Promote AI adoption in clinical practice for balance rehabilitation training
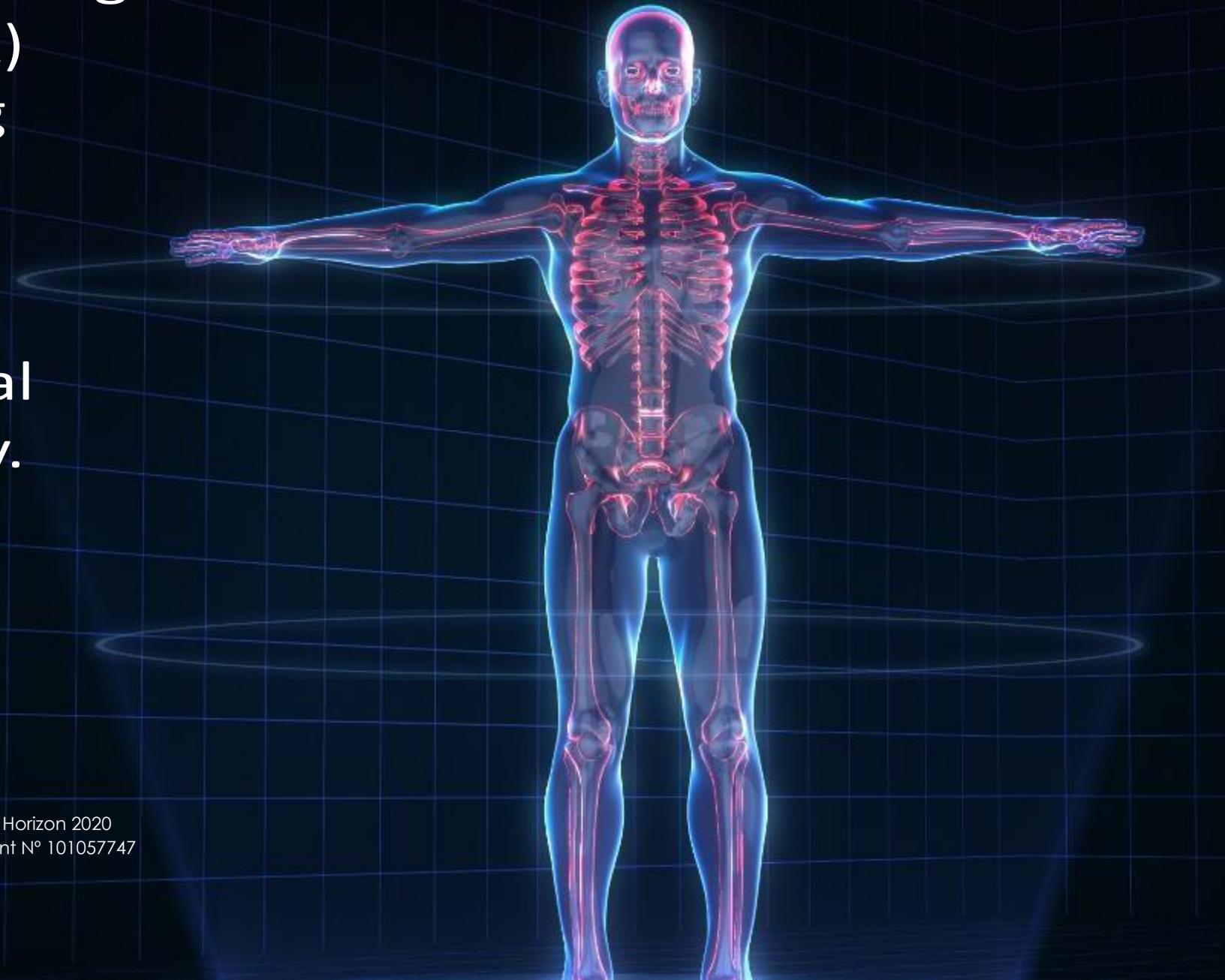
Overview presentation

TeleRehaB

TeleRehaB DSS will be
built on top of an existing
Augmented Reality (AR)
rehabilitation training
platform, aiming to
provide suggestive
feedback for experts
throughout the clinical
rehabilitation pathway.

TelereHaB in numbers

15 partners

8 countries

4 clinical trials

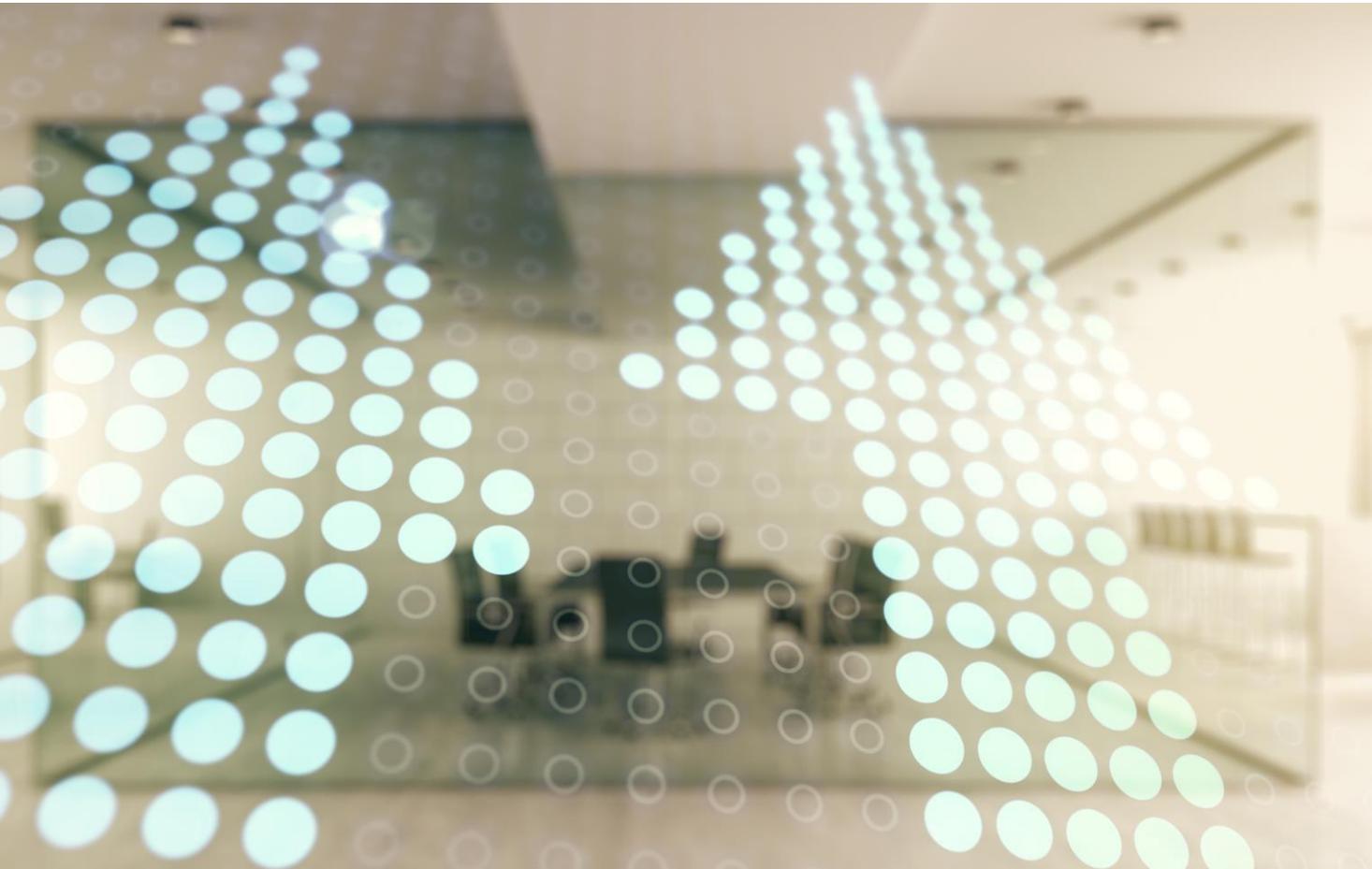**5**M€ budget

TeleRehaB

3

Use cases

Our mission. revolutionizes balance rehabilitation through AI-driven clinical support.

TeleRehaB

- Enhancing patient outcomes through AI-powered balance rehabilitation.

- Bridging the gap between clinics and remote home-based care.

- Promoting effective and affordable treatment for fall prevention.

Our ambition

Develop an AI-based Decision Support System for effective and affordable treatment of patients at risk of falls

Enhance access to falls prevention and rehabilitation services, both in clinics and through remote home-based care.
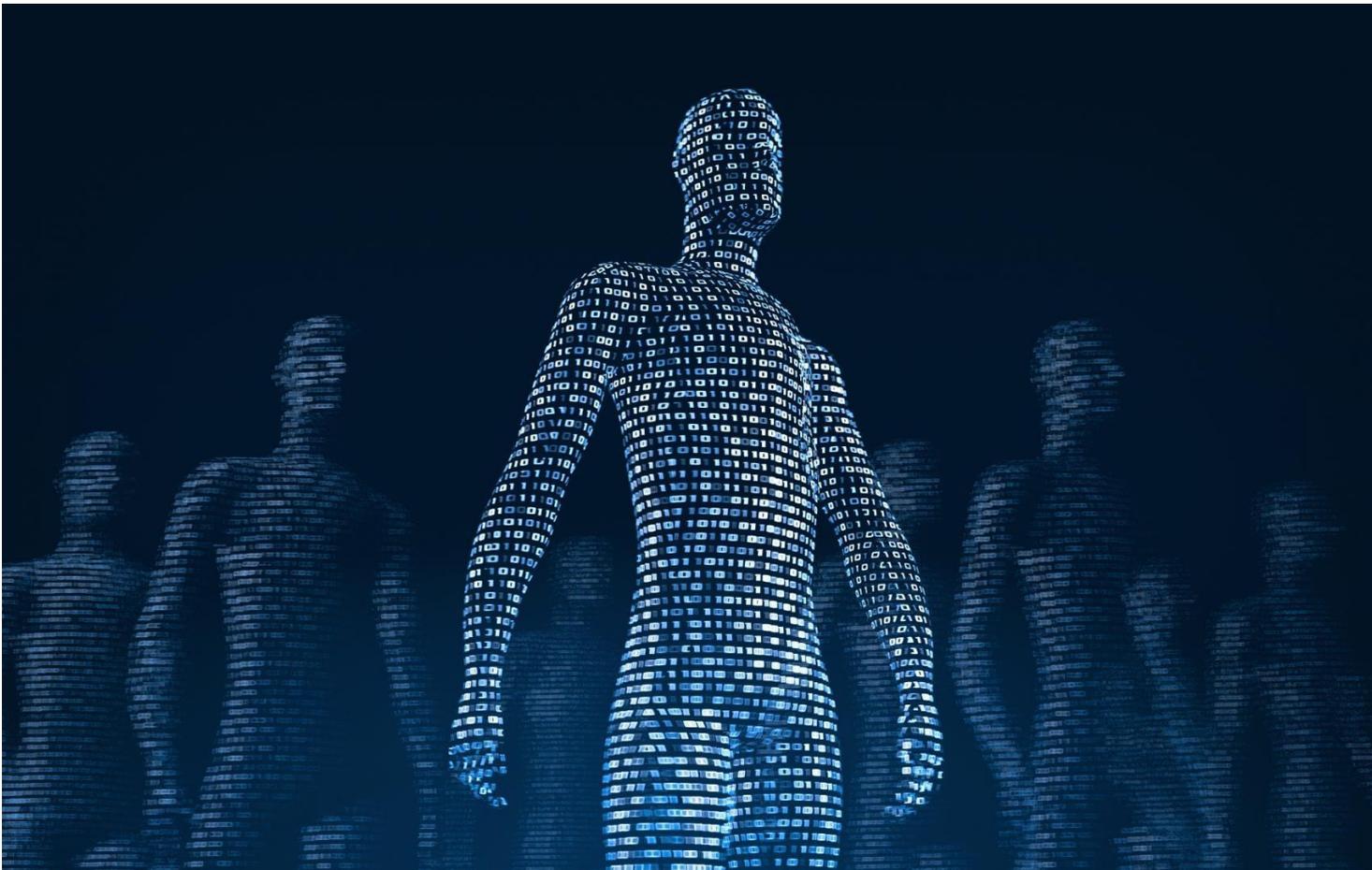
Falls account for most emergency department attendances in individuals over 65 and are a growing concern in an aging population.

Essential to address falls in older adults with comorbidities and specific needs.
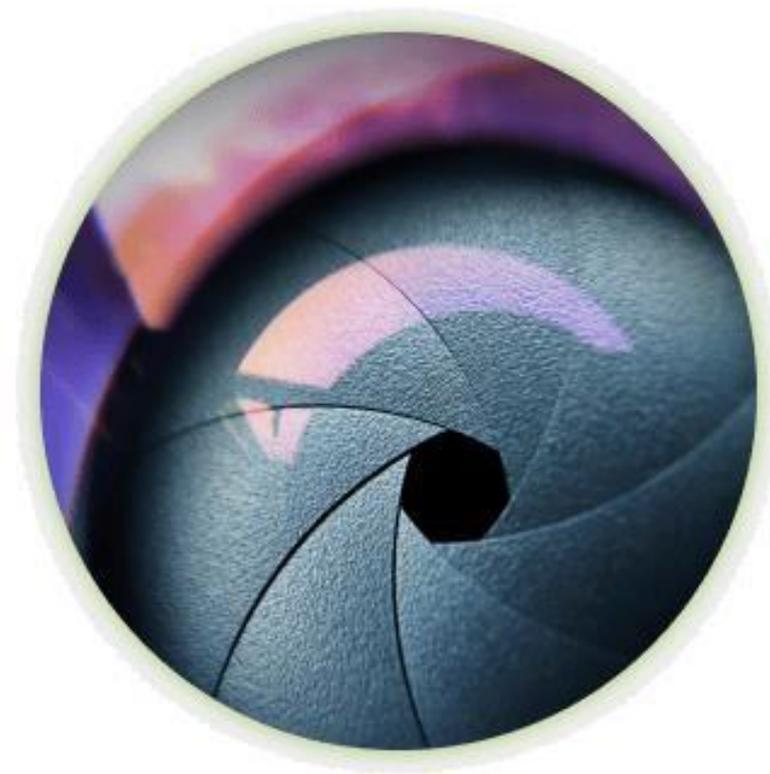
Completing Holobalance project

Our aim is to build upon the successfully completing
HOLOBALANCE project and technological platform that supports remotely monitored, a home performed balance rehabilitation program

Objectives

o Systematic review of AR interventions and digital tools for falls and balance physiotherapy

o Evaluate standard of care and calculate economic costs and benefits

o Unify research and clinical databases, develop AI/ML models using multifactorial falls/balance disorders data
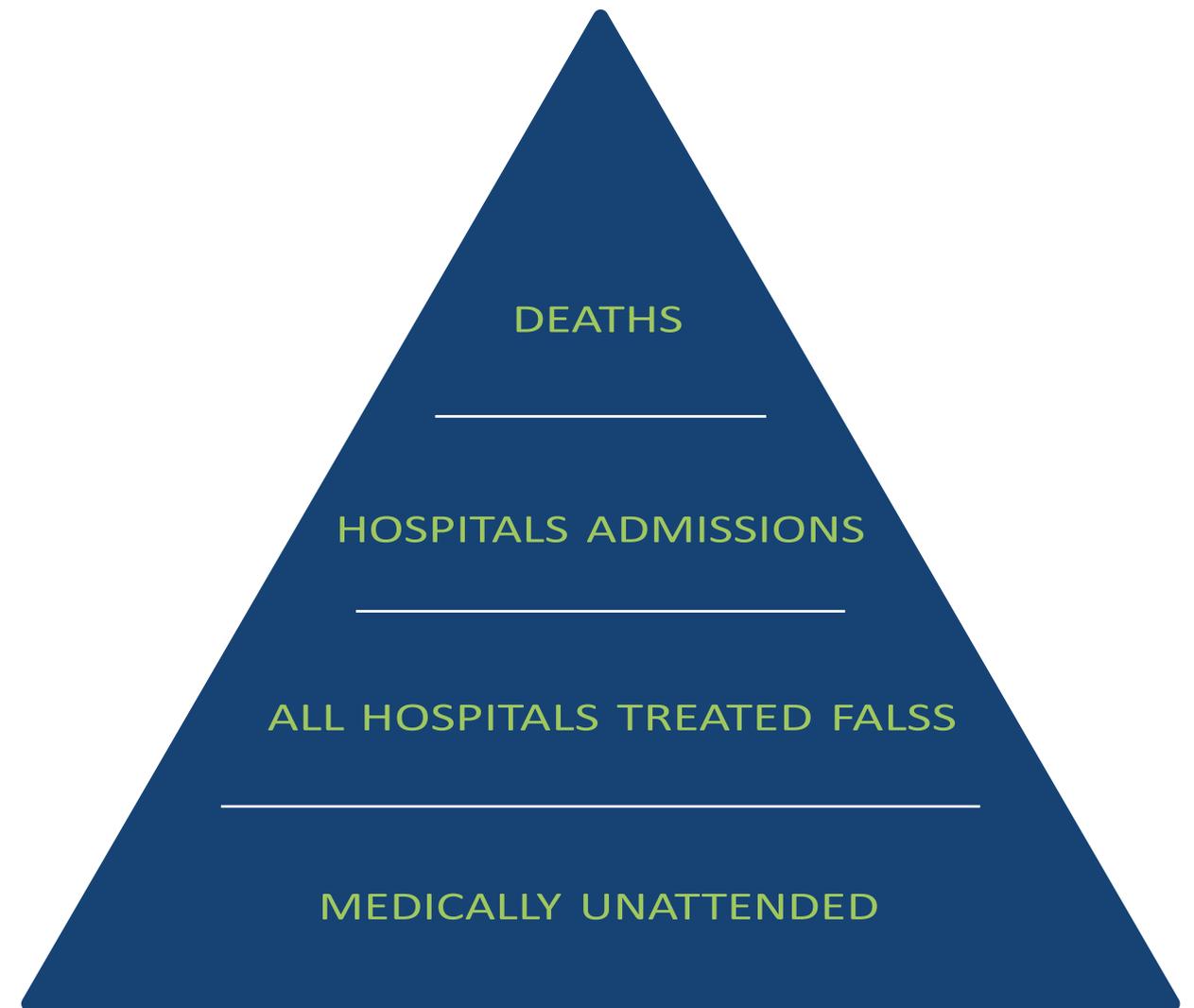
o Develop predictive analytics for treatment outcomes, side effects, and adverse events

o Validate AI-based DSS functionality compared to standard care

o Conduct health professionals' profiling for optimal patient matching

o Engage stakeholders for research co-creation and ensure compliance and adoption
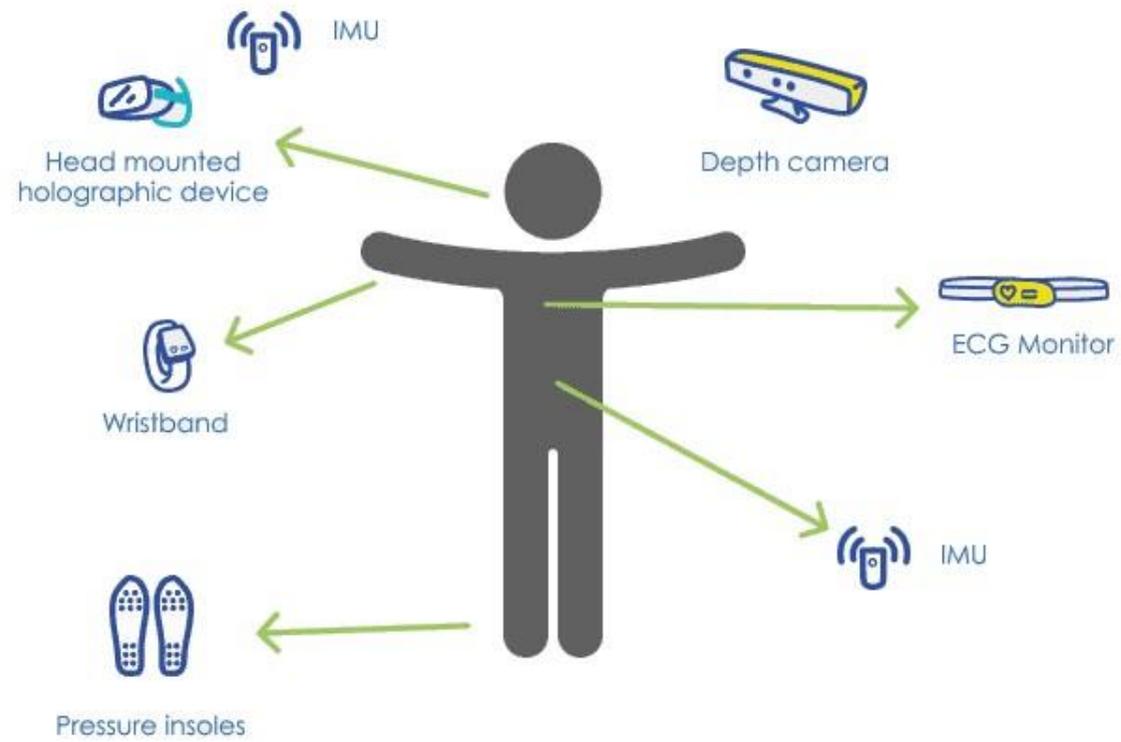
TeleRehaB context and challenge

o In an increasingly ageing population, falls are a rising epidemic that account for most (58%) emergency department attendances in over 65s and will cost Europe over 45 billion euros by 2050 (Eurosafe, 2015).

o Falls are a syndemia that coexists with multiple comorbidities in older adults, such as cardiovascular disease, mood and cognitive disorders that increase the risk of serious falls injuries in older adults and that affect the intervention outcomes.

o Multimodal, multifaceted falls prevention programmes targeting specific needs of highrisk individuals are thus of essence.

Clinical study

The TeleRehaB project will utilize the cloud-based diagnostic DM-DSS platform which incorporates different apps for users that run on mobile devices

DEATHS

HOSPITALS ADMISSIONS

ALL HOSPITALS TREATED FALSS

MEDICALLY UNATTENDED

IMU

Head mounted
holographic device

Depth camera

ECG Monitor

Wristband

IMU

Pressure insoles

ntrol

intervention

Active intervention:
HOLOBALANCE
balance rehabilitation programme

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TeleRehaB