



Health Partnering Day 2016

7 July 2016, Brussels



Health-related topics: ICT, SSH, Food Security



Personalised coaching for well-being and care of people as they age

Helena Fernández
GRADIANT

Organization and eHealth-related expertise



Agile ICT R&D Private
Technology Center



80
employees

EU acknowledgement as
Excellence Center

> 100 clients
> 60 active projects



7 FP7
2 H2020
Last 5 years

eHealth-related expertise

HOLOS

Non-contact respiration and heart rate sensor devices based on ultrawide band (UWB) technology.

DGRID

Novel detection algorithm for gross indels and copy number variation (CNV) in targeted resequencing (TR) data.



eHEART

Paroxysmal atrial fibrillation (AF) detection algorithms.

OnCare.

Validated mHealth system to follow ambulatory patients.

SMEC.

Recommender system based on collaborative filtering.

Fit for Health 2.0 and HEALTH-NCP-NET 2.0 projects are funded by the European Commission

Helena Fernandez: hfernandez@gradiant.org Alicia Jimenez: ajimenez@gradiant.org

GRADIANT's technological offer

Algorithms for biomedical signal processing.

Bioinformatics. Next-generation sequencing data analysis.

- Standard genome/exome sequencing and targeted resequencing (TR) data analysis.
- Novel detection algorithm for gross indels and copy number variation (CNV) in high-coverage TR data.
- In-silico simulation of NGS data.

IoT and data and process analytics

- IoT technologies.
- Big Data, human and machine-generated data analysis.
- Development of **communication gateways** and integration with medical and wearable devices.
- **Process mining** applied to healthcare.

Privacy and security

- **Homomorphic encryption** schemes and services for performing operations on encrypted data
- **Service for sensitive data sharing within untrusted environments.**
- **Cryptographic hardware** for data encryption and key management.
- **Security and privacy by design** methodology
- **Secure Access control to resources** and data with a high level of configurability.

Biometrics solutions: face, handwritten signature, and voice.

Development of mHealth systems.

Fit for Health 2.0 and HEALTH-NCP-NET 2.0 projects are funded by the European Commission

Helena Fernandez: hfernandez@gradiant.org Alicia Jimenez: ajimenez@gradiant.org



AGE-COACH



AGE-COACH aims to employ novel artificial intelligence technology and DSS open-source standard-based components to develop a **personal assistant** that will contribute to the empowerment of patients and family members through **disease-specific education and regular treatment enhancement** by means of the implementation of a use-case on **heart failure**.

The system will be open, scalable and able to provide such solutions in other relevant diseases.

Fit for Health 2.0 and HEALTH-NCP-NET 2.0 projects are funded by the European Commission

Helena Fernandez: hfernandez@gradiant.org Alicia Jimenez: ajimenez@gradiant.org

Consortium and required partners

Consortium

GRADIANT (coordinator) (ES)

University of Trento (IT)

University Hospital of Lincoln
(UK)

Required partners

Expert on affective computing

Expert on AAL

Expert on ethics, legal and
regulatory issues

Medical partners

Patient organizations

TOPIC	EXPERTISE AND POTENTIAL CONTRIBUTIONS
<p>SC1-PM-02-2017 New concepts in patient stratification</p>	<p>Big Data technologies for patient stratification.</p>
<p>SC1-PM-07-2017 Promoting mental health and well-being in the young</p>	<p>Development of mHealth systems. Information system to register Patient Reported Outcomes (PROs). Big Data Analytics for Clinical Decision Support.</p>
<p>SC1-PM-10-2017 Comparing the effectiveness of existing healthcare interventions in the adult population</p>	
<p>SC1-PM-17-2017 Personalised computer models and in-silico systems for well-being</p>	<p>NGS data simulation and standard NGS data analysis Novel detection algorithm for gross indels and CNV in high-coverage TR data.</p>
<p>ICT-23-2017 Interfaces for accessibility</p>	<p>Integration of wearable and medical devices.</p>
<p>NMBP-13-2017 Cross-cutting KETs for diagnostics at the point-of-care</p>	<p>Analysis of epidemiological data of health and disease patterns.</p>

PRIVACY & SECURITY

Fit for Health 2.0 and HEALTH-NCP-NET 2.0 projects are funded by the European Commission

Helena Fernandez: hfernandez@gradiant.org Alicia Jimenez: ajimenez@gradiant.org



Contact details



Thank you!

Helena Fernández: hfernandez@gradiant.org

Alicia Jiménez González: ajimenez@gradiant.org