

October 20th 2018

Oticon Perspective on Connected Audiology

Trends Informing
Modern Audiology Care:

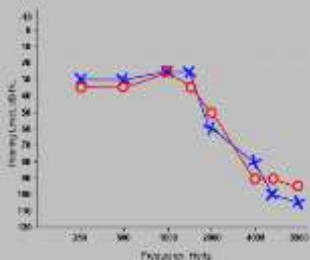
Thomas Behrens
Chief Audiologist
Director, Centre for Applied Audiology Research



Consequences of an untreated hearing loss

Hearing loss is more than an audibility problem – research from across the globe

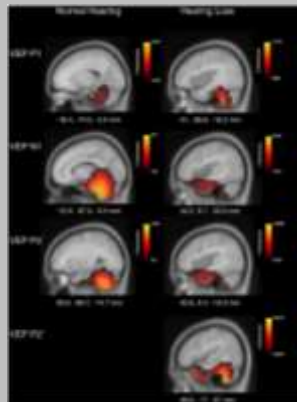
Hearing loss



Signals to the brain have lower quality



The brain will reconstruct and compensate¹



¹Campbell & Sharma, 2014

Fatigue² and social isolation³



²Hornsby, Naylor, & Bess, 2016

³Arlinger, 2003

A factor in health problems such as depression and dementia⁴



⁴Livingston et al, 2017

Oticon eHealth today

Two solutions already in use

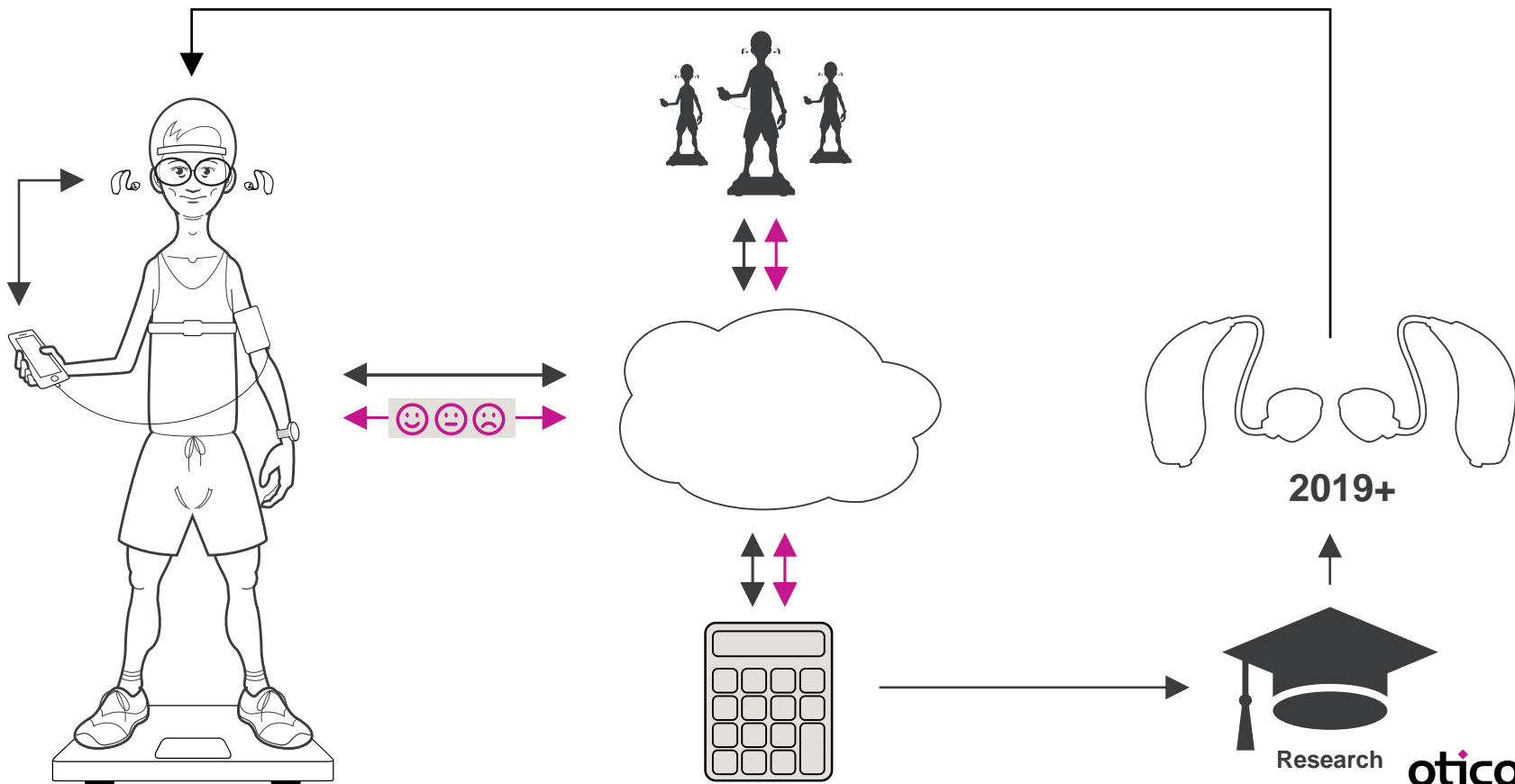


Hearing Fitness

How does it work?

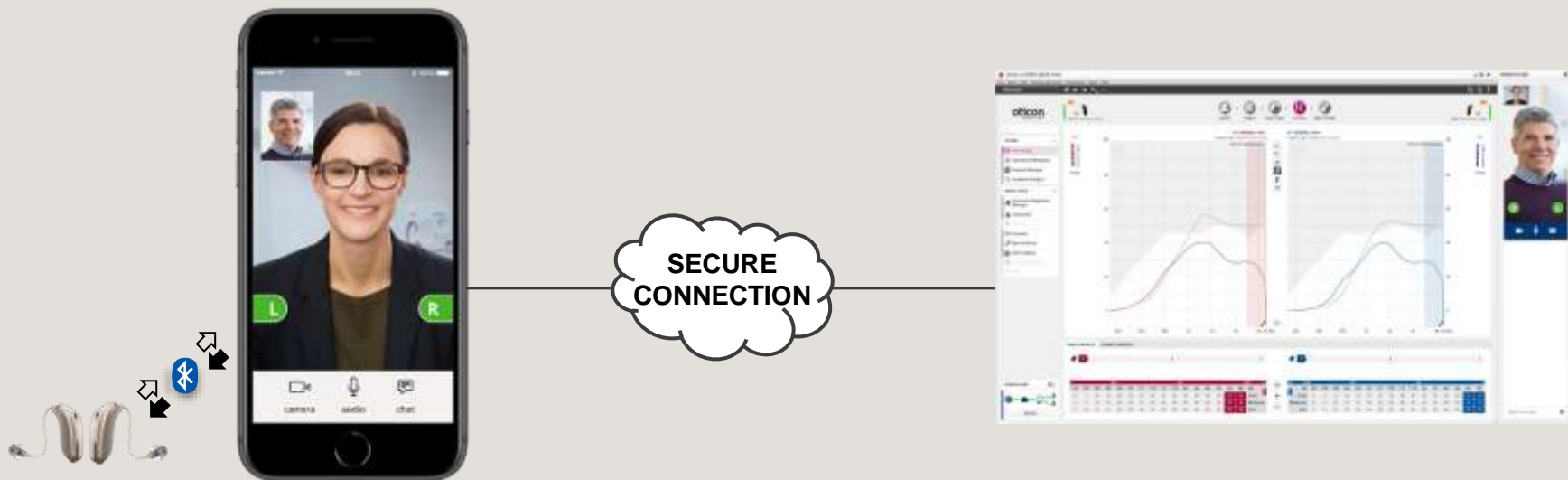


Hearing Fitness Eco-system



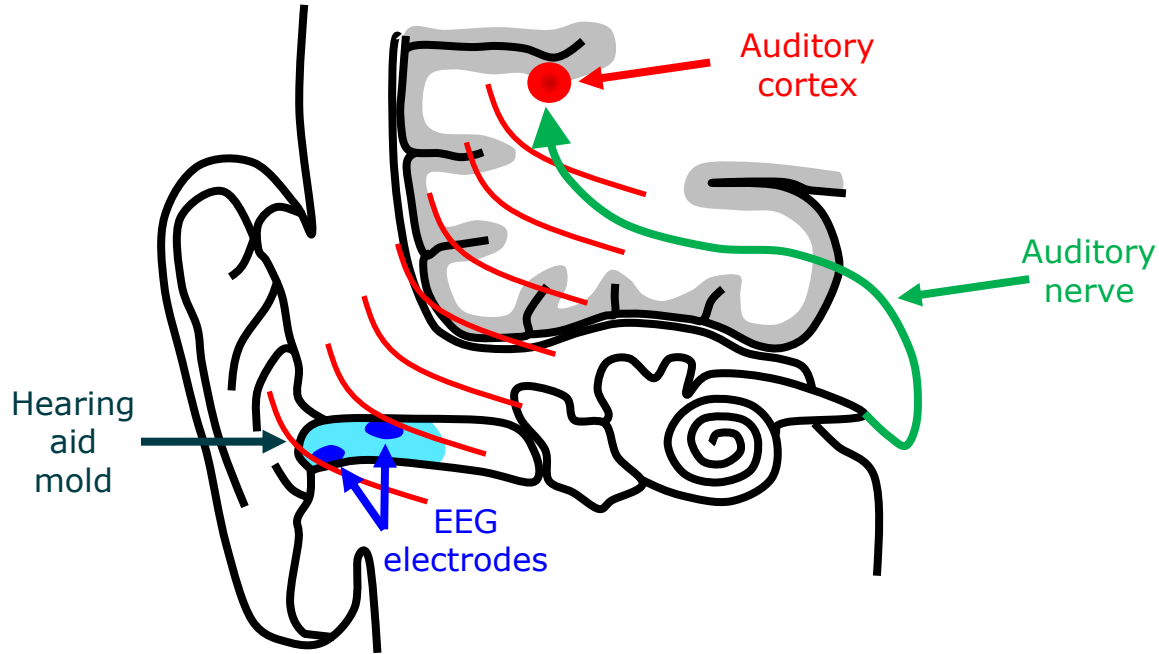
What is Oticon RemoteCare?

Limited release in a number of countries to allow testing



Oticon's secure, convenient and easy eHealth solution for follow-up care

Hearing Aids with Sensors: EarEEG device example



EVOTION Research



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727521

- 1000+ hearing aid users in future hearing aid fitting research lead by the Eriksholm
- All using a special version of Oticon Opn and a special version of the HearingFitness app + biosensors
- This allows Ecological Momentary Assessment of:
 - *user operation patterns (programs and volume)*
 - *hearing aid use,*
 - *sound environment data and identifiers*
 - *Bio signals for stress*
 - *listening experience*



CITY UNIVERSITY
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NOFAR INSTITUTE OF OCCUPATIONAL MEDICINE



Guy's and St Thomas' NHS
NHS Foundation Trust



EMPELOROS



UNIVERSITÀ
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Institute of
Public Health for
the Osijek-
Baranya County



HELLENIC REPUBLIC
National and Kapodistrian
University of Athens



REPUBLIC OF BULGARIA
Regional Administration
Pazardzhik

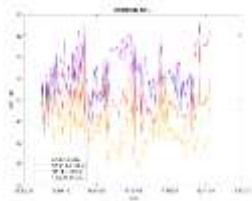


ATHENS MEDICAL
GROUP

EVOTION
BIG DATA SUPPORTING PUBLIC HEARING HEALTH POLICIES

Learning from the real data

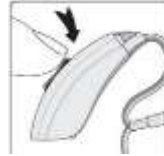
Sound environment



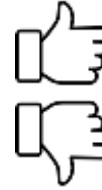
Signal processing



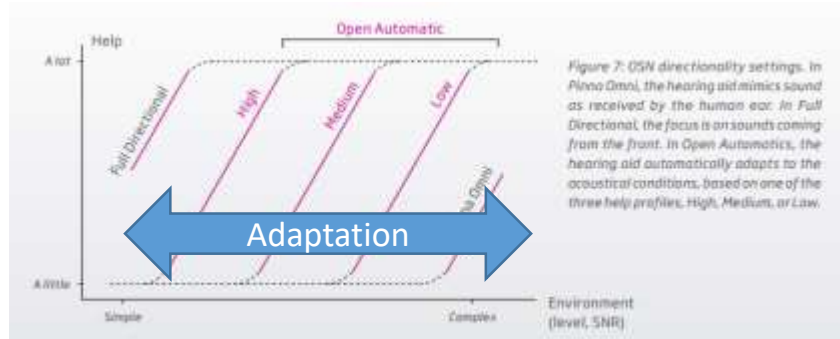
User behavior



Hearing ability



Physiological measures



EVOTION project

Recruiting a total of 1200 users at

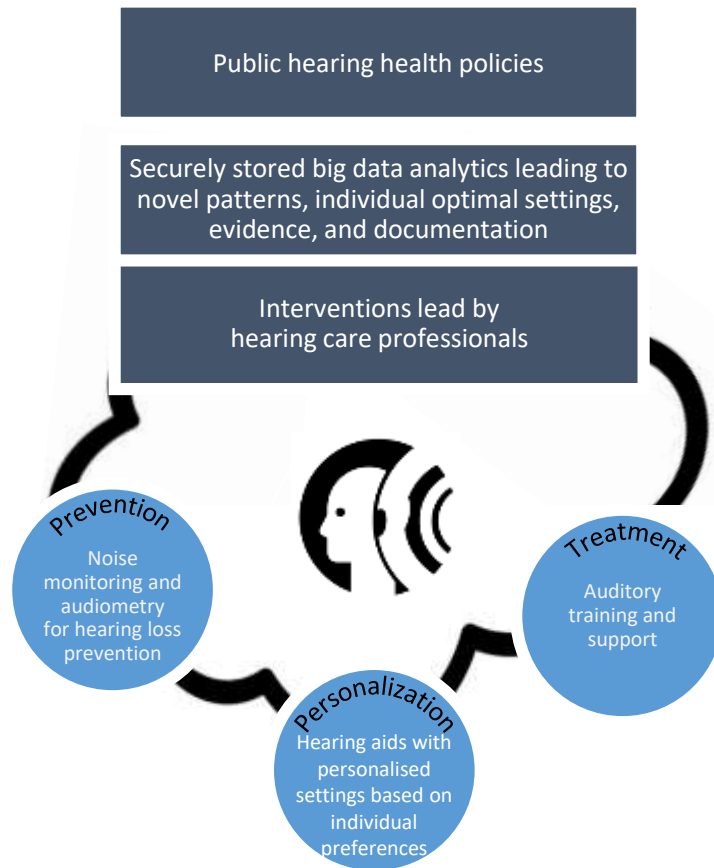
- University College London (NHS Clinic, UK)
- Guys and St. Thomas (NHS Clinic, UK)
- University of Athens (Greece)
- Athens Medical Center (Greece)

The users and hearing care professionals extend standard practice with data-driven hearing care.

Each user logs hearing care data with the app for one full year.

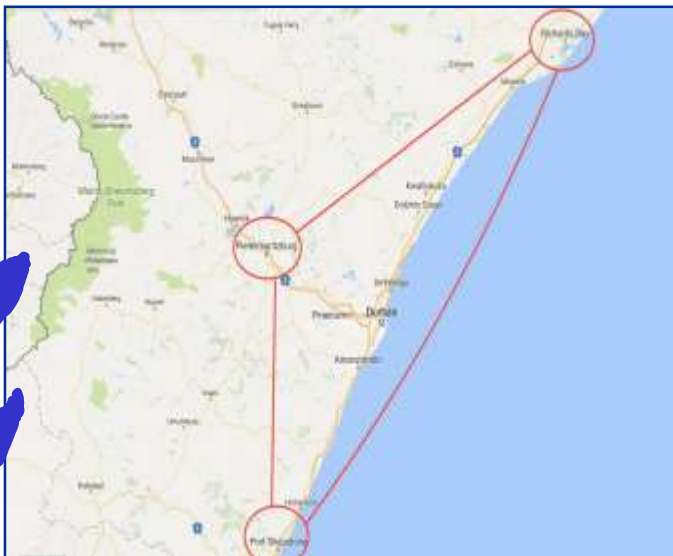
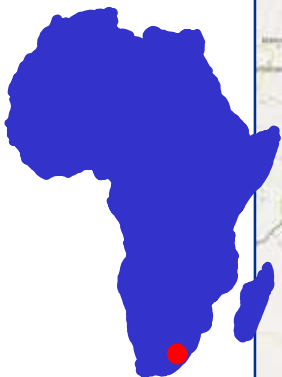
The platform collects data and makes analyses available that

- Tell users how their hearing develops and help them utilize hearing device functionality – e.g. try this program that helped last time
- Enable hearing care professional to monitor individual progress without the need for face-to-face appointments
- Enable policy makers to monitor the general hearing situation



Learning from new practise models

Example from South African Research Clinic



Hearing Research Clinic

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www.hearingresearchclinic.org

A hybrid practise model



STEP 1

Take our online
hearing screening test
for free

online



STEP 2

Talk to your hearing
coach for 15-minutes
via audio or video call

phone call



STEP 3

Book a consultation to
evaluate your hearing
at your home or office

face-to-face



STEP 4

Find a hearing solution
and rehabilitation plan
customised to suit
your needs

face-to-face



STEP 5

Live your life the way
you want with our
continued support
from your hearing
coach
online + face-to-face

Acknowledgement

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▶ The Evotion team

EVOTION
BIG DATA SUPPORTING PUBLIC HEARING HEALTH POLICIES



Oticon Foundation

