



Ministry of Science and Higher Education
Republic of Poland

Co-financed by the project of Minister of Science and Higher Education "Industry Contact Points for the Horizon Europe Research and Innovation Framework Programme"



Industry
Contact
Point
Medical
Technologies
and Health



Industry
Contact
Point
Digital
Transformation



Industry
Contact
Point
Industry 4.0

LOWER SILESIA



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STUDY VISIT & MATCHMAKING

Digital hospital

Please wait...

Intro

Guidelines for participants



- Organisation unit/name: **VTT Technical Research Centre of Finland**
- Organisation type: **VTT is a visionary research, development and innovation partner for businesses and society and one of Europe's leading research organisations**
- Contact person name: **Jussi Särkkä, D.Sc. (tech.), Business Development Manager, Healthtech**
- www.vttresearch.com/en

Contact:

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Organization



- VTT is a visionary research, development and innovation partner for businesses and society and one of Europe's leading research organisations.
- We bring together people, businesses, science and technology to solve the world's biggest challenges and create sustainable growth, jobs and well-being.
- Thinking ***beyond the obvious***, we unlock new solutions.

VTTers
are a
multidisciplinary
and diverse
community of
2,350
people

We work
with more
than
600
Finnish
and
300
foreign
companies

96%
of our
customers
reported
improved
knowledge
base.

1st
VTT is the
most active
public research
organisation in
patenting in
the Nordics.

17th
VTT's position
in the ranking
of all 22,300
Horizon
Europe
beneficiaries.

1st
VTT is the largest
beneficiary of
EU's Horizon
Europe
programme and
European
Defence Fund in
Finland.



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Our research support asset



- VTT solves major challenges and build a better future for the coming generations. We create solutions in Carbon neutral solutions, Digital technologies and Sustainable products and materials

Strong assets in Healthtech-domain, for example:

- Novel sensors and diagnostic technologies
 - Sensor components
 - Wearable sensors
 - Non-contact sensors
 - Diagnostic devices, antibodies and reader devices
 - ASIC and system design, prototyping
- Algorithms for medical devices based on sensor and imaging data, registry and biobank data
- Novel digital biomarkers for patient state quantification
- Prediction models and clinical decision support tools
- Sensor and digital biomarker validation in lab and field



Calls of interest



Jointly funded Calls of interest are in the MedTech/Healthtech-domain area is:

- Virtual Human Twins
 - Digital biomarkers
 - Continuous monitoring (ambulatory)
 - Point-of-care diagnostics
 - Preventive healthcare
 - AI-based clinical decision support
 - Photonic integrated sensing
-
- https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/horizon-europe-work-programmes_en

Project idea / expertise offer / collaboration



- Scope of the project
 - Aim is to develop next-generation continuous monitoring and wearable technologies by expanding sensing capabilities toward novel metabolic biomarkers, enabling deeper insight into human physiology. These data streams power Digital Twins that model health, performance, and disease progression in real time. By integrating wearable and Digital Twin data with EHRs, we are building a scalable health intelligence platform and seeking partners across sensing, AI, clinical validation, healthcare, and data ecosystems.
- Who/what is needed
 - Advanced materials & biosensors, wearable hardware, multimodal data integration, signal processing, AI analytics & diagnostics, clinical use case ownership, and clinical validation to build next-generation Digital Twin solutions for healthcare
- Where to apply: e.g. Horizon Europe open calls or where consortium members have the eligibility for funding

Expertise

Sensing prototyping and validation



Micronova infrastructure for micro and nanotechnology development

- The largest R&D cleanroom in the Nordic countries
- Pilot lines for semiconducting, integrated photonics, graphene and superconducting technologies
- Sensor development and characterization



Medical Device Pilot line for photonics based and wearable devices

- Clean room with controlled environmental conditions
- QMS enables collaboration with ISO 13485 certified companies
- Roll-to-roll printing, post-processing, hybrid and structural electronics integration and testing
- Pilot production of components, devices, systems and end-user products



Health labs for sensor and digital biomarker validation

- Facilities for physiological measurements including physical and mental provocation
- Pre-commercial sensor validation
- Virtual reality studies
- Measures available: ECG, EEG, PPG, SPO2, GSR, EDA, acceleration, eye movements



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Thank you

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