

MedPhab

Photonic Medical Devices

Funded by



PHOTONICS²¹

PHOTONICS PUBLIC PRIVATE PARTNERSHIP



31 January, 2023 Jussi Hiltunen

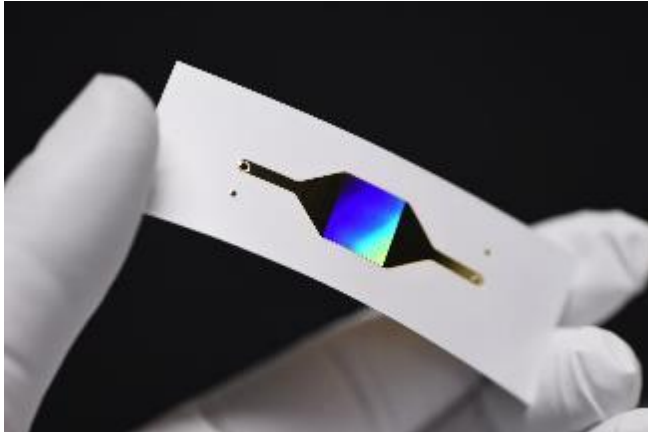
MedPhab – The Photonics-Based Medical Technology Pilot Line

Dedicated to Efficiency

- Photonics Pilot Line dedicated to medical devices
- Simplify R&D
- Enable **cost effective development** from prototype devices to manufacturing
- **Several photonics and supportive technologies** through a single entry-point
- Early adoption of **new photonics technologies**



Disposable plasmonic fluidic sensor



Technologies

- ✓ Microfluidics
- ✓ Plasmonics
- ✓ Surface functionalization

Applications

- ✓ SPR
- ✓ Surface-enhanced fluorescence

Reader units for in-vitro diagnostics



Technologies

- ✓ Optics
- ✓ Mechanics
- ✓ Integration

Applications

- ✓ Fluorescence reader
- ✓ SPR
- ✓ Interferometry

Photonic wearables



Technologies

- ✓ Optics
- ✓ Mechanics
- ✓ Integration

Applications

- ✓ PPG
- ✓ SpO2

Surgery aid



Technologies

- ✓ Fiber optics
- ✓ Integrated optics
- ✓ Micromodules

Applications

- ✓ Diagnostics
- ✓ Therapy

Example reference cases

More cases shown at medphab.com

In-vitro diagnostics



GenSpeed Biotech

Technologies

- Optical readout
- Microfluidics

Phototherapy

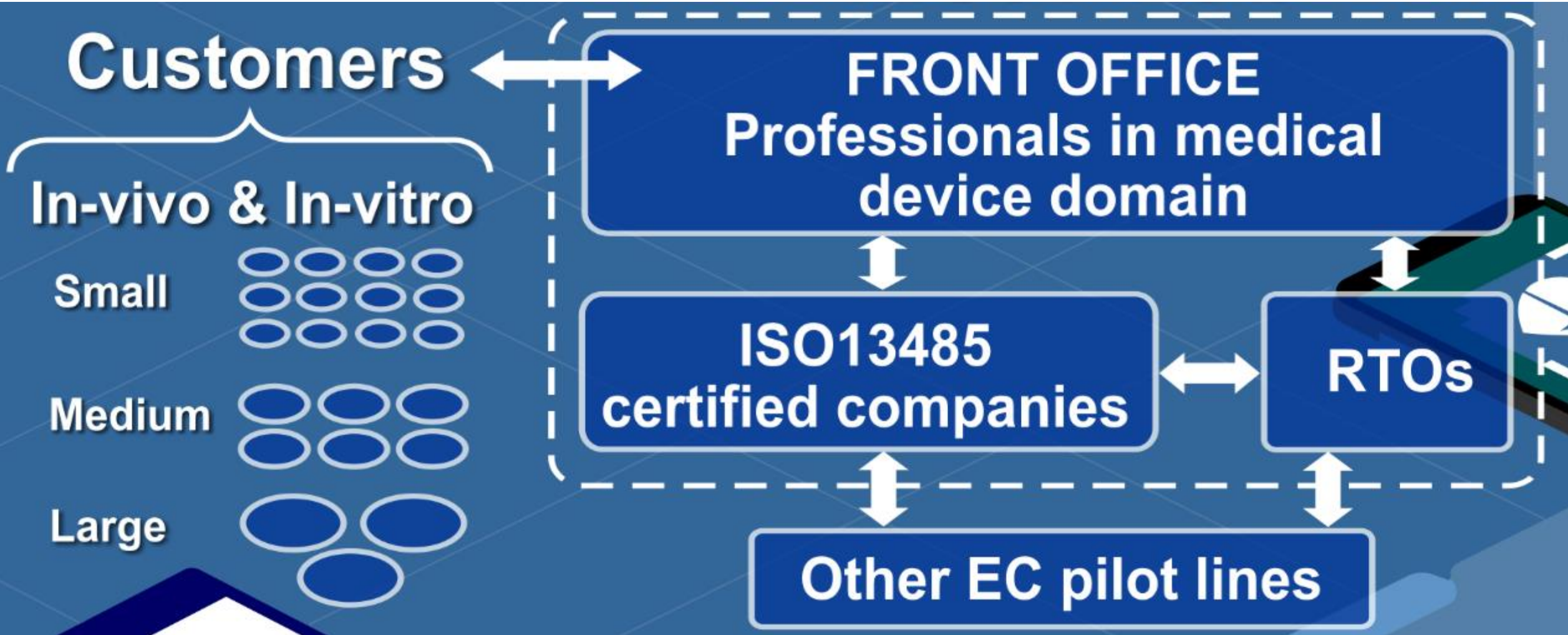


Spectracure

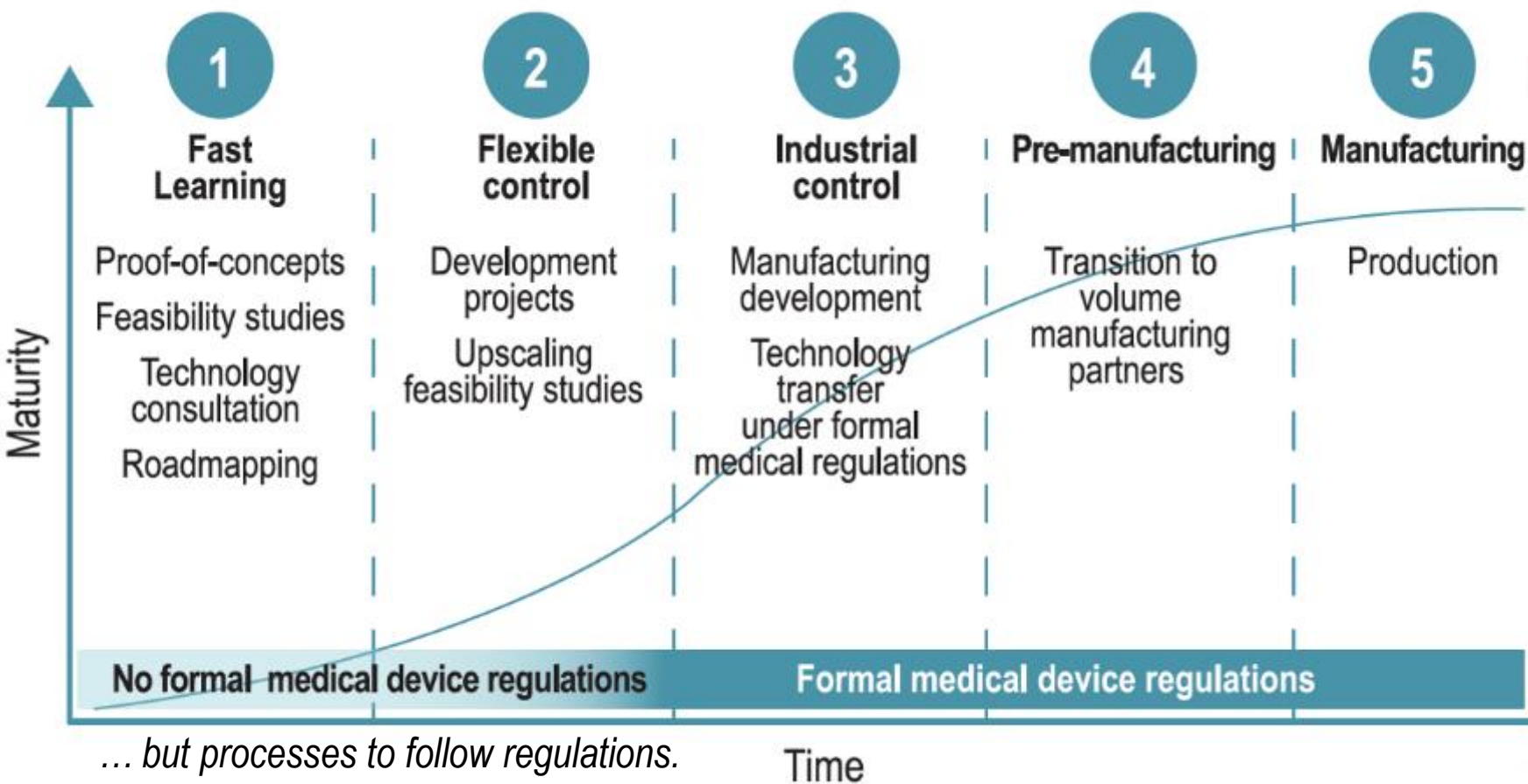
Technologies

- Optoelectronics packaging

Single entry point – how to work with us?



Single-entry point for full development chain



Front Office
Professionals in medical device domain

RTOs

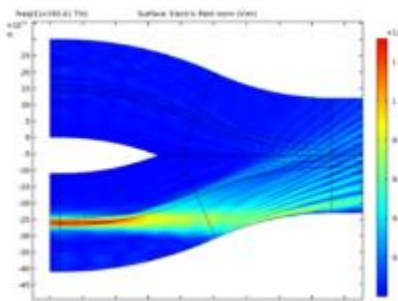


ISO13485

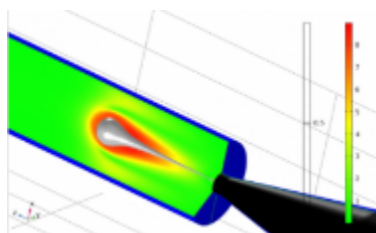


From proof-of-concept to product

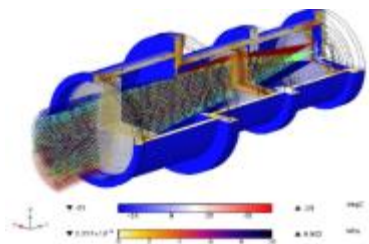
SIMULATION & MODELLING



Optical simulation



Computational fluid dynamics (CFD)



Mechanical simulation

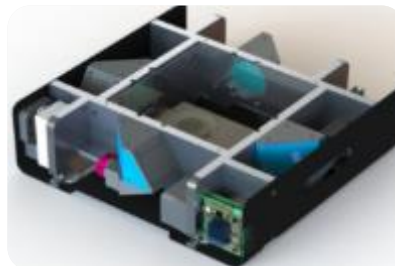
PROTOTYPING



Integrated lab-on-chip devices



Electronics



Free-space optics

DESIGN FOR MANUFACTURE & PILOT FABRICATION



Mobile optical reader + disposables



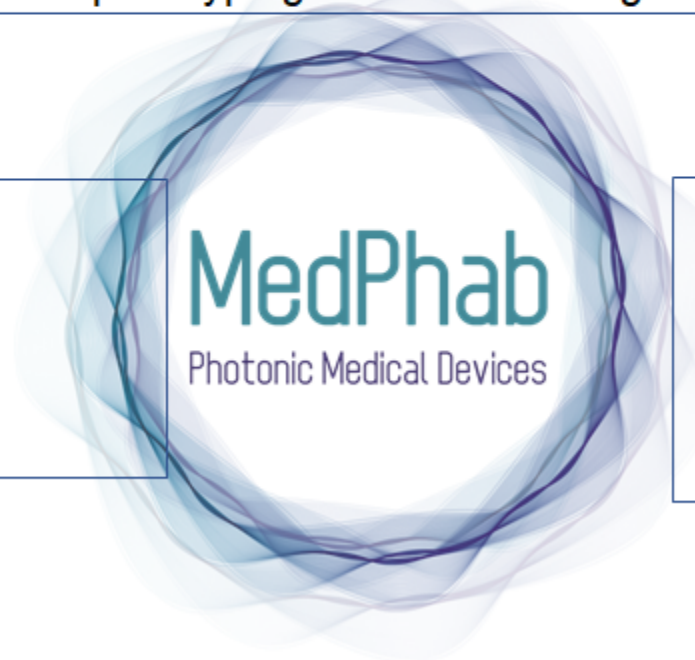
Roll-to-roll pilot manufacturing

Customers

- ✓ Accelerate product development through world-class RTOs and industrial partners who speak “the same language”
- ✓ Be matched with the right R&D partners through a single entry point
- ✓ Get a comprehensive evaluation of technology readiness and guidance in development priorities
- ✓ Medphab covers all project stages from prototyping to manufacturing

RTOs

- ✓ Improved customer service
- ✓ Creditability in medtech community



Industrial parties

- ✓ Customer cases with higher maturity from RTOs
- ✓ Update on the latest photonics technologies

Financial support for Demo-case Projects

3rd Party	EU-contribution for MedPhab services (Budget provided to MedPhab partners via MedPhab–Demo case fund)	3rd party in-cash contribution (on top of optional in-kind contribution)
SME (EU-based)	75%	25%
Large company (EU-based)	50%	50%

Total budget of MedPhab Demo Case Fund: 1.85 M€
Maximum EU-contribution per project: 250 K€





CMP

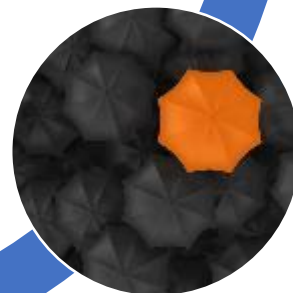


One virtual stop shop



Community building tool

- Low the barrier for technology adoption



Benchmarking tool for available technologies



Project Partners

MedPhab
Photonic Medical Devices



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 PHOTONICS²¹

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Reference cases at medphab.com

Thank you for your attention