MEDICA2023

9/OCT/2023

Our Motivation...

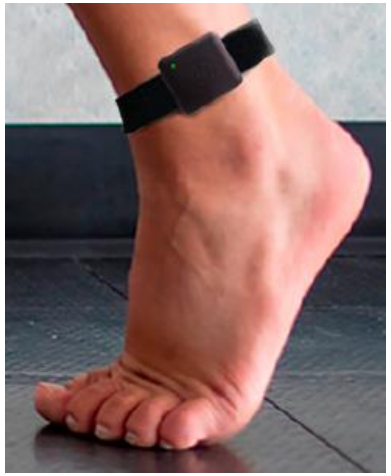
- Use our 20+ years of experience in Health and Medical devices development, to build better solutions for remote monitoring.
- Create cutting-edge products that can improve quality of life of the users, keeping sustainability of the solutions as a priority.
- Users need trouble free devices, easy to be used, hassle free!
- Focus on miniaturized wearable technology for remote monitoring, with low power consumption for easier operation.
- Multi sensor ecosystem, enabling data correlation for better diagnosis to take place.
- Data stored or uploaded for remote post processing, or medical analysis.

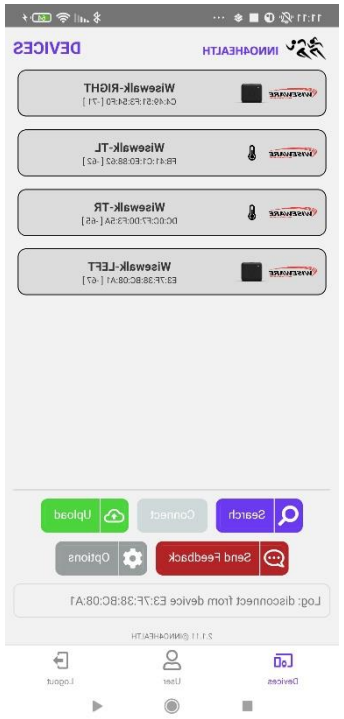
WEARABLES FOR VASCULAR DISEASES MONITORING

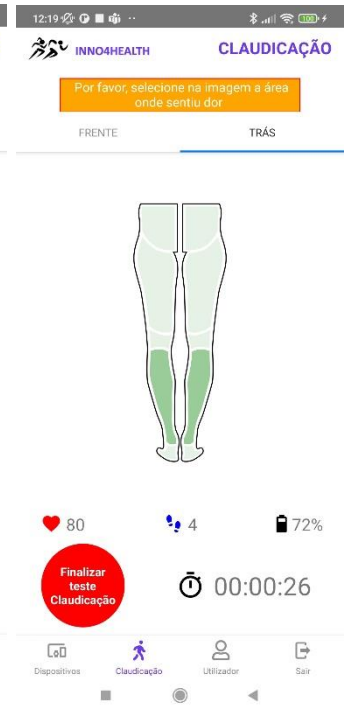
INNO4HEALTH - Wearables for Intermittent Claudication

Intermittent Claudication monitoring with ankle band and App

- One or more devices per patient can be installed.
- Ankle band integrating a long-term system (>150h) measuring 9AXES IMU.
- High precision barometric pressure sensing to understand small elevation changes, allowing correlation with energy expenditure
- Mobile application to perform walking test and provide patient feedback.



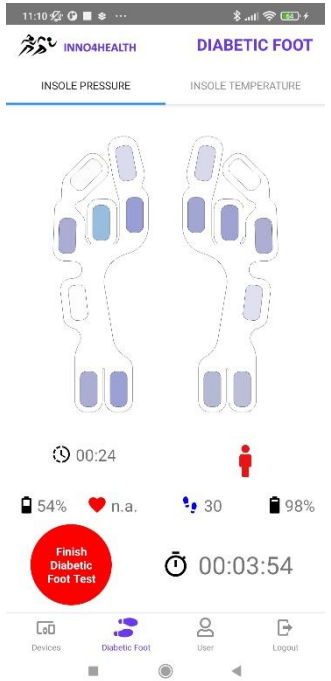


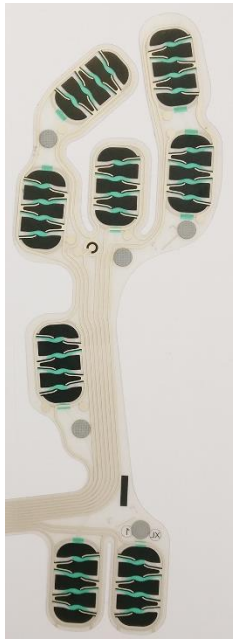


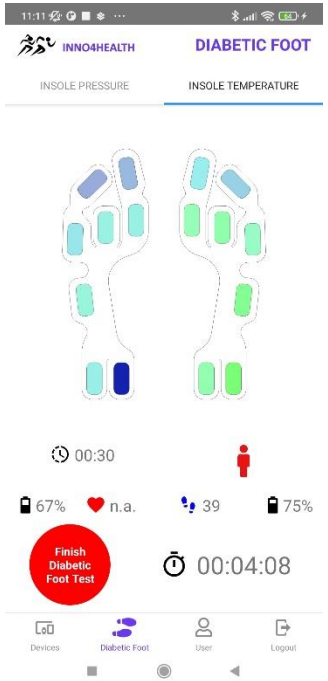
INNO4HEALTH - Wearables for Diabetic foot

Diabetic foot insole setup and App

- One or more devices per patient can be worn.
- Insole with plantar foot pressure and temperature acquisition integrating a long-term system (>150h) measuring 9AXES IMU.
- Mobile Application to acquire and show real-time foot pressure and average temperature during the day.

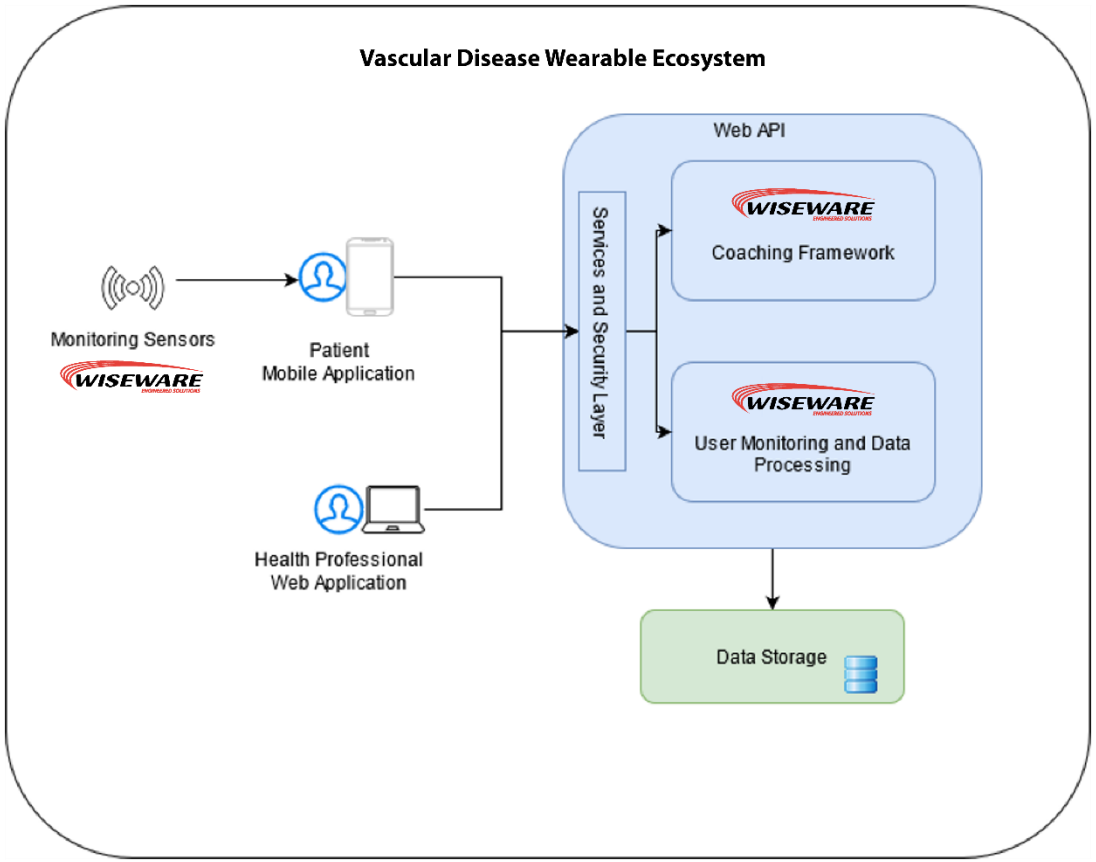






Architecture and overview of the INNO4HEALTH Ecosystem

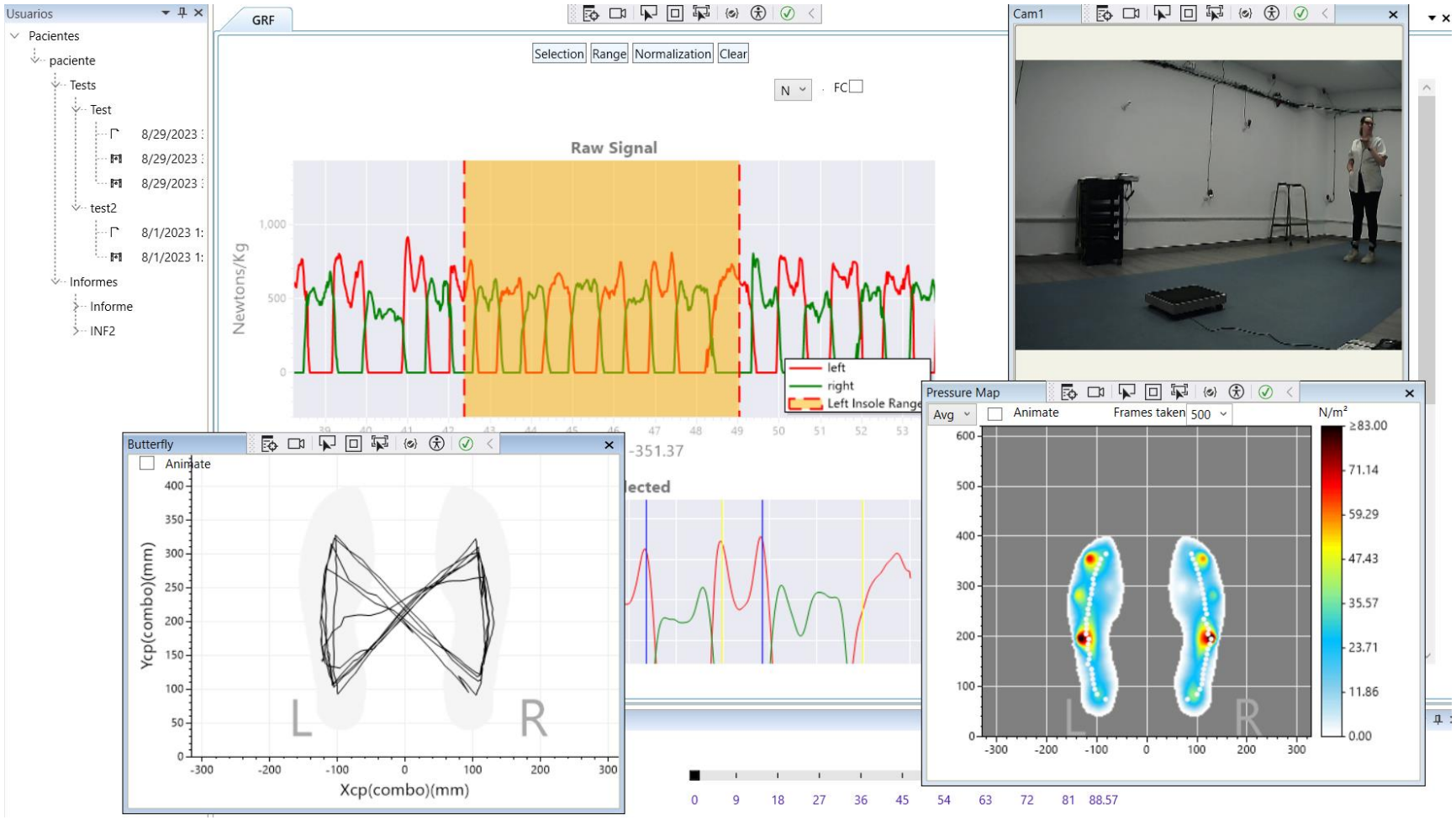
Architecture and tools developed for data aggregation



WISEWALK

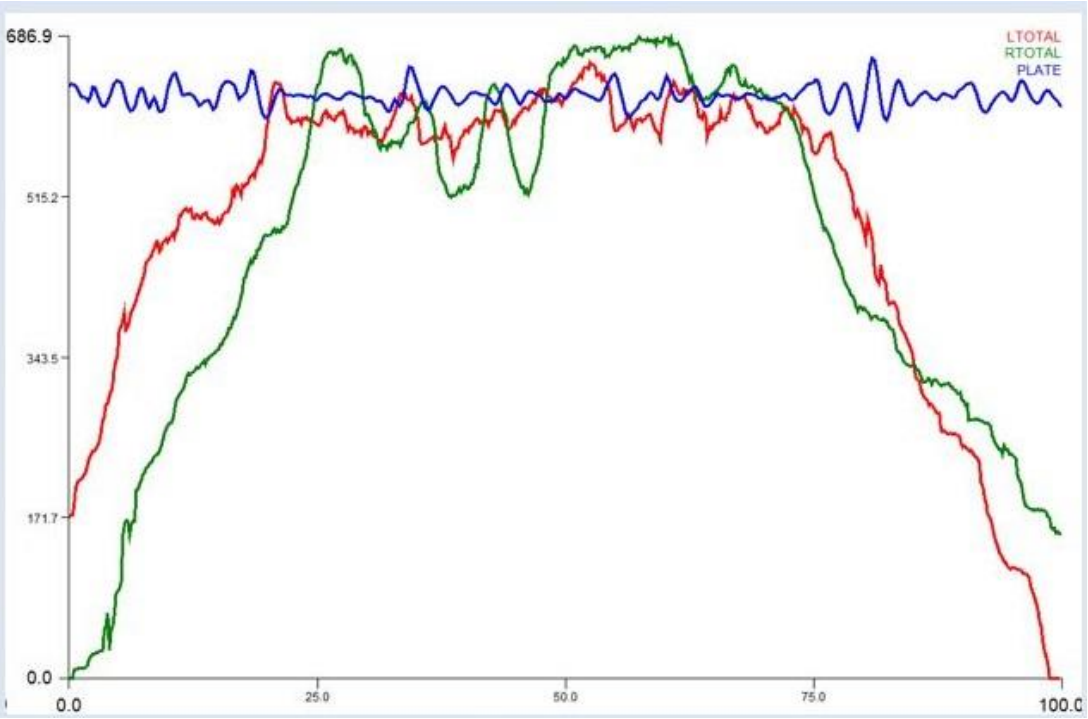
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Platform used to verify data and correlate/verify with video



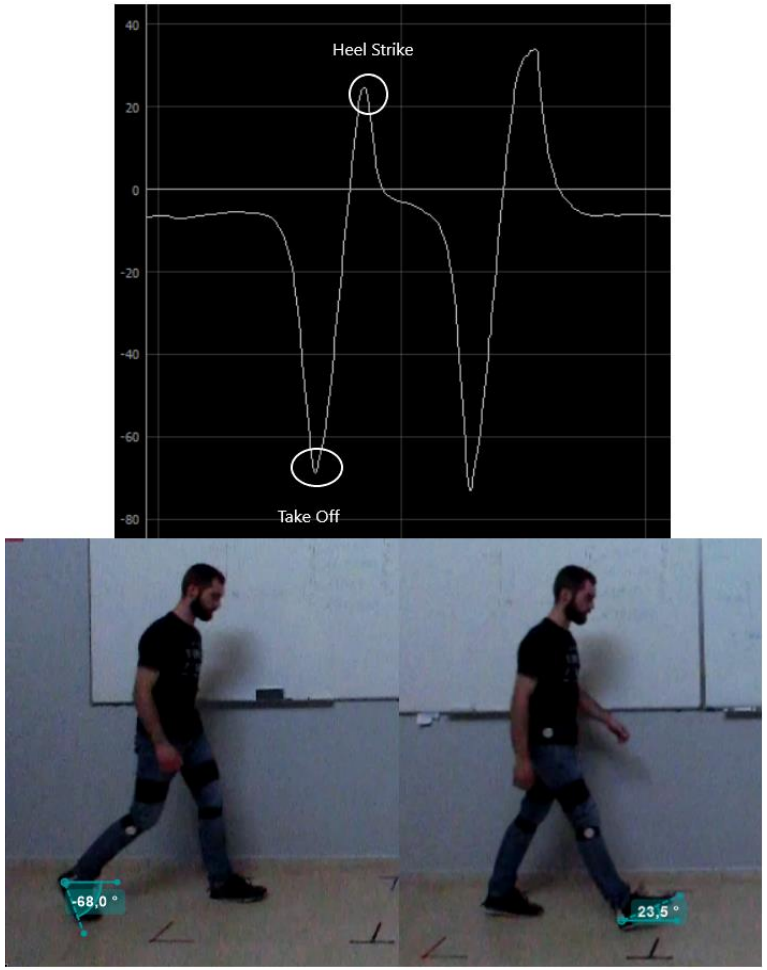
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Jump/STEP measurement and comparison with professional load cell platforms(1kHz), our setup demonstrated higher resolution and rate(2kHz), which lead to better results



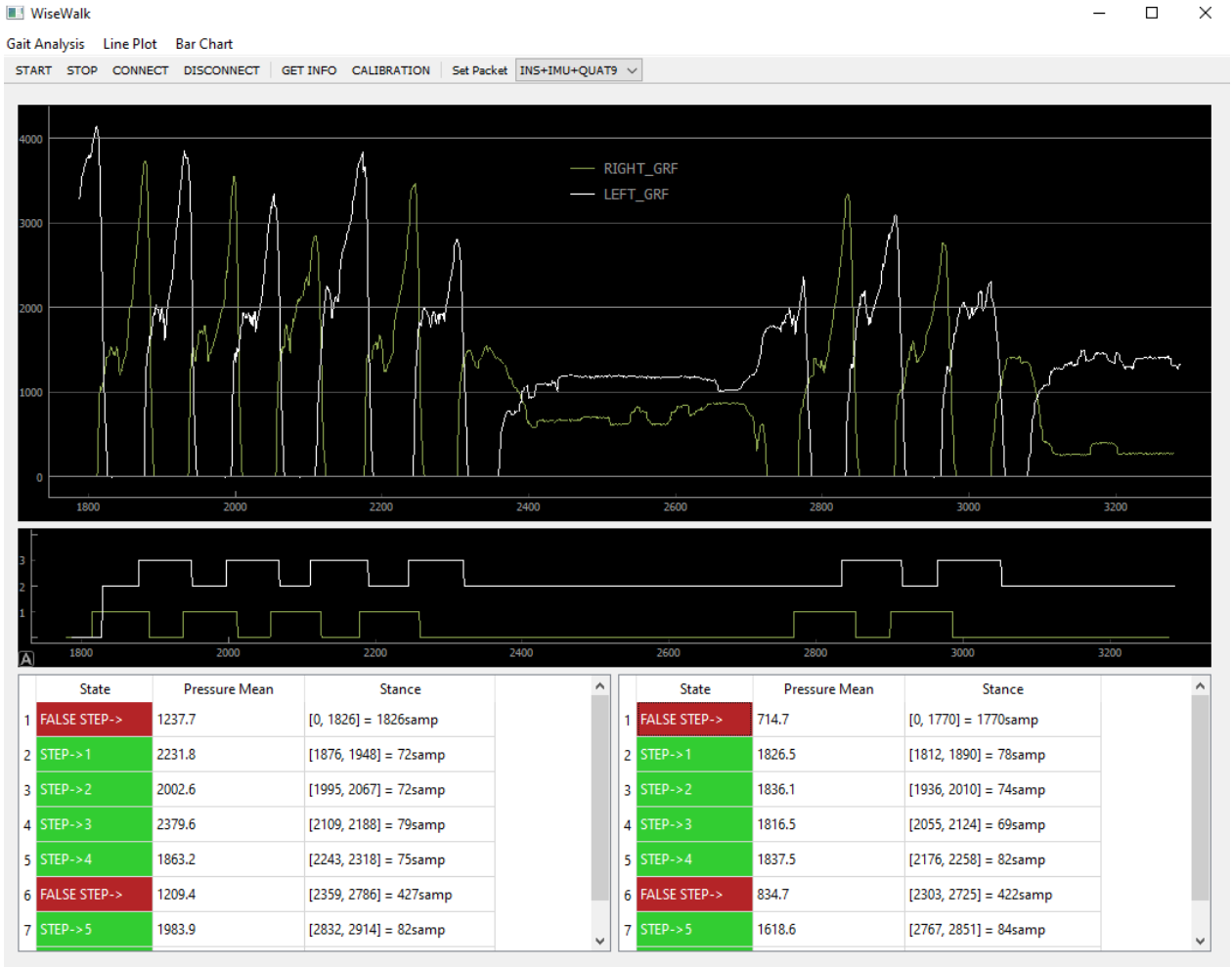
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Walking behavior to measure balance and biomechanics



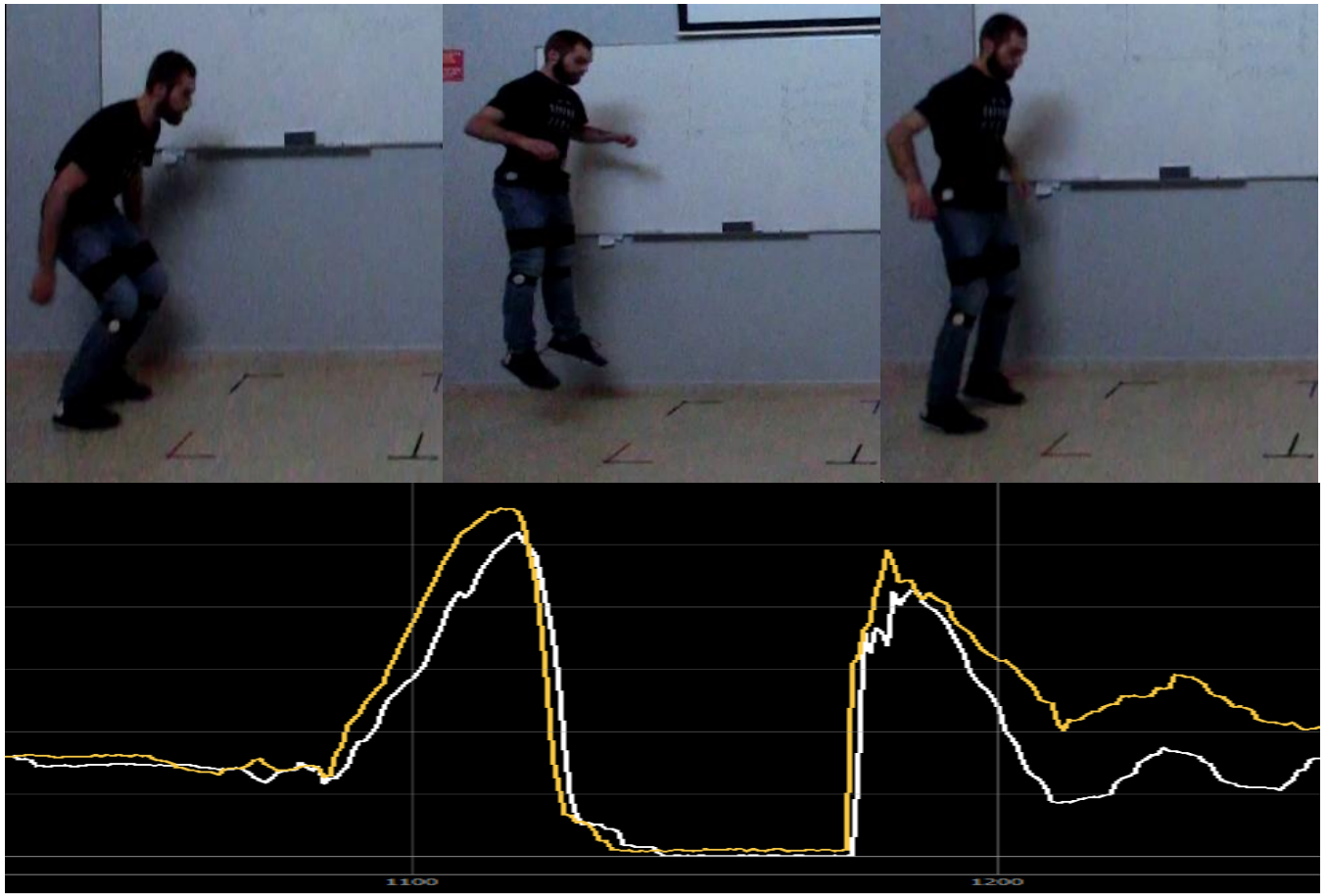
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Multi-Sensor data post processing and labeling for AI/ML Algorithms



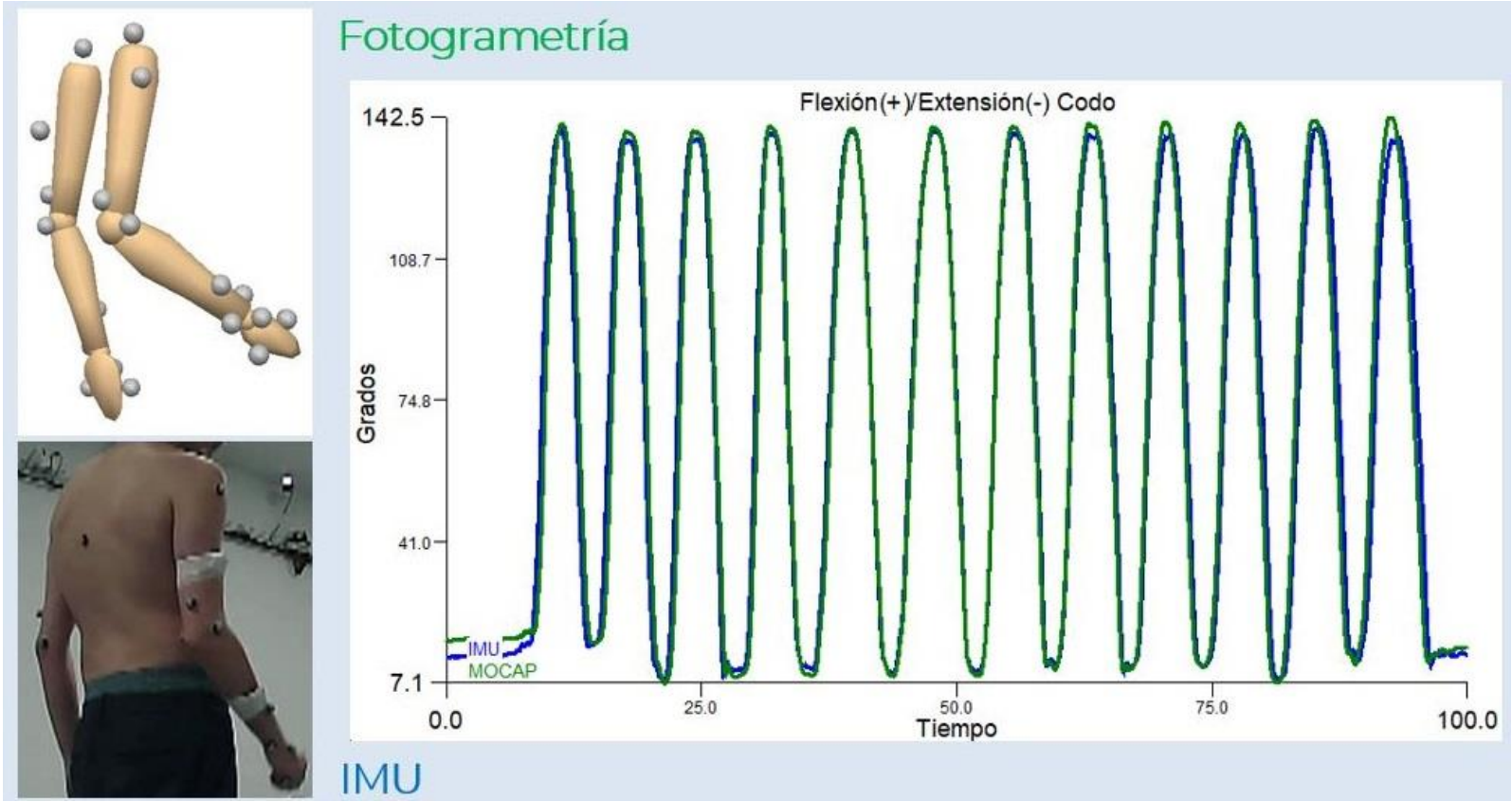
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Jump analysis needs high acquisition rates and high synchronism among all the sensors, WISEWALK samples @2kHz per sensor.



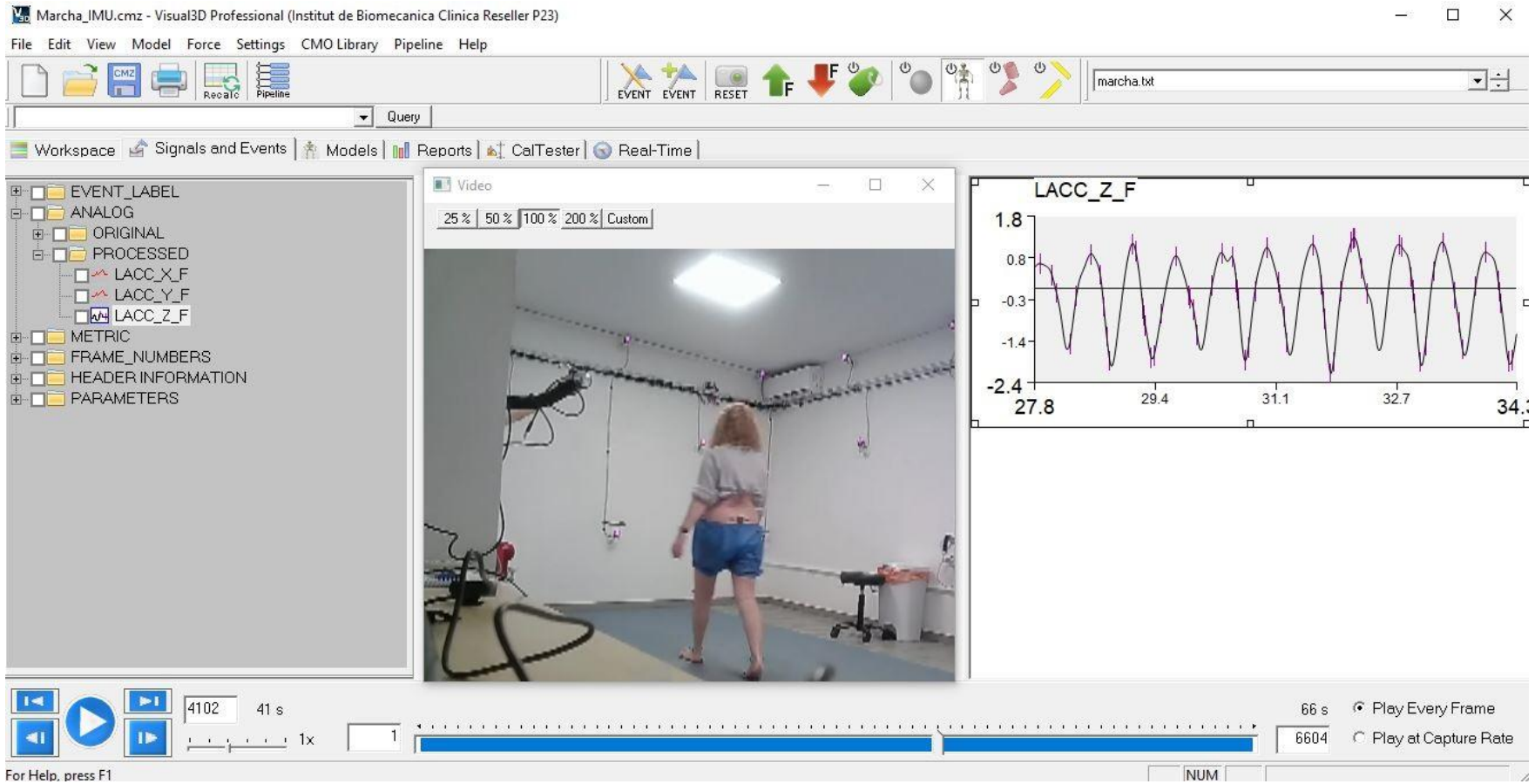
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Body sensors, able to measure angles and mechanical movement



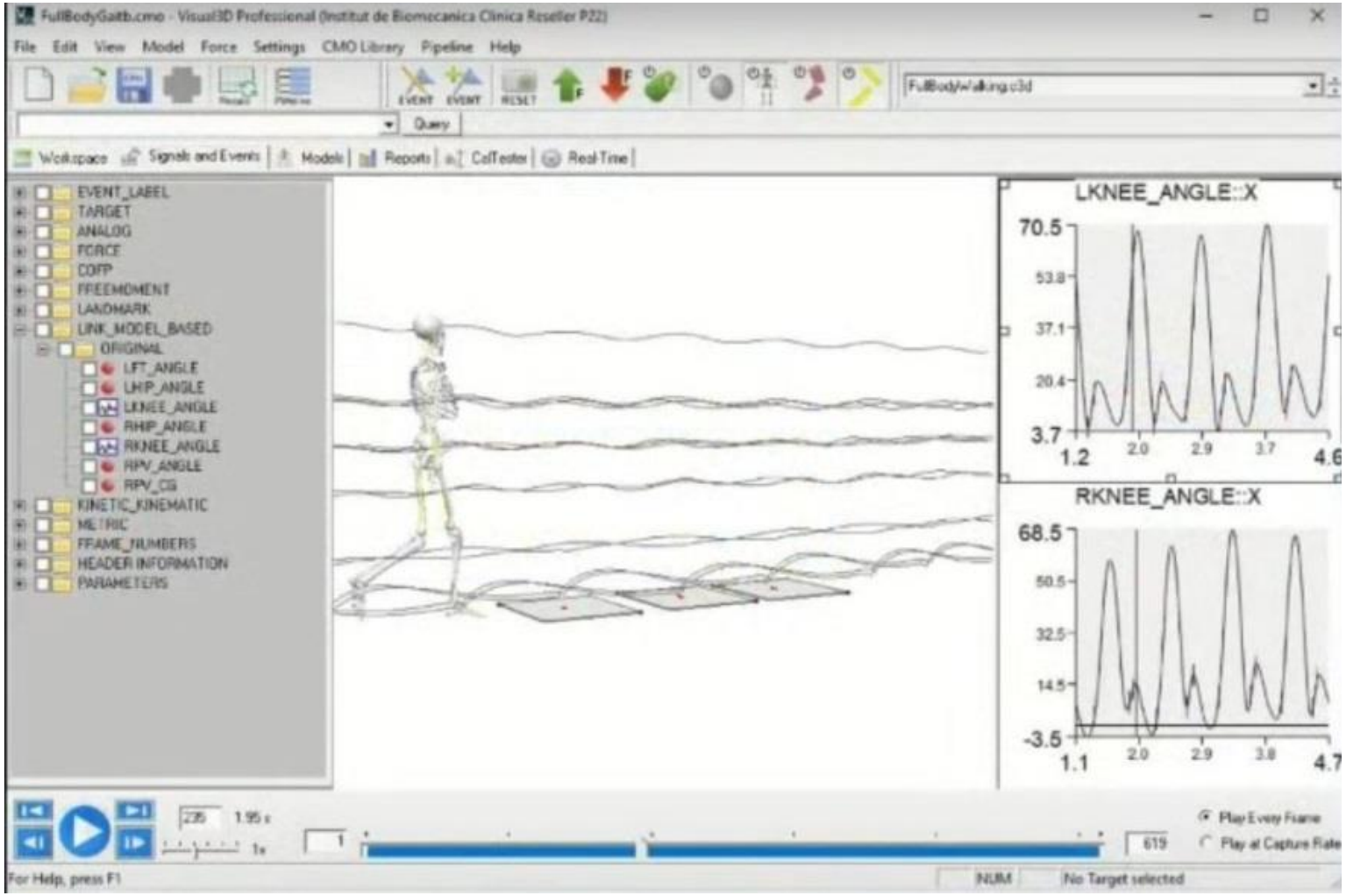
WISEWALK, Clinical Biomechanics Wearable Ecosystem

- Output data is compatible with professional analysis tools, bellow Visual3D integration:



WISEWALK, Clinical Biomechanics Wearable Ecosystem

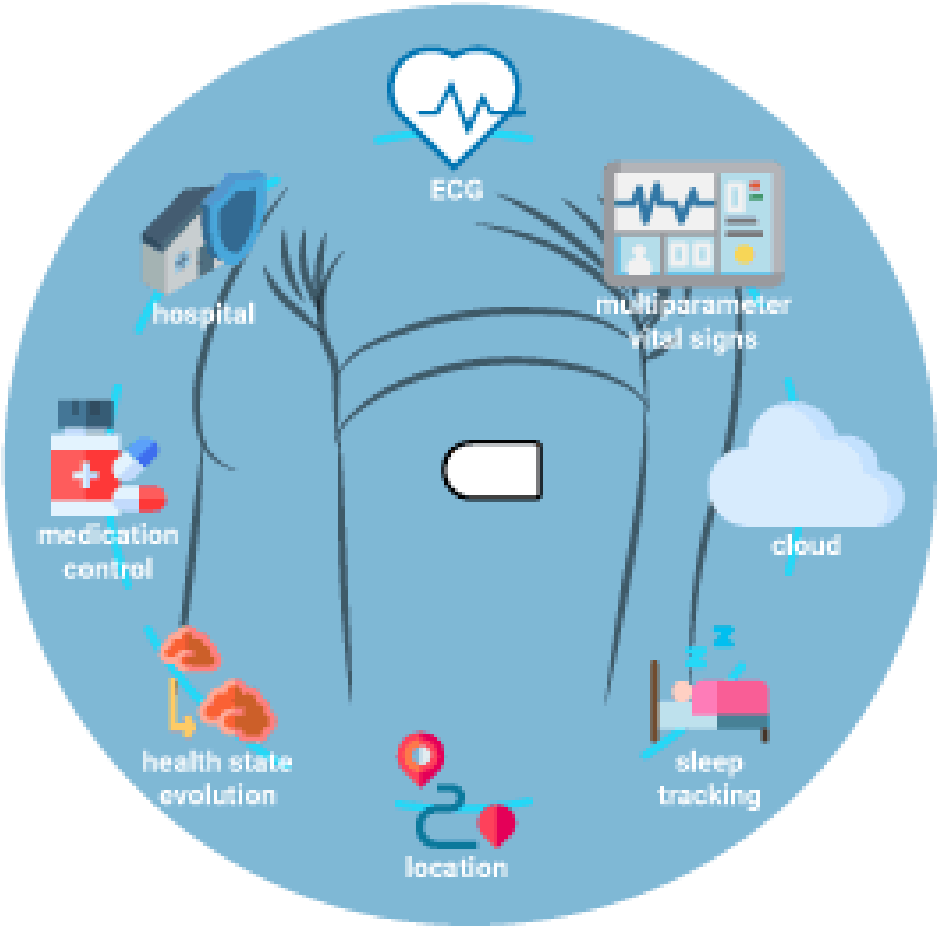
- Trend prediction based on live acquisition from insoles+sensors



SAFEPATCH

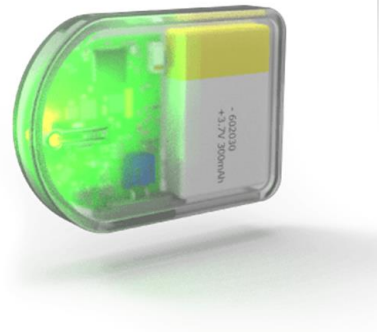
SafePatch, VitalSign remote wearable monitoring

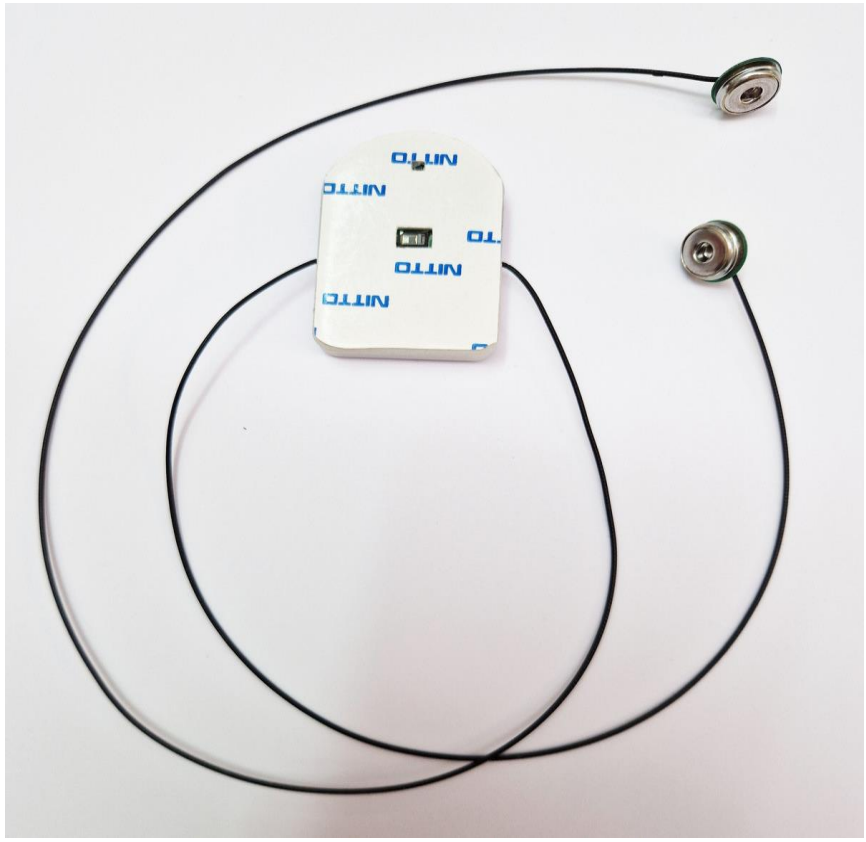
- Specifications based on workshops and interviews with ER staff, i.e. doctors, nurses, users
- HIGH FOCUS on usability and installation
- NFC to set patient/episode, that is read from ingress QR code from admission bracelet
- ECG 1 lead (medical grade) with RLD
- PPG with 4 channels
- Panic button
- SpO2
- SmO2 & StO2
- Body core temperature
- BLE / WiFi communications
- Indoor location with BLE / WiFi
- Sterilizable on ordinary equipment
- 100h battery lifetime



SafePatch, VitalSign remote wearable monitoring

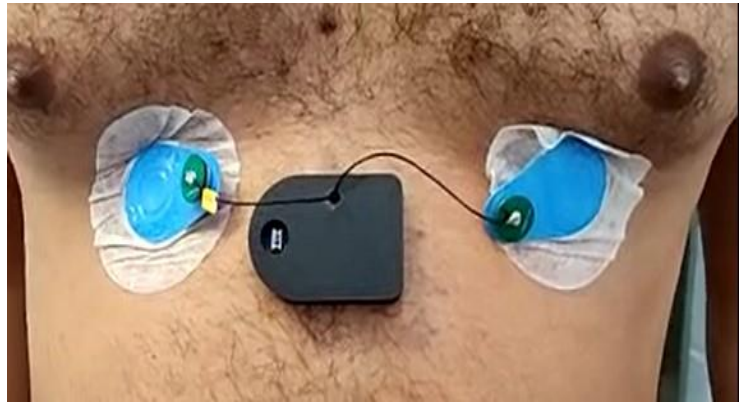
- Health patch for remote and long-term VitalSign monitoring





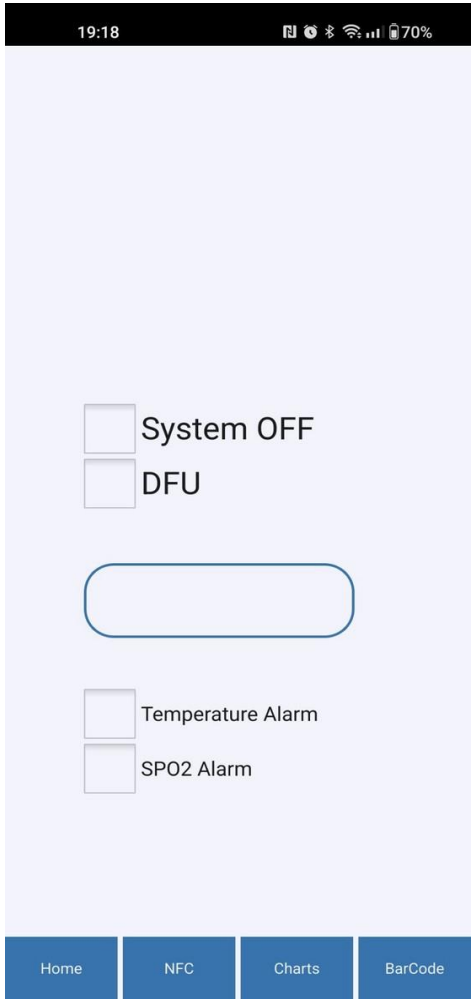
SafePatch, VitalSign remote wearable monitoring

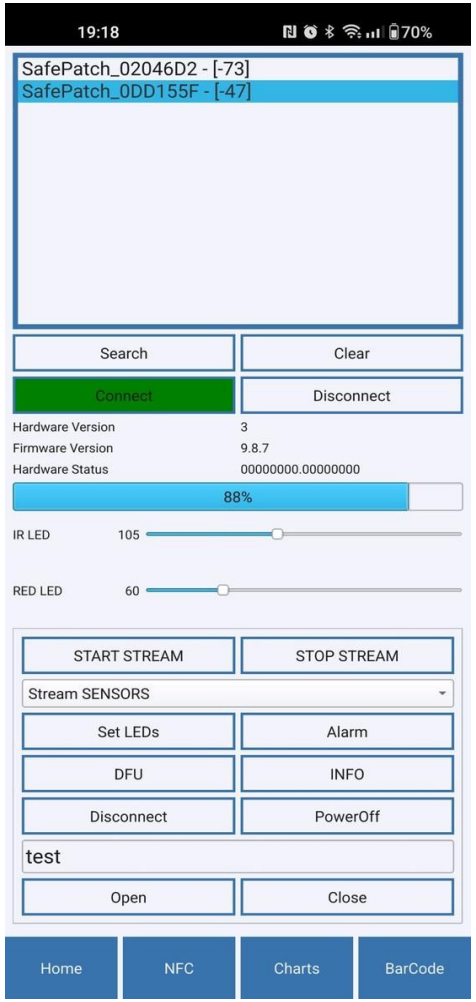
- Clinical trials ongoing



SafePatch, VitalSign remote wearable monitoring

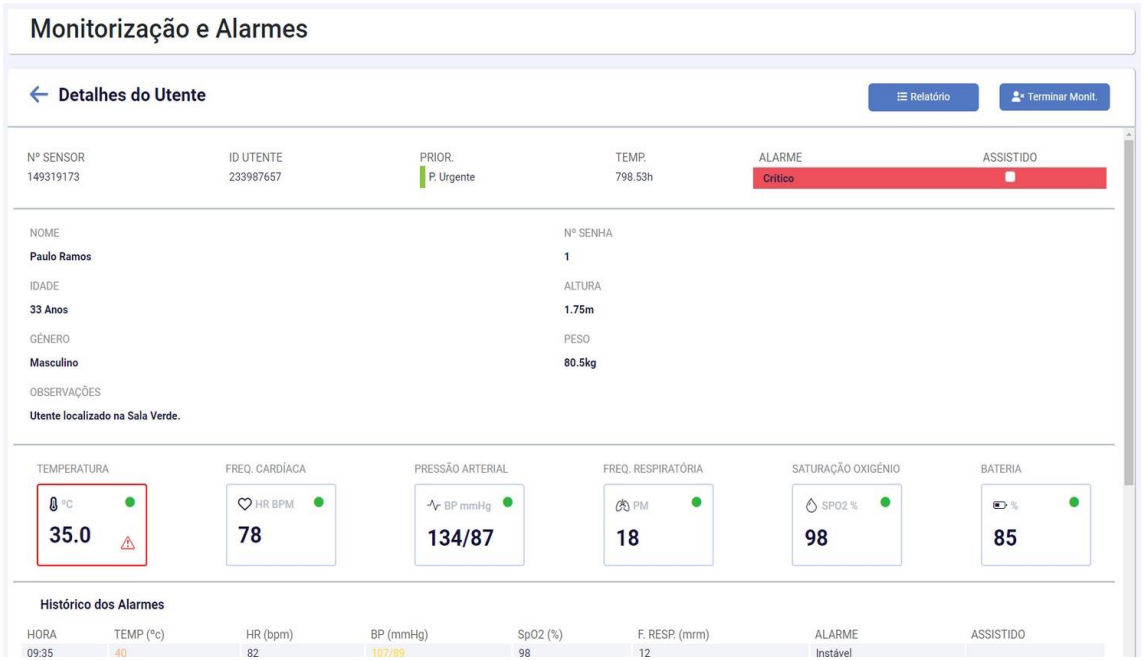
- Mobile App to enable user and caregiver data viewing online

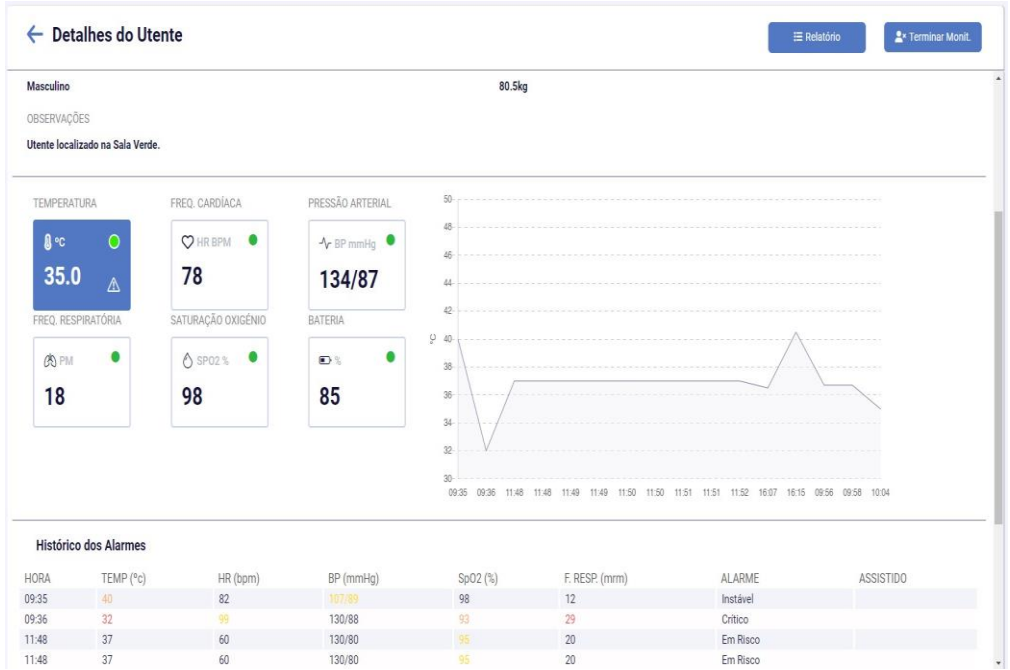




SafePatch, VitalSign remote wearable monitoring

- Remote monitoring platform, for data viewing and analysis

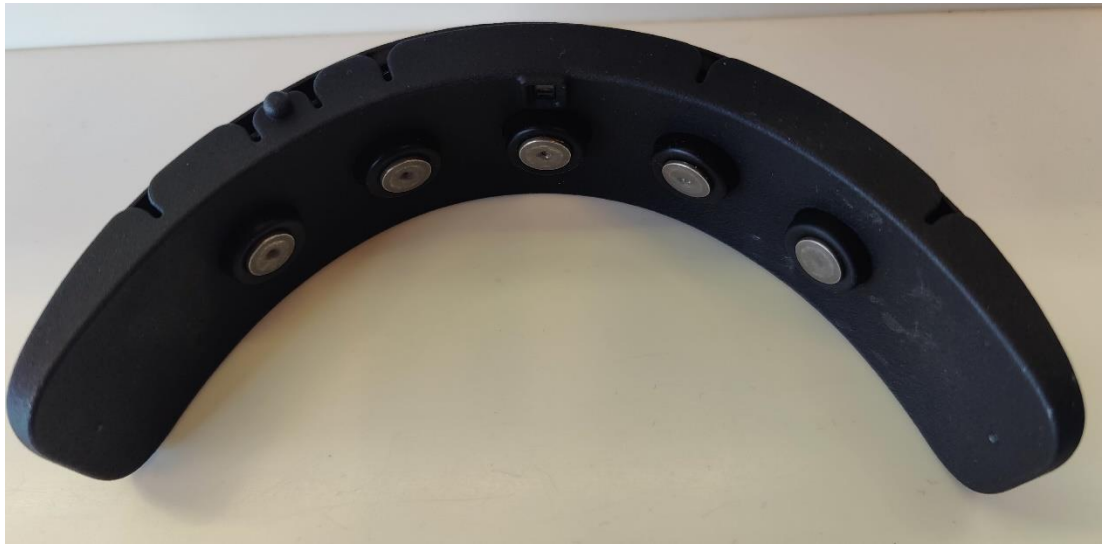




NEWRABLE

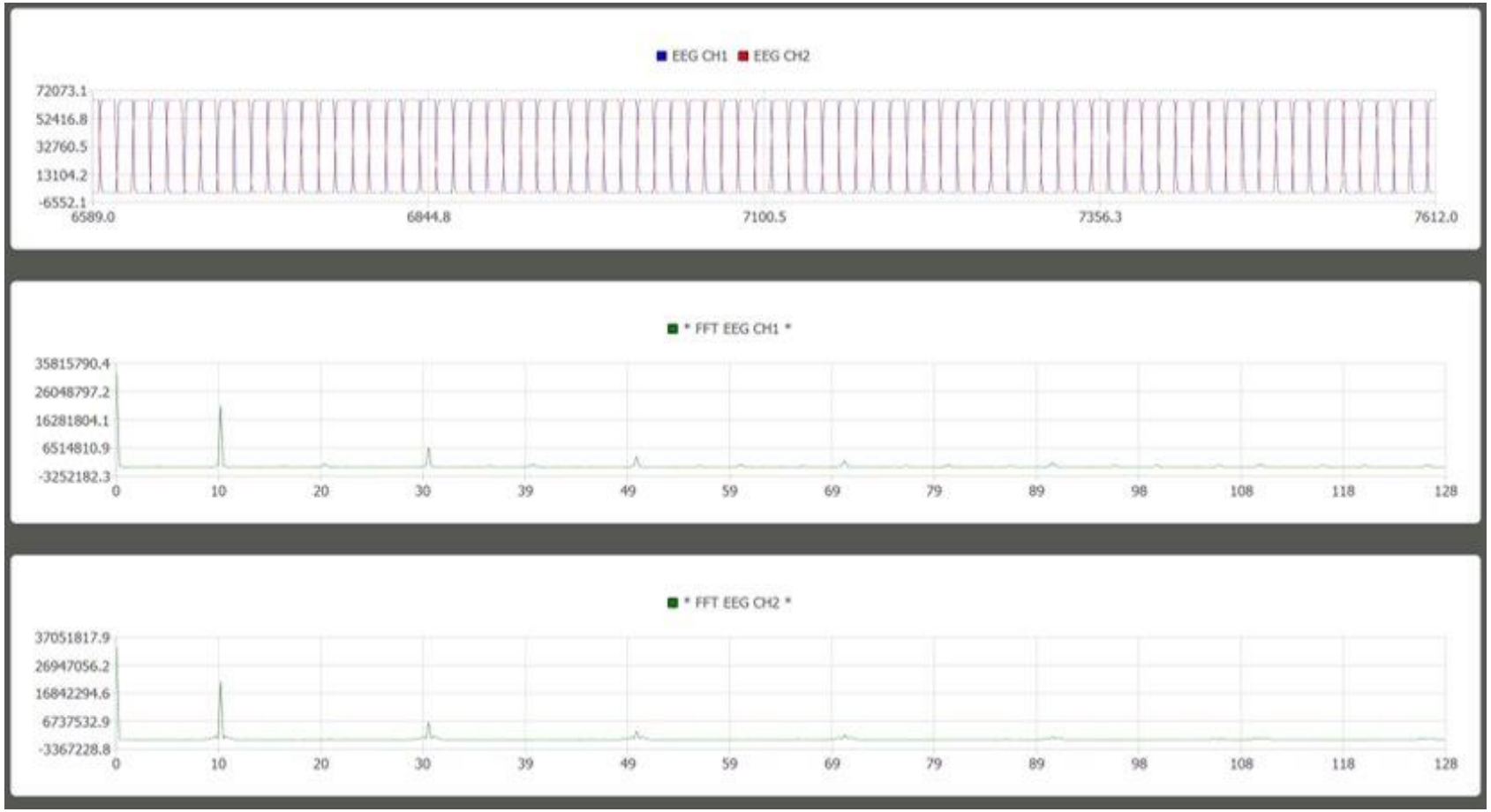
NEWRABLE - Biosignals wearable acquisition system

- Forehead wearable with 4-channel EEG Biosignal acquisition
- Integrated camera for image acquisition to understand user reaction based on sight changes
- Ambient and air quality sensors for information correlation



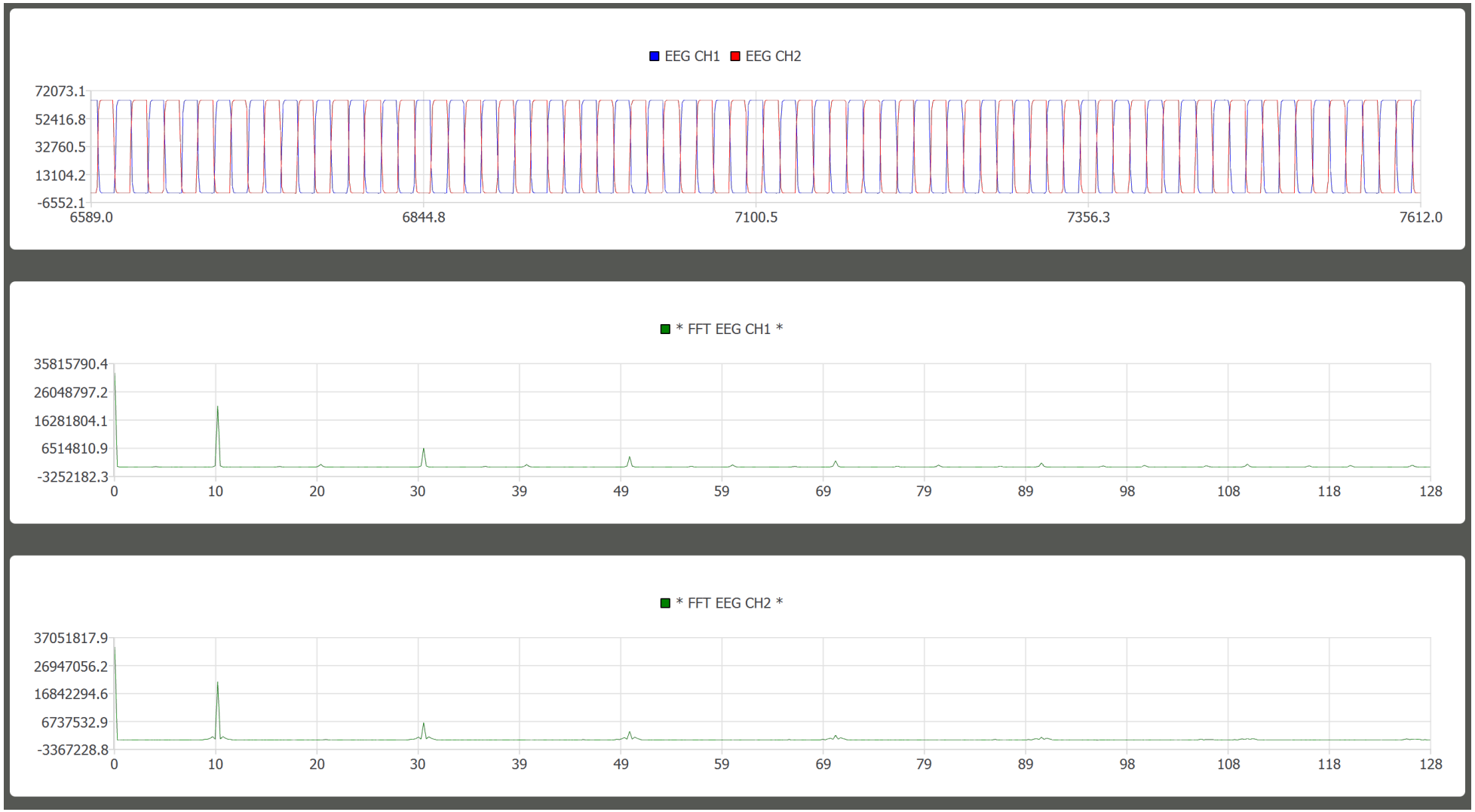
NEWRABLE - Biosignals wearable acquisition system

- User wearing one EEG band, use case is GAMING to understand stress and context awareness while playing online.



NEWRABLE - Biosignals wearable acquisition system

EEG outputs per channel



And the beauty of all the above is...

- All systems share the same API.
- All data can be synchronized live or offline.
- All devices work stand alone, storage capacity for 6M+.
- Systems use BLE 5.3 and/or WiFi 6.0 connectivity.
- Outdoor devices use 5G technology.
- TEAM mode is possible, using DECT NR+ 5G protocol.
- Off the shelf devices can be integrated on the ecosystem.
- Our team is happy to adjust protocols, output formats to meet any needs.
- All development and production is done in-house, in Portugal.


WISEWARE
ENGINEERED SOLUTIONS