CLUSTERS MEET REGIONS

A SUSTAINABLE APPROACH TO RAW MATERIALS

KITTIŁÄ FINLAND 25-27 APRIL 2023

EUCLUSTERS MATCHMAKING EVENTS

#SingleMarket30
Visit the ECCP website and follow us on social media

www.clustercollaboration.eu
@Clusters_EU

European Cluster Collaboration Platform

#ECCP  #ECCPMatchmaking  #ClustersMeetRegions
Session I: East and North Finland in Industrial Transition – shaping the future together

Round Table I: Modern Digital Solutions and High Technology

Moderator: Antonio Novo, President of the European Cluster Alliance

- Caroline Amiot, Project Manager, Photonics Finland
- Satu Väinämö, Director, PrintoCent
- Paavo Niskala, SVP IMSE Technology, TactoTek
Round Table I: Modern digital solutions and high technology.

Caroline Amiot, PhD
Project Manager at Photonics Finland
Round Table I: Modern digital solutions and high technology.

Presentation of Photonics Finland

Link to the video
Round Table I: Modern digital solutions and high technology.

**Photonics Finland services**

- Networking
- Events & Exhibitions
- Knowledge Transfer
- Innovation
- Public Relations
- Promote Photonics
- Job board
Our next event: Joensuu, Finland, MAY 30th – JUNE 2nd

Industrial thematic sessions
• Spectral & Hyperspectral imaging
• Photonics in Security & Defense
• Nano- & Micro-photonics

CXC Exclusive dinner on June 1st & Company visits on June 2nd
Dispelix, Nanocomp, Chipmetrics, and Photonics Center

Travel funding: 475€ for eligible organisations (SMEs / Research institutes / Clusters)
Round Table I: Modern digital solutions and high technology.

Photonics Finland Partner in EU Projects

**Photonics4industry**
- Delegation visits to discover the ecosystems of the 5 partner countries (Finland, Germany, France, Austria, Lithuania)
- New joint services for the clusters (Matchmaking platform, International Job board...)
- Connect businesses to trigger future partnerships

**PhotonHub Europe**
- Help SMEs to innovate using Photonics
- Trainings and Innovation Fundings
Round Table I: Modern digital solutions and high technology.

Photonics Finland Partner in EU Projects

**PIMAP4Sustainability**
- Call for Innovation fundings for cross-border collaborations between SMEs – 60k€ per project (Metalworking, Aerospace, Industrial Manufacturing)
- Call for Training
- Organisation of delegation visits to Canada, Japan and Singapore

**BestPhorm21**
- Promote Photonics to decision makers
Round Table I: Modern digital solutions and high technology.

Photonics Finland team
Let's connect! Stay updated with our activities and opportunities, follow Photonics Finland in social media!

Juha Purmonen
Executive Director

Ana Gebejes, PhD
Head of Projects

Caroline Amiot, PhD
Project Manager

Tuukka Pakarinen
Communications and Exhibitions Manager
“The whole is greater than the sum of its parts”

- Aristotle
Round Table I: Modern digital solutions and high technology

PrintoCent Industry Cluster

Satu Väinämö
Director, PrintoCent
PrintoCent
Boosts innovation and industrialisation of Printed Intelligence
• Click to edit Master text styles
Industry cluster

40+ industry members globally, which represent different parts of the value chains

> 500 experts in industry and research in the region

https://www.printocent.net/printocent-cluster
PrintoCent Pilot Factory

A world class roll-to-roll capable pilot factory for **printing, component assembly and post processing**

Enables technology development and testing from **prototyping to proof-of-manufacturing and pilot scale production for early market trials**

https://www.printocent.net/proof-of-manufacturing

Expansion of Printocent Pilot Factory to accelerate the development of medical devices

07 Mar, 2023
Events

June 8-9, 2023
PrintoCent InnoFest is an annual innovation competition – it’s a place where ideas, problems and Printed Intelligence solutions meet!

January 24-25, 2024
PRINSE’24 is the event where industry leaders show the current status of Printed Intelligence, and visionary keynote speakers lay the ground for the next steps!

https://www.printocent.net/events
We’ve joined PrintoCent ...of course we did! Here’s why:
1) Our base technology was invented at the PrintoCent pilot facilities at VTT in Oulu.
2) Our business idea was first publicly tested at #PrintoCentInnofest in 2021. Offered a friendly crowd to nurture our idea, but also tough competition from the other teams. We were happily surprised to win.
3) PrintoCent events are great for networking. We’ve met value chain members from many potential end markets. Those interactions helped us identify where to initially focus our business.
4) We now partner with several PrintoCent members, internationally, to develop first products to market.
5) PrintoCent allows our early pre-seed stage company to begin operations nimbly with low CAPEX, even though our solutions are based on novel hardware technology.

To sum it up, great collaborative spirit and valuable resources in PrintoCent. Always risks involved in starting new business, but feels kinda great doing it in this ecosystem!
PrintoCent welcomes all industries to explore what Printed Intelligence can offer!

We have partners, facilities and experience to develop sustainable solutions, find new design opportunities and to build new value chains to realize these
Find your partners in

**Printed intelligence**

Flexible - stretchable - wearable - hybrid - electronics & diagnostics

**Satu Väinämö, Director, PrintoCent**
Satu.vainamo@vtt.fi  www.printocent.net
Paavo Niskala - TactoTek

SVP IMSE Technology
TactoTek

Injection Molded Structural Electronics
IMSE® technology
• IPR Licensing
• Design Services
• Selected Manufacturing

HQ in Oulu, Finland

Offices in USA, Germany, Japan and South Korea

Head Count 100

46 patent families & +170 patents

Technology based on decades long Finnish academia research

Automotive validated technology
The Future of Electronics

Conventional electronics
- 41 parts + Two large PCBs
- Multiple injection molding tools
- Costly and complex assembly
- 48mm assembly depth
- 281 grams

IMSE = Injection Molded Structural Electronics
- One molded part with IMSE SiP
- One injection molding tool
- Minimal assembly
- 4.5mm molded material thickness, 90% less material
- 130 grams, 54% less weight
- Less energy needed in production & logistics
Emblems

Light areas

Light lines

Icons
Aviation

Smart homes
IMSE® Smart Surfaces for Integrated Sustainability

- Decorative and functional illumination - LEDs are molded within a single structure, no light guides
- Full HMI solutions
- Qualified by OEMs for automotive production use
More Benefits
- Additive Manufacturing
- GHG Emission reduction from cradle to gate*
- Supply chain and manufacturing simplicity

*verified LCA for a different IMSE Design
LCA report available for download from tactotek.com.
IMSE disruption dissected

- Subtractive
  - Flat
  - Multi-structural
- Additive
  - Curved
  - Mono-structural

Conventional electronics vs. IMSE

Complex & China driven vs. Simplified & European value chains