

Ad de Beer, Philips Sportinnovatie & maatschap- pelijke impact

13.00 – 14.00



Building continuous monitoring solutions for preparing individuals to surgery or sport competition

ELIS Innovation summit
Ad de Beer

Successful European Public Funding Projects ITEA 19008 Inno4Health

Philips
20 April 2022

PHILIPS

Having surgery is like running a marathon and for both you need training
Surgical stress response is characterized by catabolism and increased oxygen demand

Preparing patients to be fit for surgery

Payers – lower healthcare cost savings
Clinicians – less workload and risk of complications
Patients – better health outcome



These problematic challenges deriving from the healthcare and sports domains may require solutions that have a lot more in common than it could be thought

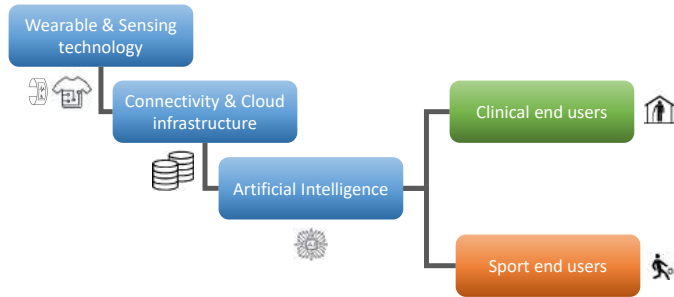


Preparing athletes to be fit for sport competition

Sport business managers – larger income
Performance coach – better informed decisions
Athletes – lower risk of injury and better training

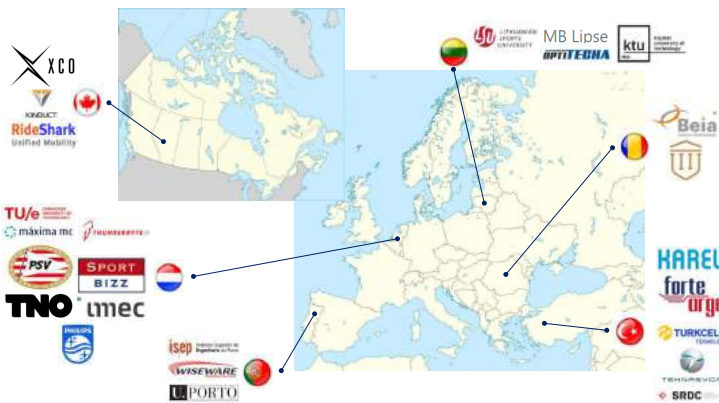


INNO4HEALTH solution pillars



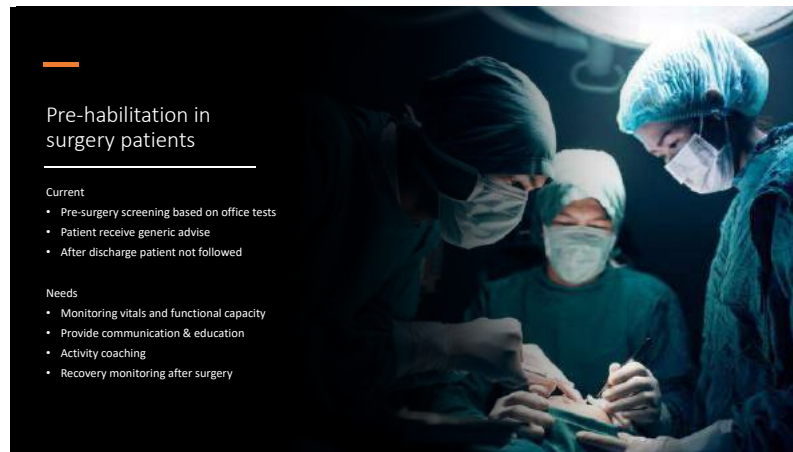
Use cases

Name	Domain		Leader
Re-habilitation after orthopaedic surgery	Health	NL/TR	MMC
Pre-habilitation in Bariatric surgery patients	Health	RO	BEIA
Screening for Sudden Cardiac Arrest	Health	NL	MMC
Claudication, venous ulcers and diabetic foot patients	Health	PT	ISEP
Holistic preparation for football competition	Sport	NL	PSV / PHILIPS
Cognitive preparation of athletes	Sport	LT	LIPSE
Management of athletes recovery after injury in team sports	Sport	CA	XCO
Personal health monitoring and self-assessment for health prevention, empowerment and management	Health	CA	RideShark



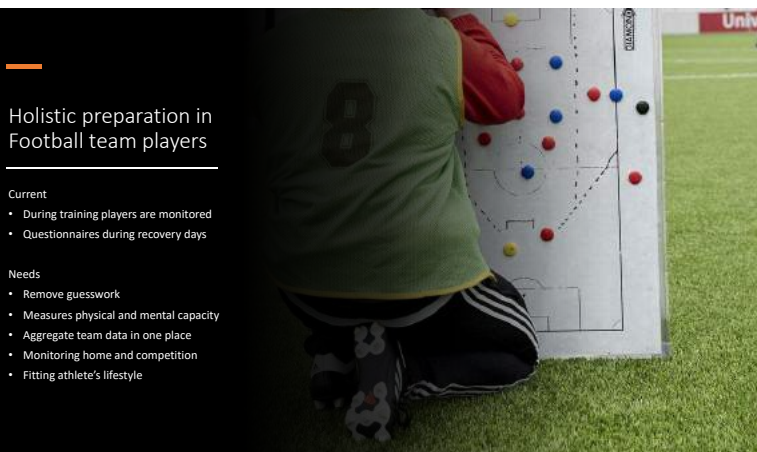
Pre-habilitation in surgery patients

- Current**
- Pre-surgery screening based on office tests
 - Patient receive generic advise
 - After discharge patient not followed
- Needs**
- Monitoring vitals and functional capacity
 - Provide communication & education
 - Activity coaching
 - Recovery monitoring after surgery



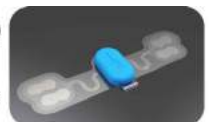
Holistic preparation in Football team players

- Current**
- During training players are monitored
 - Questionnaires during recovery days
- Needs**
- Remove guesswork
 - Measures physical and mental capacity
 - Aggregate team data in one place
 - Monitoring home and competition
 - Fitting athlete's lifestyle



// TNO - Innovative design for multi-day ECG wearables

Nighthawk Patch, Holst Centre TNO



// ITEA - Inno4Health // Date // Venue //

Examples of new business



PSV en Philips kondigen medische topprimeur aan: Veel beter na te gaan of training topsporters aanslaat



MONITOREN BINNEN EN BUITEN ZIEKENHUIS
De Healthdot sensor meet ademhalingsfrequentie, hartslag, activiteit en lichaamshouding van een patiënt elke vijf minuten gedurende 14 dagen. De data kunnen zonder tussenkomst van een ontvanger (monitoringsrelay) worden verstuurd naar één of meerdere dataplatformen. Via deze platformen van Philips (IntelliVue Guardian of Engage) kunnen zorgverleners hun patiënten binnen en buiten het ziekenhuis monitoren.

// ISEP - In-sole system for long-term monitoring of physiological parameters



- Wearable insole system for long term planar pressure measurement.
- 1kHz 8 point measurement foot pressure from both feet information, synchronized with <5ms delay.
- Integration of PPG and HRM/ECG information from Polar sensors.
- Electronics include several sensors, 9AXES IMU, Barometer, Temperature.
- GAIT analysis and step counting
- Internal memory to store offline data.

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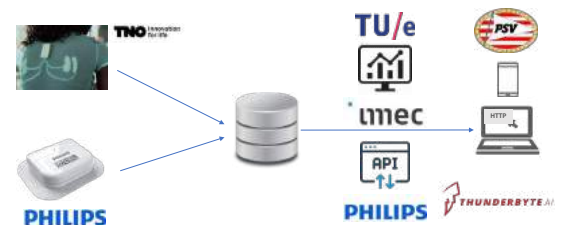
// Karel - Ecosystem of data capturing devices and wearable data collection



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ITEA 17

Removing the guesswork



// XCO Demonstrator



xco.io

Advancing human health and performance through precise measures of Motion, Cognition and Biometrics

WHOLE PERSON HEALTH ASSESSMENT*

- Movement
- Balance
- Limb asymmetry
- Cognition
- Cognitive-Motor
- Vital Signs

USE CASES

- Concussion
- Lower body injuries (ACL, Hamstring, etc.)
- Return to play protocols

*Harnessing the power of Edge Computing and embedded Artificial Intelligence to enable high-frequency multi-sensor data fusion



Markt introductie

Business development

- ✓ Market scans
- ✓ Validation
- ✓ Dissemination
- ✓ Expos / Fairs
- ✓ Market entrance strategy for the use cases



Visit our website: <https://inno4health.eu/>



PEOPLE WILL FORGET
WHAT YOU SAID,
PEOPLE WILL FORGET
WHAT YOU DID,
BUT PEOPLE WILL
NEVER FORGET
HOW YOU MADE
THEM FEEL

MAYA ANGELOU



Innovation is leading us towards making sense of complex processes that can be used to assess our ability to overcome challenging situations in life

