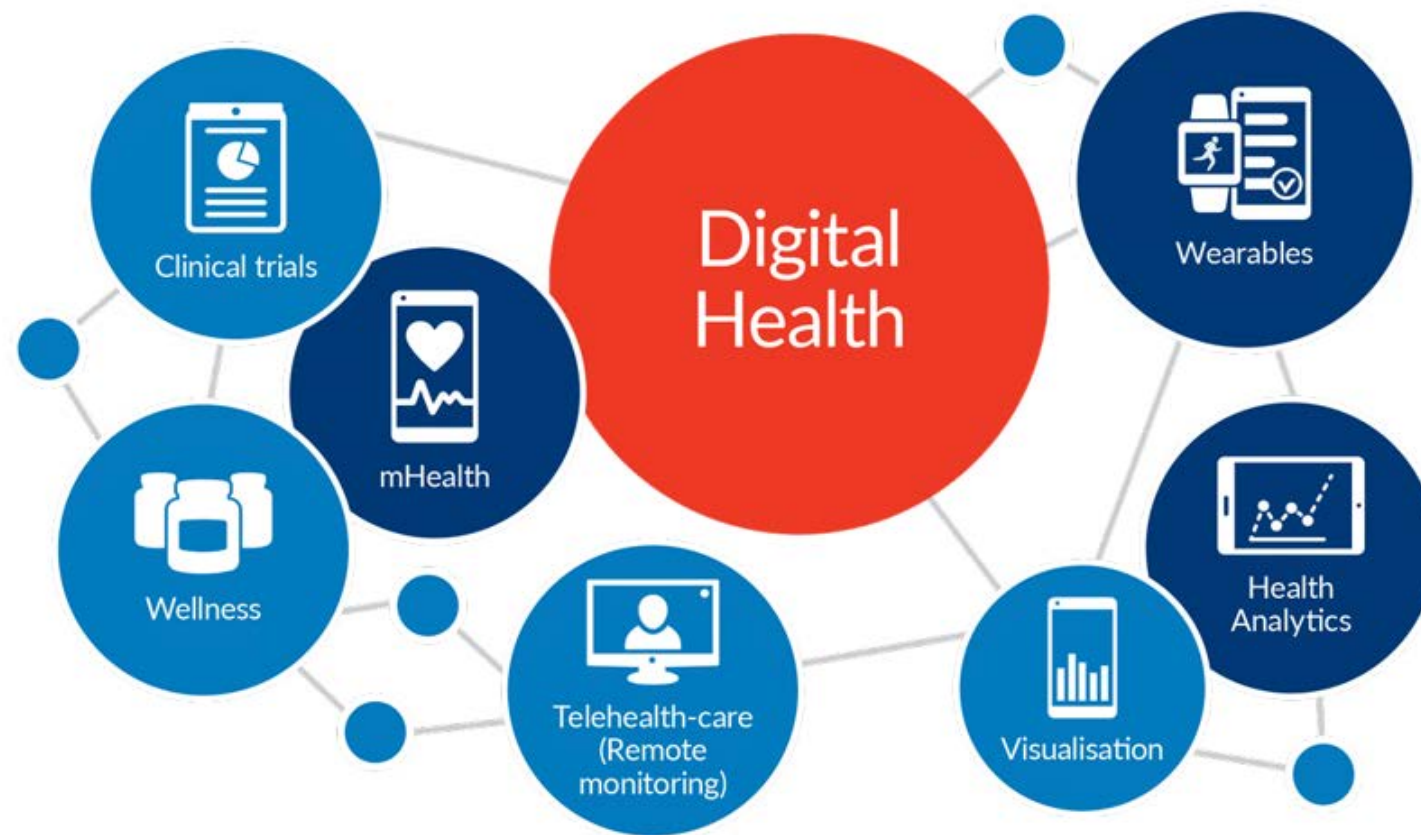




Collaboration with Technology Companies

Rhoda Au, Ph.D.
4-21-18

FDA Digital Health Initiative



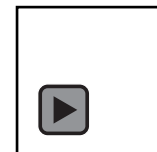
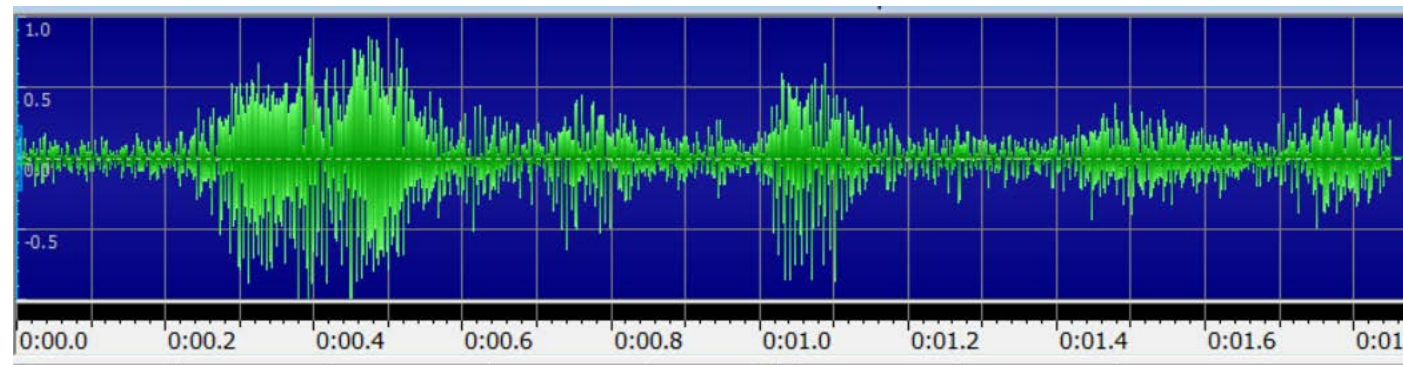
The FDA has implemented the *Digital Health Innovation Action Plan*

Promote the development and use of digital health technologies

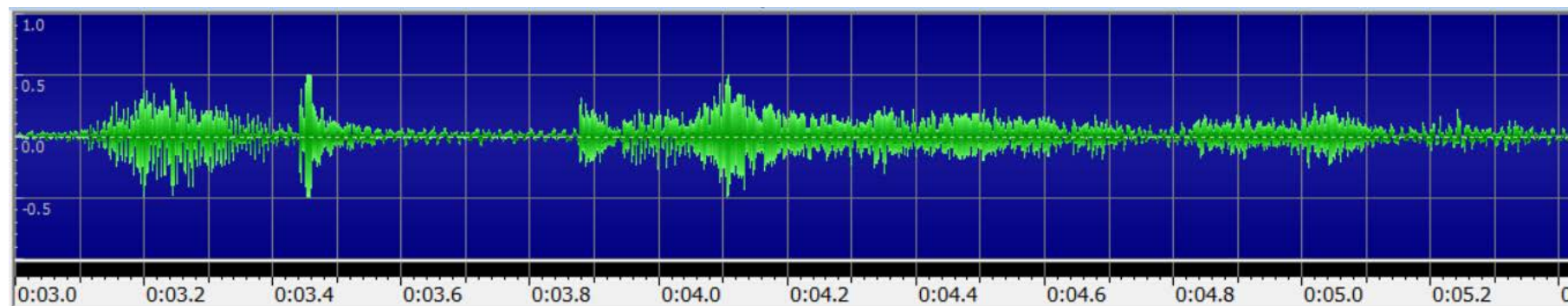


FHS Digital Voice

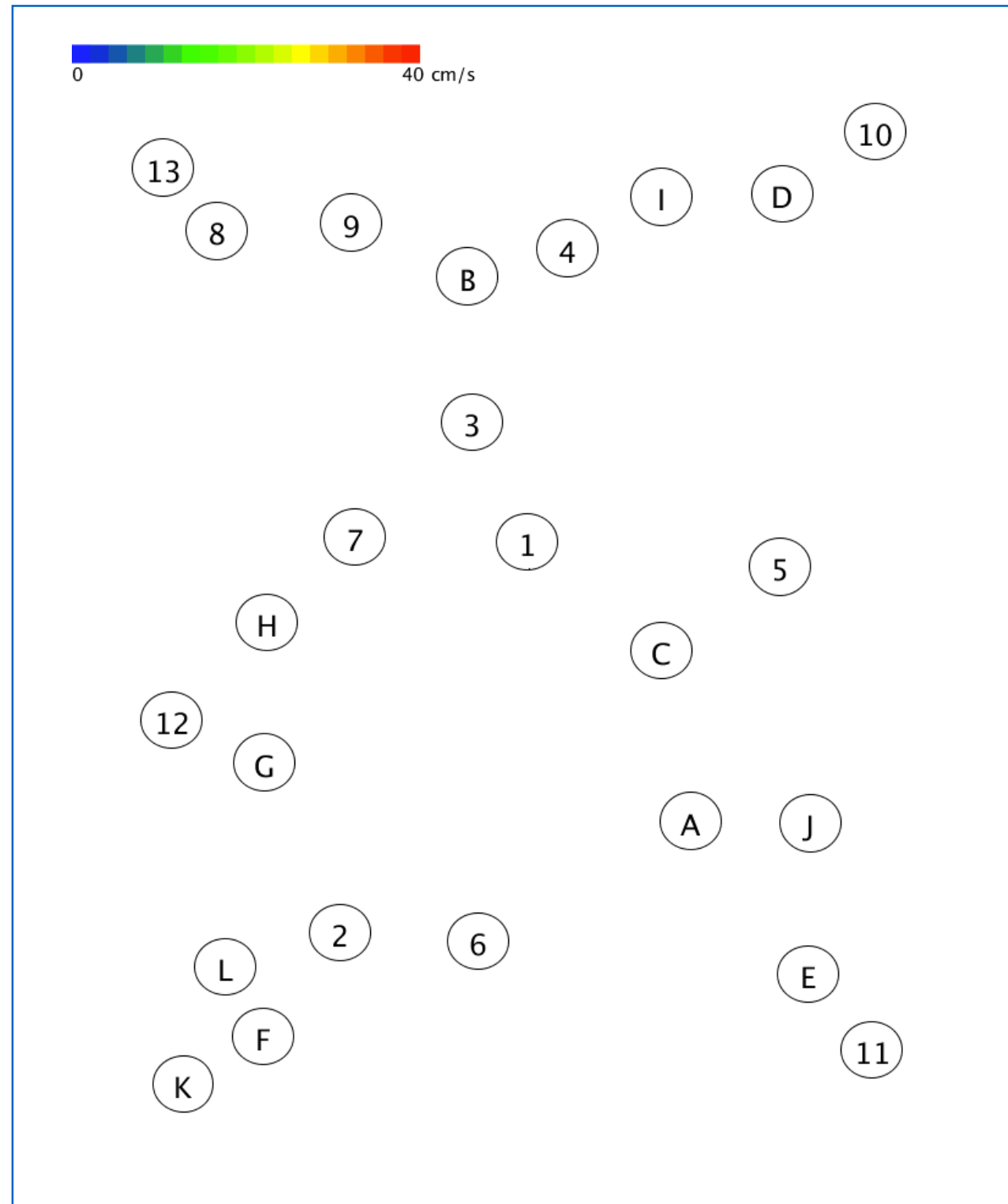
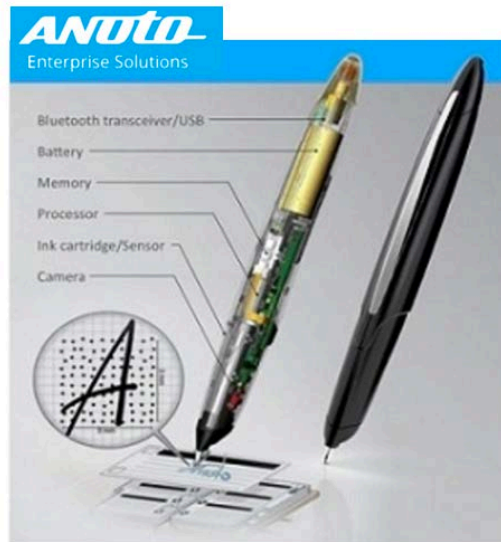
Not Demented: 2009



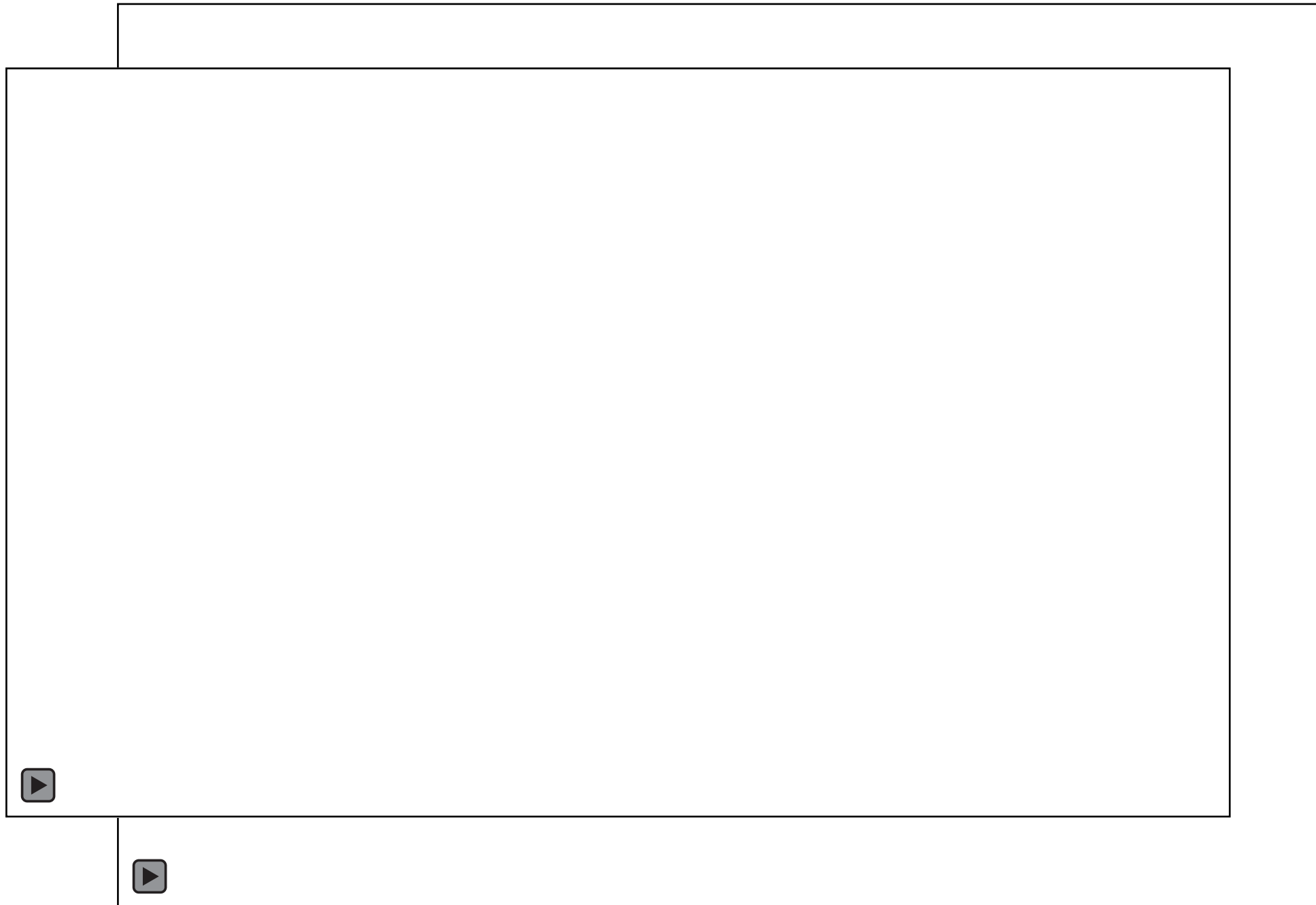
Mild Cognitive Impairment:2015



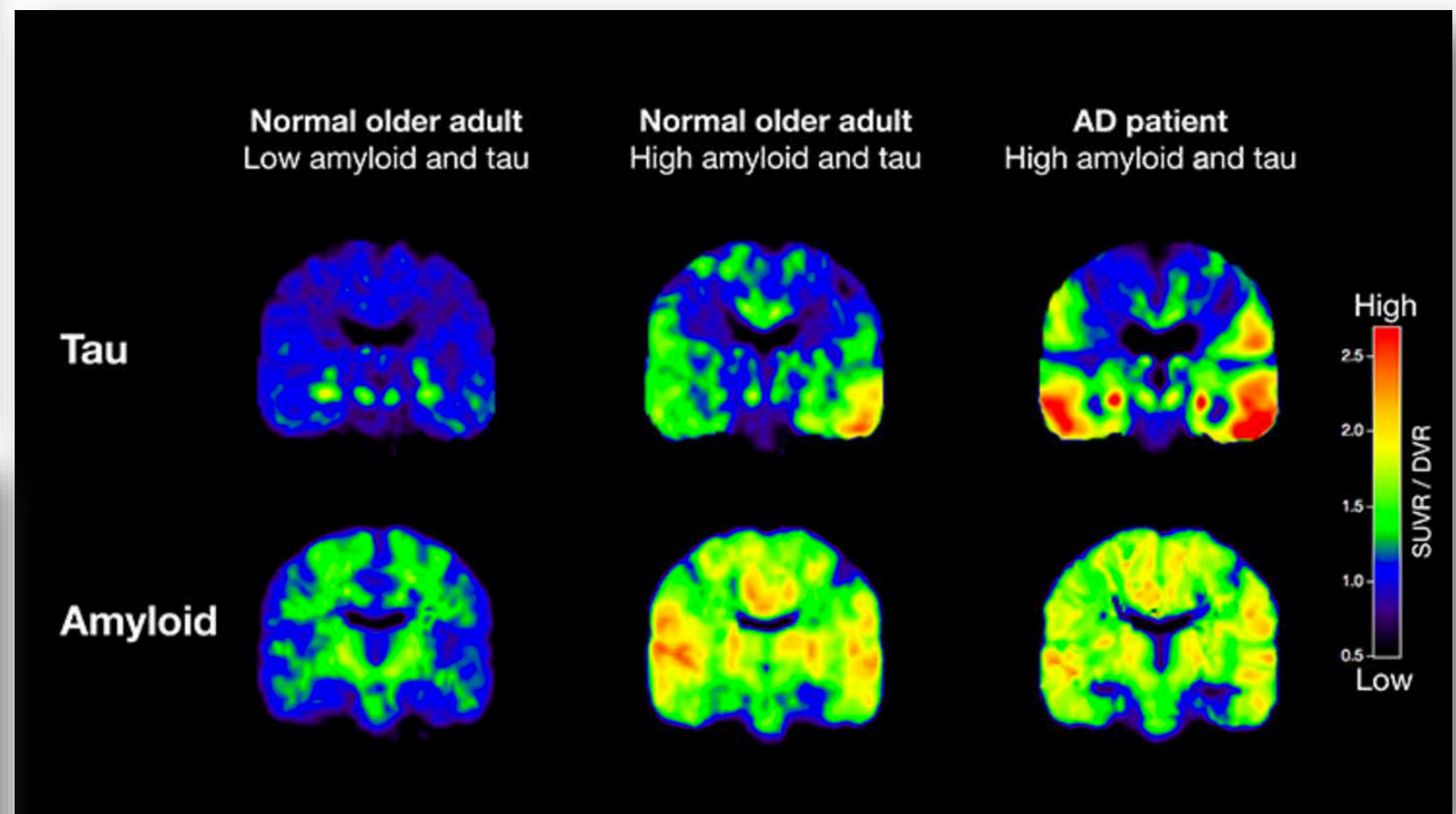
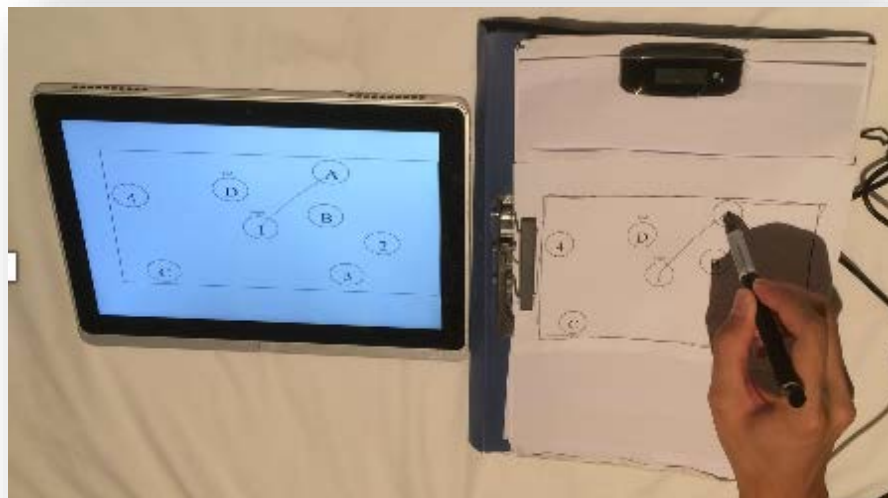
FHS Digital Drawing



New Technology Development dNP Platform



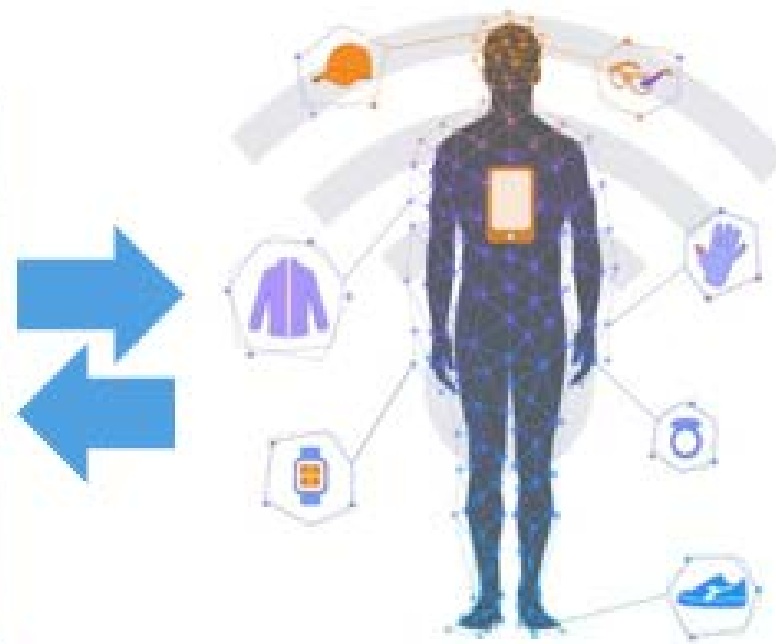
Digital Cognitive Biomarkers





Going Digital

Brain Health Monitoring Platform



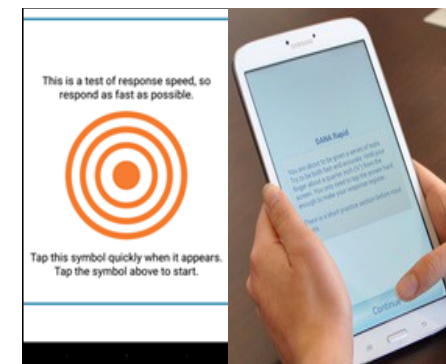
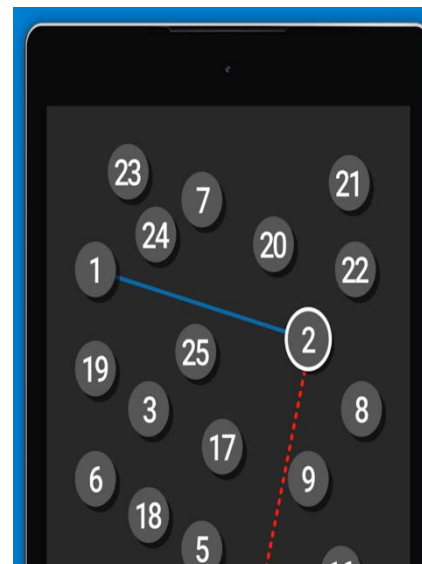
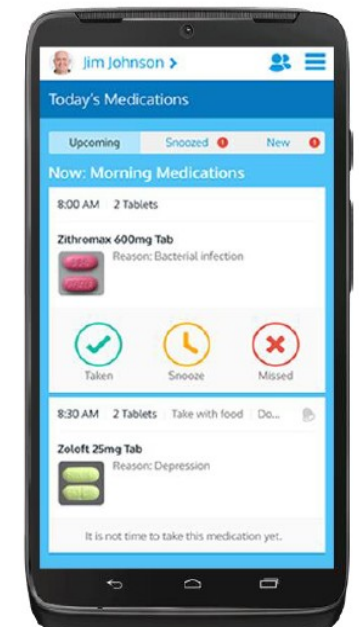
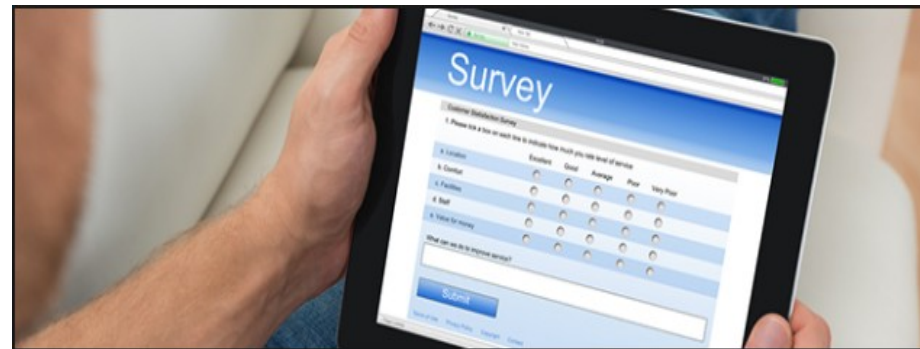
Traditional Data Collection: Clinic

Maximize Digital Capture of Health Metrics



Active Engagement Technology

Remote Monitoring





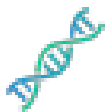
Where to Start Partners & Collaborators

sēqster™

EHR



Genomics



Wellness



Seqster is a health application that **automatically aggregates** personal health & wellness data together in one place.

Interoperability: By placing the consumer at the center of data collection, Seqster connects and standardizes **all** health data.

The **data sharing feature** makes it easy for the entire caregiver continuum to track and share data with each other.

Users can **grant access** to researchers, foundations & pharmas to **contribute** their data to **accelerate medical breakthroughs**.





My HealthTrust™

RECIPIENTS

SHARING

Keith Edwards



Settings

Marcy Edwards



Settings

Clara Dunn



Settings



Add a recipient



Lab Results: LDL

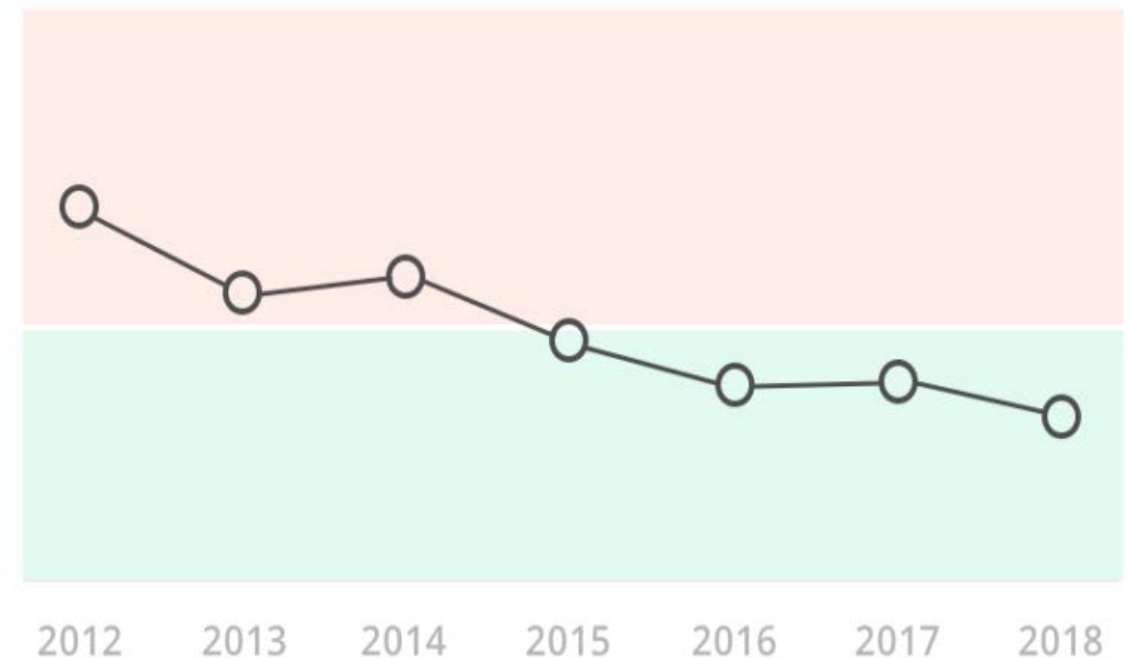
MOST RECENT LAB

Feb 2, 2018

YOUR RESULT

130 mg/dL

Healthy range



sēqster™



Me



Keith
Dad



Marcy
Mom



Clara
Daughter

 Medical

 Fitness

 DNA

FEB

JAN

NOV



Dr. Lauren Anderson



Cholesterol

[View results](#)



Lunesta (eszopiclone)



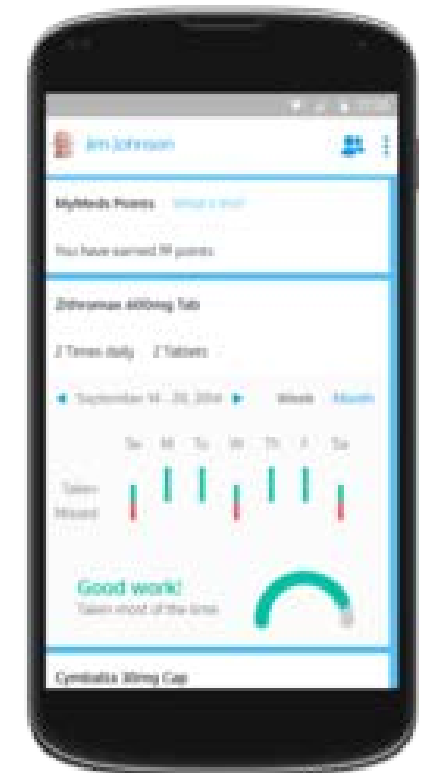
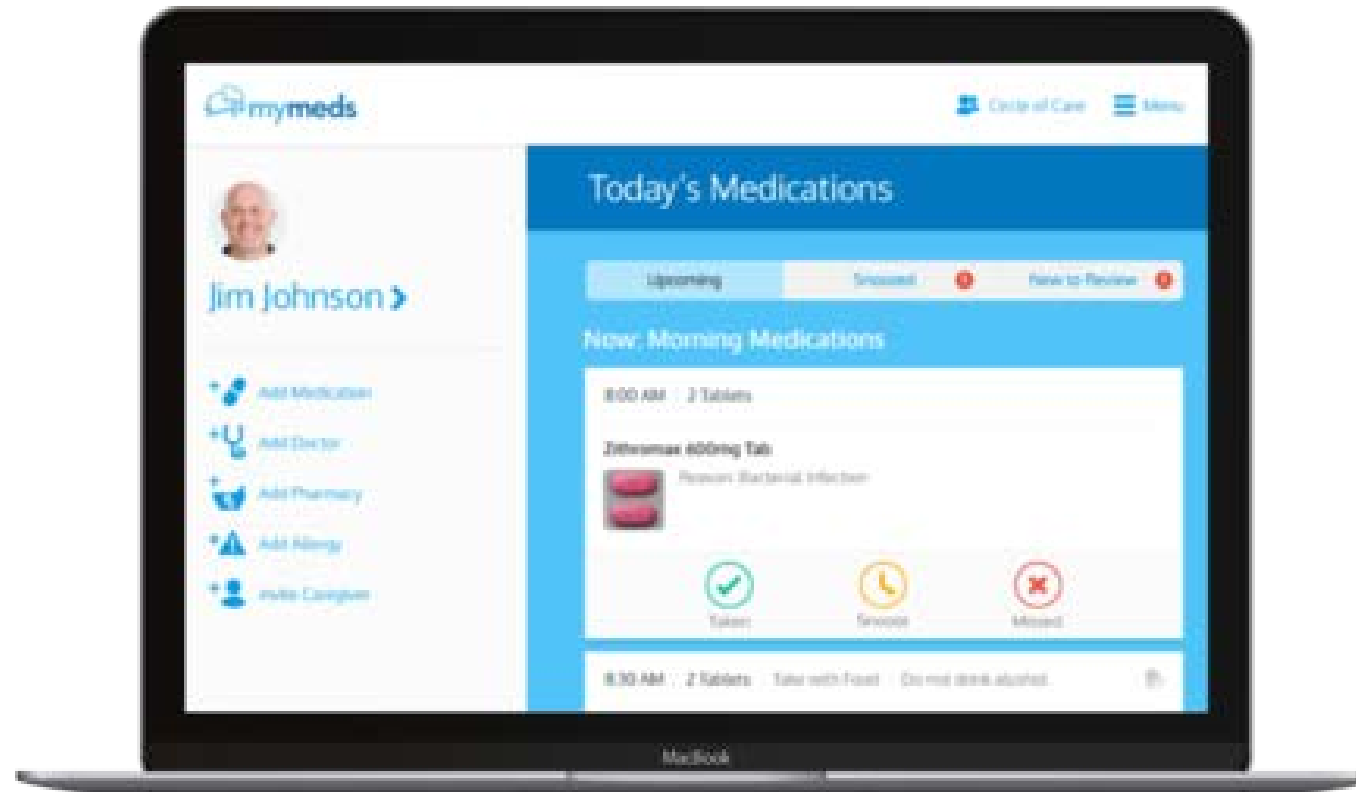
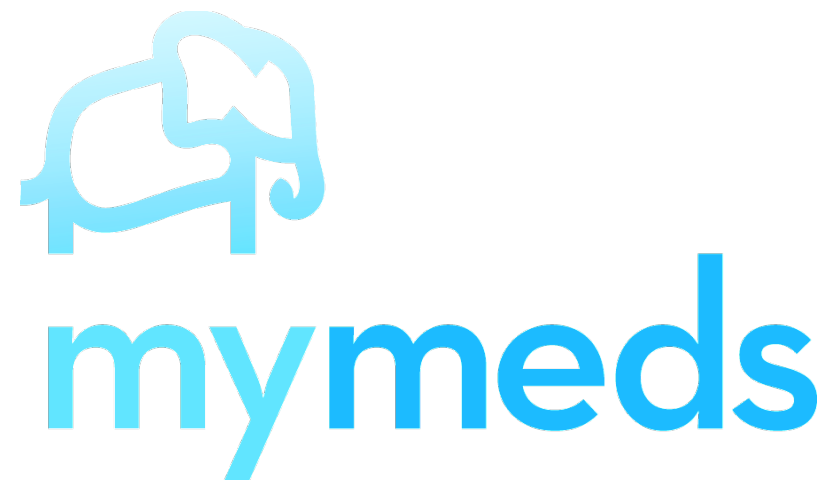
Dr. Aiden Howard

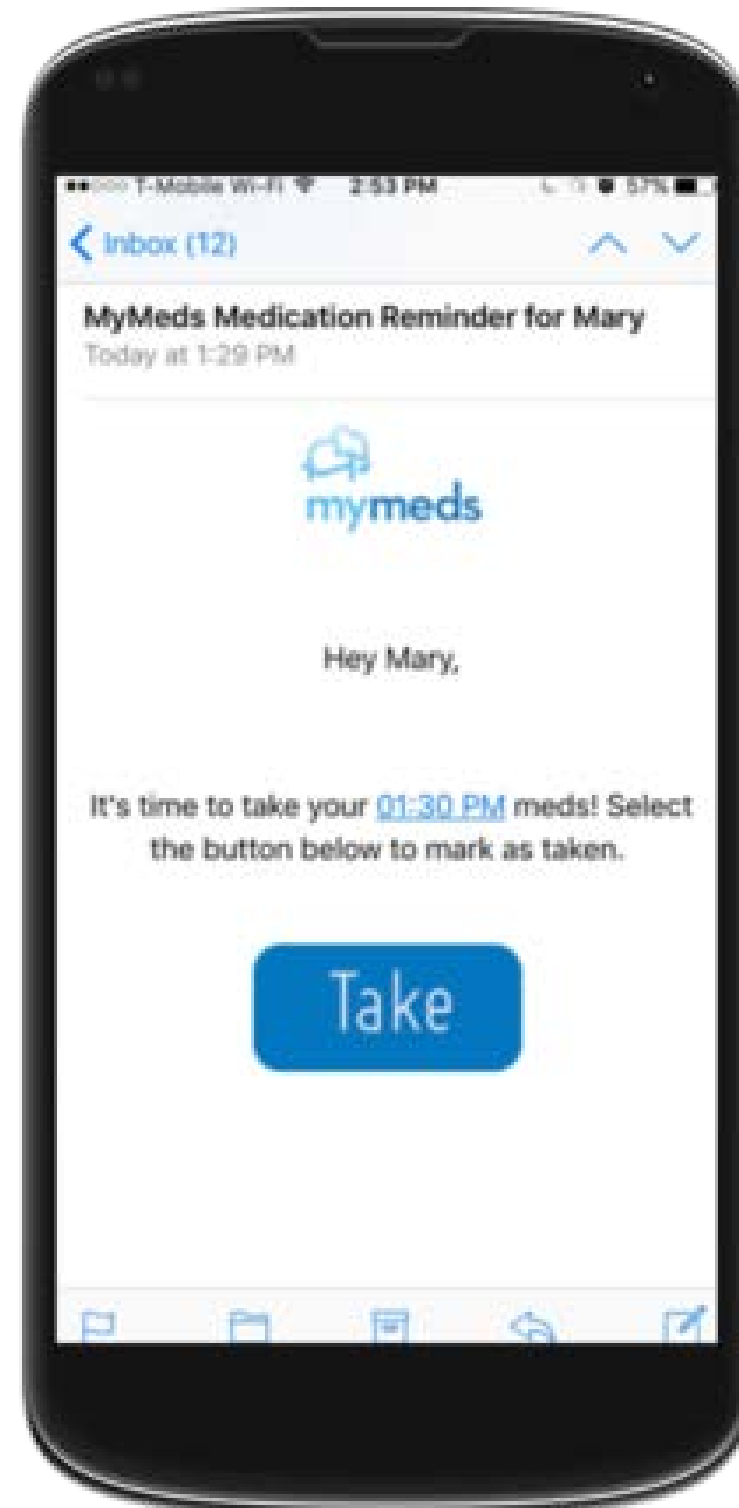


Flu vaccine

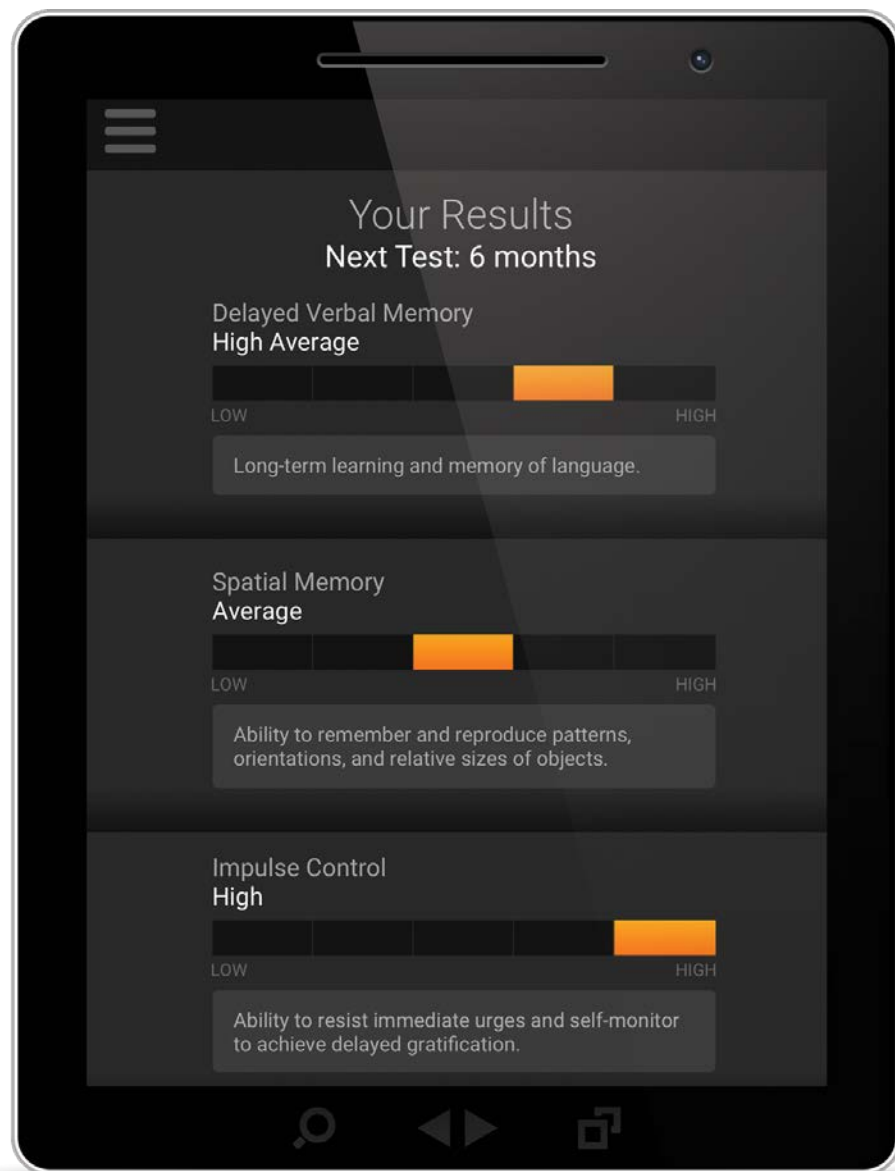


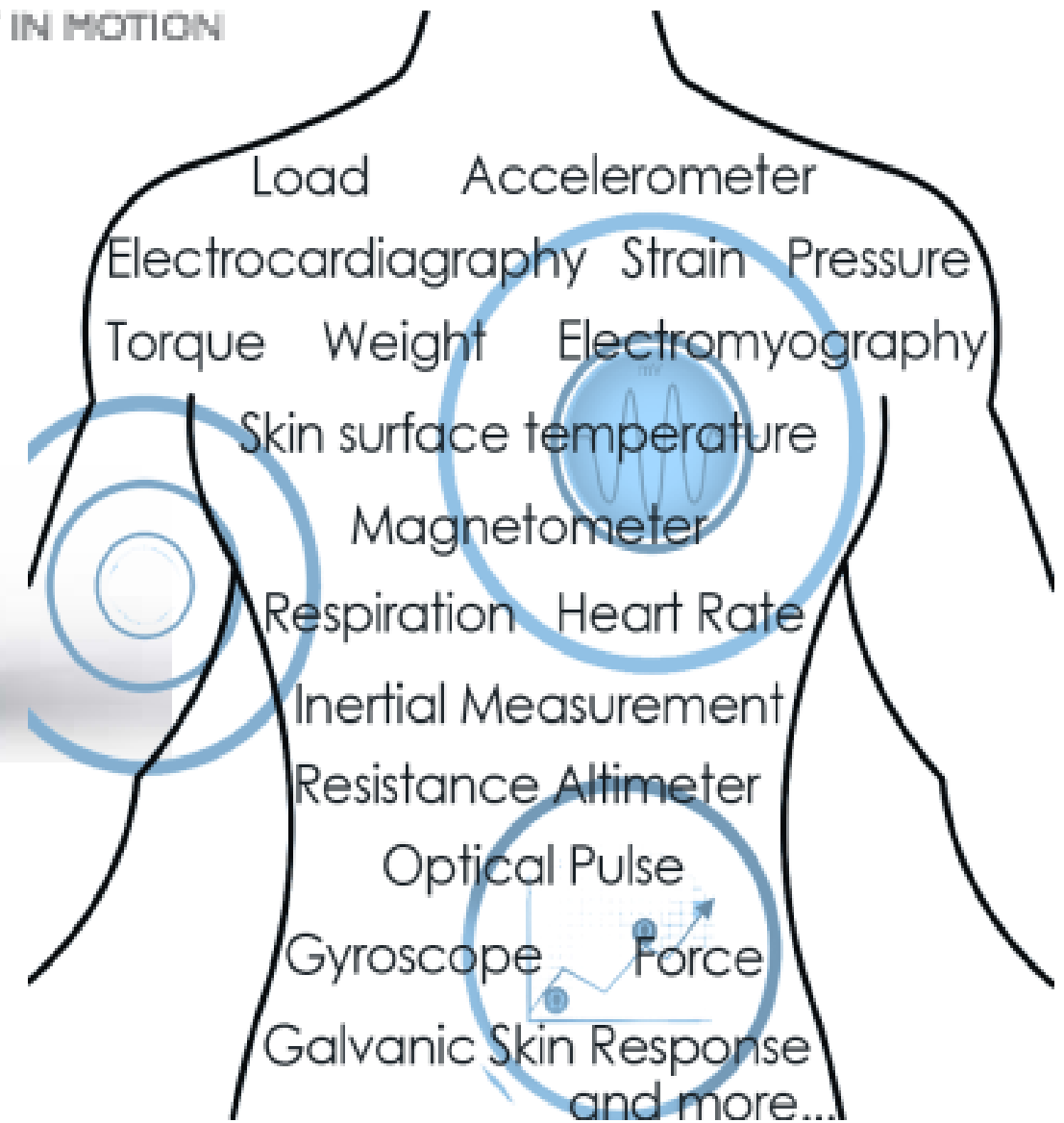
Peanut allergy

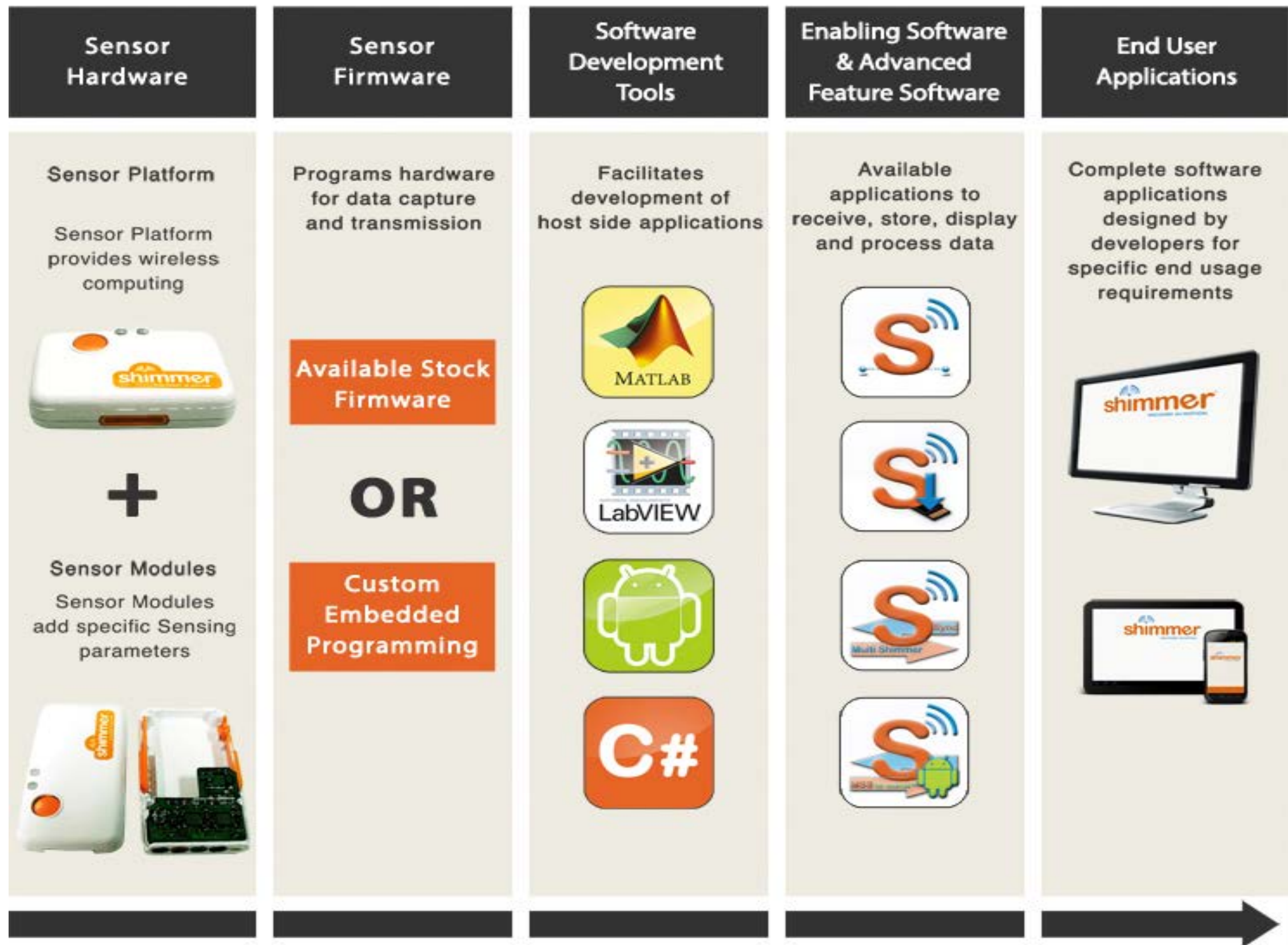




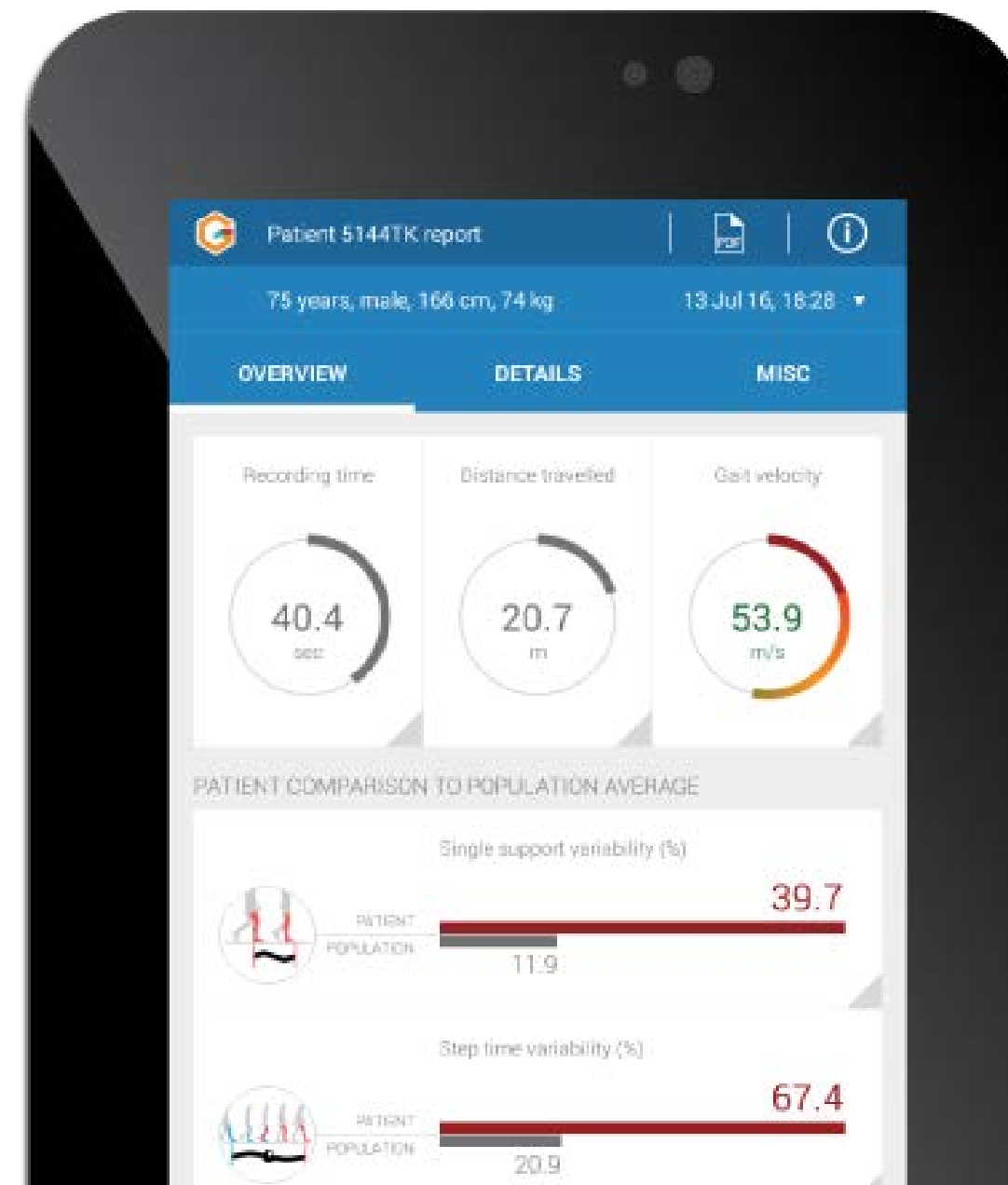
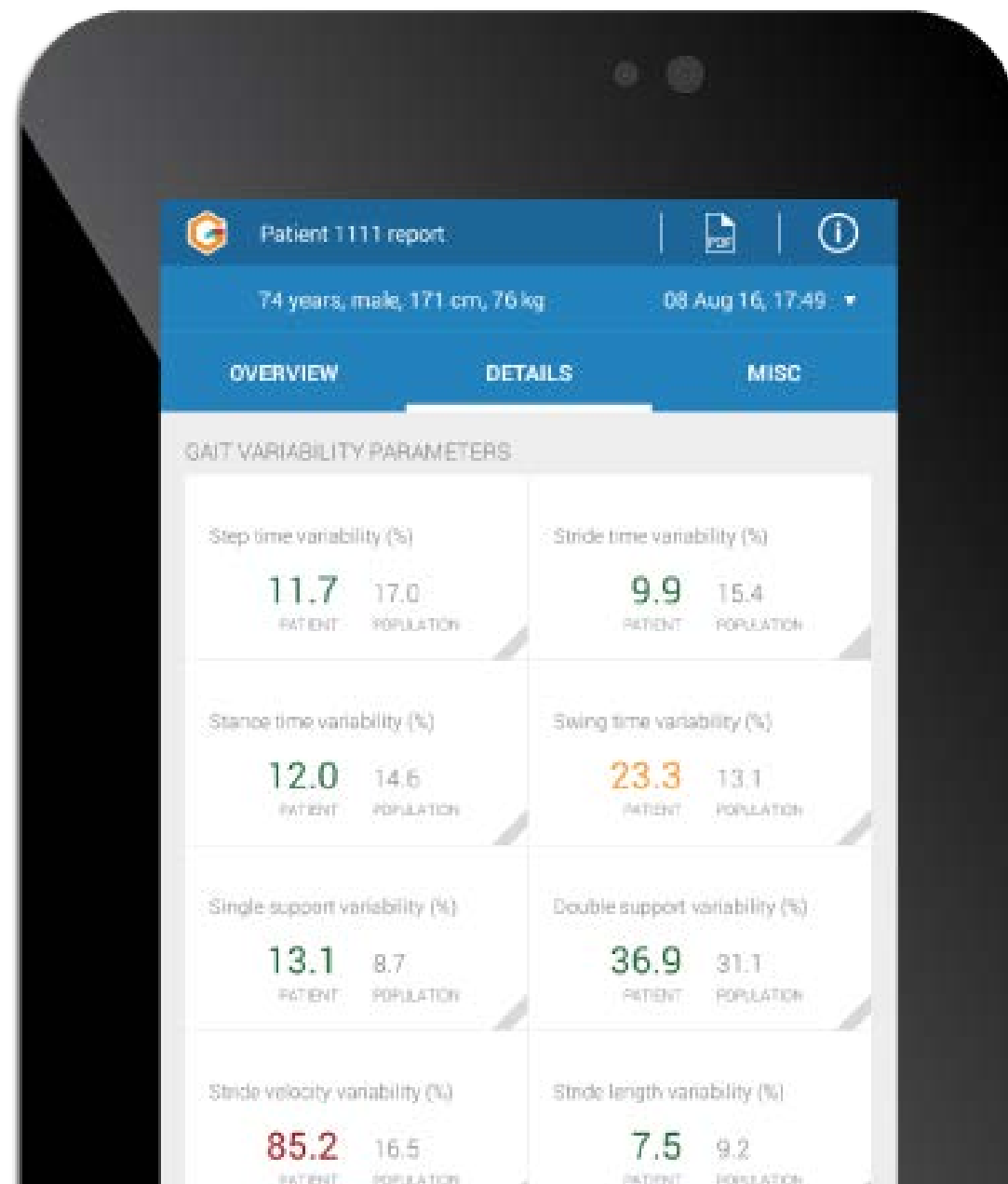
SAVONIX



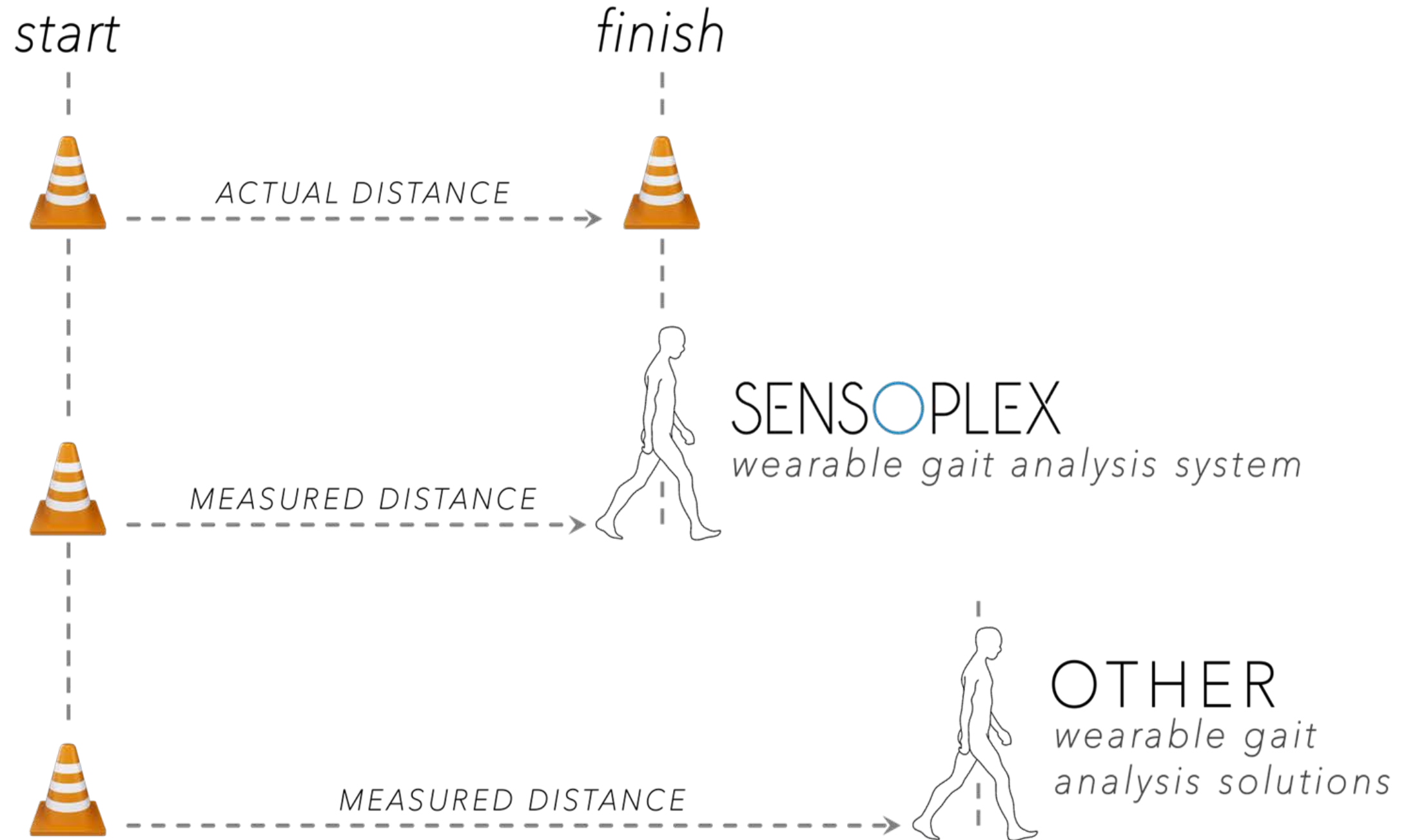








SENSOPLEX





COMPUTER



NOTEBOOK



TABLET

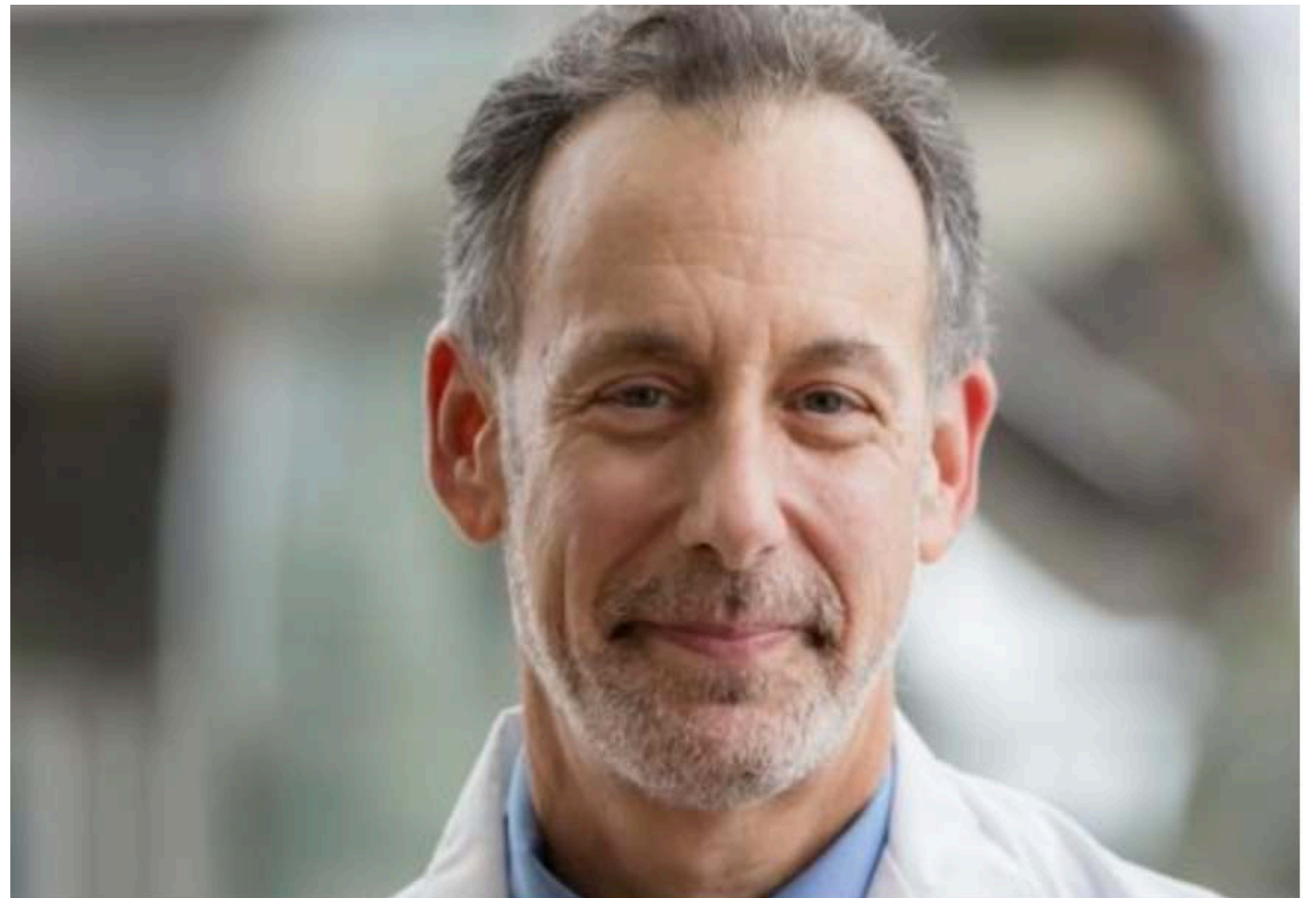


SMARTPHONE



Putting it all together

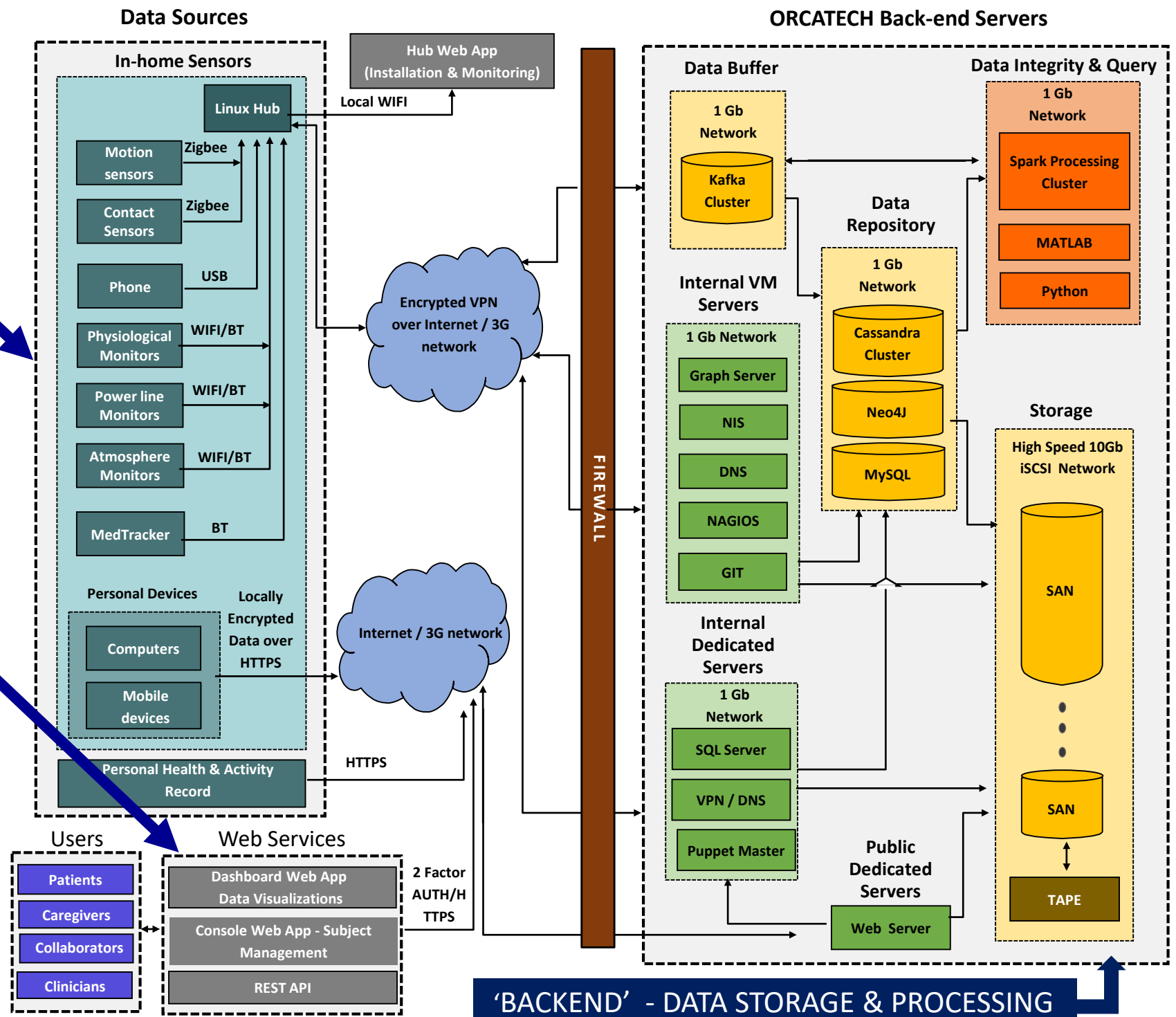
ORCATECH Collaborative Aging (in Place) Research
Using Technology (CART)



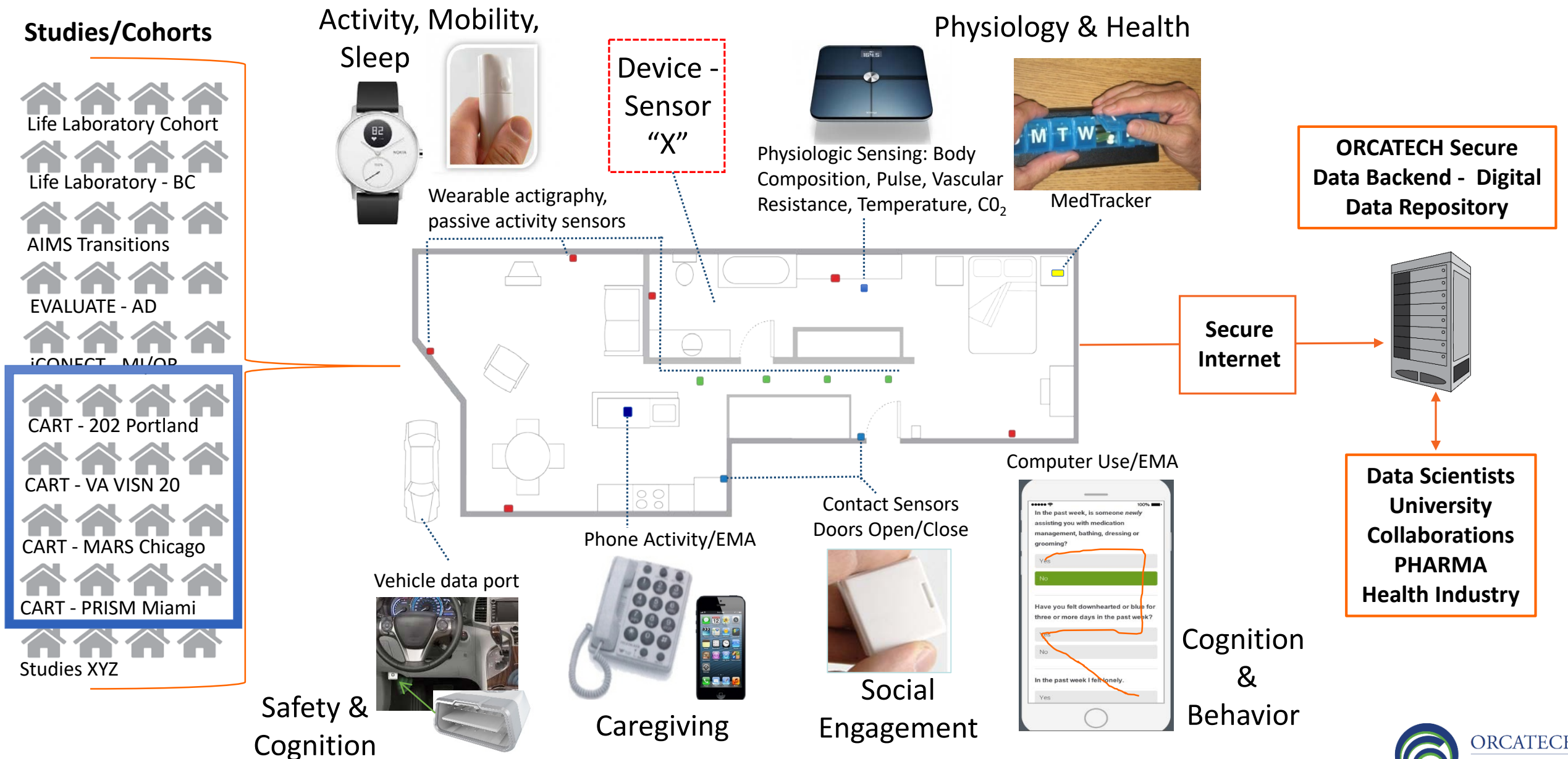
ORCATECH (CART) SYSTEM

SENSORS OR DEVICES IN HOME OR COMMUNITY

WEB SERVICES:
• APPS
• PROJECT MGT.



Technology Agnostic R & D Platform: *Life Laboratory*



Kaye et al. Journals of Gerontology, 2011; Lyons et al. Frontiers in Aging Neuroscience, 2015



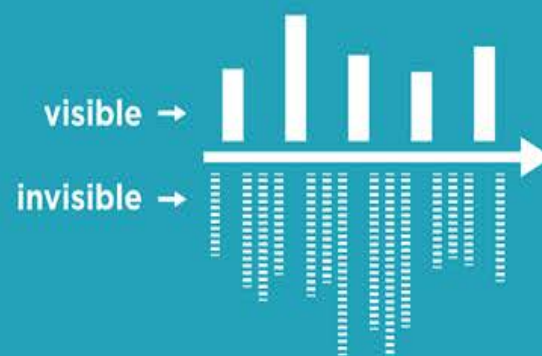
evidationTM
HEALTH

CONNECTED POPULATIONS



Rapidly recruit, screen,
and enroll thousands of
participants virtually

REAL LIFE DATA



Continuously and passively
collect patient behavior data
with consent

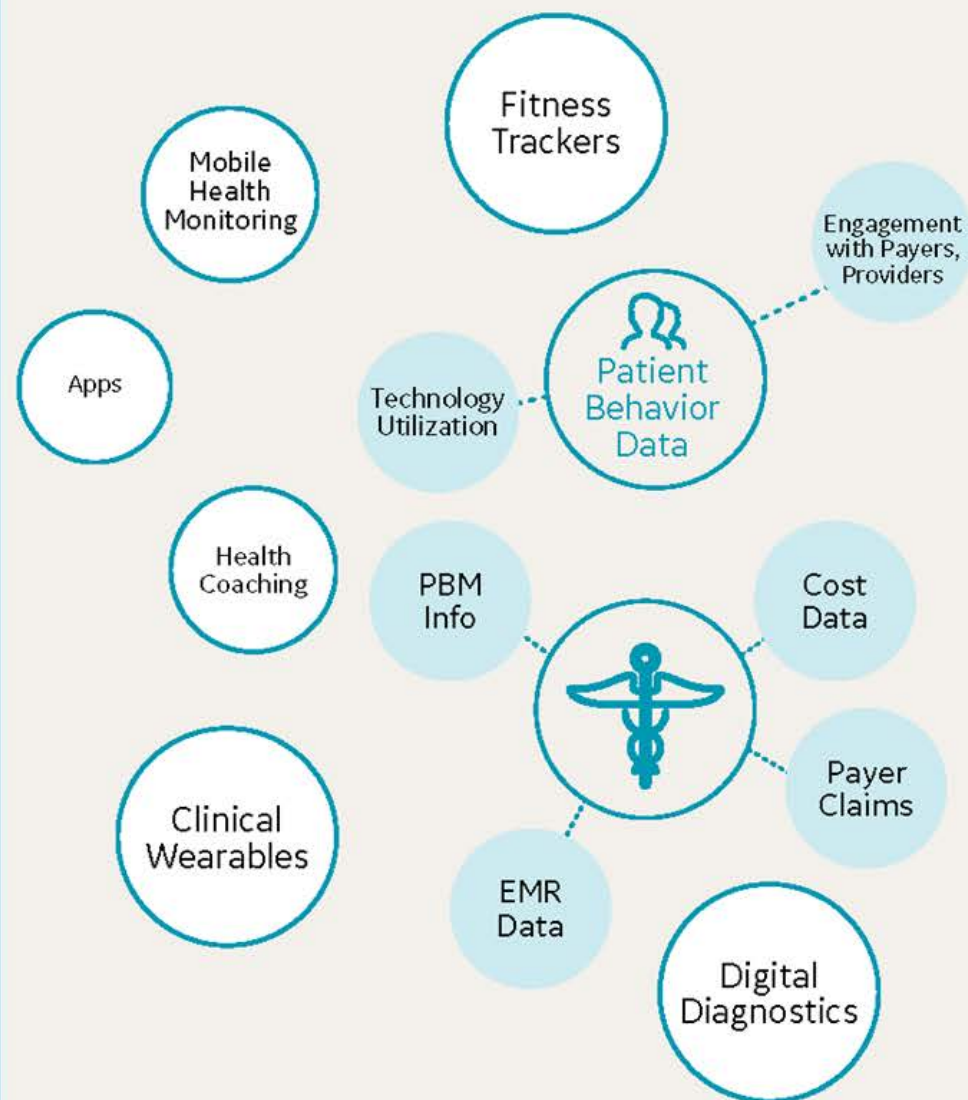
QUANTIFIED IMPACT



Quantify and improve
health outcomes outside
of clinical settings

DIGITAL HEALTH REMAINS FRAGMENTED

WITH PRODUCT VALUE LARGELY UNPROVEN

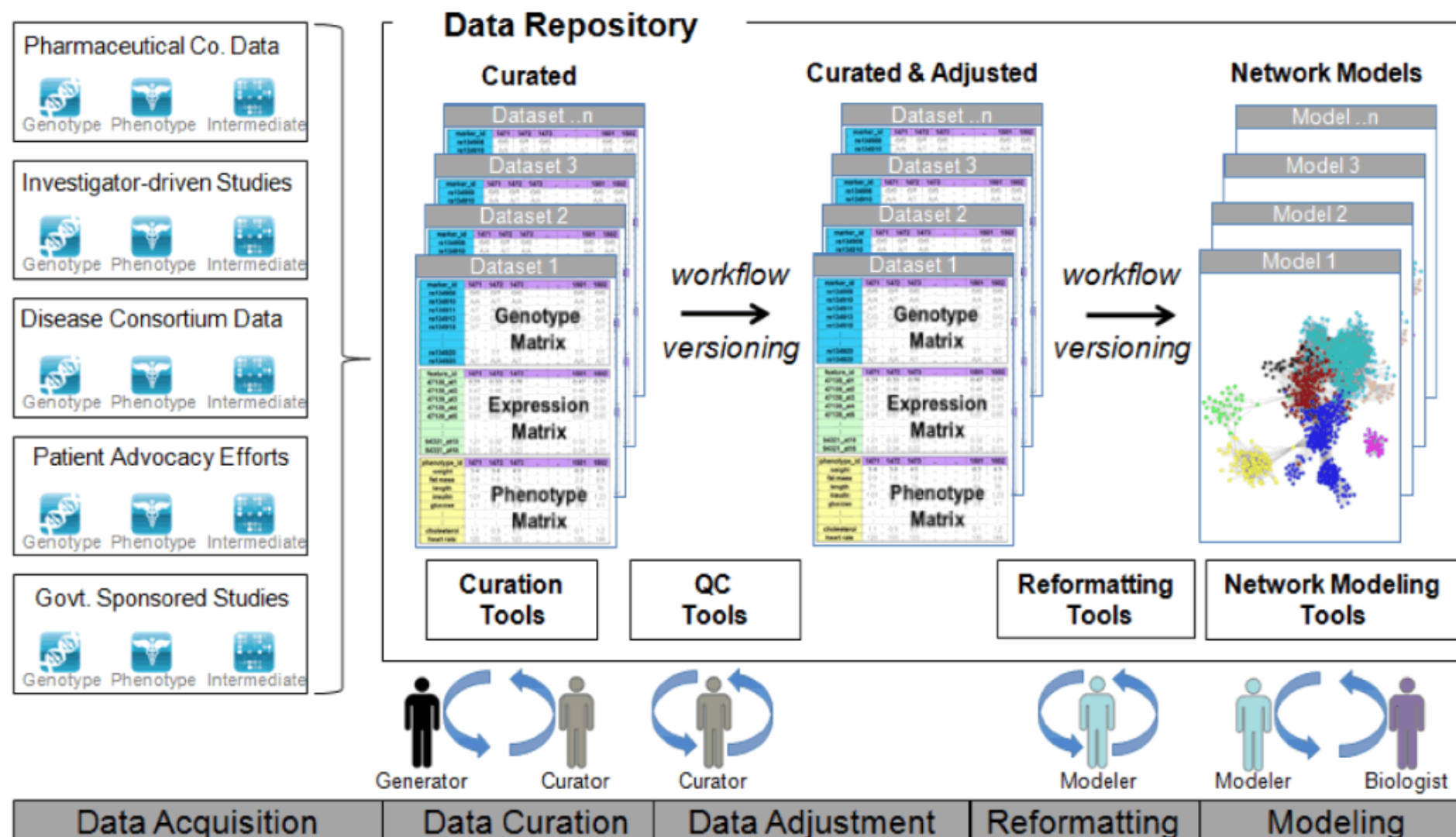


EVIDATION HEALTH: A DIGITAL HEALTH COMPANY WITH THE ABILITY TO CONNECT, VALIDATE AND OPTIMIZE DIGITAL MEDICINE





A Digital Commons for Community-Based Analysis



HEROIC
HONORABLE
DEDICATED
DUTY
SERVICE
BRAVE
READY
COMMITMENT
COURAGEOUS
SELFLESS
INTEGRITY
VALIANT

MISSION
PATRIOTIC
RESPECT
ALWAYS
COUNTRY
SEMPER
DEFEND

Cohen Veterans Bioscience



BRAIN Commons



CereMetrix®

THE MOST ADVANCED IMAGING AND ANALYTICS PLATFORM ON THE MARKET



ImagingData

CereMetrix® utilizes advanced image processing including functional and structural brain studies to automate the detection of brain abnormalities down to the voxel level and quantification of brain abnormalities, which increases the radiologists speed and accuracy.



AnalyticsEngine

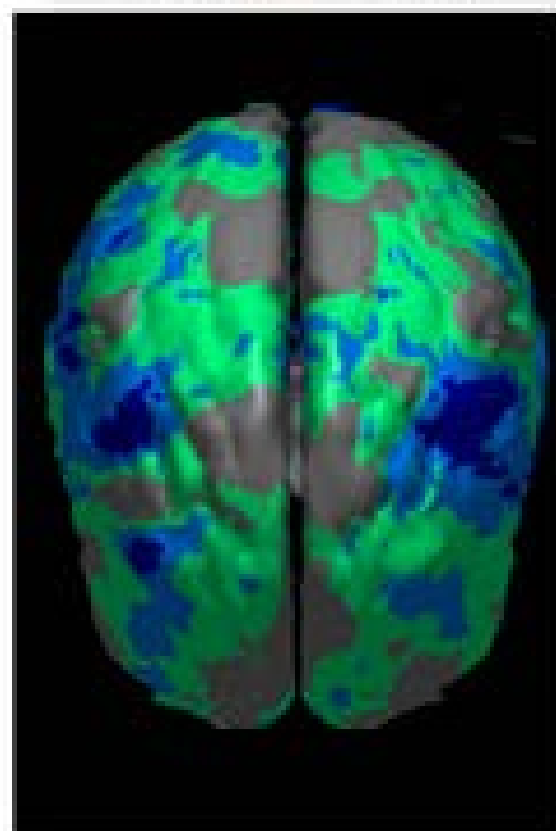
The CereMetrix® patented analytical engine distills the valuable data physicians collect – from imaging, clinical history, symptoms, lab tests and more – into actionable insights so providers can make better, faster diagnostic decisions without compromising value-based care.

MRI SCAN

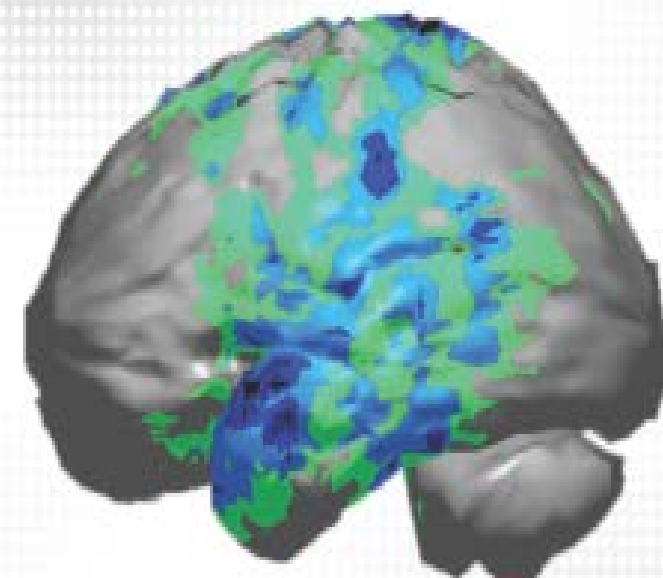


Results inconclusive

CERESCAN



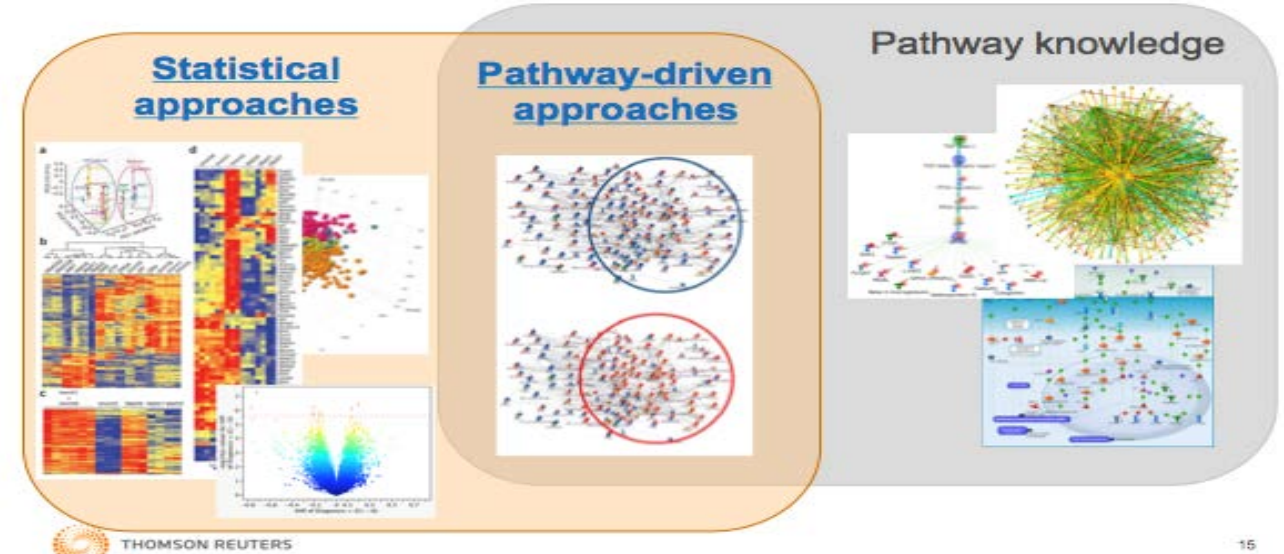
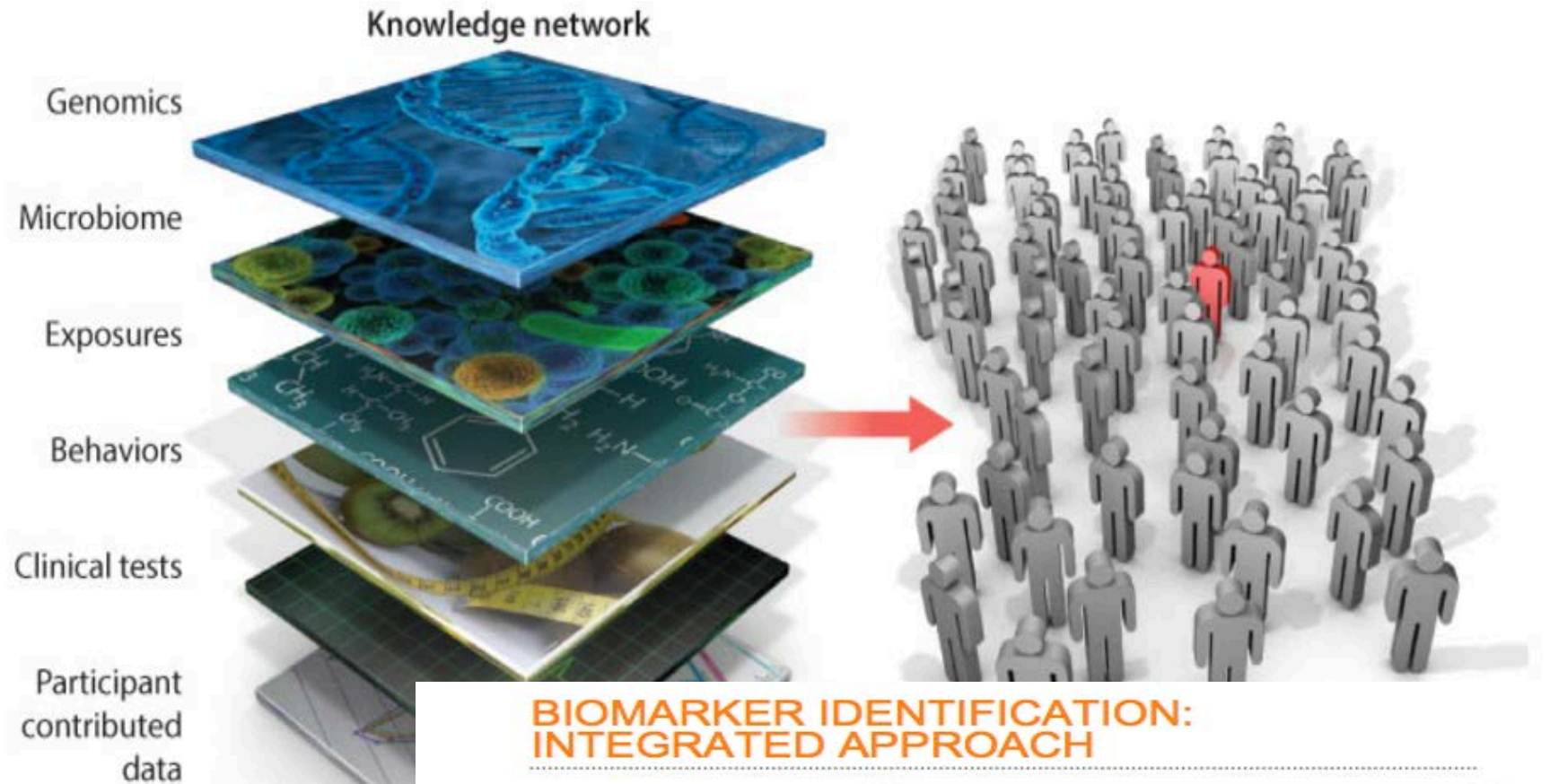
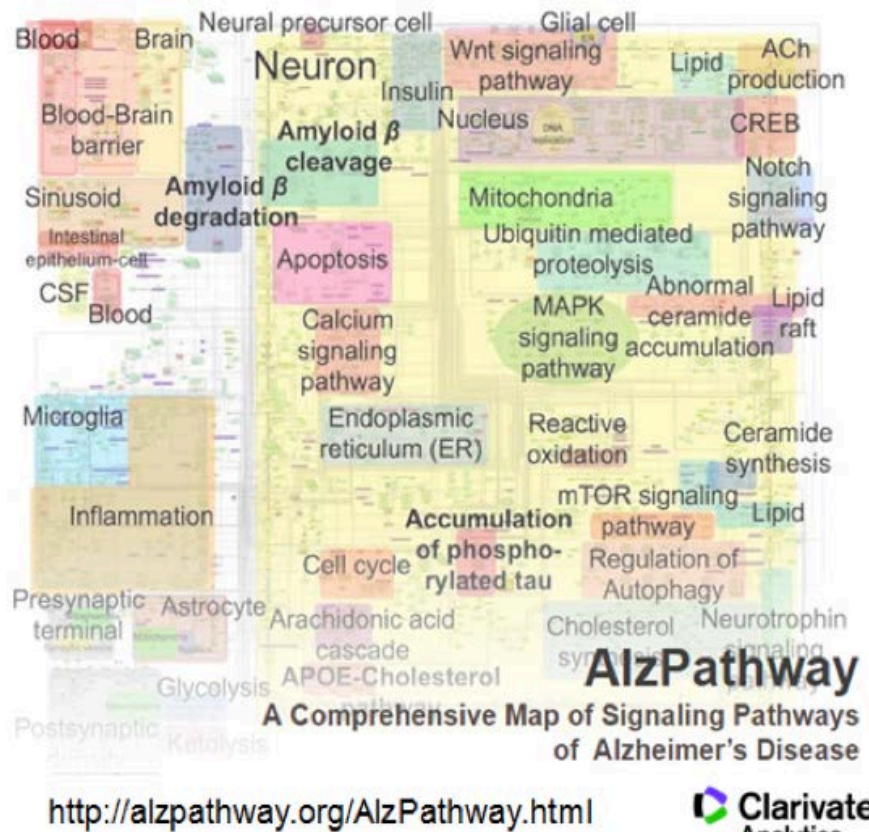
Traumatic Brain Injury detected



Alzheimer's Disease



Clarivate Analytics



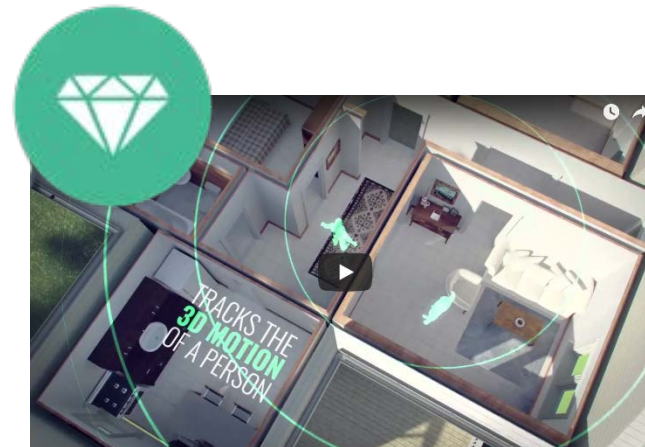
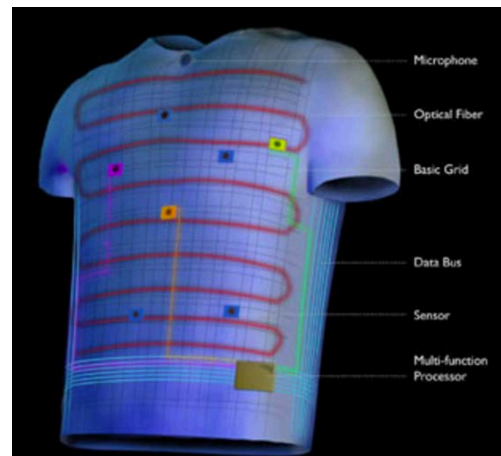


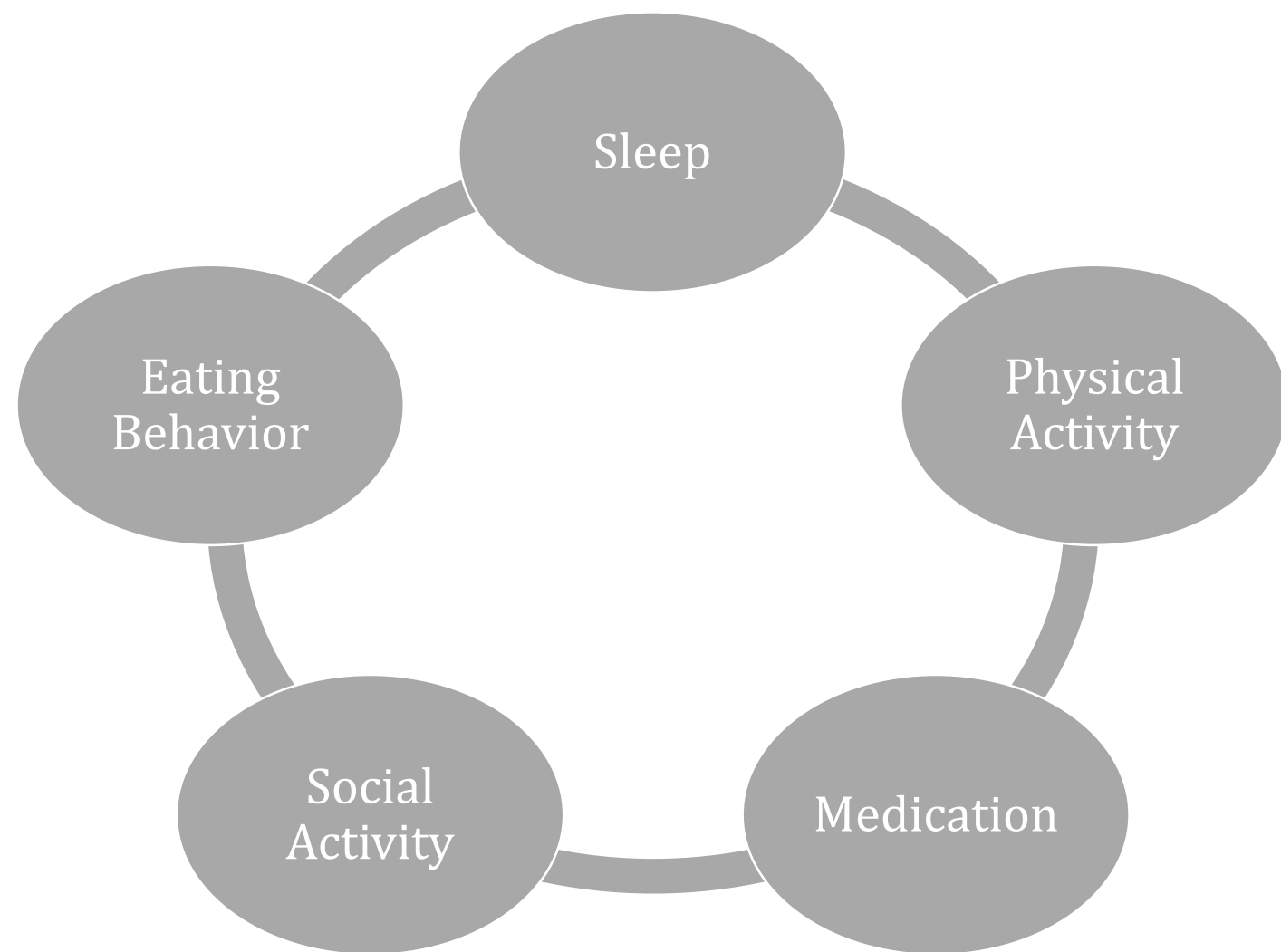
Where We Are Headed

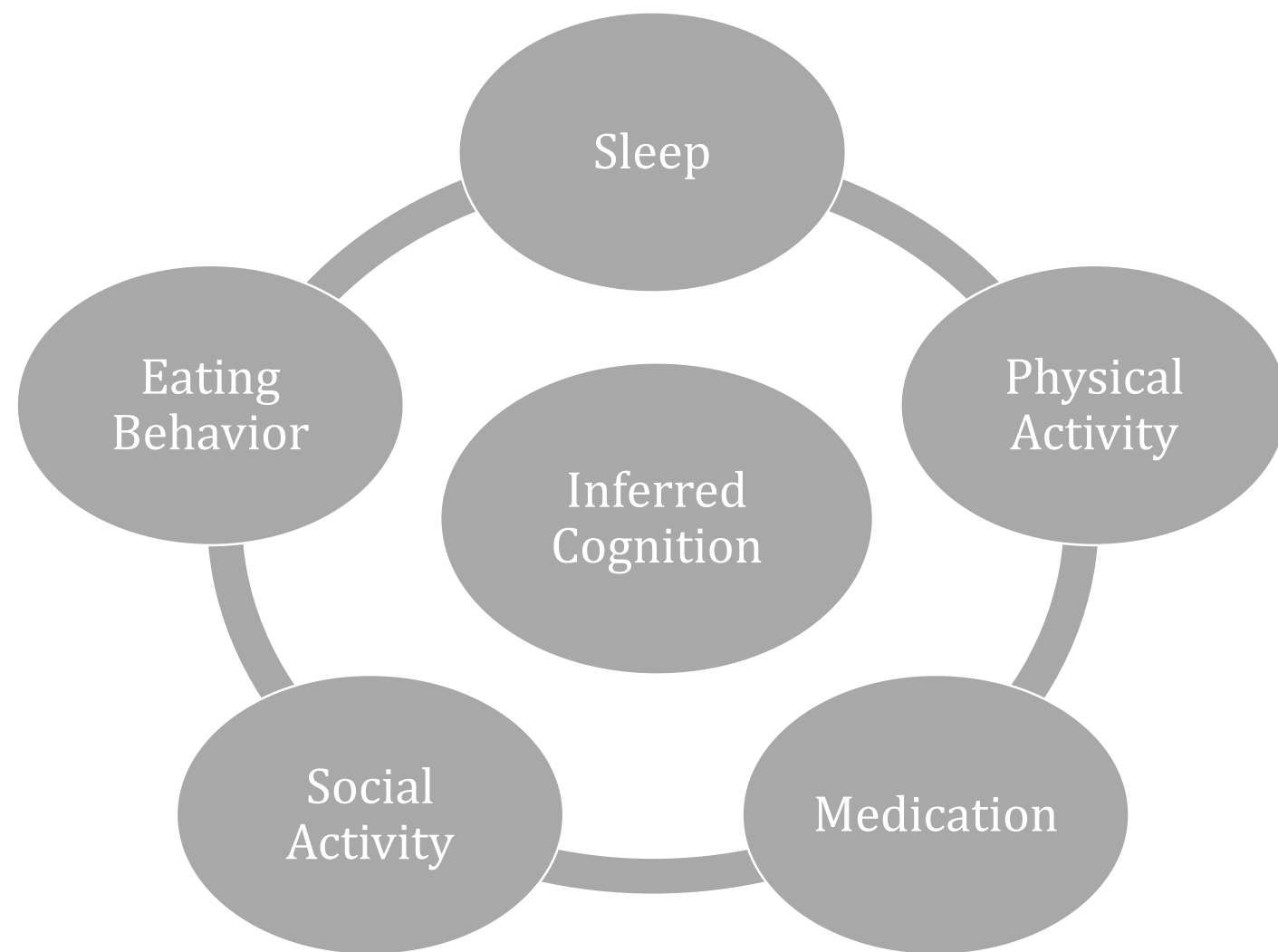


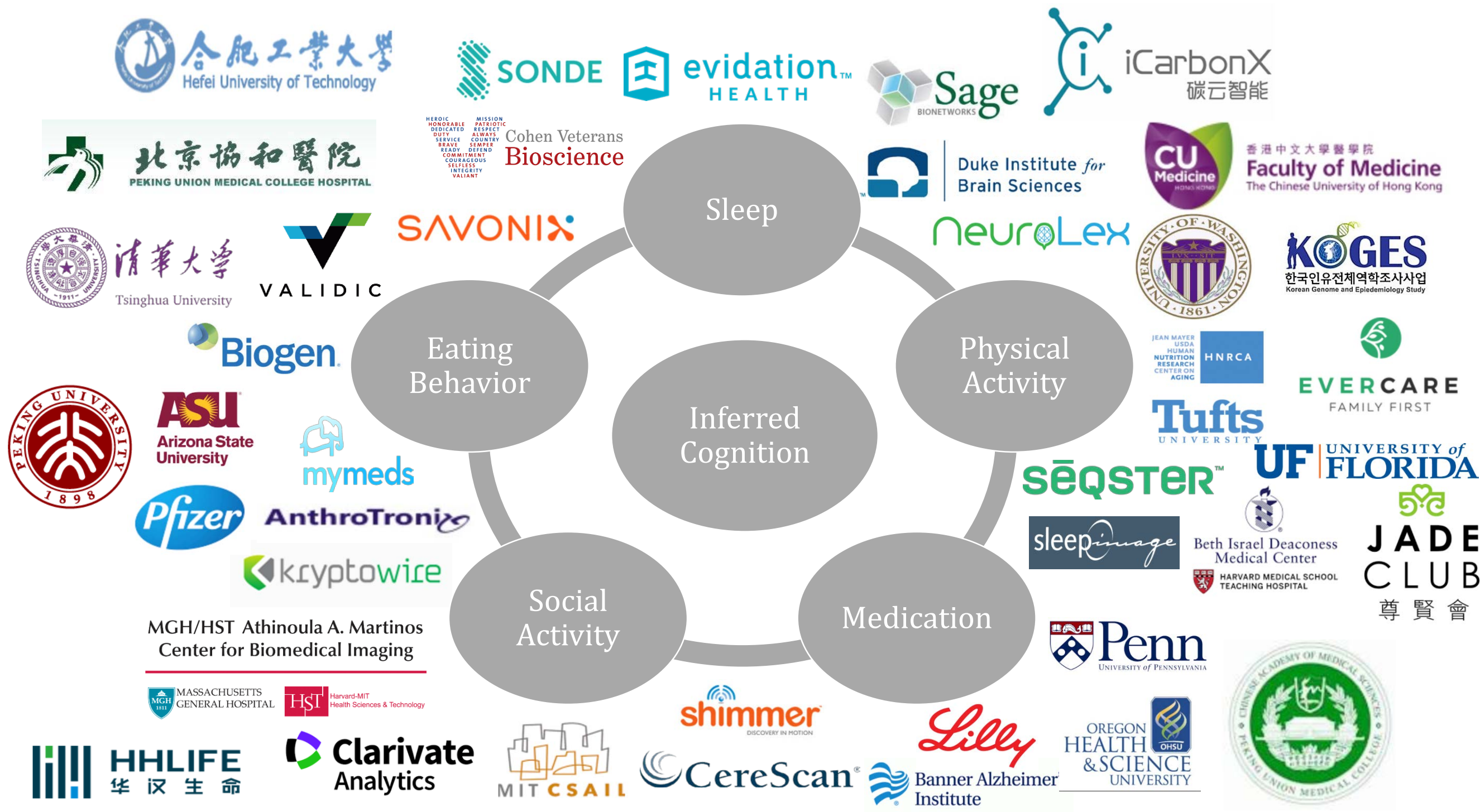
Ambient Technology


Sustainable Remote Monitoring









 合肥工业大学
Hefei University of Technology


 SONDE

 evalidation[™]
HEALTH

 Sage
BIONETWORKS

 iCarbonX
碳云智能

 北京协和医院
PEKING UNION MEDICAL COLLEGE HOSPITAL

 COHEN VETERANS
BIOSCIENCE

 Duke Institute for
Brain Sciences

 CU
Medicine
香港中文大學醫學院
Faculty of Medicine
The Chinese University of Hong Kong

 清华大学
Tsinghua University

 SAVONIX
VALIDIC

 neuroLex

 UNIVERSITY OF WASHINGTON
HONOLULU

 KOGES
한국인유전체역학조사사업
Korean Genome and Epidemiology Study

 PEKING UNIVERSITY
1898

 ASU
Arizona State
University

 Biogen

 mymeds

 Pfizer

 AnthroTronix

 kryptowire

MGH/HST Athinoula A. Martinos
Center for Biomedical Imaging

 MASSACHUSETTS
GENERAL HOSPITAL

 HST
Harvard-MIT
Health Sciences & Technology

 HHLIFE
华汉生命

 Clarivate
Analytics

 MIT CSAIL

 shimmer
DISCOVERY IN MOTION
CereScan[®]

 Banner Alzheimer
Institute

 Lilly

 OREGON
HEALTH & SCIENCE
UNIVERSITY

 Penn
UNIVERSITY of PENNSYLVANIA

 sēqster[™]

 sleepimage

 Beth Israel Deaconess
Medical Center
HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

 UF UNIVERSITY of
FLORIDA

 EVERCARE
FAMILY FIRST

 JADE
CLUB
尊賢會

 CHINESE ACADEMY OF MEDICAL SCIENCES
PEKING UNION MEDICAL COLLEGE

Smart Brain Health Monitoring Ecosystem

Inferential Data
Analysis



Smart
Ecosystem



Passive Data
Collection



Activities of
Daily Living



Thanks.

