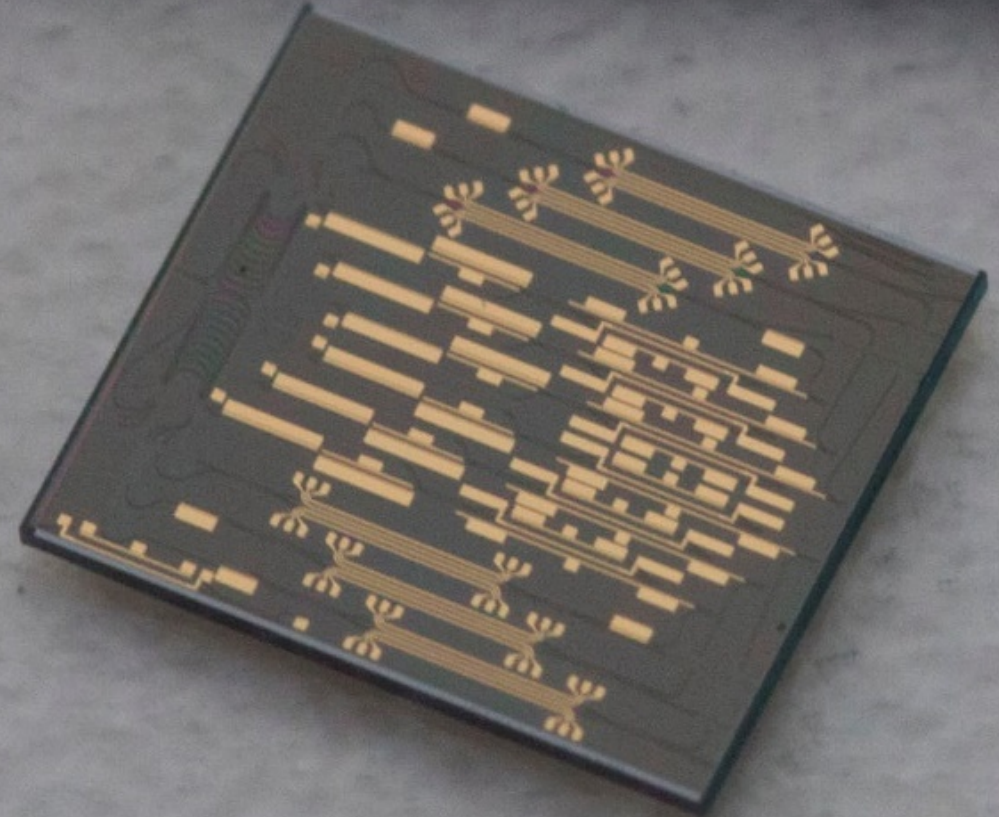


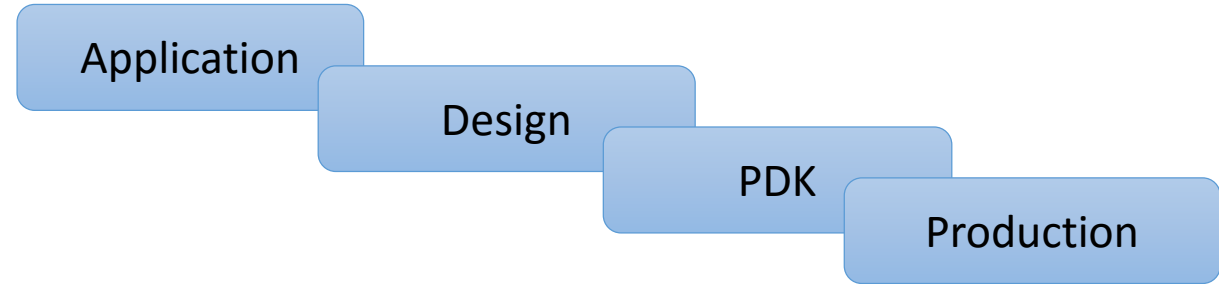
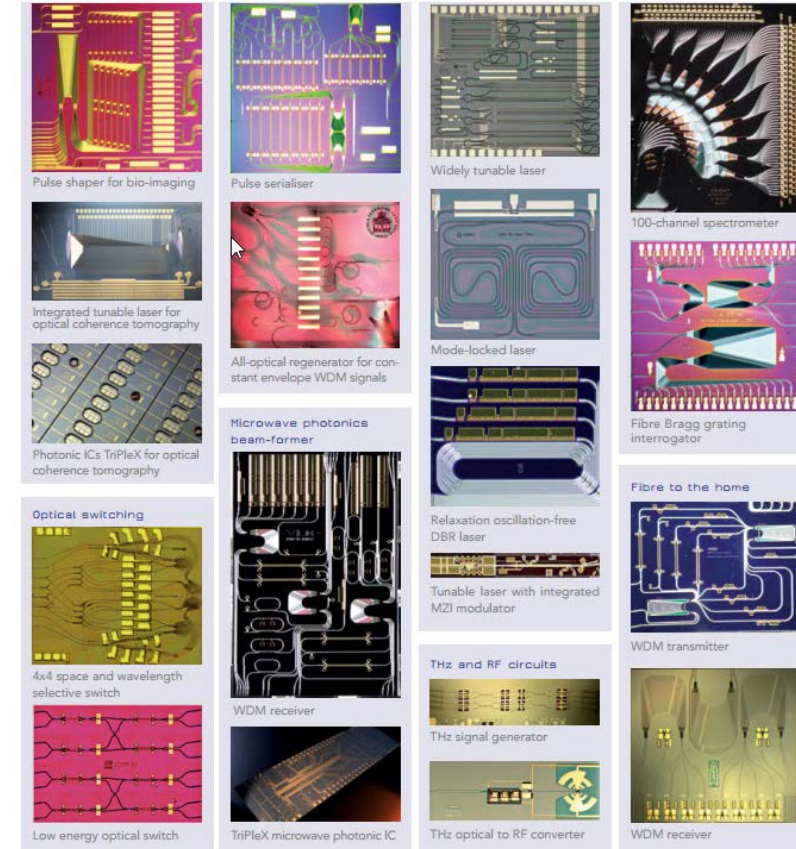
Technical Review Meeting

Open Innovation Photonic ICs OpenPICs


29th August 2017



- Accelerate photonic technologies
- **Prototyping and product development**
- Enhancement of **technology platforms**
- Development of high-performance **building blocks**
- Improvement of design workflow



- Create Innovation Pipeline, **Open Innovation** structure, in brainport region
- Become a Core Expertise Center, providing global research support
- Establish a Technology Development Center for applied R&D with Photon Delta companies
- First project within technology center



PhotonDelta
Technology
Development

PhotonDelta Technology Development drives and coordinates activities in various centres around Europe, actively linking best-in-class research and development to best business practice.

Focus on: TRL 3 - 7

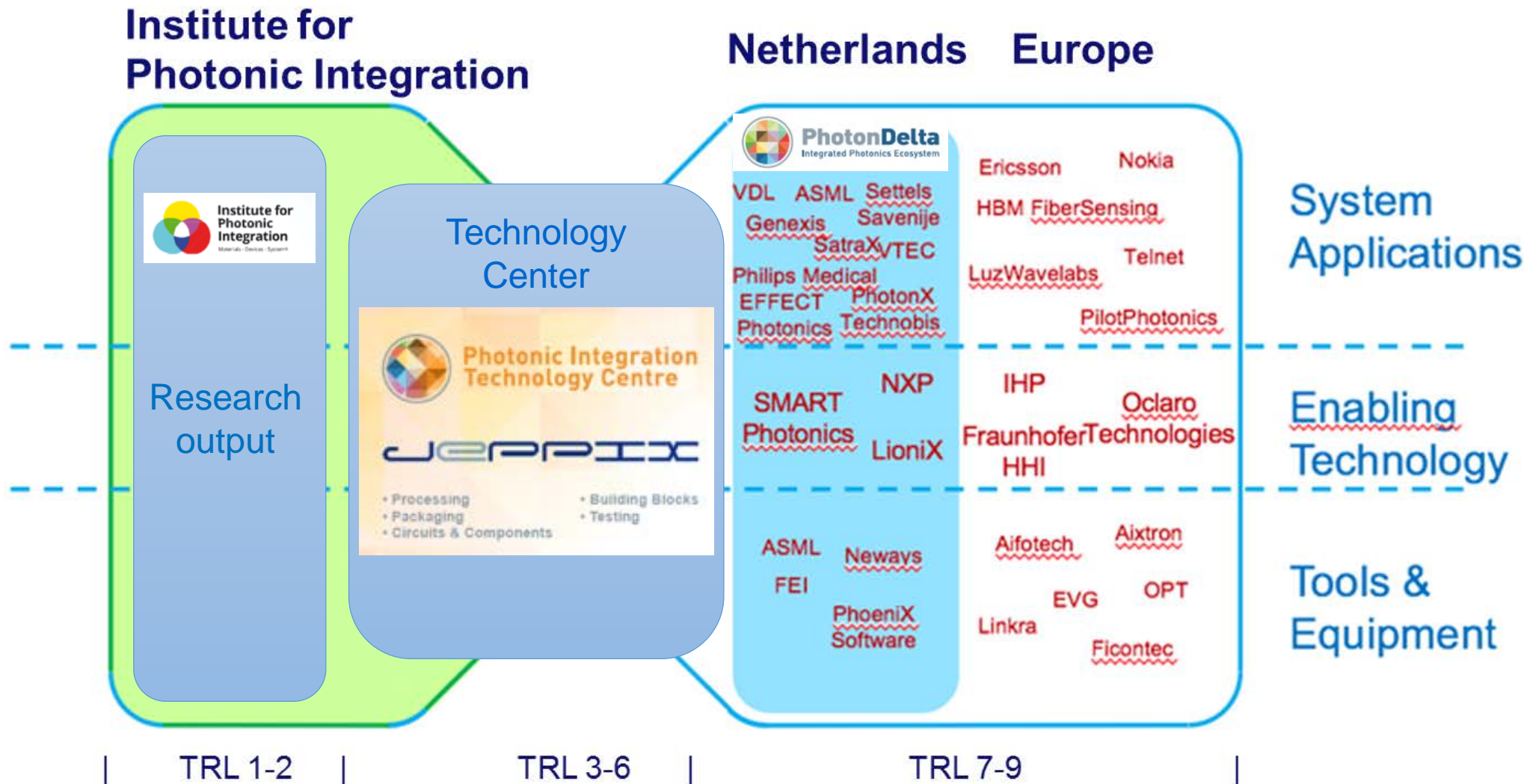


Photonic Integration
Technology Centre

JEPPPIX

- Processing
- Packaging
- Circuits & Components
- Building Blocks
- Testing







IC Research, Development and Applications

Sensors

Digital Signal Processing

System integration

Analog interfaces

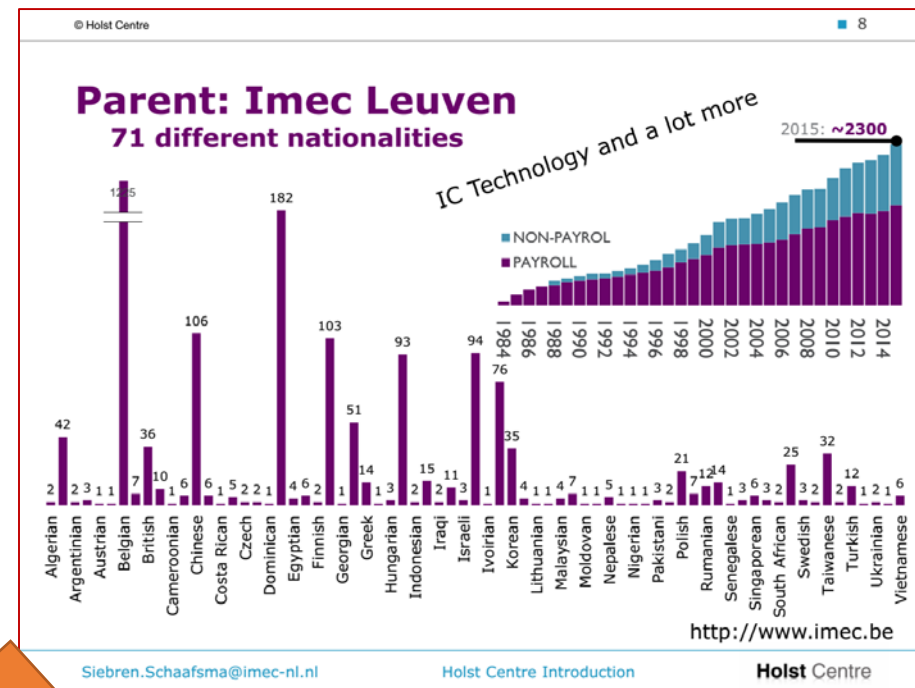
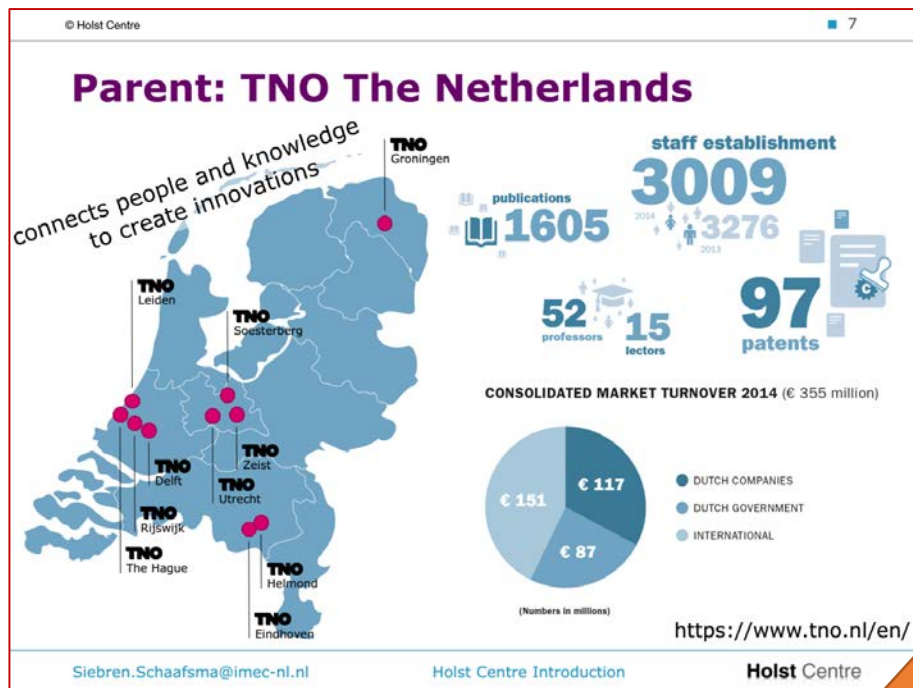
Application Demonstrators

Energy harvesting

& power management

Wireless communications





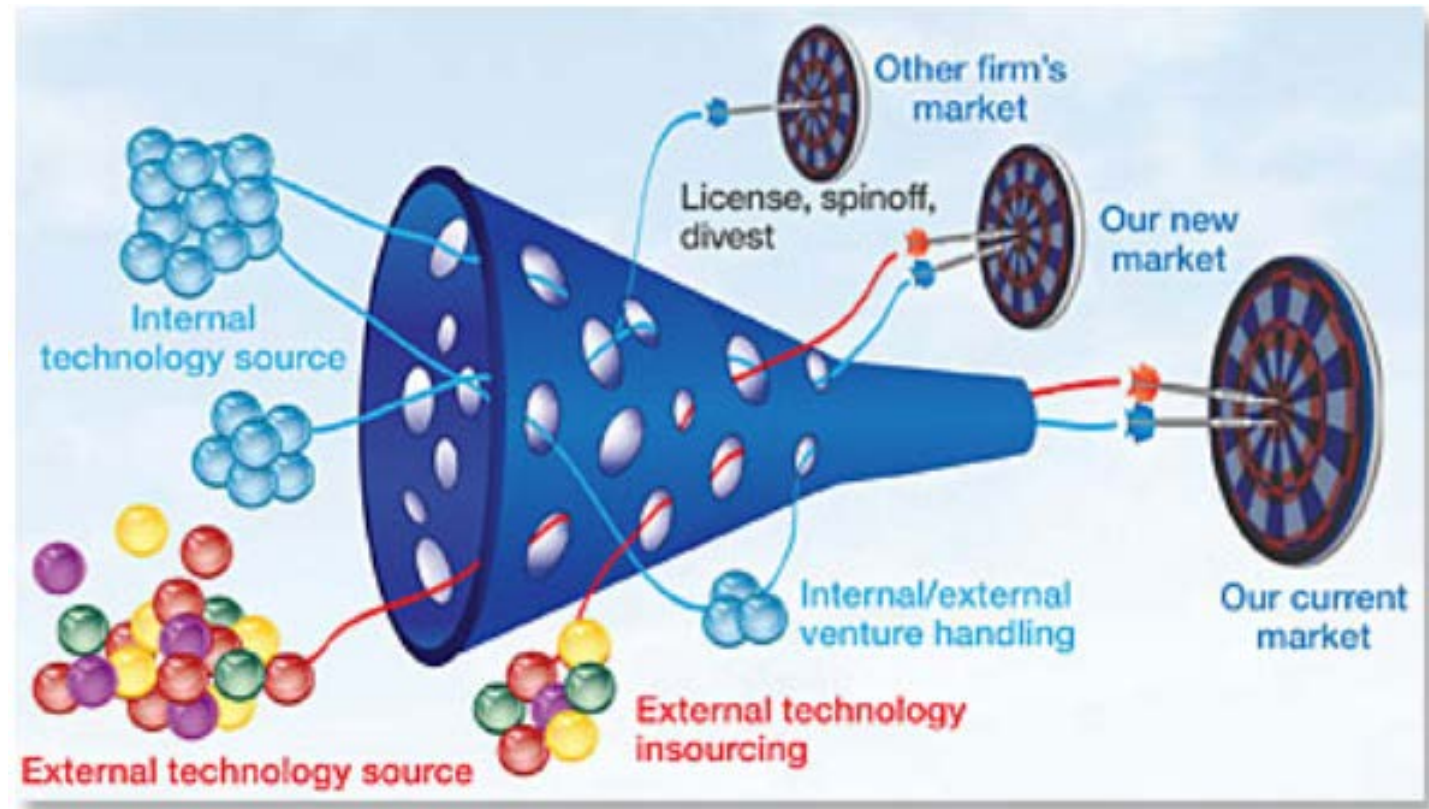
- EU Commission supports innovation hubs

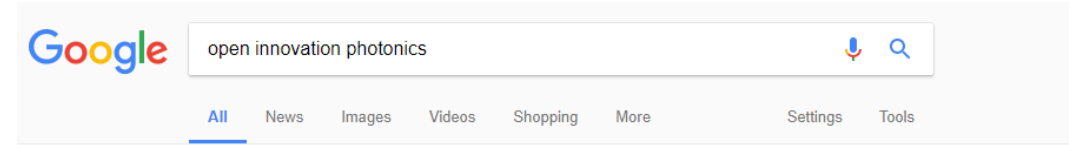
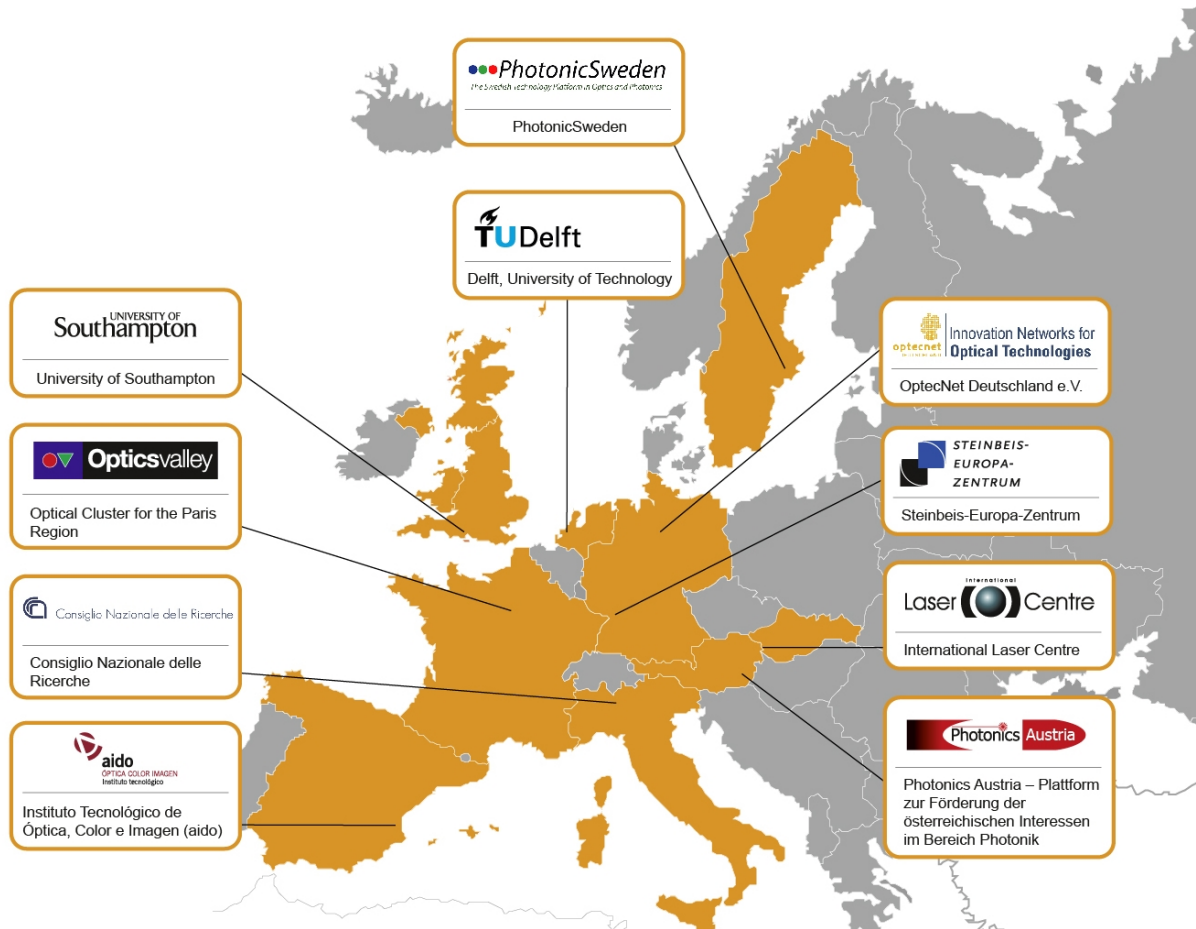
SPIE Professional January 2013

Open Innovation in Photonics

The case for sharing and harvesting innovations in photonics

By Henry Chesbrough and Jason M. Eichenholz





Entry no. 3

Open Innovation Photonic ICs (OpenPICs)
openpics.jepix.eu/
 Open Innovation Photonic ICs (OpenPICs). The South Netherlands region is a leader in the field of photonics and is home to leading research facilities and an ...

We accelerate the commercialization of photonics with Open ...
www.open-photonics.com/
 We use a unique open innovation and crowd sourcing model to facilitate collaboration between companies with market channel and inventors having new ...

Open Innovation in Photonics :: Open Innovation Community
openinnovation.net/featured/open-innovation-in-photonics/
 Jan 4, 2013 - An article on the SPIE website by Henry Chesbrough and Jason Eichenholz notes that these days the leading industrial enterprises of the past ...

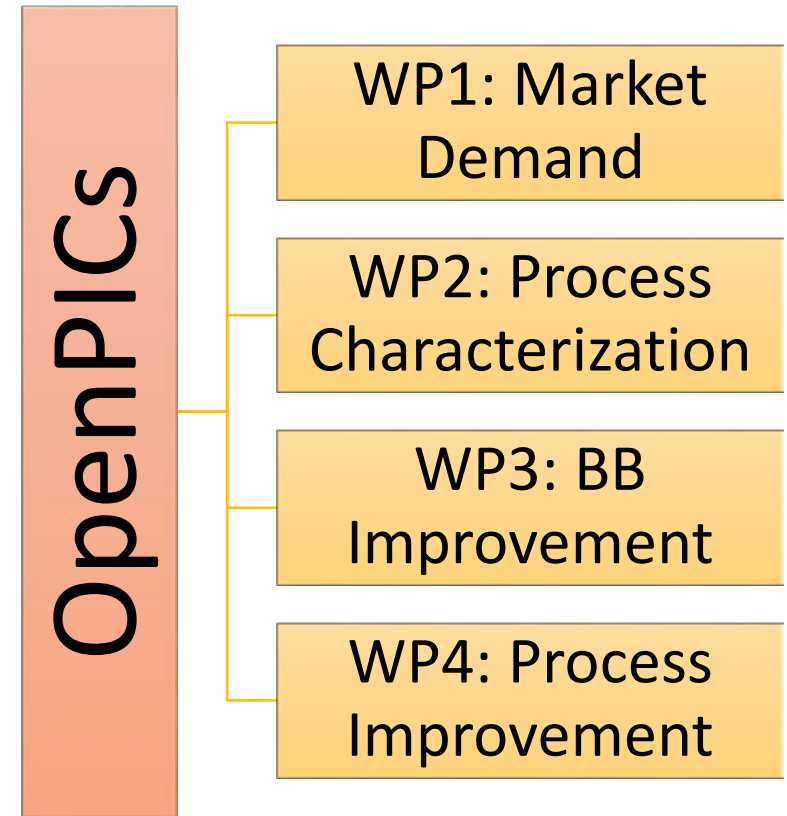
Open Innovation in photonics guidelines – Photontransfer blog
<https://photontransfer.com/.../open-innovation/open-innovation-in-photonics-guidelin...>
 Jan 20, 2016 - Open innovation in Photonics well expresses the need of cross-sectional technologies and a huge opportunity to speed up innovation ...

Open Photonics facilitates R&D-to-commercialization process - Laser ...
www.laserfocusworld.com/articles/2013/01/open-photonics.html

- Photonic Integration Group
- Smart Photonics
- Effect Photonics
- Lionix International
- Bright Photonics
- Technobis
- Phoenix Software



- **WP1 Market Demands:**
 - Translating products into building blocks
 - outreach to companies, survey
- **WP2 Process characterization:**
 - Obtaining data on the production process
 - improve production of photonic ICs.
 - improve reliability, repeatability
- **WP3 Building Block Improvement:**
 - Improving the existing subcircuits (composite blocks)
 - Improve component/circuit models
 - aim at first-time-right design
- **WP4 Process improvement:**
 - optimize and improve the production process
 - enable more and better building blocks



Submitted technical report to Stimulus

List of Milestones/Reports



Open Innovation Photonic ICs
OpenPICs
Technical Summary Report
(09/2016 – 06/2017)



Europese Unie
Europees Fonds voor Regionale Ontwikkeling






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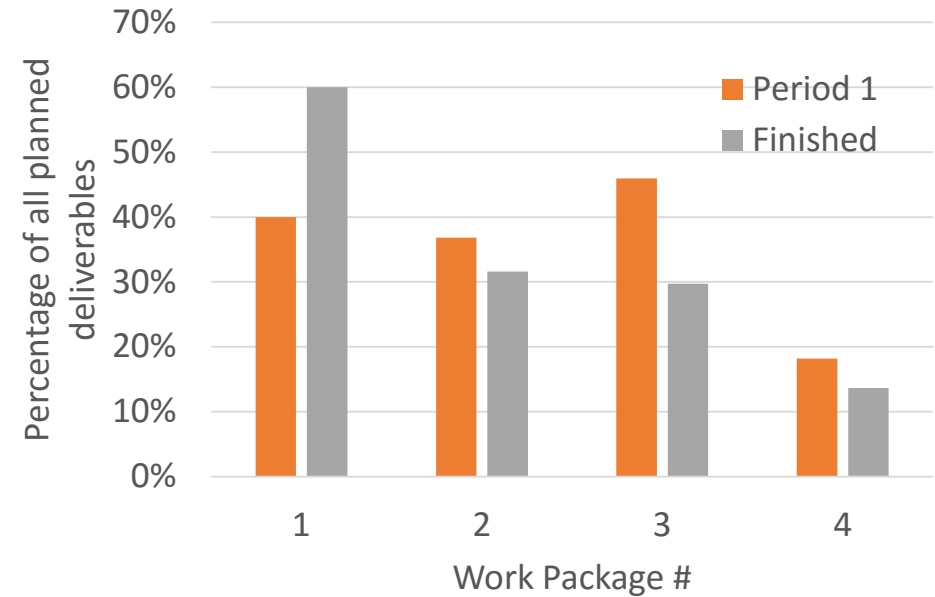


Open Innovation Photonic ICs - Technical Summary Report
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Status of project



- | | |
|---|-----------------|
| (1) Introduction | (9:00 - 9:15) |
| (2) Work Package 1 | (9:20 - 9:50) |
| <ul style="list-style-type: none">- Outreach Activities TU/e- OpenPICs for Effect Photonics- OpenPICs for Technobis | |
| (3) Work Package 2 | (10:00 - 10:30) |
| <ul style="list-style-type: none">- Pilot Line Developments | |
| (B) Coffee Break | (10:40 - 11:00) |
| (4) Work Package 3 | (11:00 - 11:30) |
| <ul style="list-style-type: none">- Contribution and planning from TU/e- Contribution and planning from Bright Photonics- Contribution and planning from Phoenix BV | |
| (5) Work Package 4 | (11:40 - 12:10) |
| <ul style="list-style-type: none">- Contribution and planning from TU/e- Contribution and planning from Smart Photonics- Contribution and planning from Lionix | |
| (6) Open Discussion | (12:20 - 13:00) |
| (B) Lunch | (from 13:00) |