



MoniCardi

Monitoring of Cardiac Health Made Simple



INSTRUMENTARIUM
SCIENCE FOUNDATION

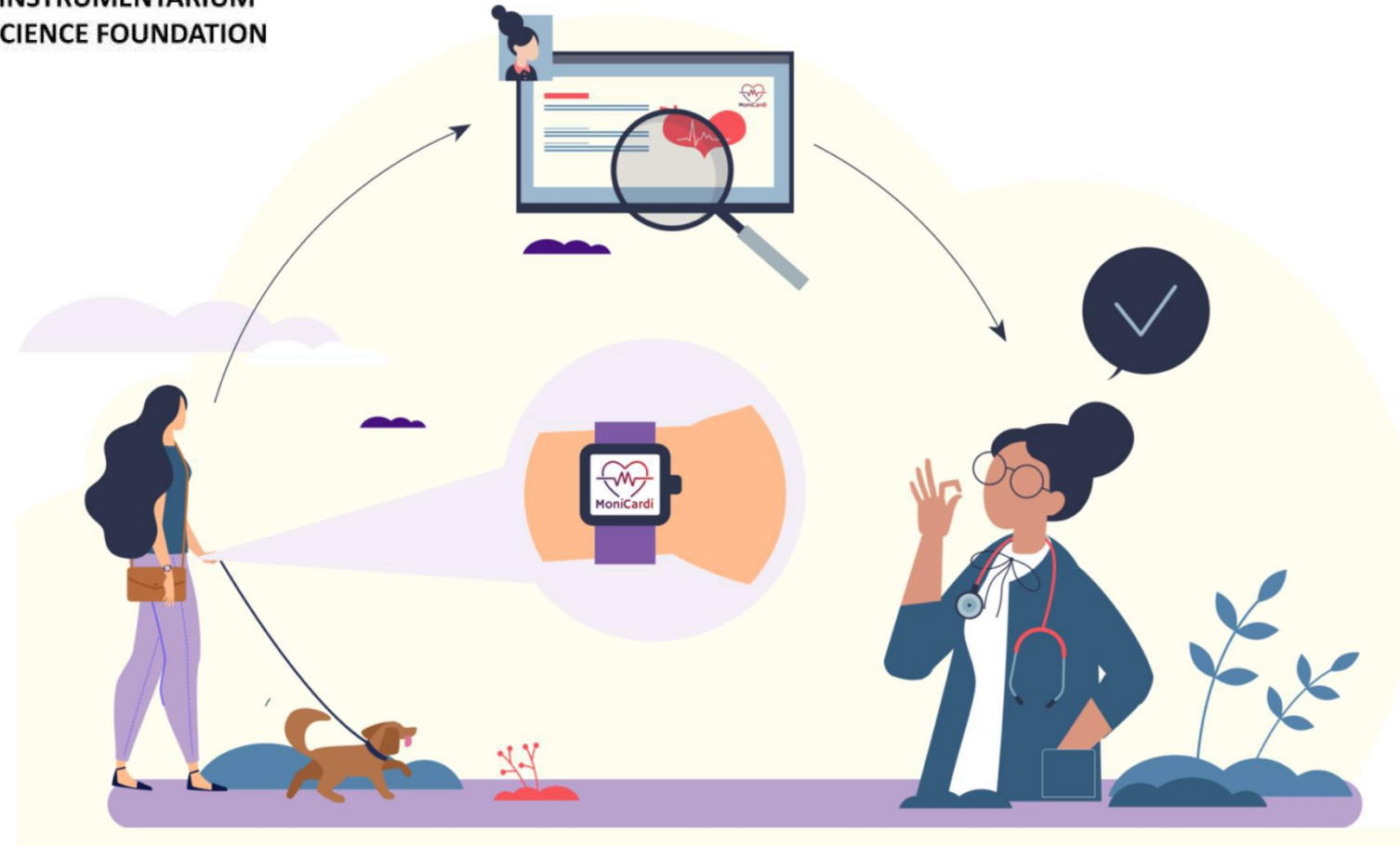
SPARK
—FINLAND

novo
nordisk
fonden

 Tampere University

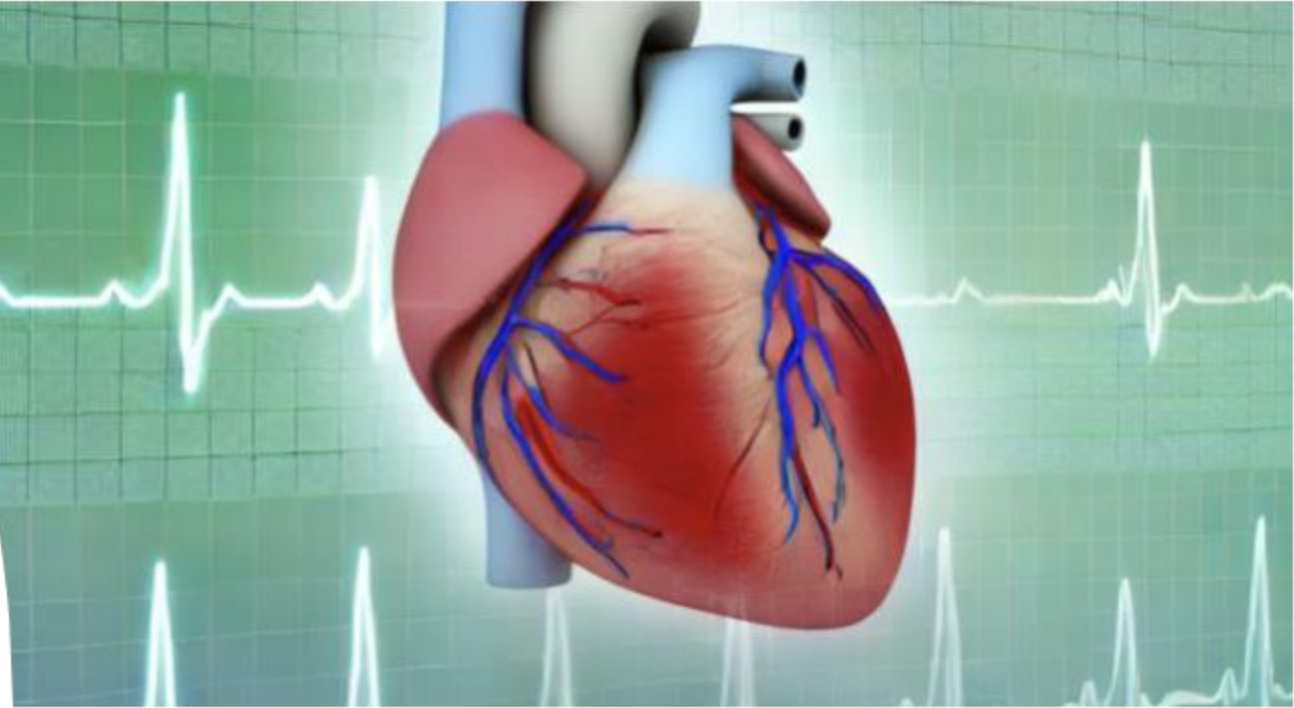
BUSINESS
FINLAND

BUSINESS
TAMPERE

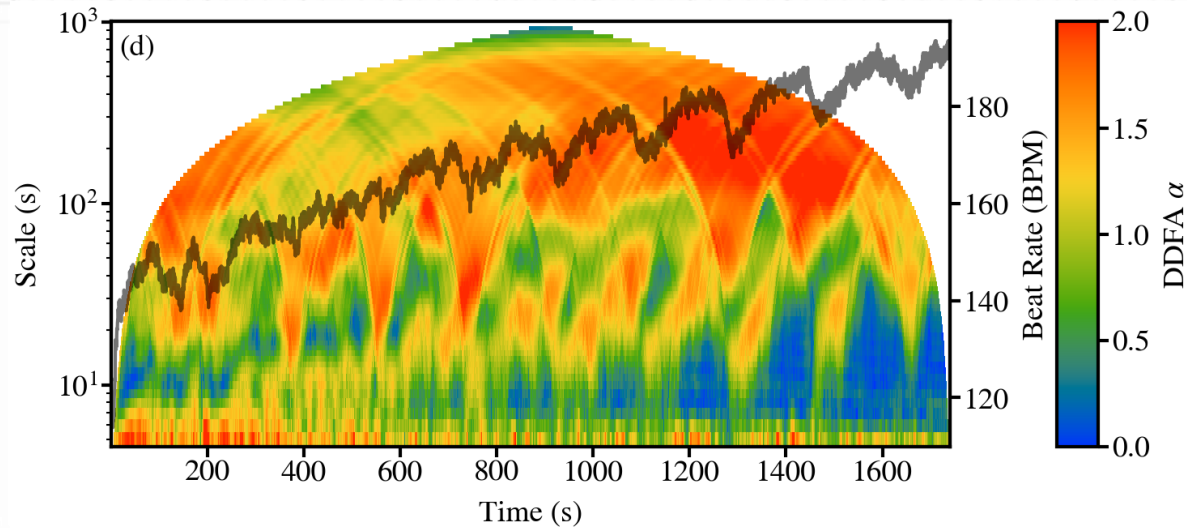
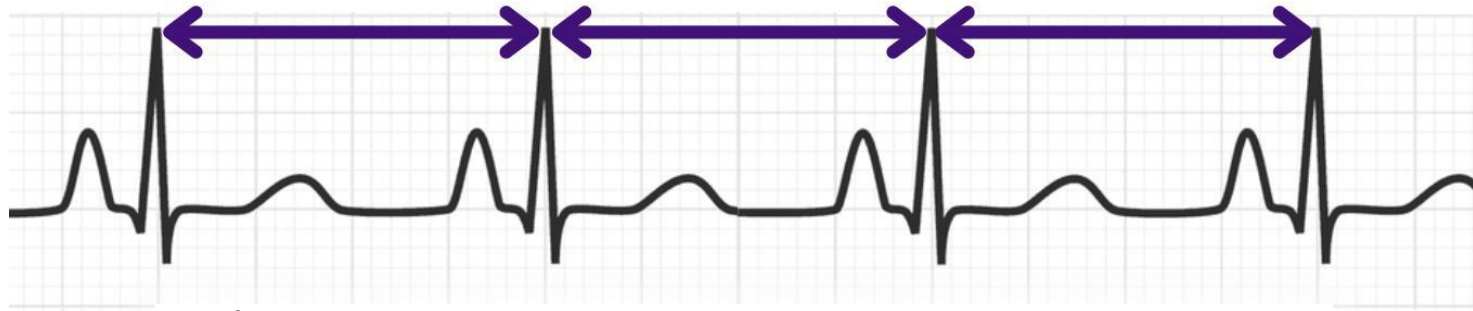


The Problem

- Cardiovascular disease is the world's #1 killer with 32% of all deaths.
- Projected global costs are set to reach \$1 trillion by 2030.
- Current heart-rate (HR) wearables fall short in clinically-relevant insights for early intervention.
- The challenge is not in HR signal quality but in unlocking clinical insights from beat-to-beat data.

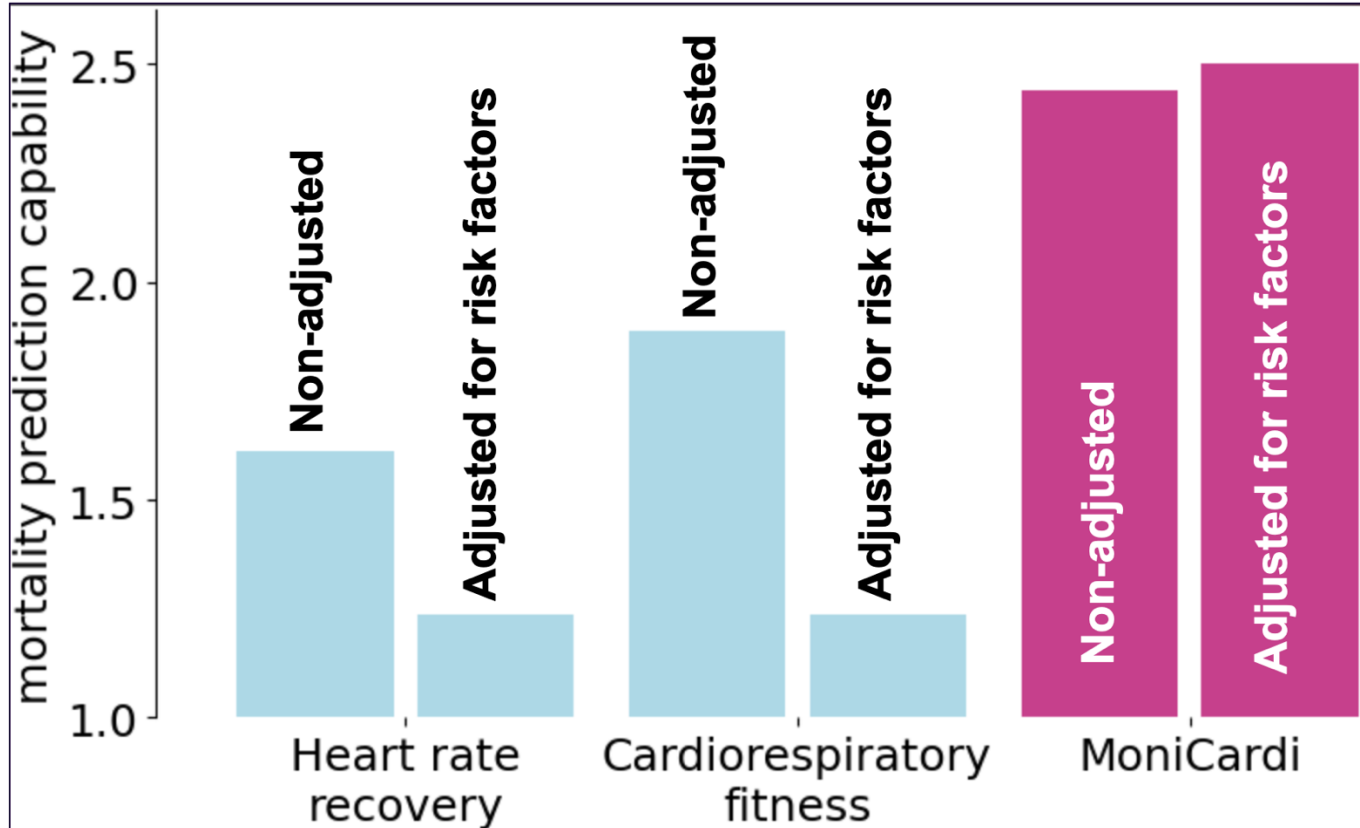


Heart rate variability: Changes in beat-to-beat intervals are complex



Prediction of sudden cardiac death

Full Exercise Test 1-minute rest



FINCAVAS: N>4000 subjects, >8-year follow-up

[JACC: Clinical Electrophysiology 10, 2010 \(2024\)](#)



Cardiac load in exercise



Estimation of Physiological Exercise Thresholds Based on Dynamical Correlation Properties of Heart Rate Variability

Matias Kannianen^{1*}, Teemu Pukkila¹, Joonas Kuisma¹, Matti Molkkari¹,
Kimmo Lajunen², Esa Räsänen¹

¹Computational Physics Laboratory, Tampere University, P.O. Box 692, FI-33014 Tampere, Finland

²Kauppi Sports Coaching Ltd, Keijunkuja 3, FI-33710, Tampere, Finland

Press release | Research

Cutting-edge technology from Tampere University now powers Suunto's products

Published on 18.9.2024

09/2024



World's first real intensity measurement



Subscribe



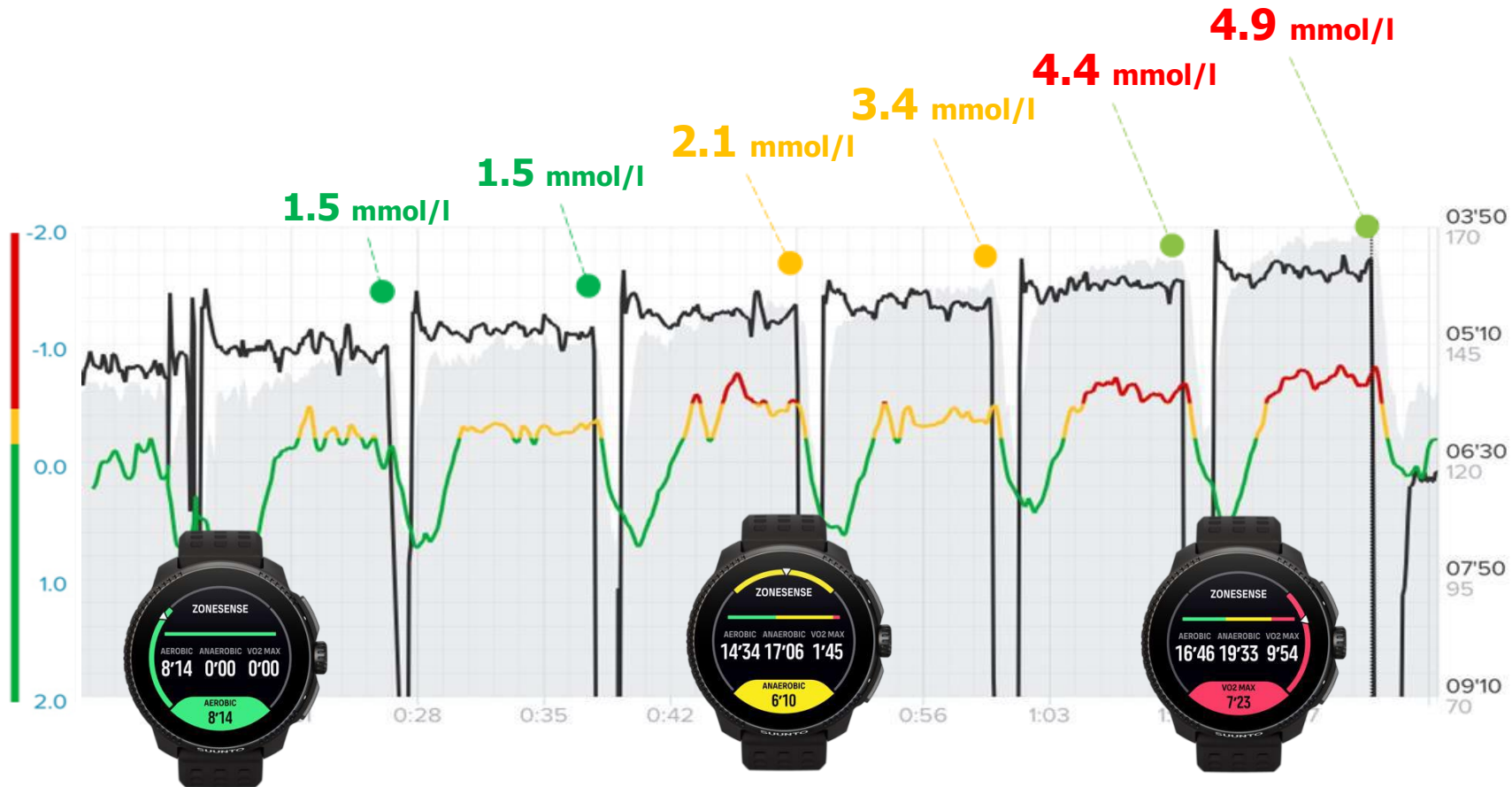
Active > Fitness Trackers

Has Suunto just beaten Garmin at its own game with this new workout tech?

Suunto's ZoneSense brings lab-grade workout insights straight to your wrist

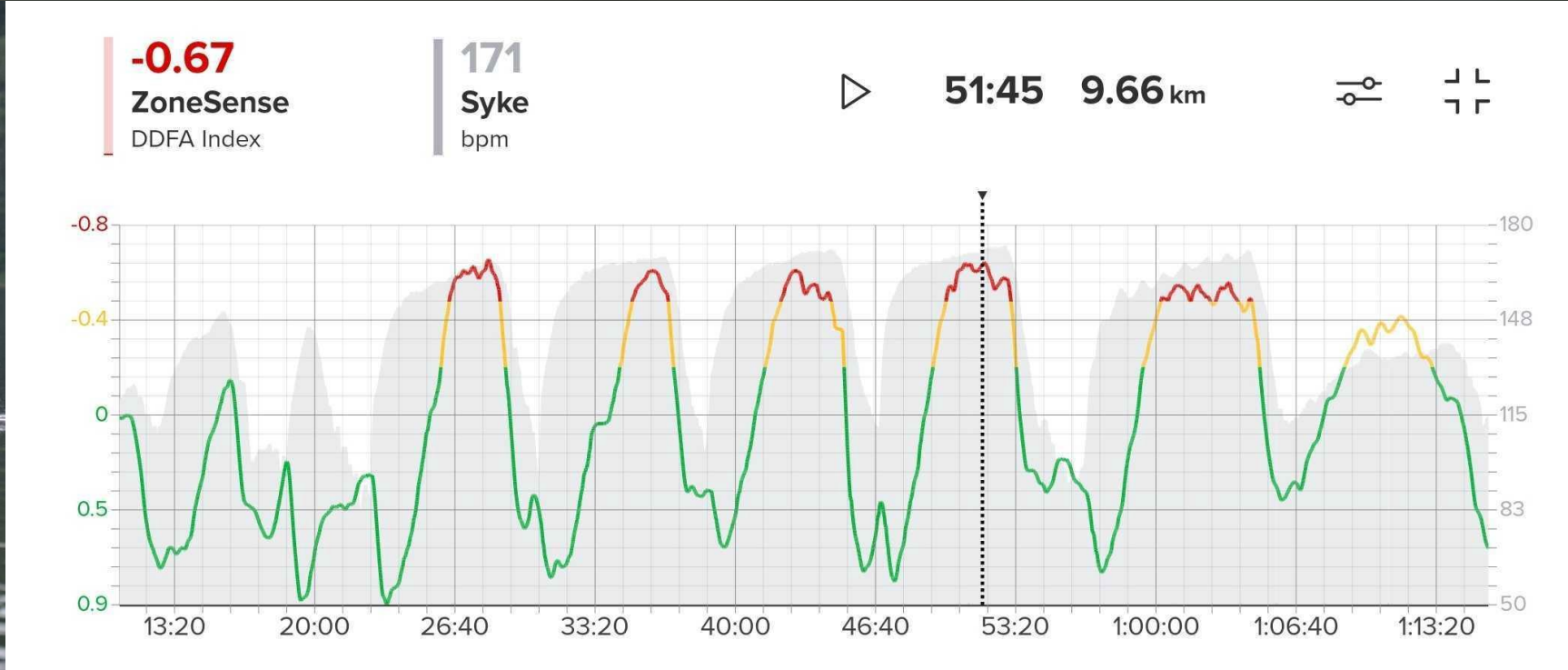
Run intervals 6 x 2km - ramp up

Suunto Field Tester



“Measured lactate levels are in line with ZoneSense.”
Field Tester

Rowing, 4 x 6 min + 8 x 40s



MoniCardi

Monitoring of Cardiac Health Made Simple



Mission

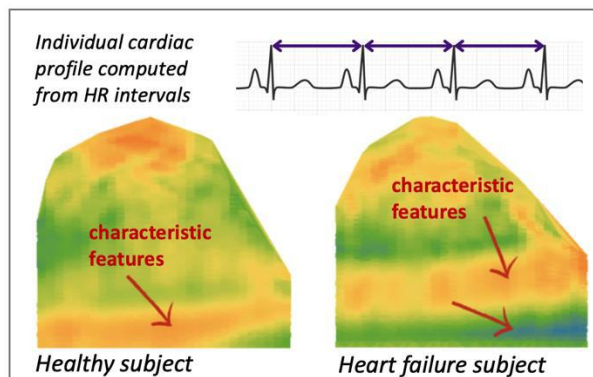
- Cardiovascular disease is the world's #1 killer with 32% of all deaths. Projected global costs reach \$1 trillion by 2030.
- Current heart-rate (HR) wearables fall short in clinically-relevant insights for early intervention.
- MoniCardi's provides detailed insights into heart conditions with clinical accuracy, while leveraging wearable tools.



Product & Solution

MoniCardi's ECG and HR analysis software enables:

- **Cardiac risk assessment**, incl. sudden cardiac death, with 30-second HR measurement
- Accurate detection of **heart diseases** such as heart failure
- Determination of **aerobic and anaerobic thresholds** in sports



- MoniCardi software **works in all HR devices** (ECG, watches, rings, clothing) and can be implemented in the chip level.

Investment Thesis

Impact:

- Strong R&D basis at Tampere University: **1.5 MEUR** of public funding; **two patents** & scientific validation in **20+ publications**
- Customer validation through **Suunto & Cardiolex partnerships**. **ZoneSense** in Suunto devices features MoniCardi technology.



Market Opportunity:

- Total Market: **\$130B** In Cardiovascular Digital Health
- Obtainable Market **\$1-10B**

Team Highlights:

Founded by 3 physicists with deep R&D expertise, supported by leading business and medical advisors.

Key Metrics

Founded:	2024
Location:	Tampere, Finland
Stage:	Early-Stage
Round:	Seed Round
Investors:	Self-funded through revenue and Innovation Prize; 100% founder-owned

Sub-sector: **Medical technologies and software**



Contact:
Esa Räsänen, CEO, Prof.
esa.h.rasanen@gmail.com
www.moniacardi.com
+358-50-301-3386