

MedPhab

Photonic Medical Devices

Funded by



PHOTONICS²¹

PHOTONICS PUBLIC PRIVATE PARTNERSHIP



30 January, 2024 Jussi Hiltunen

MedPhab – Photonics-Based Medical Devices

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



Accelerated market entry with reduced costs



Accelerate product development through world-class RTO's and industrial partners



Find your R&D partner easily through single entry point



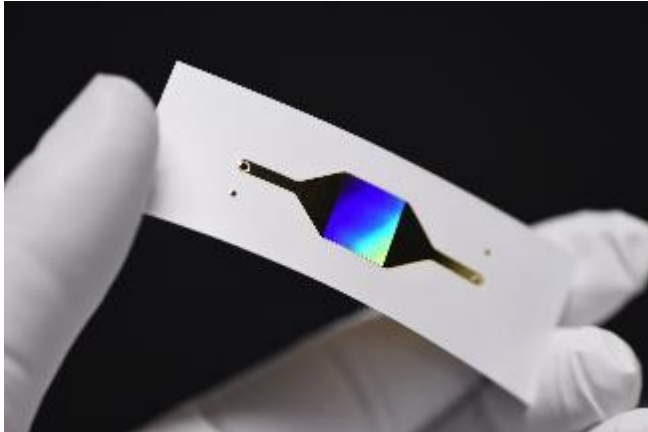
Get comprehensive support *incl. reality check* on technology and manufacturing development



MedPhab association supports from prototyping to manufacturing stage towards ISO 13485 certification



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 and therapy



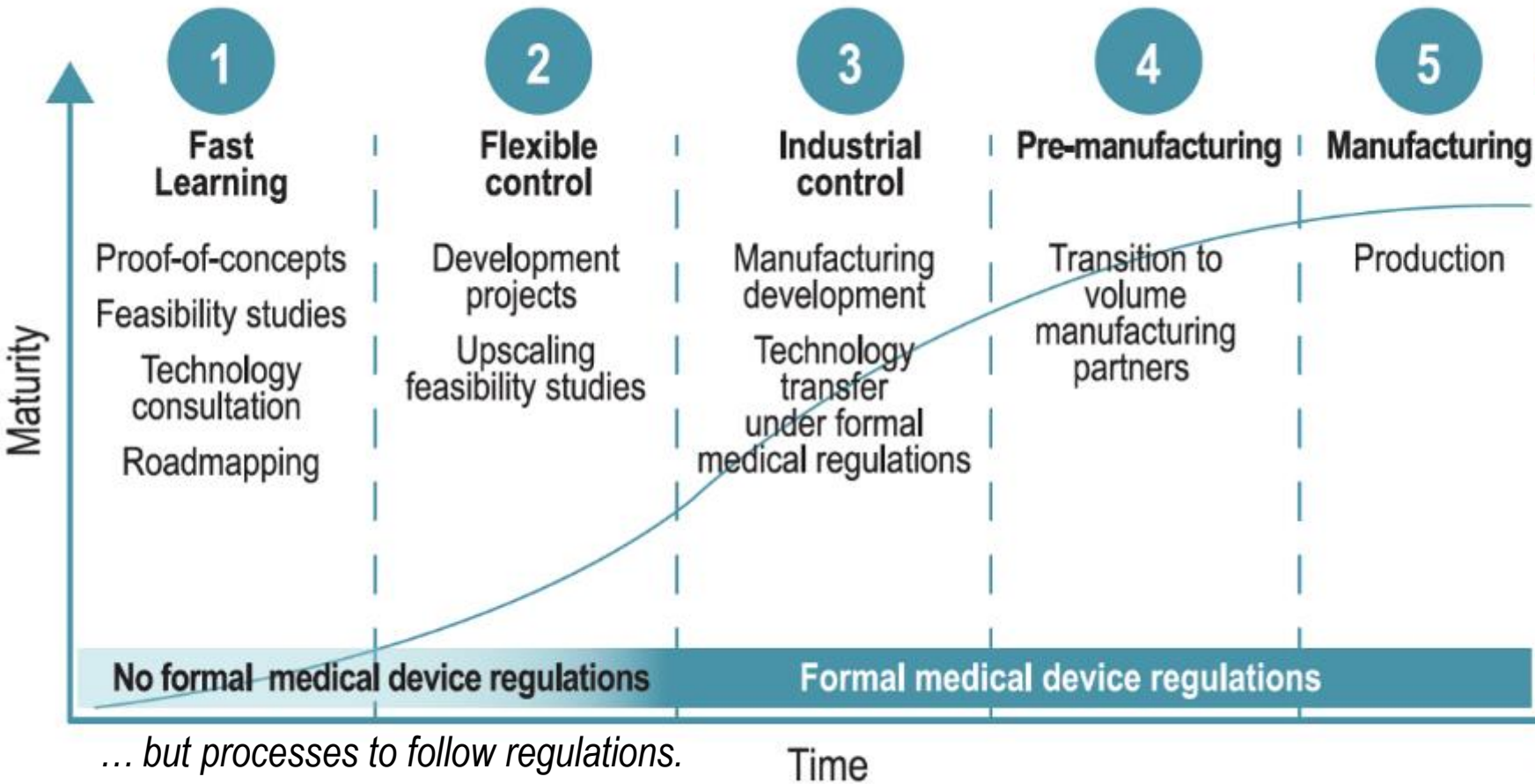
Technologies

- ✓ Fiber optics
- ✓ Integrated optics
- ✓ Micromodules

Applications

- ✓ Diagnostics
- ✓ Therapy

Single-entry point for full development chain



Front Office
Professionals in medical device domain

RTOs



ISO13485



Technologies

- ✓ Integrated optics
- ✓ Advanced packaging
- ✓ Fiber optics
- ✓ Microfluidics
- ✓ Reader Devices
- ✓ Development Support

Services

- ✓ Research & development
- ✓ Prototyping
- ✓ Manufacturing development
- ✓ Scale-up

Hospital Use



Home Care



In-vitro Diagnostics



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- ✓ European pilot line dedicated to development, manufacturing, testing, and validation of photonic technologies in medical devices
- ✓ Non-profit, legal entity
- ✓ Presence around Europe
- ✓ Hundreds of experts and state-of-the-art infrastructure

MedPhab Partners



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Thank you for your attention