

OpenCur, Inc.

A medical grade personalised wearable health
monitoring system

Introduction

O U R M I S S I O N

Easy, wearable continuous medical-grade diagnostics in a home-care program and hospital environment



A G E N D A

PROBLEM

SOLUTION

KEY BENEFITS & USP

PRODUCT OVERVIEW

TRACTION

MARKET SIZE

REVENUE STREAMS

COMPETITION

DEVELOPMENT ROADMAP

COLLABORATION

OPERATIONS PLAN JURA

TEAM

FUNDRAISING GOALS



PROBLEM – WEARABLES CARDIOLOGY

ECG/Blood Pressure



→ Require constant **calibration** with traditional monitors.

→ Measure data **sporadically**, missing data is **calculated** with models using averages

- Statistically insufficient for meaningful diagnostics
- Inaccuracy
- Lack of personalization distorts results

PROBLEM – WEARABLES CARDIOLOGY

ECG/Blood Pressure



→ Deliver results without **context**. (Activity, stress, environment, other markers (glucose, ECG, ..)...)
→ Insufficient for meaningful diagnostics
→ Lack of personalization distorts results

→ Measured data **stored locally** on smart phone only
→ No immediate / cumbersome access to information for physicians

■ P R O B L E M – W E A R A B L E S C A R D I O L O G Y

ECG

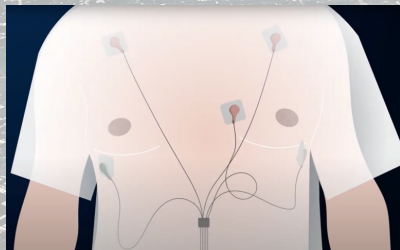


Measure data **sporadically**, **action** needed (person needs to touch the device).

→ **Insufficient for meaningful diagnostics.**

→ **Inaccurate**

OR



Cables needed for continuous and accurate measurement

→ **Inconvenient**

→ **Difficult to maintain longer term and in all situations**

■ P R O B L E M – WEARABLES C A R D I O L O G Y

Wearables don't deliver medical-grade data

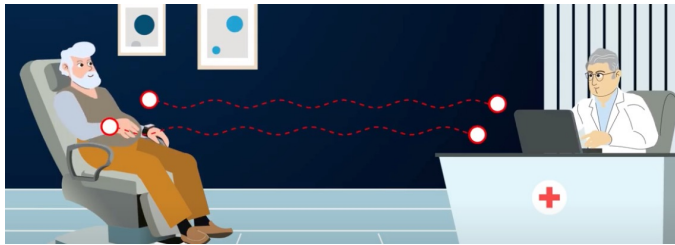
A recent consumer report listing the shortcomings of currently available solutions that we address, focusing on cardiology:

- <https://www.consumerreports.org/health/blood-pressure-monitors/measuring-blood-pressure-with-a-wearable-device-a9251907587/?EXTKEY=AFLIP>

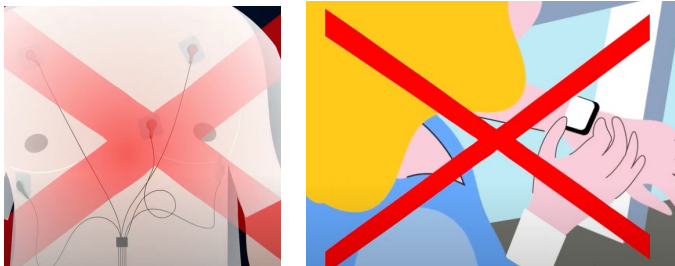


■ SOLUTION – CARDIOLOGY

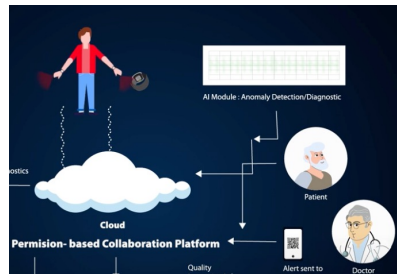
A novel, ground-breaking patent-pending engineering solution



- First wearable to **physically measure all** data points **continuously**, in any frequency with **context information** added
- Data is fine-tuned to the person monitored
 - Accuracy
 - Statistically meaningful for diagnostics



- Measurements made **automatically**
- No action from user needed.
 - No cables needed



- Directly **connected to physicians**, data stored in the cloud

■ PROBLEM/SOLUTION – M E D I C A L W O R K F L O W

PROBLEM

Hospital workflow

Patient in cardiac arrest while waiting at admission



Drug trials

Clinical trials are expensive and take a long time

Cancer Screening

Long waiting time, appointment system, high costs

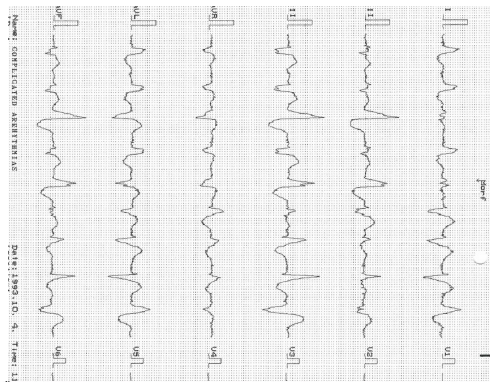
SOLUTION

→ Data immediately available to physicians at the time of entry

→ Screening of cardiological markers is quick and inexpensive
→ Trial participants do not need to get admitted to hospitals – yet data immediately available

→ Bio sensor for early detection of cancerous cells with DNA hybridization (We are industry partner in a research project with a CA-based University)

ECG ANOMALY DETECTION



AMPLITUDE TABLE [mV]									
	I.	II.	III.	aVR	aVL	aVF	V1	V2	V3
Pmax	0.168	2.153	-34.0	-11.7	2.038	-16.1	-31.6	2.032	-6.45
Pmin	0.168	2.153	-34.0	-11.7	2.038	-16.1	-31.6	2.032	-6.45
Qmax	-0.13	-0.05	-0.05	-0.45	-0.63	-0.04	-0.20	-0.10	-0.03
Rmax	0.238	0.879	1.059	0.242	0.262	0.904	0.203	0.645	0.917
R"m	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Smax	-0.13	-0.50	-0.54	0.183	0.000	-0.48	-1.01	-1.18	-0.72
J	0.000	-0.47	-0.57	0.183	0.262	-0.48	0.000	0.068	0.016
ST80	0.051	-0.45	-0.52	0.183	0.271	-0.41	0.068	0.000	-0.15
Tmax	0.150	0.127	0.348	0.471	0.368	0.059	0.271	0.271	0.240
Tmin	-0.63	-0.56	-0.63	-0.08	-0.43	-0.55	-0.03	-0.13	-0.19
Umax	2.165	2.153	2.128	-32.5	-32.4	-32.5	-32.5	-32.5	-32.4

TIME-INTERVALL TABLE [ms]									
	I.	II.	III.	aVR	aVL	aVF	V1	V2	V3
Pt	0	0	0	0	0	0	0	0	0
PQ	0	0	0	0	0	0	0	0	0

~170 different abnormal ECG patterns in our database

- Dataset on each anomaly with patient demographics in image and numbers.
- AI model is trained on image and numerical results.



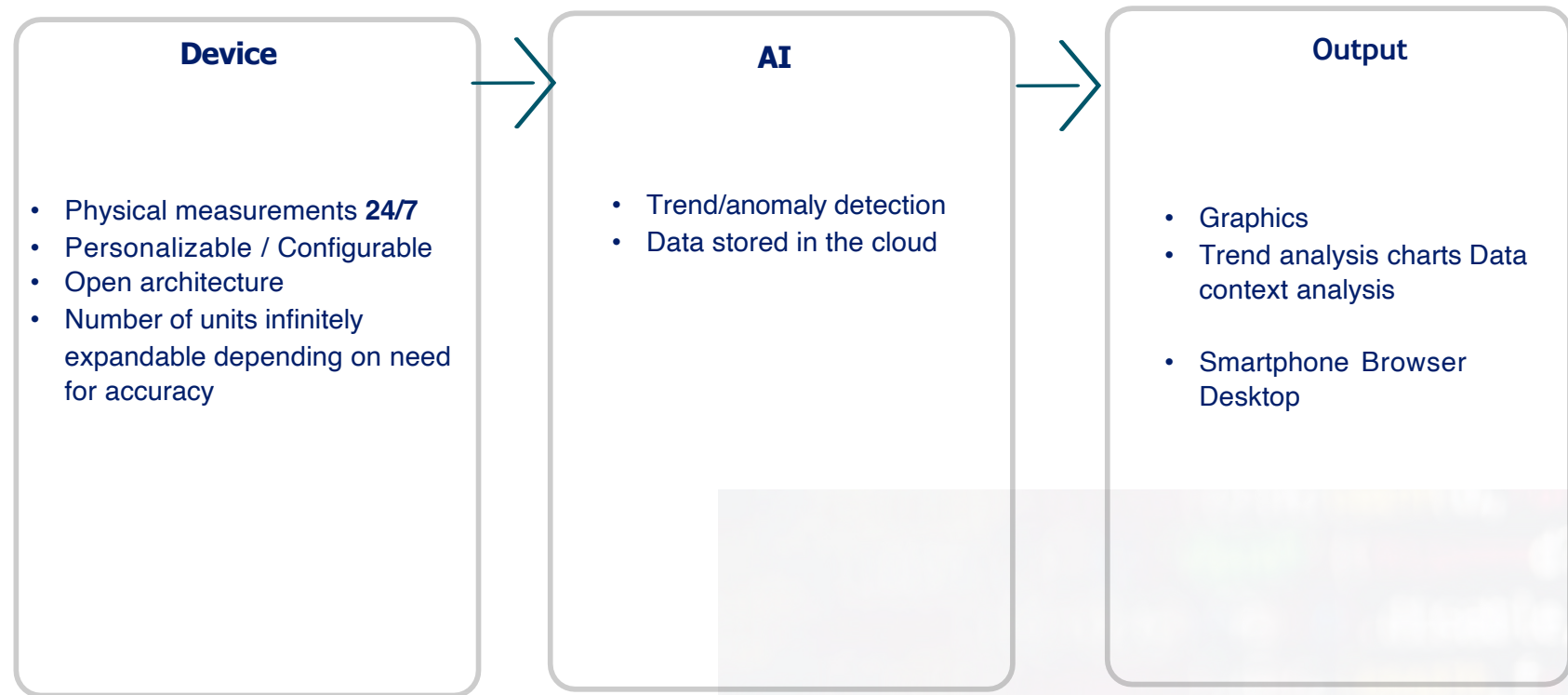
K E Y F E A T U R E S & U S P



Automated, continuous, cuffless, calibration-free personalised monitoring of cardiovascular markers like ECG, blood pressure. Early cancer detection, glucose monitoring, myograph

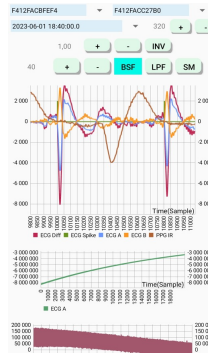
- A large number of data points per second coming from real, physical measurements
- Data paired with context information about the individual's activities and the environment the person is embedded in.
- DNA hybridization (early cancer detection) and glucose monitoring add-ons (work-in-progress)
- Data points are measured, not calculated - no need for calibration
- Collected data saved on a cloud platform

PRODUCT OVERVIEW **eCUR**



■ T R A C T I O N

Market validation, start of first trials, first quotes, patenting



- Market survey conducted with physicians and medical professionals (including AHA)
 - First patent filed in January 2023 for the device
 - Prototype manufacturing started, first quotes in preparation
- FDA inquiry about 'Breakthrough Device' classification submitted (Class II)
- Research project in cooperation with a Canadian University to integrate early cancer detection and glucose sensors
- Permission based collaboration platform in place

■ T E S T I M O N I A L S

“the right solution at the right time”

Board member
American Heart Association





COMPETITION

Our differentiation: Accuracy, Content/Usefulness, Personalization

Main competitors:

- **Sky Labs** (South Korea)
- **Aktiia** (Switzerland)

Monitoring Blood Pressure (BP), ECG, O2 saturation,... with wearables seems to be a crowded space, but none of the existing solutions :

- Delivers accurate, continuous physical measurements in an automated way customized to the patient, which is essential to draw verifiable conclusions on cardiovascular condition of an individual (e.g. predicting heart failure, heart rate variability, causes of hypertension or BP variability, detecting early signs of arrhythmia,..)
- Most solutions measure punctually and not automatically (for 30 second when the patient 'does something'), or measure sporadically
- Try to fill the missing data points with algorithms, which are based on AVERAGE VALUES of millions of patients, but not on the individual the monitoring is intended for.

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R & D Development Roadmap



Available today

Work-In-Progress

Planned

	Feature	Description	TBC
HW	High-resolution device for - EKG measurement	Cable-free Capacitive sensor (Sensors do not need to touch skin) 'Indefinitely' expandable	✓
HW	- EKG + PPG sensor calculates accurate PTT (Pulse Transit Time) - Gyroscope /accelerometer - O2 saturation / Pulse - Air quality	Basic information to calculate accurate blood pressure automatically Submits information about the activity of the person linked to measured data Humidity, dust, chemical composition	✓
SW	Android App		✓
SW	Server App	Processing the signals and calculating results	✓
HW	Myograph		Q4/ 2025
HW	Bio sensors for: a) DNA hybridization b) Glucose monitoring	Early detection of cancerous cells	Q1/ 2026 Q2/ 2026
SW	Fine-tuned blood pressure	Mathematical/AI model will be finalized to convert PTT to blood pressure	Q3/ 2024
SW	AI for trend recognition	Based on input of medical staff	Q3 /2025
SW	GUI development	Based on input of medical staff	Q4 /2024

OUR TEAM



**Jozsef
Nieberl**

Co-Founder

Electroengineer; integration of high-precision measuring sensors, programming and development of embedded systems for medical and industrial applications



**Huba
Horompoly**

Co-Founder

Serial Entrepreneur, Chemical Process Engineer/Economist/MBA; Business Development; Engineering Tool Development



**Kristof
Horompoly,
CFA**

Co-Founder

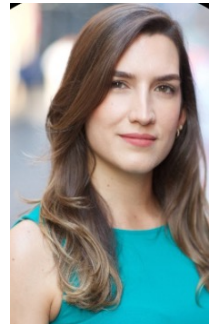
Mathematician, ML/AI expert, former Head of Responsible AI at JPMorgan Chase



**Dr. Greg
Sigalov,
PhD**

R&D Lead

Phd in computational biophysics; Applications of machine learning in the medical field; Former Senior Scientist at Renown Universities



**Maria
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Advisor

Pathologist/Oncologist
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Thank you for your attention



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