- Assembly and Packaging Pilot Production

2016 Factory of the Future
- Photonics Laser-based production
  - From "design to piece" – Excellence in laser-based additive industrial manufacturing
  - Rapid individualised laser-based production
Photonics Partnership Board proposal for Horizon 2020 Work Program 2017

2017 Photonics KET

Research Actions
- Petabit/s Optical Core and Metro Networks
- Photonic integrated circuit technology

Innovation Actions
- Innovation Incubator for SMEs ( photonics and non-photonics SMEs)
- Moving photonic and spectroscopic imaging devices for in-depth disease diagnosis to the clinic
- Process and Product Monitoring and Analysis (PPMA)

Coordination and Support Action
- Photonics21 Secretariat: Photonics area in Europe – Coordination and Collaboration
Next steps

- What would be the next steps?

- Should we e.g. work on a joint position paper for a specific topic in the field of resource-efficiency and green transport?

- If so, who would like to volunteer to contribute to this activity?

- The Photonics21 secretariat will share with you the outcomes of the thematic session.
Thank you very much for your attention and participation!
Have a safe trip home!