PICs4All

We help to apply Photonic ICs in your Products

Katarzyna Ławniczuk

PICs4All: EU H2020 Innovation Support Action

- **Bridges the gap** between technology and market
- **Helps to assess** the benefits of applying Photonic ICs in your products

- **European Network of Experts in Photonics**

  Application Support Centers in:

TU/e Technische Universiteit Eindhoven University of Technology – Where innovation starts

UNIVERSIDAD POLITECNICA DE VALENCIA

TELECOM ParisTech

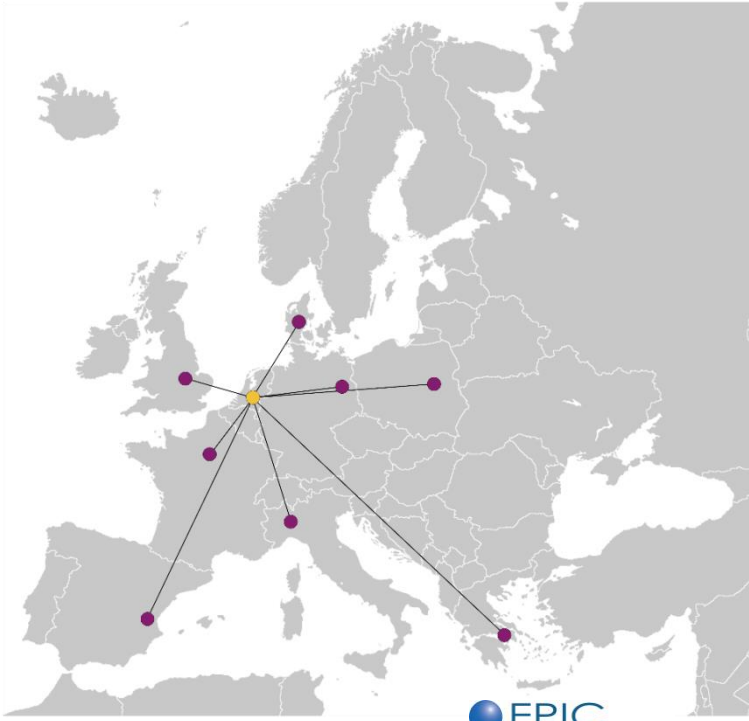
UNIVERSITY OF CAMBRIDGE

National Technical University of Athens

AARHUS UNIVERSITY

POLITECNICO DI MILANO

Technische Universität Berlin



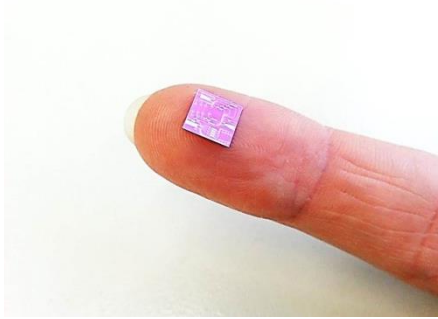
Berenschot

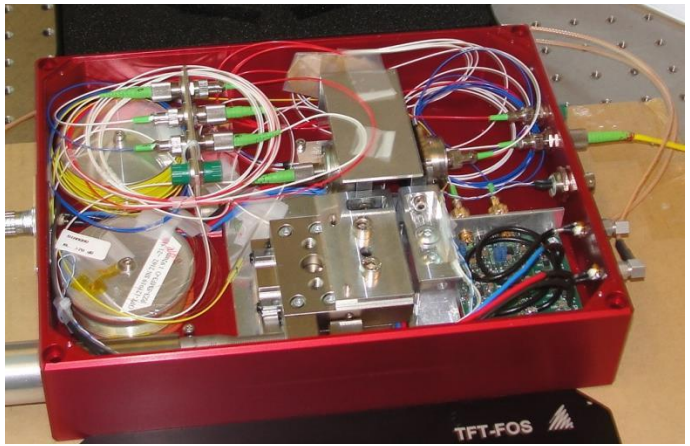
EPIC European Photonics Industry Consortium

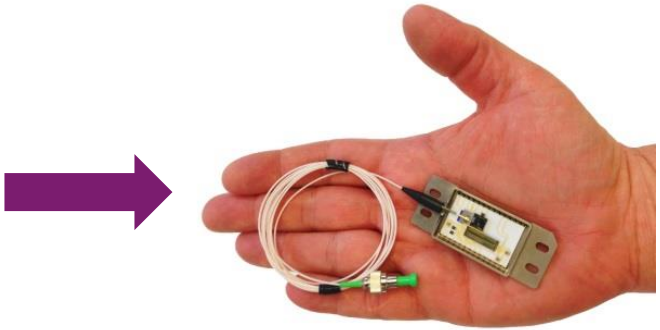
Why PIC technology?

Photonic ICs bring competitive advantage to your products:

- ✓ Miniaturization
- ✓ Cost reduction
- ✓ Performance enhancement







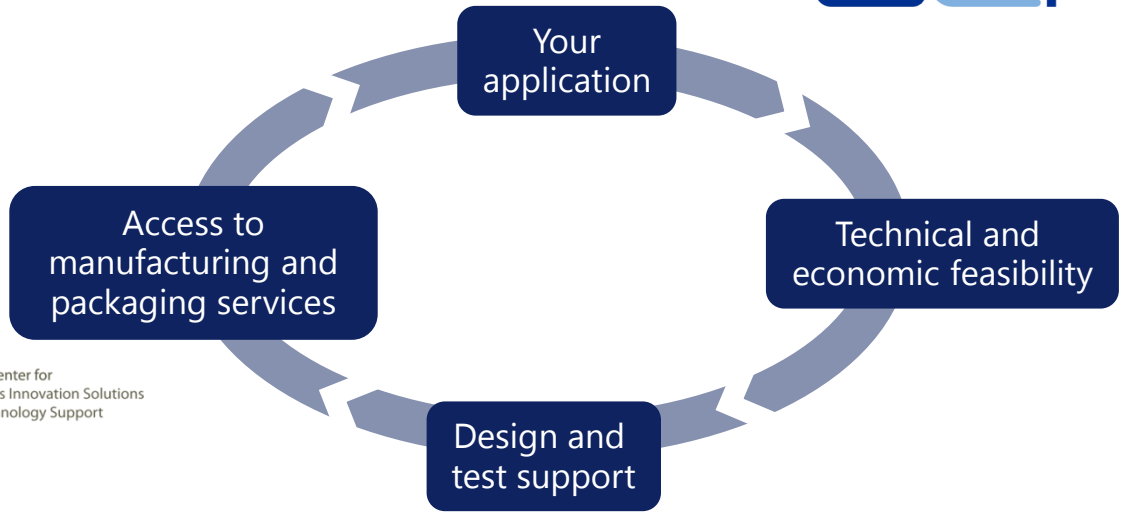
Where to use PIC technology?

- Telecom and Datacom
  - Switching, FTTH, RoF, OTDM, DWDM
- Sensor readouts
  - FBG interrogators
  - Spectrometers
- Medical and diagnostic
  - OCT, bio-imaging
- Microwave, THZ and RF photonics
- Quantum communication
- Variety of lasers
  - Widely tunable, multiwavelength
  - Ring and pulse lasers
- **And many more…**

PICs4All: applying PICs into products

PICs4All offers:

free advice on technical and economic viability
free support in conceptualisation, design and testing of Photonic ICs
guidance in access to manufacturing and packaging services
access to III-V and SiN technologies via JePPIX ecosystem



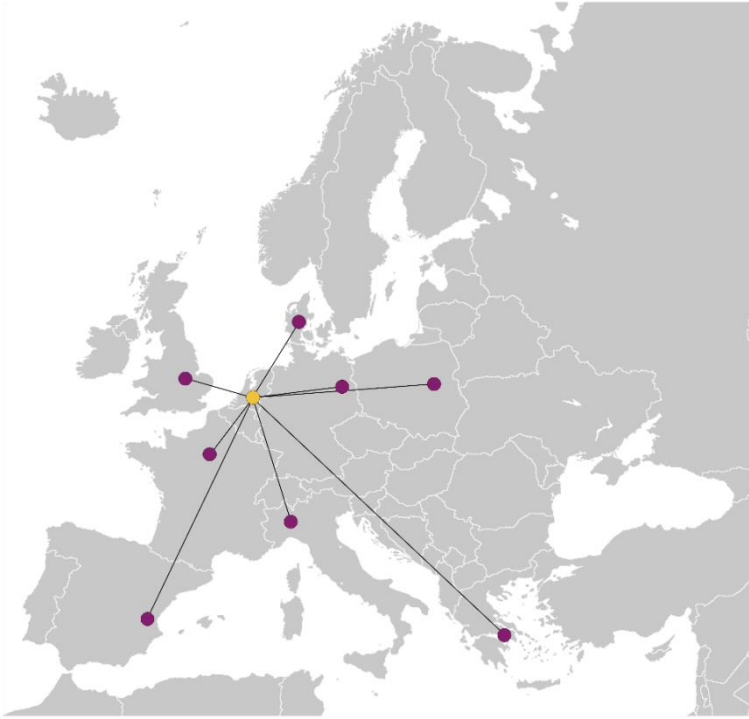
ACT PHAST
Access Center for Photonics Innovation Solutions And Technology Support

How can we help you?

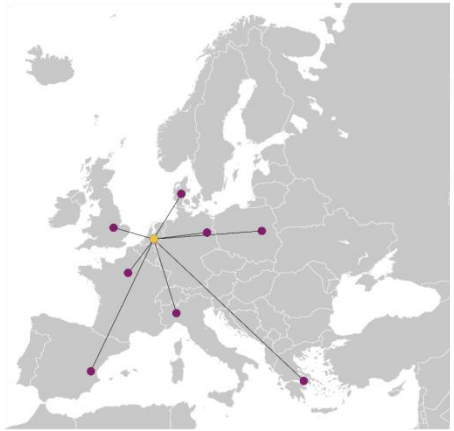
- ✓ Expertize in PIC technology platforms
  - InP, Si, SiN, Polymer
- ✓ Technical skills in photonic integration
  - Modelling & Design
  - Prototyping & Fabrication
  - Measurement & Testing
  - Packaging & Assembly
- ✓ Guide to free and (semi-)commercial capabilities
  - Access to CAD/design software tools
  - Prototyping & Fabrication (clean-room facilities)
  - Measurement & Testing (labs)
  - Packaging & Assembly

JePPIX

ACT PHAST



Who will help you?



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9. National Technical University of Athens:
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PICs4All: targeted group

- **Device manufacturers and components vendors:**
  in photonic, optoelectronic, electronic, telecommunication, data-communication sensor, automotive, medical etc.
- **System integrators:**
  in application for tele- and data-communication, sensing, radio frequency (RF)- and wireless communication, next generation 5G communication, automotive and aerospace.
- **European** and **international scientific** and **industrial community** of photonics, with a specific focus on integrated photonics and optics.
- **Subsystems developers, equipment suppliers** and all **European societies** for optics, photonics; including optical clusters and associations in Europe.

PICs4All: actions

- **Workshops**: know-how sharing and outreach to new users (Photonics Event, 1-2 June 2016, Veldhoven, The Netherlands, focused on PICs in sensing)
- **Conferences and PIC related events:** regional conferences, technical exhibitions, conferences and trades is a stimulus at the European and regional scale (20 events attended)
- **Scouting and one-to-one meetings:** direct communication, (35+ scouting activates)
- **Clusters, regional development agencies:** collaboration with national clusters, combined initiatives such as workshops
- **JePPIX and EPIC:** reach out through JePPIX and EPIC activities
- **Promotion of project results:** application notes, successful PIC prototypes


JePPIX

PhotonicsNL

Presenting

Pitches

Workshop Integrated Photonics for Sensing

Program June 1st starting at 14:20h, Beneluxzaal

In the afternoon PhotonicsNL will organize the workshop Integrated Photonics for Sensing Applications together with our partner JePPIX in Eindhoven. JePPIX assists organizations around the globe to get access to advanced fabrication facilities for Photonic Integrated Circuits (PIC). The prediction is that the development and application of PIC's will be as revolutionary as the development and application of Electronic IC's in the past thirty years. Especially the impact in ICT-applications will be enormous when energy consuming electronic IC's in data-centers will be replaced by much less energy consuming and much faster PIC's. Please visit the JePPIX website for more information.

This workshop will be an excellent opportunity to get more acquainted with this disruptive technology in general and in this case PIC's for Sensing Applications. Imagine yourself, a complete Optical Spectrometer on a chip!

The prime objective of the CSA-project PICs4All (started in January 2016) is to increase the impact of photonics and enable access to the advanced photonic integrated circuit (PIC) technologies for academia, research institutes, SMEs and larger companies. Jeppix is the coordinator of the project.

Another CSA-project that started in 2013 already is Actphast. Actphast can give you access to a network of over 200 top photonics experts and the state-of-art technology platforms from leading European research institutes. We make life easier by matching you with the best experts to your specific needs, managing a lot of the paperwork for you, and subsidizing the project. We focus on innovation projects which can be completed quickly in 6-9 months and can result in accelerated readiness of strong new products for market launch. A close collaboration between Actphast and PICs4All is obvious!

The workshop will end with pitches from companies that play an important role in the whole value chain from development, design, fabrication, testing, packaging and applications of PIC's.

Your contacts: *Katarzyna Lawniczuk, Jeppix, k.lawniczuk@tue.nl*
Guus Tamminau, PhotonicsNL, guus.tamminau@photonicsnl.org

You can subscribe for the workshop on forehand by sending us an e-mail!

PICs4All: instruments

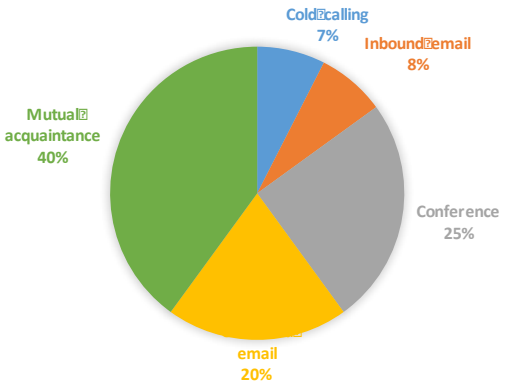
- **Communication kit**: flyers, presentations, introduction to PICs and generic technology, examples of PICs, ASC info
- **Press release**, publications, newsletters
- **Social** media, website, network, e-mailing

- **Work-flow** and guideline with ASC capabilities
- **Techno-economic** guideline and supporting materials (questionnaires and specification tables helpful for scouting and projects assessment)
- **ZOHO system** to keep track of the work (online dedicated data collection tool)

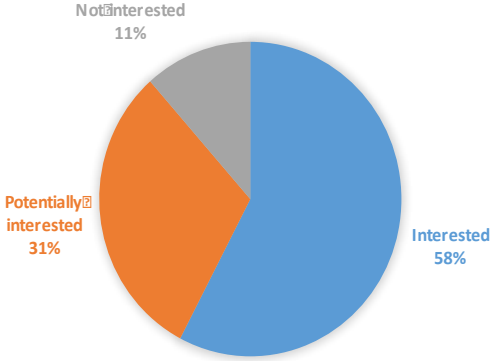
PICs4All: instruments

- **ZOHO system:**
  - to establish the effectiveness and efficiency of scouting in a quantitative way,
  - to track, in real-time, the progress as well as the outcome of PICs4All,
  - to identify scouting mechanisms used, type of documents used/shared, application domain and market sector, who initiated first contact, etc.

- **Funding mechanisms:**
  - No co-finance via PICs4All
  - PICs4All stimulates through support and guidance
  - Collaboration with ACTPHSAT



Scouting mechanism used



Overall user interest

Open **for collaboration with other projects**
in bringing photonics technologies to a broad audience

Thank you!

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