Breaking barriers for a sustainable Active and Healthy Ageing through IoT technologies
OUR AMBITION

ACTIVAGE is about setting the grounds for the Digital Transformation of Social Care that will change the life of 100 million people across Europe, including us.

PERSONAL CENTERED
AHA-IoT ECOSYSTEM
JOINING TWO DOMAINS

ACTIVAGE is founded on the cross-road of two big strategic initiatives launched by the EU Commission in the frame of the European Digital Single Market.
ACTIVAGE IN NUMBERS

- 50 partners
- 9 pilots
- >7k users
- >200 ACTIVAGERS
- 7 countries
- 43k devices
- 25 Supply partners
- 22 Demand partners

Budget: 25 M€
THE AIM OF ACTIVAGE

IoT for SLE
Ecosystem enabling

SCALING
UP
AHA markets

LONGITUDINAL
• Replicability
• Population

VERTICAL
• Multiplicability
• Personalization

- ARCHITECTURE
- INTEROPERABILITY - DATA MODEL - SEMANTICS
- STANDARDISATION
- DATA PROTECTION & PRIVACY
- ECOSYSTEM BUILDING
- BUSINESS MODELS (for scaling up)
- EVIDENCE CREATION
ARCHITECTURE
Moving from legacy to full IoT ecosystem

- Thousands of Applications and services
- Hard to replicate/scale up

LEGACY FROM PILOT SITES (DS)

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ACTIVAGE STANDARDIZATION ACTIVITIES

Global mapping and allignment
ACTIVAGE STANDARDIZATION ACTIVITIES

Data Modelling towards Data Markets

- Physical world to Data
  - OMA LwM2M data Models and OMA LwM2M Objects range for ACTIVAGE in OMNA (HOPU)
    - In particular, we have the block of objects reserved for vendors (32969 – 33009)
  - ETSI SmartBAN chaired (CSEM)
    - Contributions to the current standards for Body Area Networks communications based on Bluetooth

- Data Quality Validation
  - IEEE PAR2510 Standard for data integration sensors integration in IoT

- Data Exchange
  - ETSI ISG CIM - FIWARE Data models contributions (HOPU)
    - Contributed to all the ETSI ISG CIM documents: Architecture and Data Models, Context management and cross-domain by design
  - ETSI SAREF – Semantics interoperability
    - Cooperating with SAREF extensions as SAREF4CITY to explore opportunities for AHA domain.
    - Exploring value from home appliances (refrigerators, etc.) for behavioural monitoring.
    - Additional analysis for integration with AIOTES Semantic in progress (NUIG)
ACTIVAGE STANDARDIZATION ACTIVITIES

Standardisation collaboration in SAREF

- **ETSI SAREF eHealth extension**
  - STF 566 (TS 103 410-8)
  - SAREF4EHAW: SmartM2M; Extension to SAREF; Part 8: eHealth/Ageing-well Domain DTS/SmartM2M-103410-8-SRF4EHAW
    

  - Definition of the extension being cooperated by HOPU on behalf of ACTIVAGE as part of SmartM2M action STF566 (Q1/Q2 2019)
    
    https://portal.etsi.org/STF/STFs/STFHomePages/STF566#who

  - Implementation in progress of mapper / adapter from NGSI to NGSI-LD (including SAREF reference model) for Q2/Q3 2019
NEW ÁREAS OF RESEARCH AND INNOVATION

TWO BATTLEFIELDS OF RESEARCH AND GAPS TO ADDRESS IN IoT for SLE

1. The EDGE (The far west)

   ▪ Standardisation
   ▪ Security & privacy management
   ▪ AI, Smart devices, virtual sensors
   ▪ BMI (no invasive)
   ▪ Robotics
NEW ÁREAS OF RESEARCH AND INNOVATION

TWO BATTLEFIELDS OF RESEARCH AND GAPS TO ADDRESS IN IoT for SLE

2. The DATA ECONOMY in SILVER AGE

- Based on AIOTES ecosystem:
  - De-coupling data generation and data consume
  - Data sharing across IoT platforms
  - Data re-use across applications and services
  - Data lakes
  - Data analytics
  - BIG DATA
  - DATA MARKETS
IN SUMMARY

“PROLONG AND SUPPORT THE INDEPENDENT LIVING OF OLDER ADULTS THROUGH AHA SERVICES BASED ON IOT”

Drive the digital transformation of Active and Healthy Ageing

TECHNOLOGY

BUSINESS

SOCIO-ECONOMIC EVIDENCE

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THANKS FOR YOUR ATTENTION!

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Coming soon:

IoT for Smart Living Environments: Challenges and Recommendations for Ageing Well

An AIOTI oficial publication
### Benefits from the Use of Activage Technological Framework

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<tbody>
<tr>
<td><strong>Data security and privacy ecosystem</strong></td>
<td><strong>Scale up</strong></td>
<td><strong>Interoperability</strong></td>
<td><strong>Data centric</strong></td>
<td><strong>Sustainability</strong></td>
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<td>- GDPR compliance</td>
<td>- <em>Vertical</em> -&gt; expand service to broader population targets</td>
<td>- IoT infrastructure independence</td>
<td>- Maximise compliance with GDPR</td>
<td>- Innovation -&gt; openness</td>
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<td>- <em>Longitudinal</em> -&gt; create a rich portfolio of services that fit better and more accurate the changing needs of large population cohorts</td>
<td>- Cross services interoperability vendor unlocking</td>
<td>- Adapt to technology evolution trends</td>
<td>- Business models and</td>
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<td>- Re-use of data &amp; sharing of data -&gt; data banks</td>
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ACTIVAGE CITIES & REGIONS IN EUROPE

DS 1 GAL: Deployed in Galicia, in North-West of Spain

DS 2 VLC: Deployed in Valencia, a city in East Spain

DS 3 MAD: Deployed in metropolitan area of Madrid

DS 4 RER: Deployed in Parma, Emilia-Romagna region

DS 5 GRC: Central Greece, Metamorfosis & Pilea-Hortiatis

DS 6 ISE: Deployed in Isere Department in East France

DS 7 WOQ: Deployed in several cities in Hesse Federal State

DS 8 LEE: Deployed in Leeds, city in North of England

DS 9 FIN: Deployed in cities of Turku, Oulu, Tampere & Helsinki
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AHA-IOT SERVICES

Living outdoors with freedom
- Monitoring outside home
- Support for transportation and mobility
- Exercise promotion

Living safe at home
- Daily activity monitoring at home
- Safety, comfort and Security at home

Preventing mental decline
- Cognitive stimulation
- Exercise promotion

Taking care of diseases
- Integrated care for chronic conditions
- Emergency trigger

Promoting Social connections
- Prevention of social isolation