### **The Vision**

The progressive aging of the world's population leads to an increase of pathological aging. In this context, our mission is to promote "active" aging, based on healthy and conscious lifestyle habits. To achieve this goal, we propose a *"green*" telemedicine service, designed to limit the need for regular hospital checkups, improving patients' quality of life and contributing to the environmental sustainability of the healthcare system. This initiative is part of the broader of Precision framework Medicine and Digital Healthcare.

### **The Mission**

In recent years, our projects have focused on the development and validation of telemonitoring protocols, using **digital indexes**, of behavioral and physiological variables (e.g., cognitive performance, sleep quality, stress), in cognitively frailty people.







## LOCATION

SIESTA Lab

Department of Physiology and Pharmacology "V. Erspamer"

Sapienza University of Rome

### CONTACT

Claudio Babiloni claudio.babiloni@uniroma1.it

Roberta Lizio roberta.lizio@uniroma1.it

+39 0649910989 https://dff.web.uniroma1.it/en https://www.pdwaves.eu/

# Smart Me&You



## A telemedicine service





#### SmartMe&You

SmartMe&You is a "green" telemedicine service designed for elderly individuals at risk of cognitive decline or those already diagnosed with cognitive impairment. It offers digital screening of cognitive and motor functions, general stress status, and sleep-wake cycle.

The *SmartMe&You App* supports the evaluation and training of vigilance, attention and memory through specific video-games. Performances are available on the GARR cloud and are analysed by AI to detect or predict deterioration in cognition.



### **Tools used**

SmartMe&You uses a commercial *smartwatch* suitable for scientific applications to collect markers of global stress and motor, sleep, and cognitive dysfunction, and the SmartMe&You App for running *serious video games* on tablets to monitor vigilance and cognitive functions.

#### Where and how

The GARR Consortium provides the GARR Cloud network for storing and telemonitoring digital and clinical data on users, with their consent.

SmartMe&You can be used anywhere and without an Internet connection, ensuring flexibility and accessibility. The research group of Sapienza University of Rome (UNIROMA1) is currently working on protocols for the extraction of electroencephalographic markers of the sleep-wake cycle and sleep quality, within the SIESTA Lab, which is part of the Open Lab network of the **"Rome** Technopole" project (Spoke 6, Flagship 7).







### Team

- *Sapienza University* of Rome (UNIROMAI) developed SmartMe&You to provide a preliminary check-up service of cognitive function, vigilance, sleep-wake cycle, brain integrity, and risk factors associated with pathological aging
- *GARR Consortium* provides the GARR Cloud network for storing and telemonitoring digital and clinical data on users
- SenTech Srl and Sogetel Srl are collaborating on the development of ICT and artificial intelligence technologies used in SmartMe&You
- **IRCCS San Raffaele Rome** is clinically validating SmartMe&You.