



Stages of a Pressure Ulcer

Stage 1

Stage 2

Stage 3

Stage 4

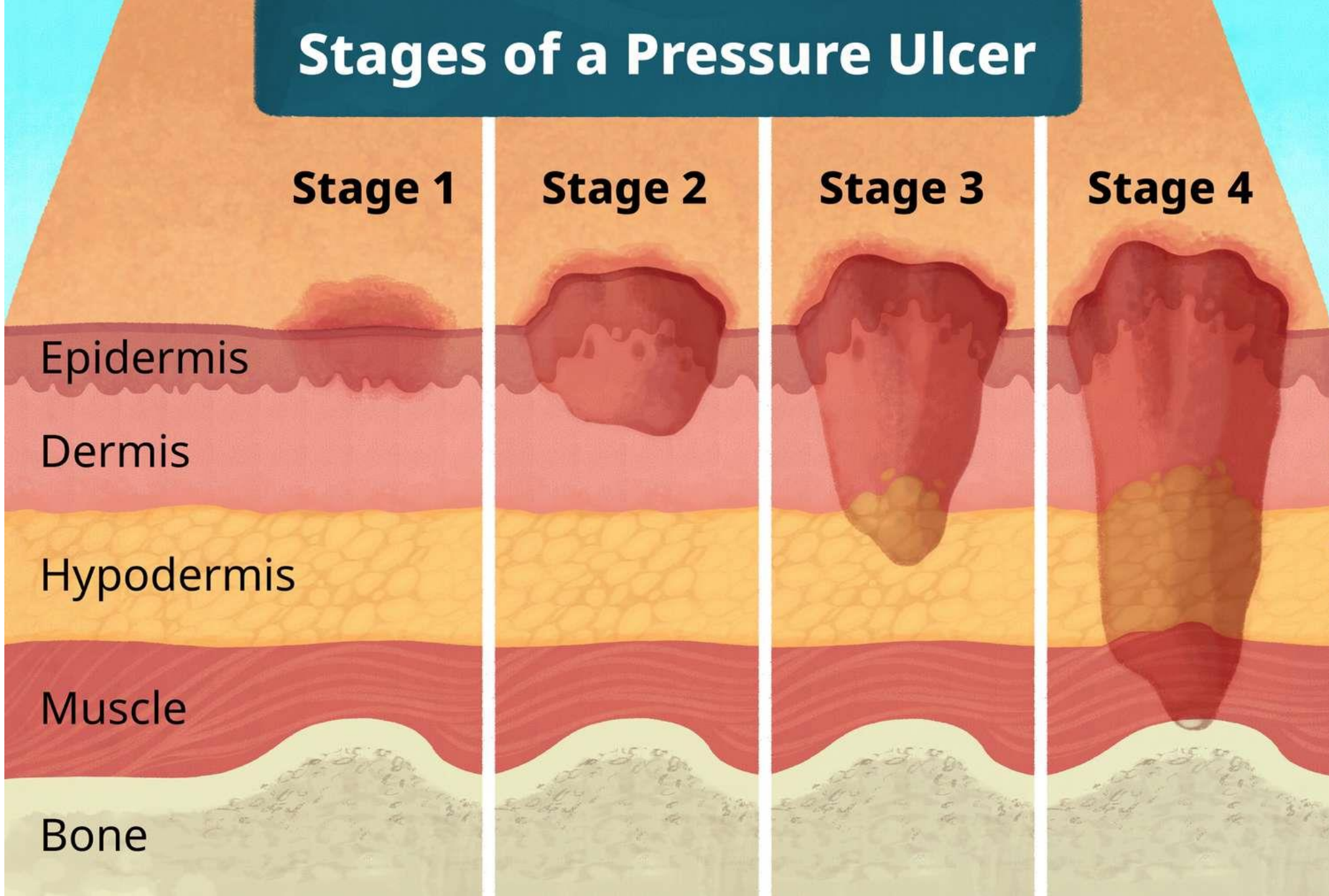
Epidermis

Dermis

Hypodermis

Muscle

Bone



B.C. woman dies of infection her family said was caused by bedsores; lawsuit filed

Family alleges negligence by staff caused her eventual death from sepsis they say was caused by an infection of a large hole on her tailbone

Susan Lazaruk

Published May 22, 2024 • 4 minute read



Georgina Dodds died at age 62 in 2022 after developing blood poisoning from what her family says was untreated bed sores when she was living in a long-term care home in New Westminster.

A woman whose mother died after living in a B.C. seniors care home where her untreated bed sores became infected says watching her die a painful death was “traumatic” and not something a family should have to witness.



60,000 deaths per year in the US are due to pressure ulcer complications

New England Journal of Medicine

17k

Over **17,000 lawsuits** related to pressure injuries are filed yearly. It is **the 2nd most common** claim after wrongful death.

\$250k

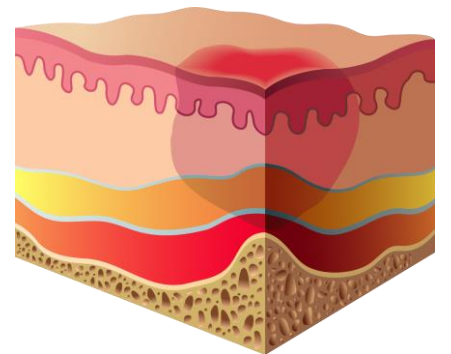
A **single lawsuit** has an average cost of **\$250,000**.

Annual Cost:
US: ~ **\$ 26.8b**
UK: ~ **£ 2b**
NL: ~ **€ 1b**

Up to **\$150k**
total cost per patient

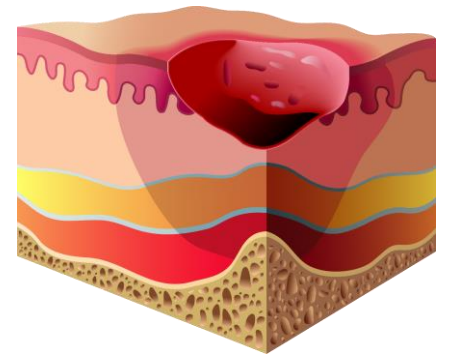


STAGE 1



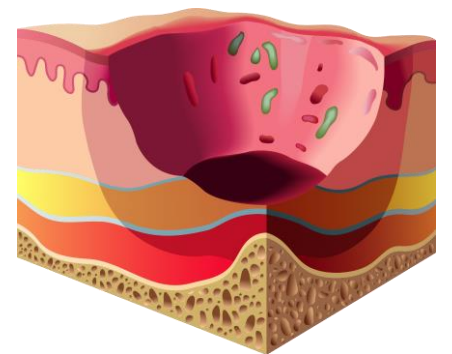


STAGE 2



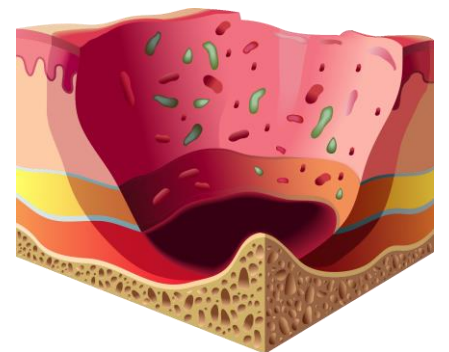


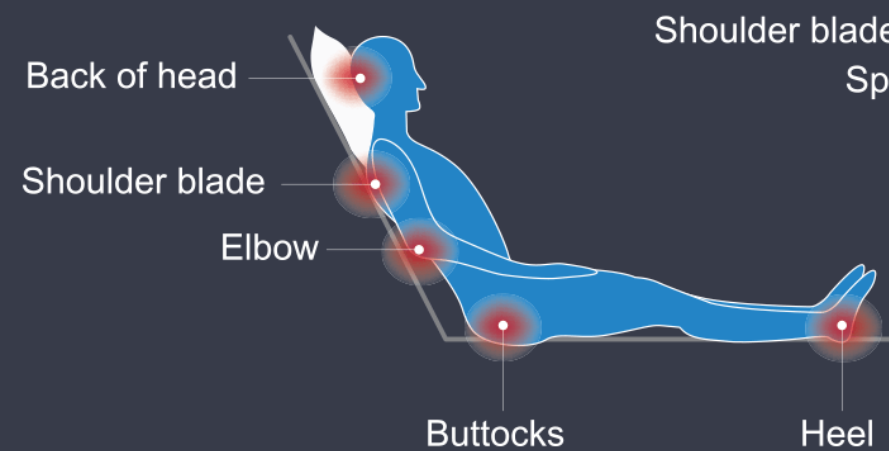
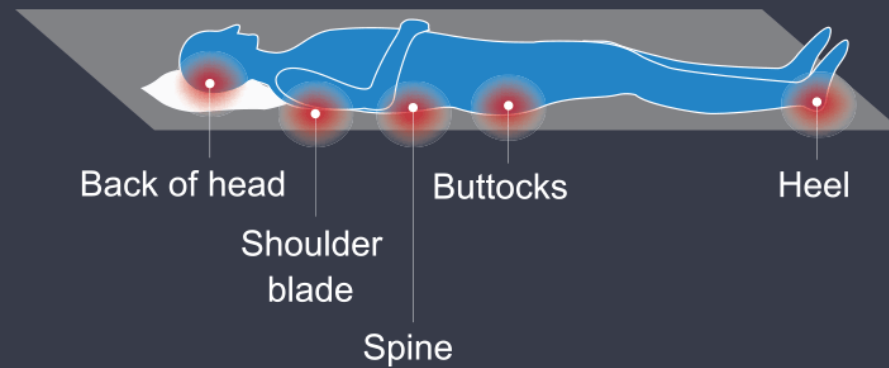
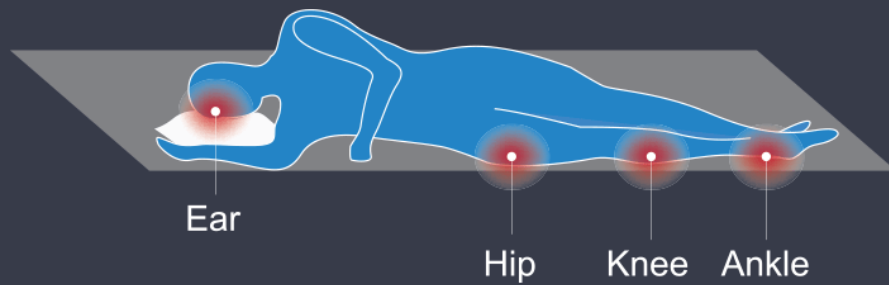
STAGE 3





STAGE 4

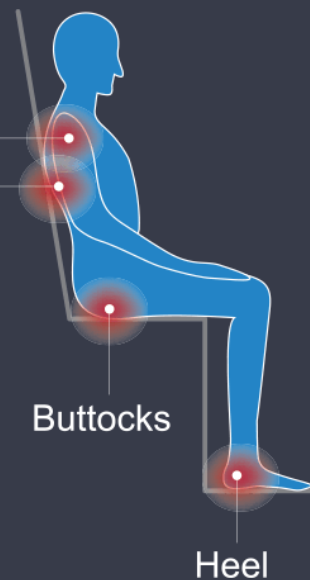




Prevent Pressure Ulcers



**Change position
every 2 hours**




VitalWear

Shortage of Healthcare Workers

*“Based on this forecast, the **labour market shortage for health and wellbeing** will **increase** from 49.400 people in 2023 to 231.700 people in 2033.”*

Prognosemodel
Zorg en Welzijn

Source: <https://prognosemodelzw.databank.nl/dashboard/stories-dashboard/1--zorg-en-welzijn--breed->

Monitoring must be Autonomous

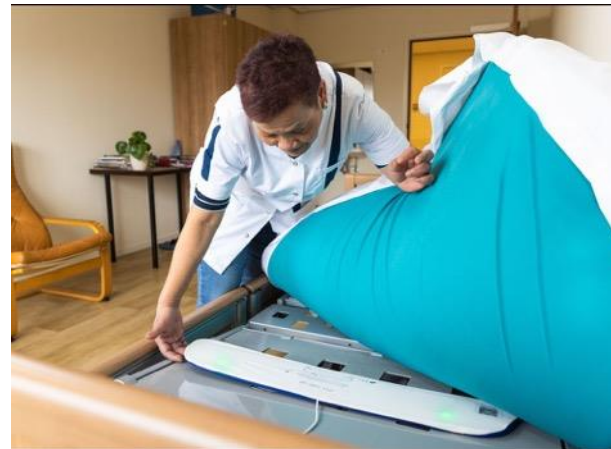


Pressure Monitoring is not sufficient

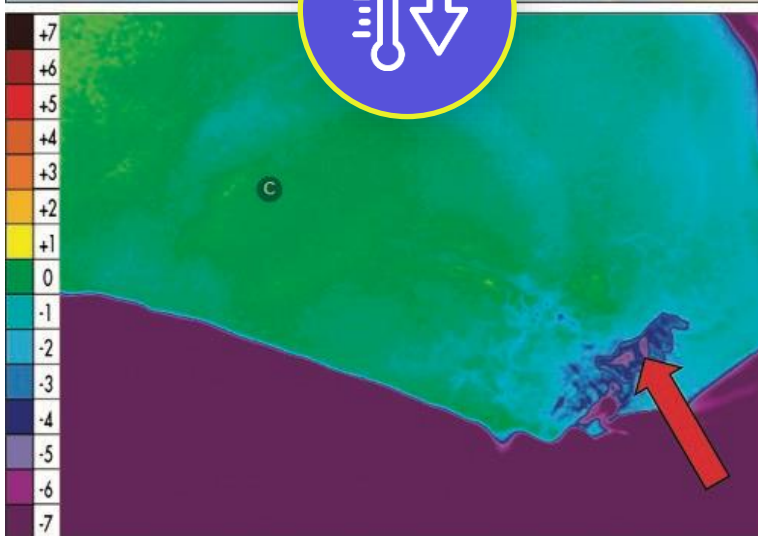
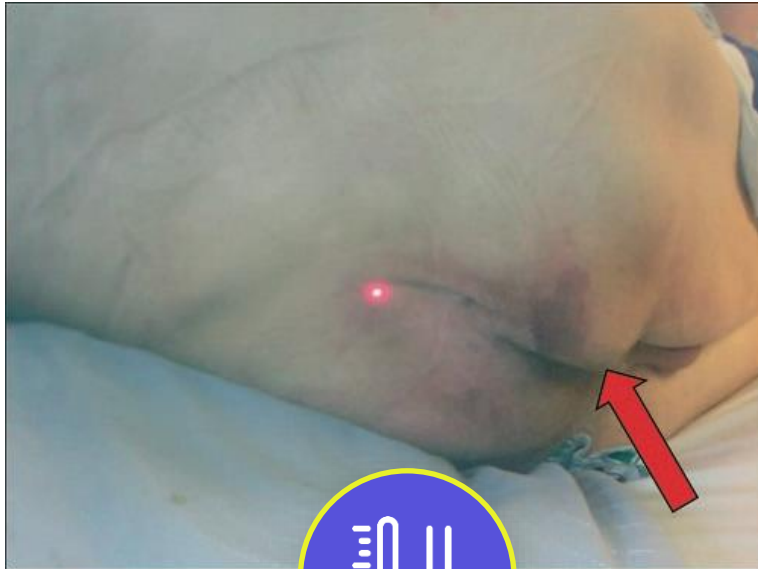


XSENSOR

Intelligent Dynamic Sensing

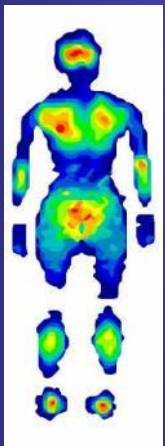
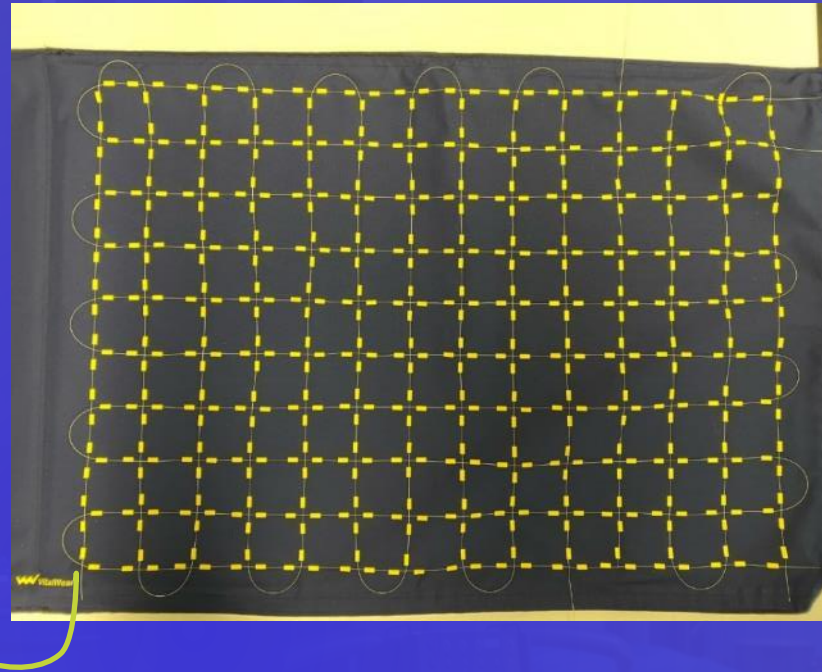


Temperature Monitoring enables Detection

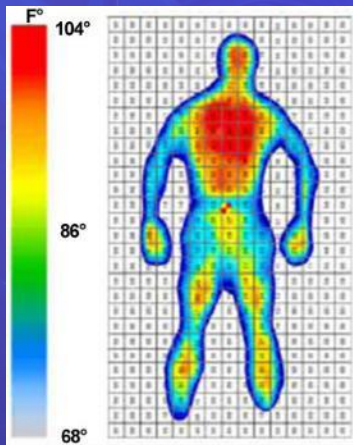


Source:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716560/>

VitalWear's Solution



Measurement of
Pressure



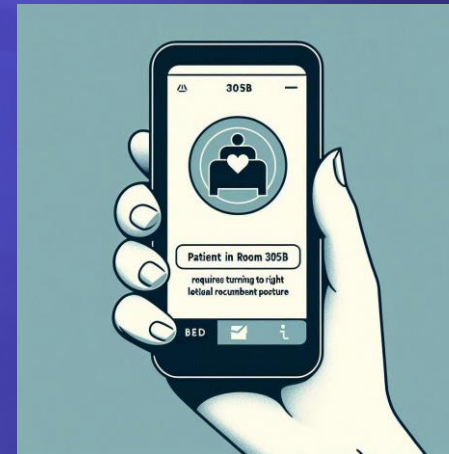
Measurement of
Temperature



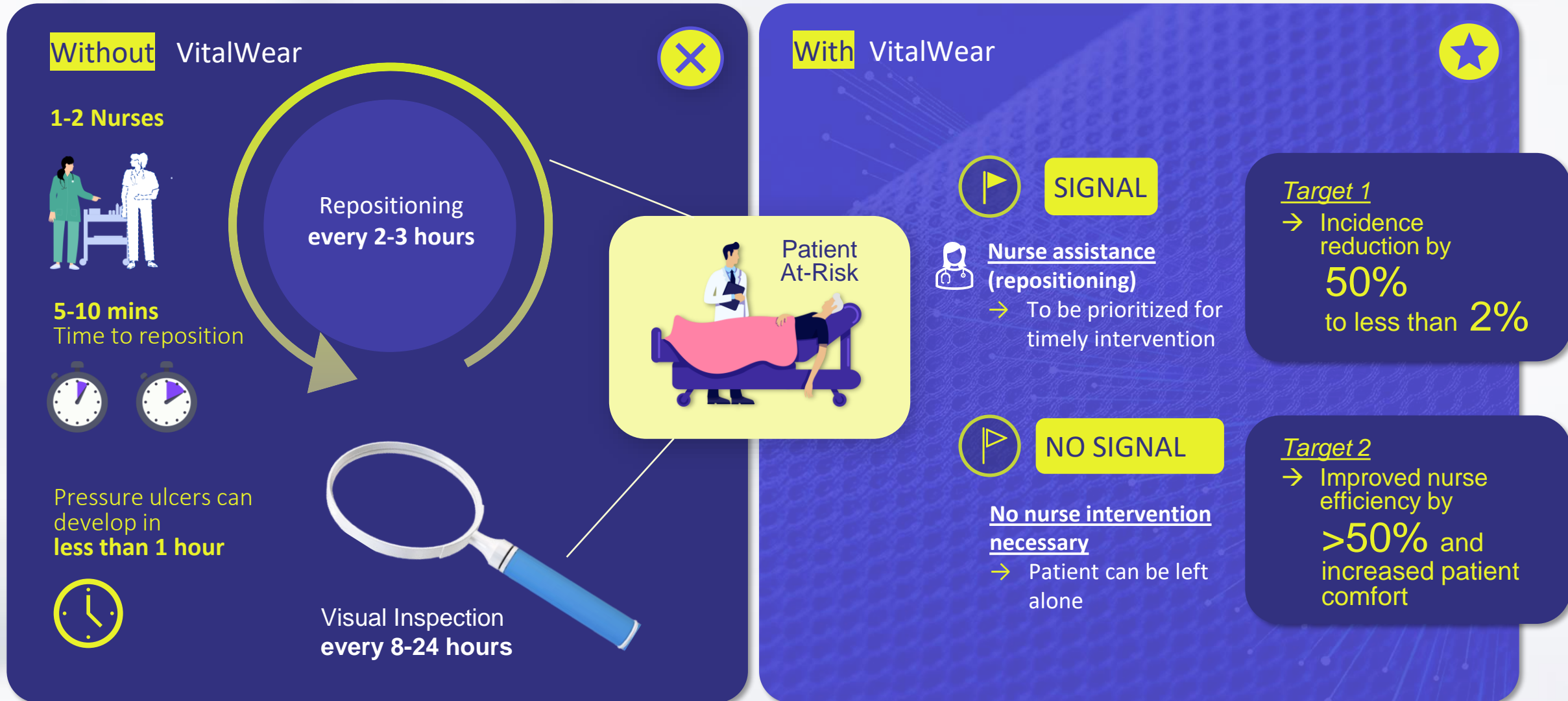
Continuous & Autonomous
Operation



Event-based Guided
Caregiver Intervention



Clinical Use Case

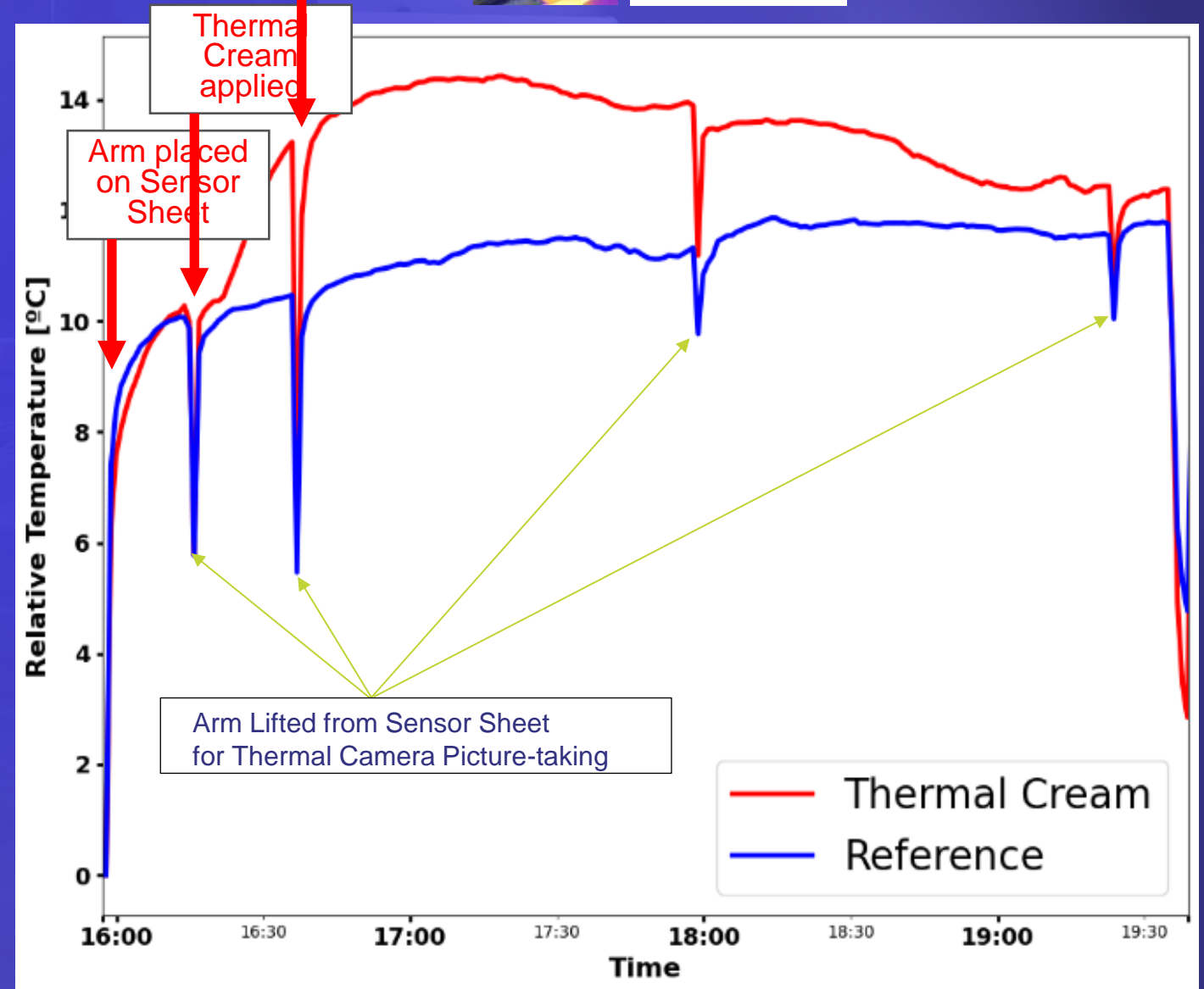


Skin Temperature Monitoring

Proof-of-Concept Experiment
with Thermal Cream on Forearm

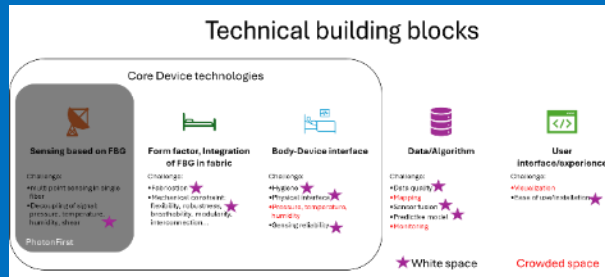


Conclusion:
VitalWear prototype sensor
sheet accurately detects
temperature variations
on human skin.



Intellectual Property

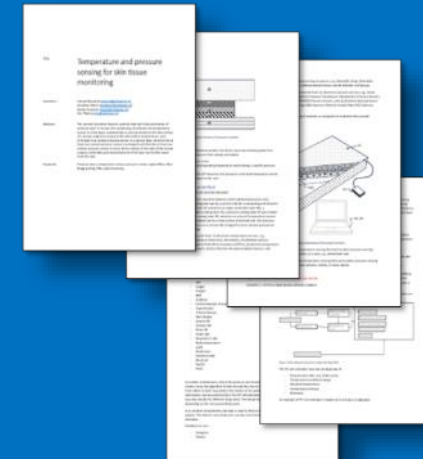
IP Landscaping & IP Strategy



Idea Generation & Invention Disclosures



Patent Drafting and First Filing



Team covers Technology, Innovation, Clinical Studies and Regulatory Compliance



Eric Thelen
CEO



Jettie Hoonhout
Medical Strategy Officer



Jonathan Palero
Senior R&D Engineer



Yannik Bourquin
Senior R&D Engineer



Kostas Voutyras
CTO



Pablo de Anta Dardagan
R&D Hardware Engineer



Arlette Beekman
Intern - Computational Modelling



Strong Network of Collaborators

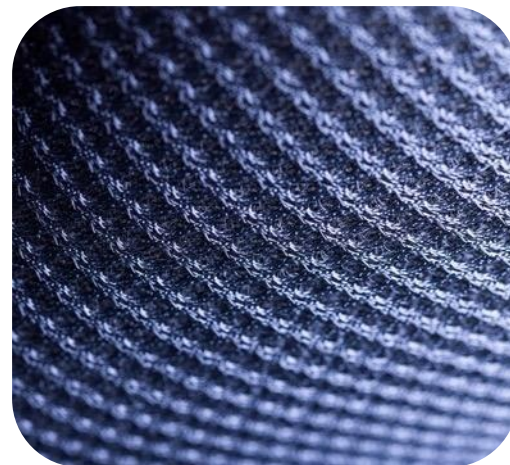
Photonics



Data Management



Textile Integration

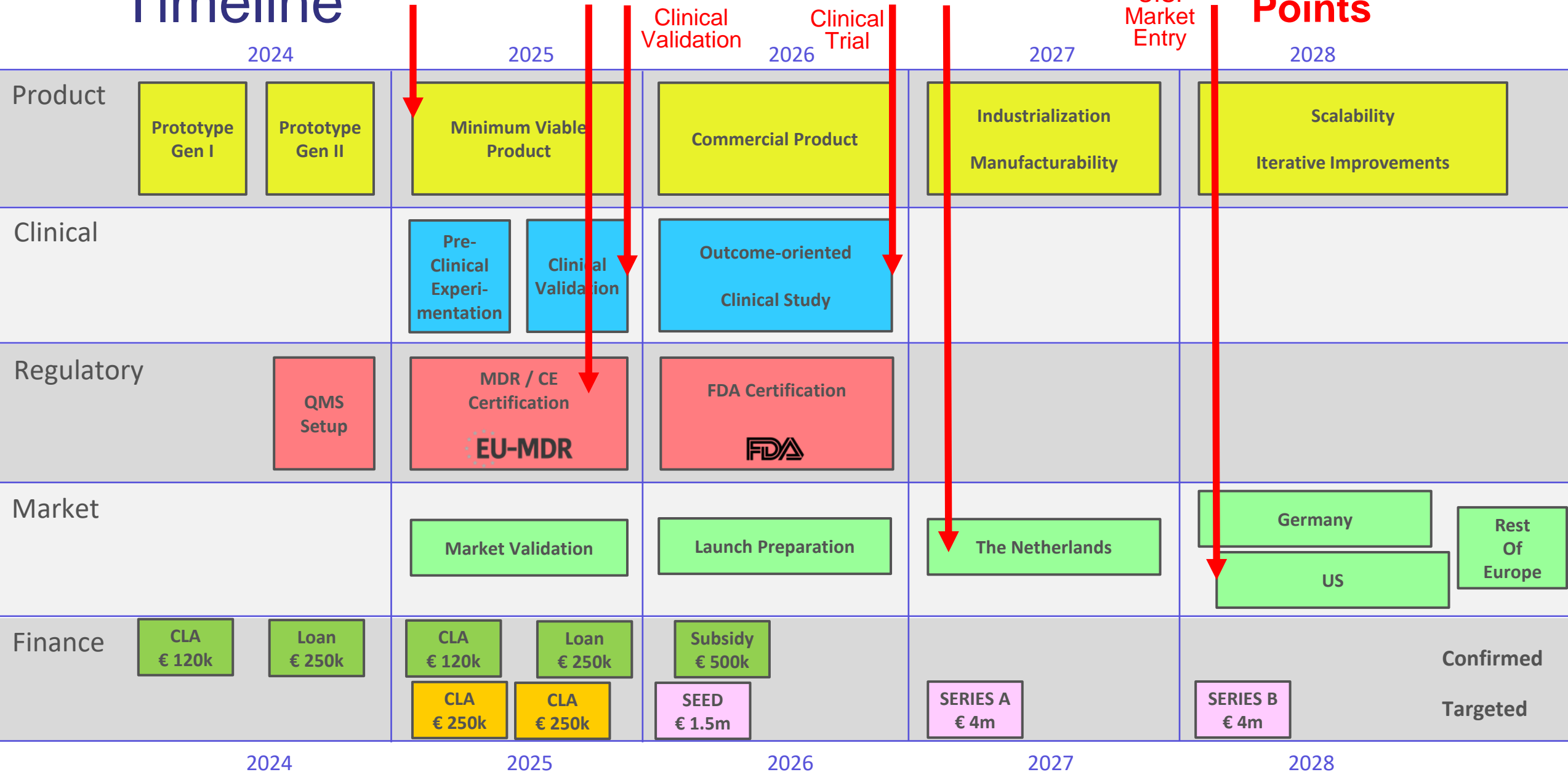


Clinical

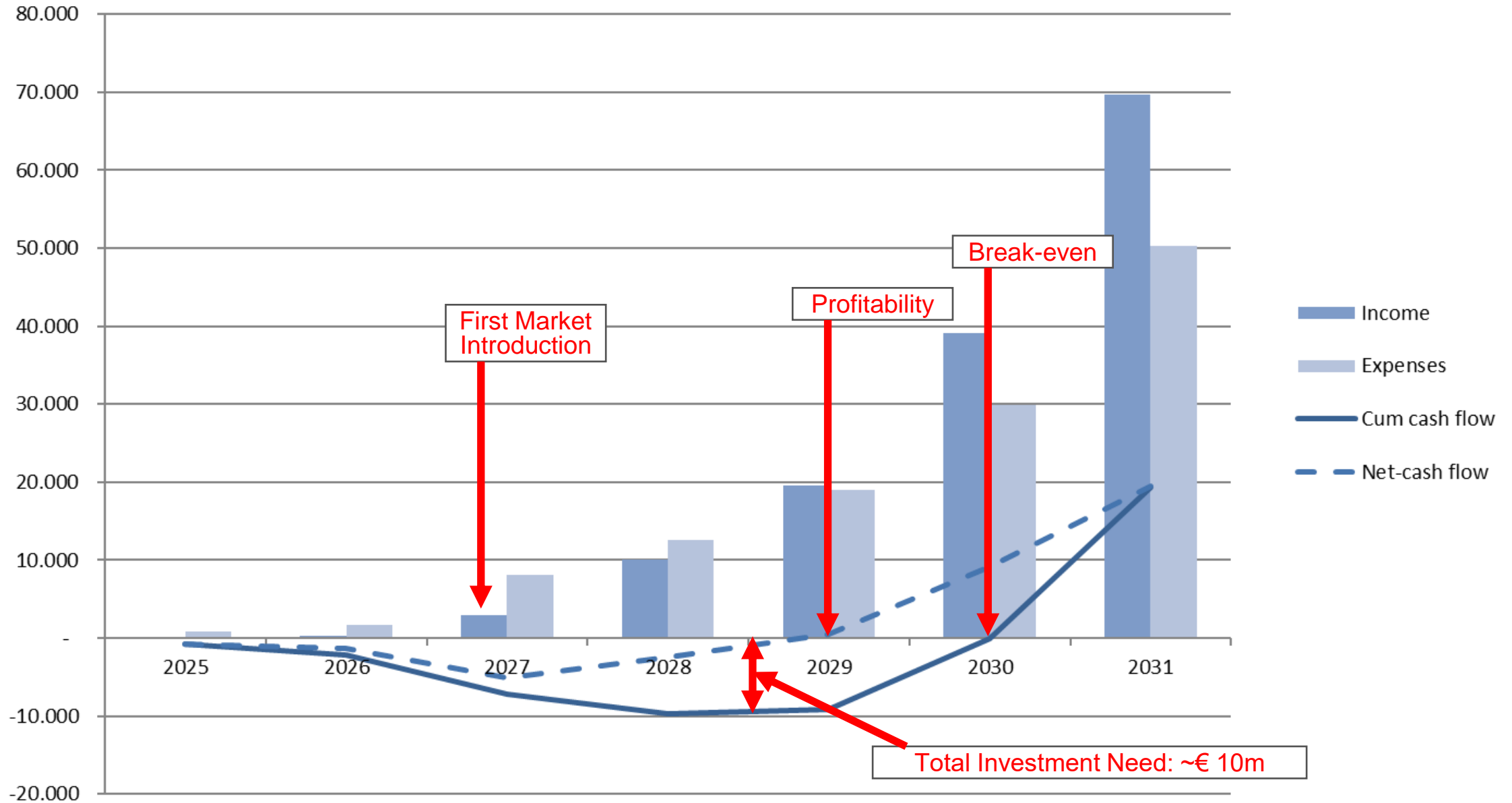


Timeline

Value Inflection Points



Financial Projections (x 1,000 euros)

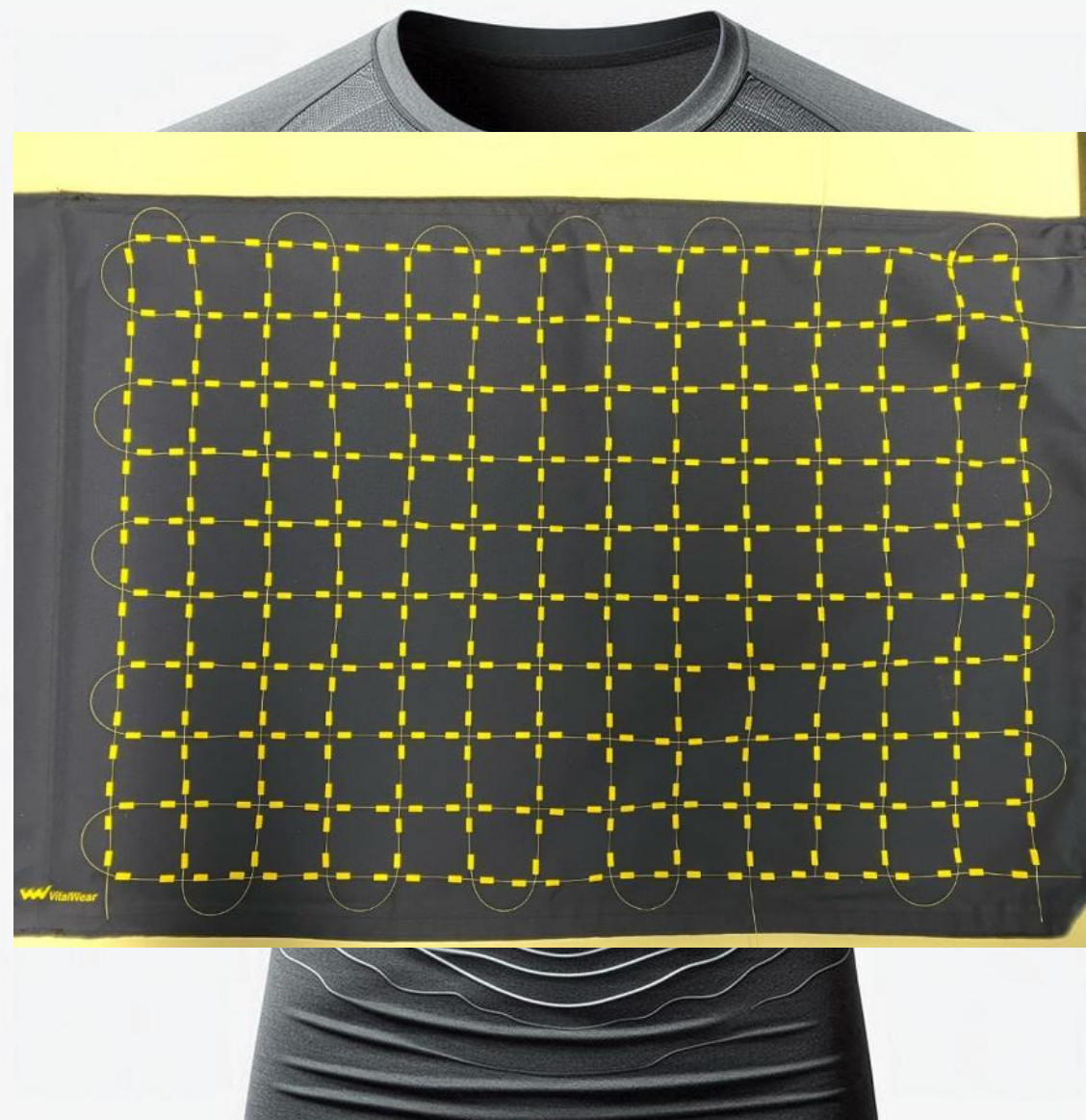


Growth Opportunities





**Optical Fiber Sensing
Integrated in Textiles
for
Non-invasive
Medical Applications**





We help patients and nurses to prevent pressure ulcers.



eric@vitalwear.nl
www.vitalwear.nl

Pre-Seed Financing

Confirmed: € 1m in Loans and Grants

Need: € 500k from Private Investors