Healthentia Digital Biotech

Real-life Outcomes for Clinical Research & Care

Clos Chapelle-aux-Champs 30
1200 Bruxelles, Belgium

@innovationsprint.eu @innovSprint #iSprint

WHO WE ARE

20 years of expertise in eHealth applications and Life Sciences

vision to boost digital transformation in Life Sciences & develop personalized predictive eHealth solutions using advanced AI

500+ peer-reviewed papers &

35.000+ research citations (h-index 16..64)

ACTIVITIES

BUSINESS SOLUTIONS

Healthentia - An eClinical solution for remote data-driven trials.

CloudCare2U - eHealth platform to support the independent living of chronic disease patients.

RESEARCH & DEVELOPMENT

Virtual coaching to guide behavioral change

IoT Security in connected devices, infrastructures and databases

Real World Data Use AI for personalized, predictive healthcare

BUSINESS SOLUTIONS

Healthentia: An eClinical solution for remote data-driven trials

www.healthentia.com

Healthentia facilitates clinical trial optimization, accelerating trial processes, reducing failure rate, and validating drug/intervention efficacy and effectiveness with Real World Data insights

- On Cloud & On Premises
- ePRO/eCOA - Portal & mobile app
- BI and reporting
- AI-based clustering and predictions
- Open API for Integration with eCRF/EDC solutions
- Class I Medical Device, GDPR and ISO 27001
- Validated for Good Clinical Practice
- Used by Top5 Pharma

GET IT ON Google Play

Available on the App Store

Healthentia

ISO 9001:2015 COMPANY

ISO 27001 Certified

EU GDPR COMPLIANT

CE

Medical Device Class I
ref. BE/CA01/1-72378

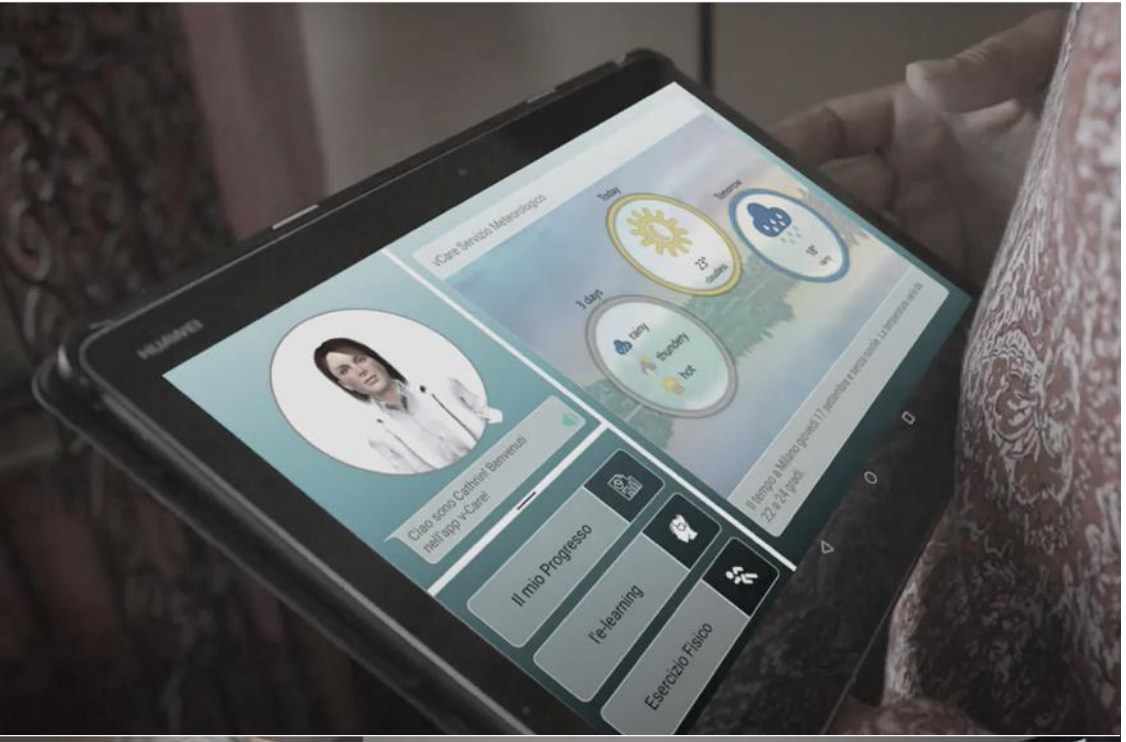
Source: eWall platform for MCI & COPD patients

CloudCare2u: eHealth solution supporting independent living of chronic disease patients with IoT

www.cloudcare2u.com

CloudCare2U is based on the outcome of the successful EC-funded project eWALL, that showed remarkable achievements in the treatment of patients suffering from MCI, COPD and frailty conditions

CloudCare2U is a cloud-based platform utilizing a holistic infrastructure model with “sensing” and “listening” environments with an affordable, easy to install system



Source: vCare Coaching assistant

Virtual Coaching for behavioral change

EU H2020

council-of-coaches.eu

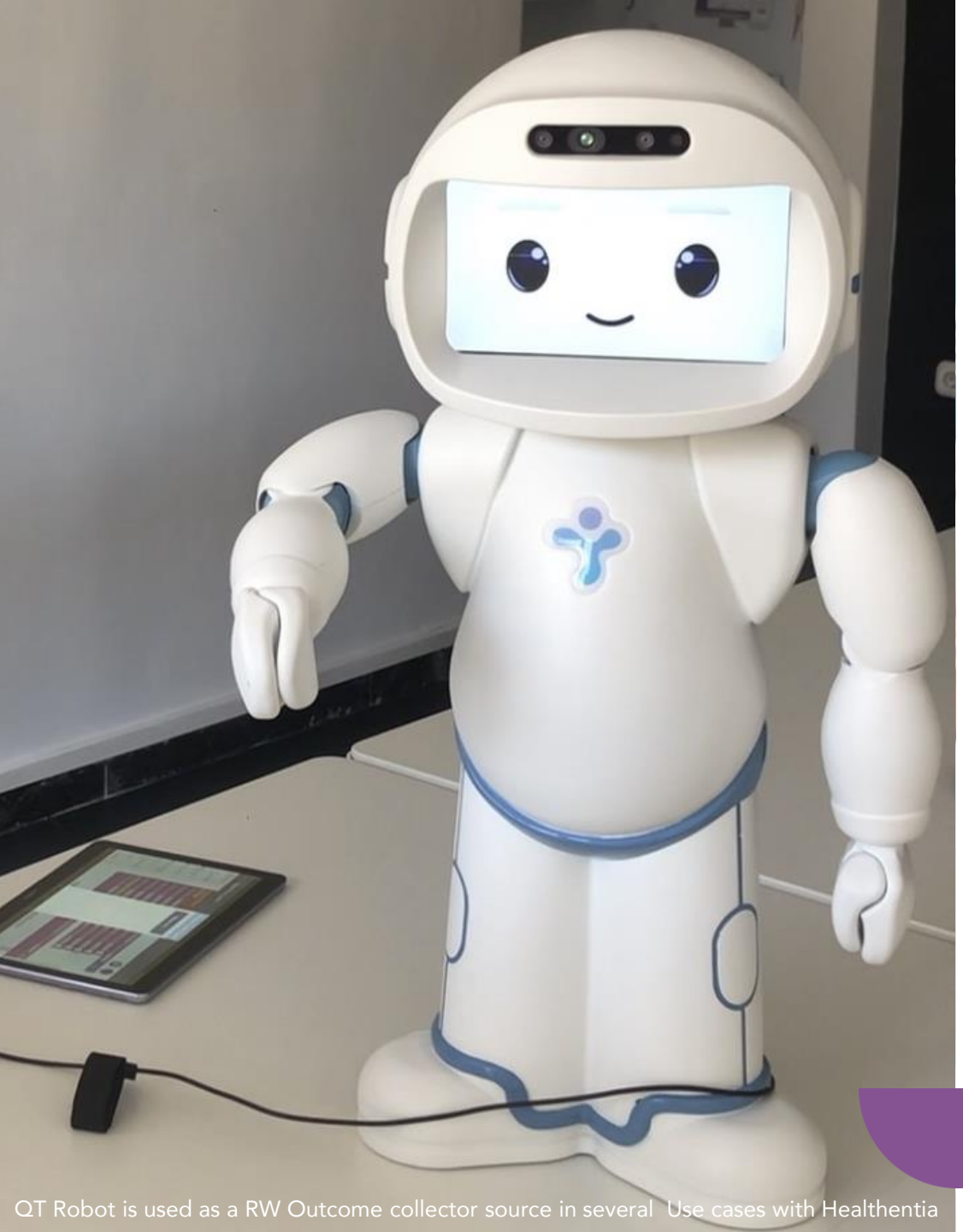
Council of Coaches is a **virtual council of several coaches** (embodied conversational agents) with different expertise and personalities that can assist people in achieving behavioral change for health and well-being.

vCare-project.eu

vCare aims to provide a smart coaching solution grounded on **personalized care pathways for rehabilitation** for people as they age.

coadapt-project.eu

Coadapt aims to provide a platform that will serve as a change-enabler supporting human and Work Station Adaptation Support to aging citizens



QT Robot is used as a RW Outcome collector source in several Use cases with Healthentia

IoT smart objects & Cybersecurity

EU H2020

secureiot.eu

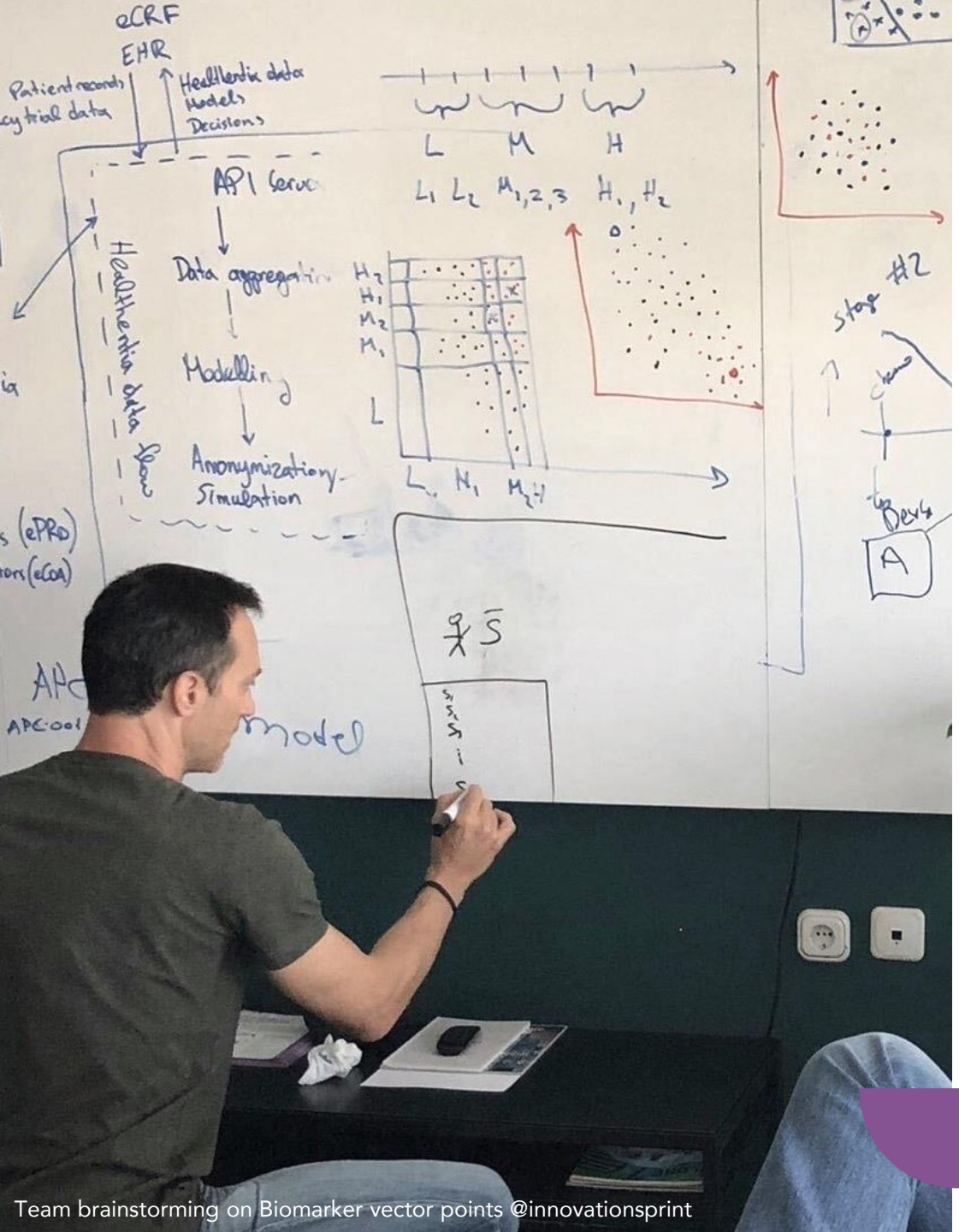
Predictive Security for IoT Platforms and Networks of Smart Objects.

SecureIoT

panacearesearch.eu

Protection and privacy of hospital and health infrastructures with smart cyber security and cyber threat toolkit for data and people

Panacea
People-centric cybersecurity in healthcare



Team brainstorming on Biomarker vector points @innovationsprint

Real World Data Collection

EU H2020

[Deep learning of Patients]
Co-funded by Innoviris.brussels with an R&D ambitious initiative of processing patient-centered Real World Data to discover novel digital biomarkers.

innoviris .brussels
we fund your future

[infinitech-h2020.eu]
Tailored IoT & BigData Sandboxes and Testbeds for Smart, Autonomous and Personalized Services in the European Finance and Insurance Services Ecosystem.

INFINITECH

[terminet-h2020.eu]
Next generation IoT devices in market-oriented use cases, including Healthcare

TERMINET

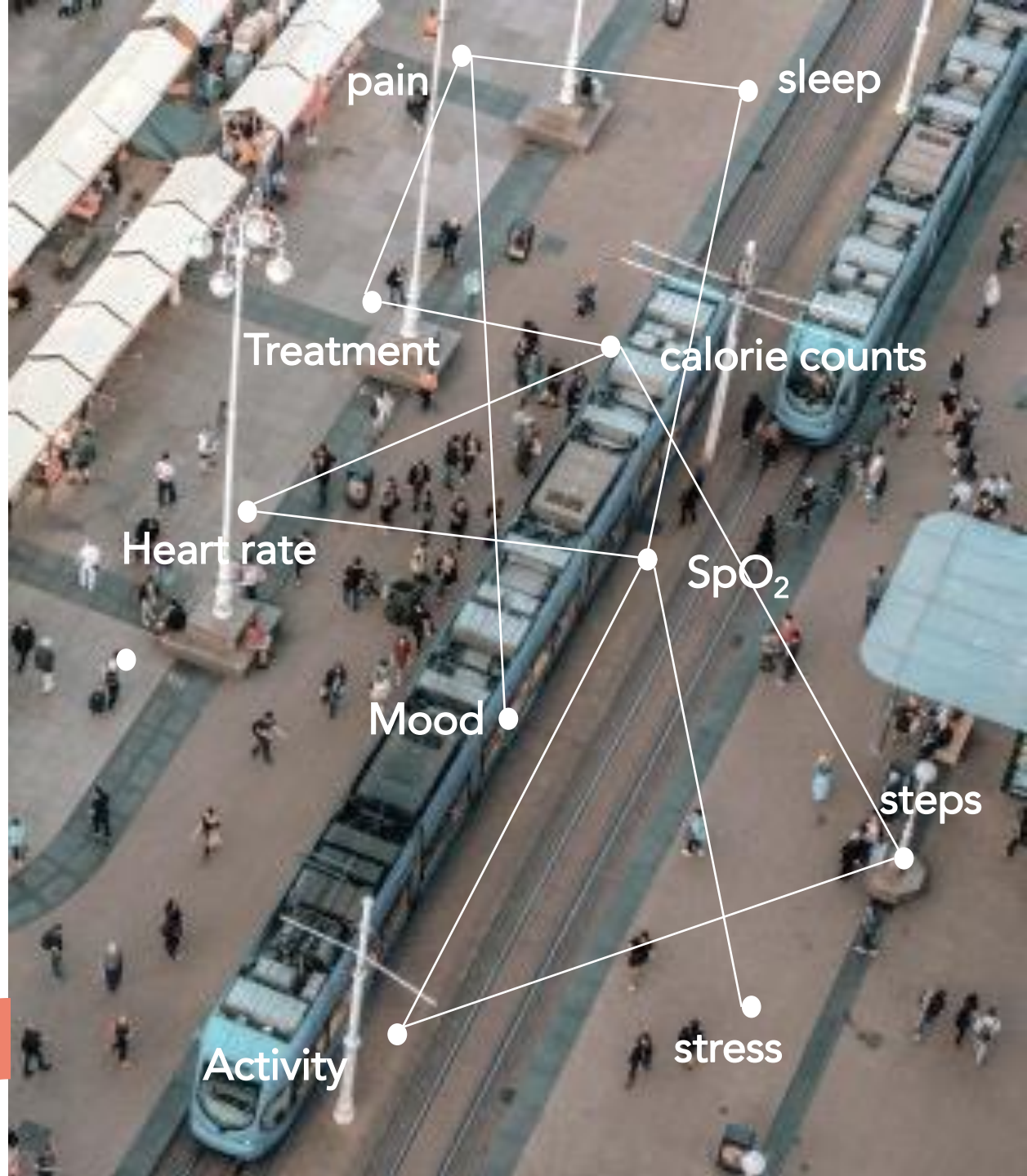
New EU Projects:

- Re-sample – COPD
- iHelp – Pancreatic Cancer

WHAT DRIVES US

10s of millions of wearables are tracking population health

Activity & lifestyle is >40% determinant of Health Status and Disease Evolution



MISSING DATA

Clinical practice and Research fail to consider powerful lifestyle and disease daily activity

Drugs often fail in Real life. Could the missing data hold the answers?

Source: Roche, Digital Biomarkers in Neuroscience Presentation

ROADMAP

Roll-out of Milestones

eHealth

Starting Point was CloudCare2u, an eHealth platform to support the independent living of chronic disease patients

Virtual trials

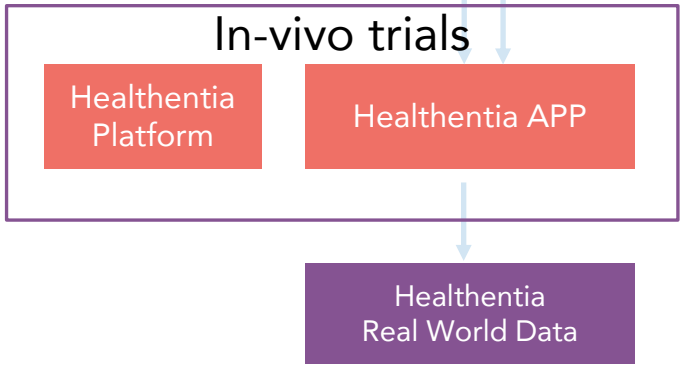
Real World Data collection through Healthentia ePRO & IoT devices enabling Virtual Trials

Digital BioTech

Real World Data Processing. Synthetic Data & Digital Composite Biomarker

Healthentia for DTx

Digital Composite Biomarker used as an enabler of AI driven personalised DTx processes



Real World Data Collection

We collect objective data using remote IoT devices & sensors and subjective data from patient-reported outcomes (ePRO)

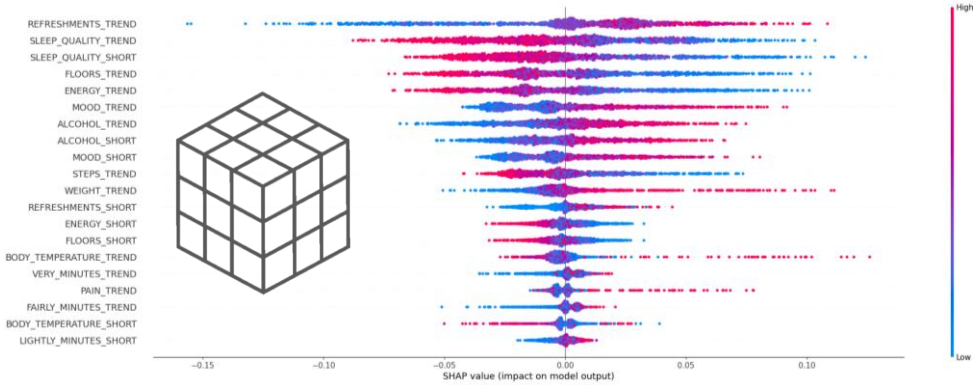
- Outcomes (eg. QoL questionnaires)
- Lifestyle data, i.e. Physiological, Psychological, Sociological
- Environmental data to extract context information

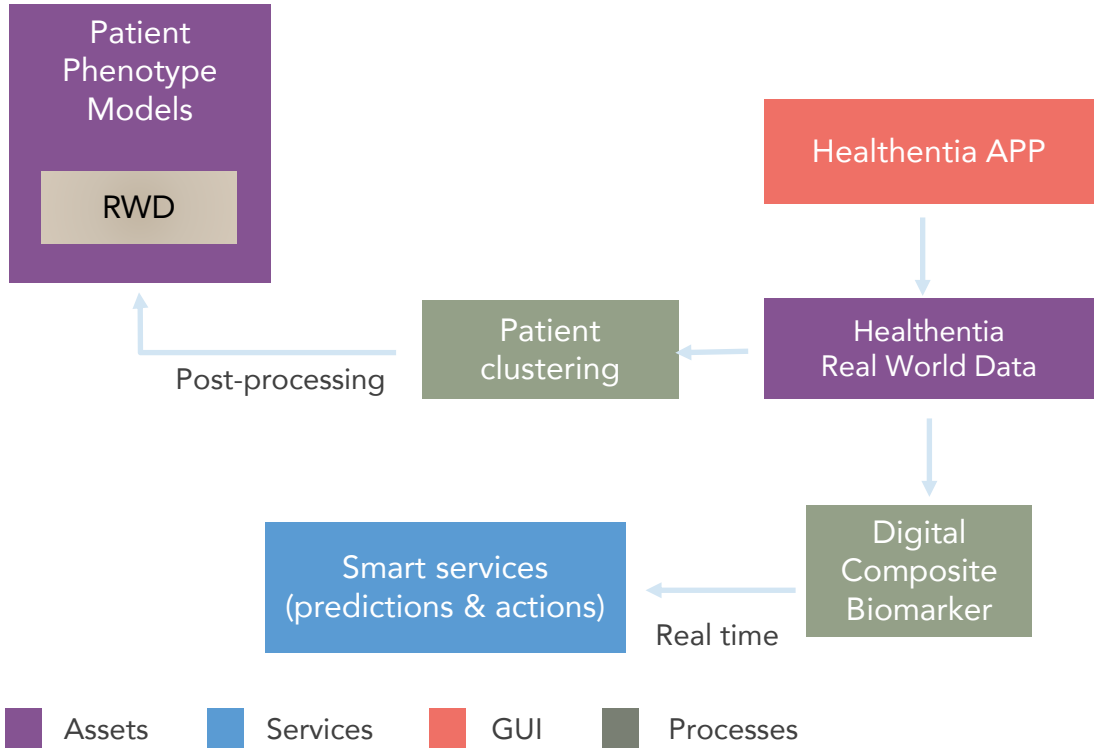
ISO 9001:2015 COMPANY · ISO 27001 Certified · EU GDPR COMPLIANT · CE · Medical Device Class I ref. BE/CA01/1-72378

HIPAA Compliant · kubernetes · Microsoft Azure

Assets Services GUI Processes

N Dimendions





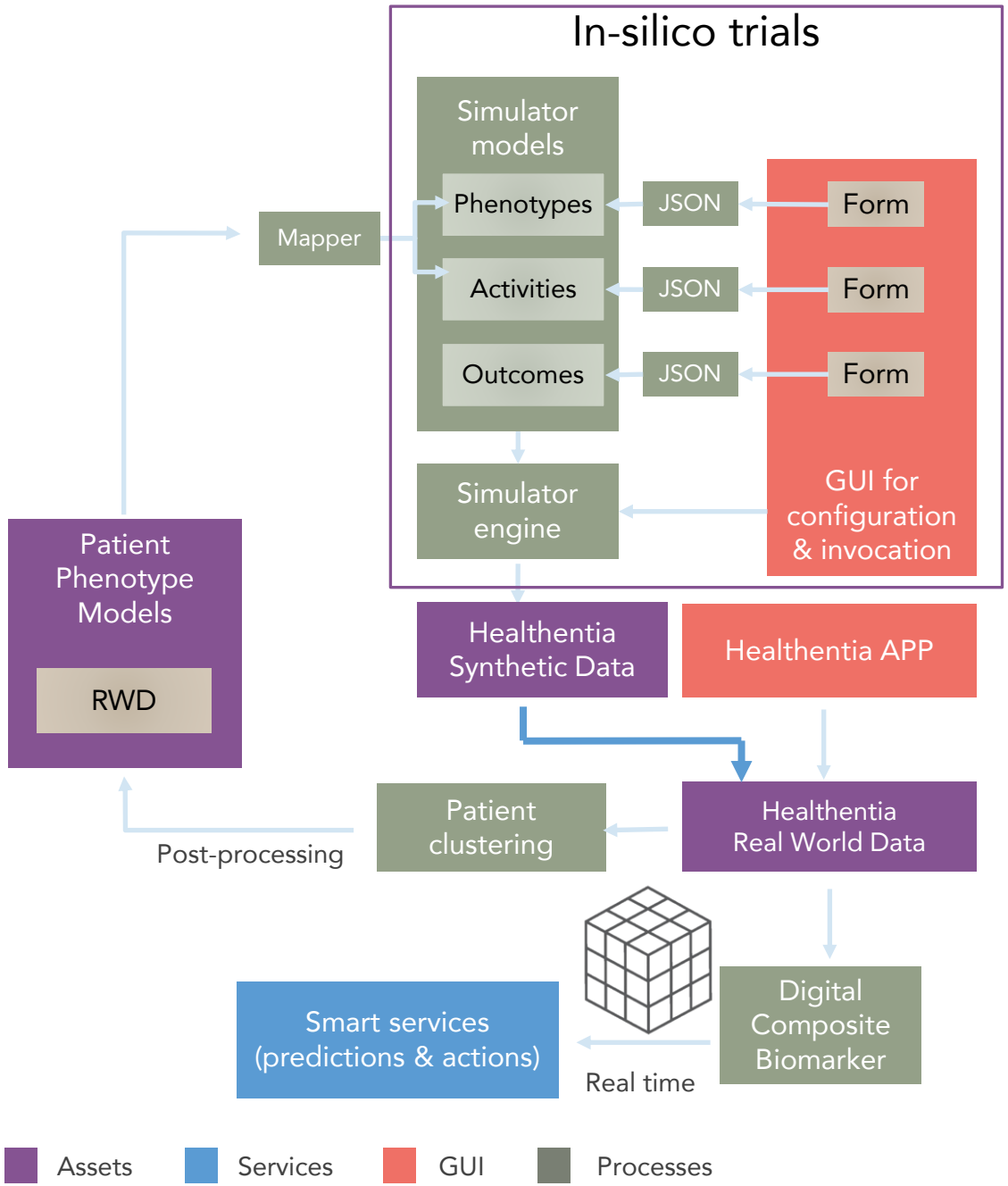
RWD processing through Composite Digital Biomarker

The Collected data points are seen as dimensions of a feature vector.

- We defined a Composite Digital biomarker comprised of an N d dimensional feature vector
- Optimized per Therapeutic Area via proprietary classifier and ML algorithms
- Clustering algorithms create phenotype models

Evidence & early validation

- Strong evidence for its prediction capabilities
- Validation with 7-years of lifestyle data;
- Prediction accuracy >80% in detecting weight changes



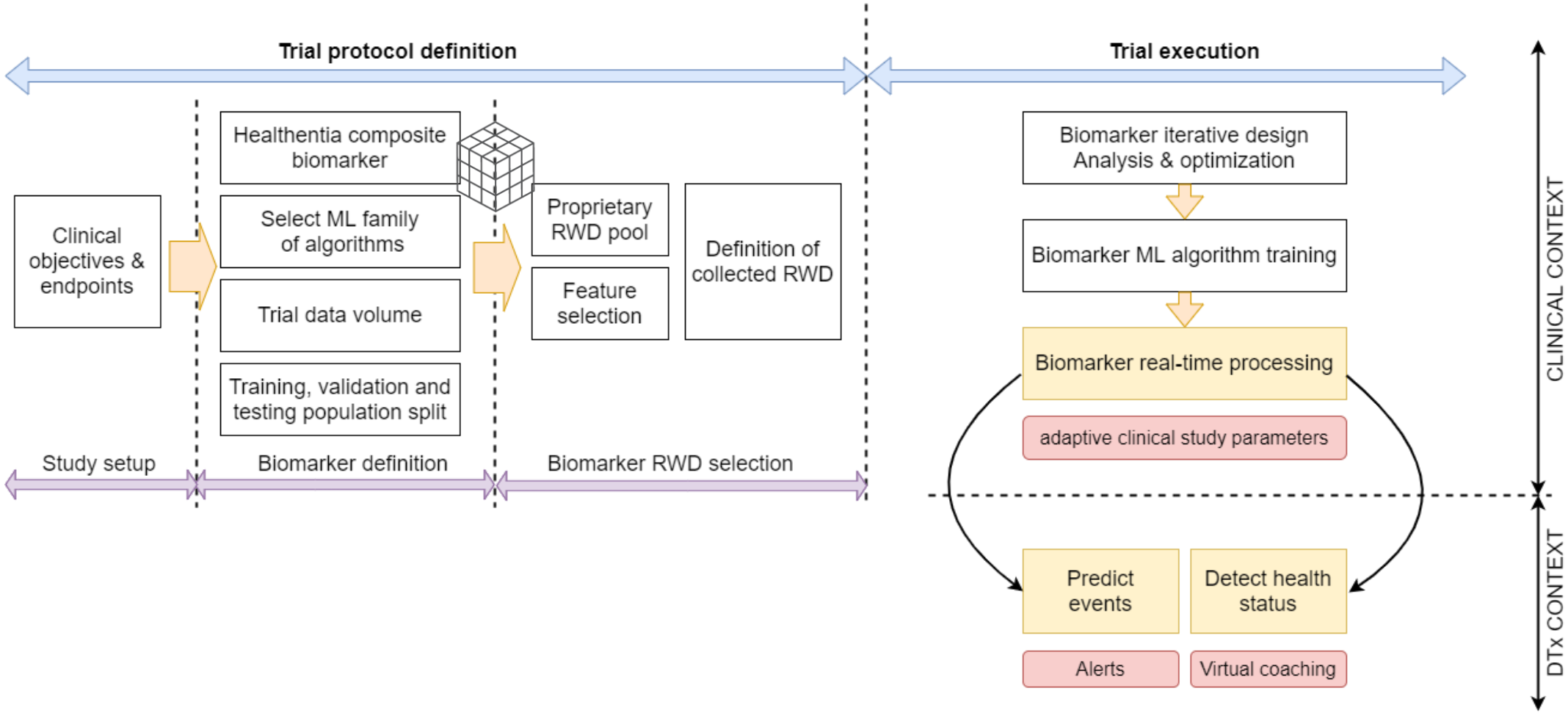
Synthetic Data generation

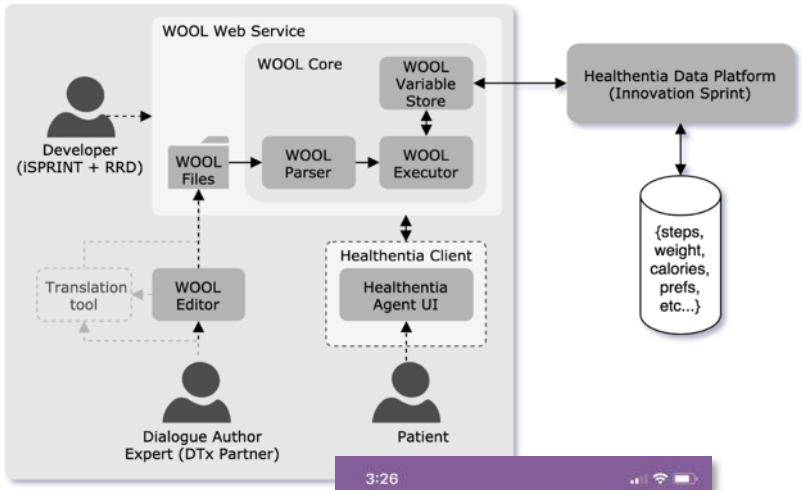
To achieve length, depth and breadth, in the data collection we need to involve many people for a long time usually a costly process so we created a simulator

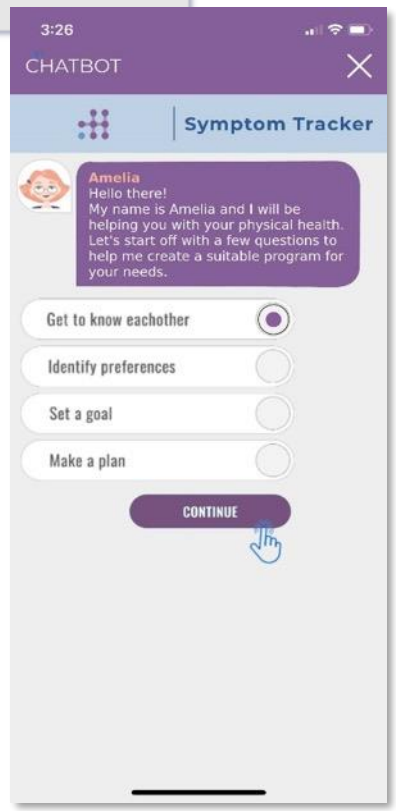
- configure demographic information & duration
- behavioral phenotype models of people with defined activities simulate days of their lives
- activities generate physical measurements
- Reported outcomes are also simulated

OUR PROCESS

Composite Digital Biomarker Optimization







Healthentia DTx – Virtual Coaching

Utilizing Healthentia digital Biomarker as a carrier, enabler and enhancer of AI driven personalised/precision DTx processes

- Drive behavioural change
- Orchestrate Virtual Coaching
- Virtual coaching is based on WOOL an open source dialogue platform. This paradigm was tested in *Council of Coaches* EU project

FLAGSHIP PROJECTS

AI driven Trials

- Adjust our generic digital composite biomarker to meet the needs of the specific therapeutic areas
- Train the biomarker with data from the trial for a period of time
- Once trained it will be able to offer smart services like prediction of events or deterioration of health status

APACHE 50 patients
Oncology - Ovarian Cancer

INTERFACE 500 patients
HIV patients remote monitoring

TRACER COP
Covid19 risk monitoring of Oncology patients

COPD 200 patients
Disease management

LICO 300 patients
Liver involvement in Covid19 patients

LIFESCIENCES ECOSYSTEM

Strategic partnerships in the Life sciences sector like Clinical Research organizations

BLSI brussels life science incubator

lifetech.brussels hosted by hub.brussels

BeCRO Belgian Association of CROs

innoviris .brussels empowering research

EUCROF European CRO Federation

Roessingh Research and Development

UNIVERSITY OF TWENTE. | TECHMED CENTRE

Gemelli

Fondazione Policlinico Universitario A. Gemelli
Università Cattolica del Sacro Cuore

RESEARCH & DEVELOPMENT

Strategic partnerships like hospitals and Research institutes in the healthtech field

Join our Vision to develop personalized predictive applications for Clinical research care

EMAIL

info@innovationsprint.eu

PHONE

Tel: +32 (0)2 8806290

OFFICE ADDRESS

Brussels Life Sciences Incubator
Clos Chapelle-aux-Champs 30
1200 Brussels, Belgium